

DON'T BANK ON THE BOMB

A Global Report on the Financing of Nuclear Weapons Producers



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ABOUT ICAN

The International Campaign to Abolish Nuclear Weapons is a global grassroots movement advocating for a treaty to eliminate nuclear weapons. With partner organizations in 60 countries, we provide a voice to the overwhelming majority of people globally who support nuclear abolition. www.icanw.org

ABOUT PROFUNDO

Profundo is an economic research consultancy analysing commodity chains, financial institutions and corporate social responsibility issues. It works predominantly for environmental, human rights and development organizations in the Netherlands and abroad. www.profundo.nl

The authors have made their best efforts to ensure that the information contained in this report is accurate. However, it is possible that, given the large volume of data contained herein, errors may have been made. We would be grateful if readers informed us of any such errors by email: info@icanw.org.

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Foreword

Nuclear weapons are an obscenity. They are the very antithesis of humanity, of goodness in this world. What security do they help establish? What kind of world community are we actually seeking to build when nations possess and threaten to use arms that can wipe all of humankind off the globe in an instant?

Unimaginative leaders continue to believe that eliminating this ultimate menace is impossible – a hopeless, utopian goal. But how often have we heard politicians say “this will never happen over my dead body”, and then it happens because people rise up and take action to make it happen? Politicians should have learned by now never to say never!

That is not to suggest that the struggle for a nuclear-weapon-free world will be easily won. Like any battle waged against a deeply entrenched system, it will take patience and perseverance. We won't see success overnight. But we really must approach the challenge with urgency, for despite the end of the cold war, the world remains just a hair's-breadth from nuclear catastrophe, and every moment is crucial.

It distresses me greatly that the nuclear-armed nations have failed to live up to their disarmament commitments, choosing instead to continue squandering billions of dollars on these awful bombs. It is an outrageous theft of public resources – at a time when there are people who go hungry, when children are dying because they have no clean water, when diseases run rampant, when we have the wherewithal to eradicate all these dreadful scourges.

We keep admitting that the globe is shrinking, that we are one another's keeper, as it were. Yet, we tolerate – through our collective inaction – the existence of tens of thousands of nuclear weapons capable of blowing the whole world into smithereens. How can this be? Are we not all brothers and sisters on this small globe of ours?



The imperative to take immediate, united action for nuclear abolition could not be clearer. This splendid and timely report, *Don't Bank on the Bomb*, will help people everywhere make their contribution, however small, to this vital campaign for a safer world. It's each little contribution put together that will ultimately lead to the abolition of nuclear weapons – not any single momentous event or decision by governments.

Banks and other financial institutions should be called upon to do the right thing and assist, rather than impede, efforts to eliminate the threat of radioactive incineration by divesting from the immoral nuclear arms industry. In the long struggle to end racial segregation in South Africa, our freedom was won with the help of concerned individuals around the world who pressured their leaders and corporate actors to stop funding the racist regime.

To those who invested in our country, we said: you are doing us no favour, you are buttressing one of the most vicious systems. Divestment was vital in the campaign to end apartheid in South Africa. Today, the same tactic can – and must – be employed to challenge man's most evil creation: the nuclear bomb. No one should be profiting from this terrible industry of death, which threatens us all.

Desmond Tutu

NOBEL PEACE PRIZE LAUREATE

Cape Town, South Africa, March 2012

Introduction

Challenging the Nuclear Weapons Industry

Each year, the nine nuclear-armed nations spend a combined total of more than US\$100 billion on their nuclear forces – assembling new warheads, modernizing old ones, and building ballistic missiles, bombers and submarines to launch them. Much of this work is being carried out by private companies. How can we stop it?

Don't Bank on the Bomb is the first major global report on the financing of companies that manufacture, modernize and maintain nuclear weapons and their delivery vehicles. It identifies more than 300 banks, insurance companies, pension funds and asset managers from 30 countries that invest significantly in 20 major nuclear weapons producers. With the information and arguments contained in this report, concerned citizens can put pressure on these and other financial institutions around the world to end their support for the nuclear weapons industry.

By lending money to nuclear weapons companies, and purchasing their shares and bonds, banks and other financial institutions are indirectly facilitating the build-up and modernization of nuclear forces, thereby heightening the risk that one day these ultimate weapons of terror will be used again – with catastrophic humanitarian and environmental consequences. Divestment from nuclear weapons companies is an effective way for the corporate world to advance the goal of nuclear abolition.

United Action for Divestment

A coordinated global campaign for nuclear weapons divestment is urgently needed. It can help put a halt to modernization programmes, strengthen the international norm against nuclear weapons, and build momentum towards negotiations on a universal nuclear weapons ban. Some financial institutions, including government funds, have already opted to exclude nuclear weapons companies from their investment portfolios. Others must now follow suit.

Chapters

- 1 Introduction:** Chapter 1 summarizes nuclear weapons investments globally, and outlines the methodology used in this study.
- 2 Why Divest:** Chapter 2 shows why financial institutions should divest on humanitarian, legal and environmental grounds.
- 3 Nuclear Forces:** Chapter 3 examines the nuclear weapons spending and modernization programmes of the nuclear-armed nations.
- 4 Producers:** Chapter 4 profiles 20 companies that manufacture nuclear weapons and the missiles, submarines and bombers that launch them.
- 5 Investments:** Chapter 5 shows which financial institutions are investing in these companies – through shares, bonds and bank loans.
- 6 Policies:** Chapter 6 looks at the policies of 14 mainstream institutions in nine countries on investing in nuclear weapons companies.
- 7 Take Action:** Chapter 7 offers suggestions for encouraging financial institutions to divest, and for undertaking further research.
- 8 Financial Institutions:** Chapter 8 profiles each of the 322 financial institutions identified as investing in nuclear weapons companies.

Scope of Research

This report focuses on investments since July 2008 in a selection of 20 companies most heavily involved in modernizing and maintaining nuclear warheads, as well as developing the missiles, submarines and bombers intended to launch them. The companies are based in the United States, the United Kingdom, France, India, the Netherlands and Italy. Chapter 4 provides details of the involvement of these companies in nuclear weapons production.

FINANCIAL INSTITUTIONS

The report lists financial institutions that have been substantively involved in financing the selected nuclear weapons producers by means of share issues, shareholdings, bond issues, bondholdings and bank loans since 2008. More than half are based in the United States, and one-third in Europe. The rest are primarily from Asia (including Australia) and the Middle East. Most have significant investments in one or two of the nuclear weapons companies, while some invest in several. Among the banks and other financial institutions most heavily involved are Bank of America, BlackRock and JP Morgan Chase in the United States; BNP Paribas in France; Deutsche Bank in Germany; and Mitsubishi UFJ Financial in Japan.

INVESTMENT POLICIES

The report also examines the policies of 14 mainstream financial institutions on investing in nuclear weapons. It finds that the policies are generally not very strict and leave room to invest in producers of nuclear weapons if, for example, the investment is not targeted at the production of nuclear weapons, or only a small part of the company's turnover is generated by nuclear weapons work. Only two of the 14 financial institutions researched, Rabobank and PGGM, were found not to invest substantively in nuclear weapons producers.

Boycotting and Divestment

In four of the nine nations that possess nuclear weapons – the United States, the United Kingdom, France and India – private companies are extensively involved in the design and production of nuclear warheads, delivery vehicles, and related infrastructure. Elsewhere in the world, nuclear weapons modernization is carried out primarily or exclusively by government-owned entities, making boycotts and divestment campaigns more difficult to pursue.

BOYCOTTING

Boycotting is a method of protest that targets unethical companies directly. A well-known example of a nuclear weapons boycott is the campaign initiated in the 1980s by Infact (now Corporate Accountability International) against General Electric. GE had played a major role in nuclear weapons production since the Manhattan Project. The boycott resulted in significant financial losses for the company and damage to its brand. Ultimately, it was compelled to end its involvement in nuclear weapons work.

Direct boycotts of this kind can only be effective where nuclear weapons companies are involved in the production of consumer goods. Most nuclear weapons companies are primarily defence contractors with no consumer market. There are exceptions, however. For example, Honeywell International, in addition to producing nuclear missiles and conducting simulated nuclear tests, sells fans, heaters, thermostats and related technologies to consumers.

Boycotts can also be applied in a more general way, as in the case of the boycott of all French products in the 1990s, which helped bring an end to nuclear testing in the South Pacific. People around the world stopped buying French cheese and wine, and postal officers even refused to deliver French mail.

DIVESTMENT

Divestment differs from boycotting in that it focuses on financial institutions that invest in nuclear weapons companies, either by lending money or through the ownership of bonds and shares. The Norwegian government pension fund's disposal of investments in several nuclear weapons companies in 2004 is a well-known example of nuclear weapons divestment.

Two government entities in New Zealand, the Accident Compensation Fund and the Government Pension Fund, have also divested from some nuclear weapons stocks in response to public pressure, and a growing number of private financial institutions, including large banks, are adopting policies that exclude investments in nuclear arms makers.

Divestment campaigns have been especially effective in non-nuclear-weapon states, where the public generally assumes that financial institutions are not investing in this field. However, even in nuclear-armed states, students have managed to influence the investment decisions of their universities, and large churches have taken steps to ensure that their funds are not used for nuclear weapons production.

BOX 1

At a Glance: 20 Major Nuclear Weapons Companies

These 20 companies, which are the focus of this report, are involved in the nuclear weapons programmes of the United States, the United Kingdom, France and India. The report examines which financial institutions around the world invest in these companies through shares, bonds and loans.

Alliant Techsystems

Alliant Techsystems, or ATK, is involved in the manufacture of US nuclear-tipped ballistic missiles. It produces rocket propulsion systems for Trident II submarine-launched ballistic missiles and Minuteman III intercontinental ballistic missiles.

Babcock & Wilcox

The Babcock & Wilcox Company supplies the US government with various nuclear components for its defence programmes. It operates the Pantex plant of the National Nuclear Security Administration, where it modernizes nuclear warheads.

Babcock International

Babcock International is involved in the development of a new class of nuclear-armed submarine for the United Kingdom. It also assists with the maintenance of the country's existing fleet of *Vanguard*-class nuclear-armed submarines.

BAE Systems

BAE Systems is involved in the development of a new class of nuclear-armed submarine for the United Kingdom to replace the *Vanguard* class. It is also part of a joint venture that is producing nuclear missiles for the French air force.

Bechtel

Bechtel manages the Los Alamos and Lawrence Livermore national laboratories in the United States, which research, design and develop nuclear weapons, and monitor the "safety and reliability" of the entire US nuclear weapons stockpile.

Boeing

Boeing is involved in the maintenance of the 500 or so Minuteman III nuclear intercontinental ballistic missiles in the US arsenal. It is responsible for guidance, flight controls, secure codes, weapons systems testing and engineering.

EADS

The European Aeronautic Defence and Space Company, or EADS, is a Dutch company that produces and maintains submarine-launched nuclear missiles for the French navy, and is part of a joint venture that is building nuclear missiles for the French air force.

Finmeccanica

Finmeccanica holds a one-quarter share in MBDA, a joint venture that is building nuclear missiles for the French air force. The missiles are capable of being launched from the *Mirage 2000N* fighter plane and the new *Rafale* fighter plane.

GenCorp

GenCorp is involved in the design, development and production of land- and sea-based nuclear ballistic missile systems for the United States. It is currently producing propulsion systems for Minuteman III and D5 Trident nuclear missiles.

General Dynamics

General Dynamics provides maintenance, engineering and technical support for US nuclear-armed submarines. It built the *Ohio*-class submarines for the US navy, many of which are equipped with Trident nuclear-tipped missiles.

Honeywell International

Honeywell International produces approximately 85 per cent of the non-nuclear components for US nuclear weapons. It is involved in simulated nuclear testing and the life-extension programme for the US navy's Trident II nuclear missiles.

Jacobs Engineering

Jacobs Engineering owns a one-third share in the Atomic Weapons Establishment, which designs, manufactures and maintains the nuclear warheads for the United Kingdom's submarine-launched intercontinental ballistic missiles.

Larsen & Toubro

Larsen & Toubro is involved in the design and construction of five nuclear-armed submarines for the Indian navy, each of which will be equipped with 12 missiles. The company has also tested a launch system for India's nuclear missiles.

Lockheed Martin

Lockheed Martin is involved in the production and maintenance of nuclear weapons for both the United States and United Kingdom. It is responsible for the construction of submarine-launched Trident II D5 nuclear missiles.

Northrop Grumman

Northrop Grumman leads a joint project responsible for producing and maintaining Minuteman III nuclear intercontinental ballistic missiles for the United States. Roughly 500 such missiles form the core of the US land-based nuclear arsenal.

Redhall Group

Redhall Group operates within the nuclear weapons industry via contracts with the British Ministry of Defence carrying out mechanical and electrical engineering activities at the Atomic Weapons Establishment in Aldermaston and Burghfield.

Rolls-Royce

Rolls-Royce is part of a joint venture in the United Kingdom to develop *Successor*, a new class of nuclear-armed submarine. It is also involved in the maintenance of the existing fleet of *Vanguard*-class nuclear-armed submarines.

Safran

Safran is part of a joint venture to build the new M51 submarine-launched nuclear missiles for the French navy, which each deliver multiple warheads. Its subsidiaries Snecma and Sagem provide the propulsion and navigation systems for these missiles.

Serco Group

Serco owns a one-third share in the joint venture AWE-ML, which runs the British Atomic Weapons Establishment. It is responsible for manufacturing and maintaining the nuclear warheads for the country's submarine fleet.

Thales

Thales is part of a joint venture to build the new M51 submarine-launched nuclear missiles for the French navy, which each deliver multiple warheads. EADS's subsidiary Astrium is the lead contractor, whereas Thales is a main subcontractor.

Summary of Findings: The Financing of Nuclear Weapons Companies

This table lists by country the 322 financial institutions identified in this report as being substantively involved in financing nuclear weapons producers. Full details of their participation in recent share and bond issues, the value of their share- and bondholdings and the bank loans they have provided can be found in Chapter 5, which is ordered by nuclear weapons company. For general information about the financial institutions listed, see Chapter 8.

KEY: TYPES OF FINANCING

- Si** Financial institution participated in at least one **share issue** of the nuclear weapons producer from July 2008 to December 2011.
- S** Financial institution owns or manages at least 0.5% of the nuclear weapons producer's **shares** at the most recent filing date.
- Bi** Financial institution participated in at least one **bond issue** of the nuclear weapons producer from July 2008 to December 2011.
- B** Financial institution owns or manages at least 0.5% of the nuclear weapons producer's **bonds** at the most recent filing date.
- L** Financial institution participated in at least one **bank loan** of the nuclear weapons producer from July 2008 to December 2011.

	ALLIANT TECHSYSTEMS	BARCOCK & WILCOX	BARCOCK INTERNATIONAL	BAE SYSTEMS	BECHTEL	BOEING	EADS	FINMECCANICA	GENCORP	GENERAL DYNAMICS	HONEYWELL INTERNATIONAL	JACOBS ENGINEERING	LARSEN & TOUBRO	LOCKHEED MARTIN	NORTHROP GRUMMAN	FEDHALL GROUP	ROLLS-ROYCE	SARRAN	SERCO GROUP	THALES	
AUSTRALIA																					
ANZ			L	L	Bi L	L				Bi L				Bi L			L			L	
Commonwealth Bank of Australia			L			L											L				
Macquarie Group								B							S						
Platinum Investment Management												S									
Westpac						L	L			L											
AUSTRIA																					
Erste Bank							L														
BAHRAIN																					
Arab Banking Corporation						L															
Gulf International Bank					L												S				
BELGIUM																					
Ackermans & van Haaren																S					
Dexia								L													
KBC Group																S					
CANADA																					
Bank of Montreal										Bi L											
CIBC																				B	
Gryphon International																				S	
Manulife Financial				B		B	B														
Ontario Teachers' Pension Plan				S																	
Power Corporation of Canada	B														S B						

S = **SHARES** (≥0.5%) B = **BONDS** (≥0.5%) L = **BANK LOAN** (SINCE JULY 2008) Si = **SHARE ISSUE** (SINCE JULY 2008) Bi = **BOND ISSUE** (SINCE JULY 2008)

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Royal Bank of Canada	Bi L					Bi L	L				L			Bi			L			
Scotiabank		L			L					Bi L					L					
Sun Life Financial				B							S			S	S		S			
Toronto-Dominion Bank				L			L			Bi L							L			
CHINA																				
Bank of China						L														
ICBC						L	L													
SAFE Investment Company																			S	
DENMARK																				
Danske Bank											L									
EUROPE																				
European Investment Bank								L									L	L		
FRANCE																				
AXA	B	S		S		B					B				S B		S		S	
BNP Paribas	L	L		Bi L	L	Bi L	Bi L	Si Bi Bi L			Bi L			Bi	Bi L		Bi L	Bi B L		Bi B L
Cov�ea Mutal Insurance Group																			B	
Cr�dit Agricole		L		L		Bi L	Bi L	Bi L			L			Bi L			L	Bi L	L	Bi B L
Cr�dit Mutuel			L	L	L		L	L											L	L
Financiere de l'Echiquier																				S
Groupe BPCE	S					S Bi	S Bi	L Bi B L		S					S				L	Bi B L
Oddo & Cie																			S	
Soci�t� G�n�rale				L	L	Bi L	Bi L	Si Bi L			S Bi L						L	Bi L		Bi L
GERMANY																				
Allianz	S B			S B		S B				B	B			S B	S B			S B	S	
BayernLB			L	L		L	Bi L	L									L		L	
Commerzbank				L		Bi L	Bi L	Bi L									L	L		L
DekaBank							B													B
Deutsche Bank	S			S Bi L		Bi L	Bi L	Si Bi L	S B	S	Bi L		S	S Bi			L	L		Bi L
DZ Bank							L	L												B
Helaba							L													
KfW							L													
Landesbank Baden-Wurttemberg								L												
Munich Re				B																
Universal-Investment-Gesellschaft																S				

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INDIA																				
Edelweiss Capital													Bi							
Equirus Capital													Si							
General Insurance Corp. of India													S							
ICICI Bank						Bi L							L							
JM Financial													Si Bi							
Kotak Mahindra Bank													Bi							
L&T Employees Welfare Foundation													S							
Life Insurance Corporation of India													S							
New India Assurance Company													S							
Reliance Anil Dhirubhai Ambani													S L							
State Bank of India													Bi							
UTI Asset Management													S							
Yes Bank													Bi							
IRELAND																				
Allied Irish Banks		L																		
ITALY																				
Banca Leonardo																			B	
Banca Monte dei Paschi di Siena								Bi L												
Banca Popolare di Milano								L												
Banca Popolare di Sondrio								L												
Banca Popolare Emilia Romagna								L												
Banca Popolare di Vicenza								L												
Banco Popolare								L												
Credito Emiliano								Si Bi												
Gruppo Carige								L												
Intesa SanPaolo				L	Bi L	L		Si Bi B L		Bi	Bi L			Bi	Bi					L
Mediobanca								Si L												
UBI Banca								L												B
Unicredit							L	Si Bi L			L									L
JAPAN																				
Daiwa Securities Group						Bi			B											
Mitsubishi UFJ Financial	Bi L	L	L	L	L	Bi L	Bi L	L		Bi L	Bi L			Bi L	Bi		L	L		L
Mizuho Bank	L				L	Bi L	L			Bi L	L			Bi L						
Nomura								Si Bi												
Sumitomo Mitsui Banking		L		L		Bi L	L	L		Bi L	L			Bi L	L		L			L

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JORDAN																					
Arab Bank					L	L															
KUWAIT																					
Kuwait Investment Authority			S																		
National Bank of Kuwait					L																
LIBYA																					
Libyan Investment Authority								S													
NETHERLANDS																					
AEGON	B		S	B		B		B			B							S		S	
ING						Bi L	L				B								L		
Unilever Pensioenfonds Progress																S					
NORWAY																					
DnB											L										
Government Pension Fund Global		S	S									S						S			S
RUSSIA																					
Vnesheconombank							S														
SAUDI ARABIA																					
Riyad Bank					L	L				L				L							L
SINGAPORE																					
DBS						L	L				L			L					L		
United Overseas Bank	L																				
SPAIN																					
Banco Santander						Bi L	L	Bi L		L	L							B L	L		Bi L
BBVA		L			L	Bi L	Bi L	Si Bi L		Bi L	Bi L										L
Grupo Entrecanales								S													S
SWEDEN																					
Nordea Bank																					L
Skandinaviska Enskilda Banken				L			L														
Svenska Handelsbanken										L											
Swedbank												S				S					

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🇨🇭 SWITZERLAND																				
Credit Suisse			S	Bi L		Bi L	L	Si L					Si		S Bi					
Jabre Capital Partners	B																			
Julius Baer																			B	
Pictet & Cie																	S			
Swiss Reinsurance Company										B	B									
Swisscanto																	B		B	
UBS				S L		S Bi L	B L	S Bi L	B	S	Bi	S		Bi L	S					
🇨🇳 TAIWAN																				
Bank of Taiwan										L										
Chang Hwa Commercial Bank	L																			
First Commercial Bank	L																			
Hua Nan Financial Holdings	L																			
🇦🇪 UNITED ARAB EMIRATES																				
Abu Dhabi Commercial Bank					L															
National Bank of Abu Dhabi						L				L										
🇬🇧 UNITED KINGDOM																				
Aberdeen Asset Management																				S
Altium Capital																	Si			
Aviva			S	S B		B			B	B				B	B					
BAE Systems Pension Funds Investment Management			S																	
Baillie Gifford & Co.																		S		S
Barclays			S L	S Bi L	L	Bi L	Bi L	Bi L		Bi L	Bi L		Si Bi	L		S	Bi L		L	L
Charles Stanley Group																	S			
Close Brothers Group																	S			
Co-operative Group																		B		S
Collins Stewart Hawkpoint																S				
Egerton Capital			S																	
F&C Asset Management			S	S																
Hermes			S																	
HSBC			L		L	L	L			Bi L		Si Bi			L	L	Si L	L	L	L
Ignis Asset Management			S														S		S	
Invesco	S	S	S	S					S	S	S						S		S	
Investec Asset Management																	B			
Jupiter Asset Management			S	S																
Lansdowne Partners																				S

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Legal & General			S	S													S		S	
Lewis Trust Group																S				
Liontrust Asset Management																S				
Lloyds Banking Group			S L	S L	L	Bi L	L	B		Bi L				Bi L			S L		S L	
Longview Partners															S					
Majedie Asset Management			S	S															S	
Marathon Asset Management				S																
Mondrian Investment Partners																			S	
National Farmers Union Mutual Insurance Society			S																	
North Atlantic Value																S				
Octopus Investments																S				
Old Mutual	S		S								S	S			S					
Premier Asset Management			S																	
Prudential	B		S	S B					S							S	S B			
Royal Bank of Scotland	Bi B L		L	L	L	Bi L	Bi L	Bi L		Bi L	Bi L			Bi	Bi L	S	Bi L	Bi L	L	Bi L
Royal London Mutual Insurance Society			S																	
Schroder Investment Management			S										B				S			
Standard Chartered						Bi L					L		Bi							
Standard Life			S	S						S									S	
SVG Capital																S				
TT International			S																S	
Universities Superannuation Scheme			S													S				
UNITED STATES																				
Abrams Bison Investments										S										
Adage Capital Management										S										
Affiliated Managers Group	S		S																	
AIG				B		B		B			B			B	B					
Algert Coldiron Investors									S											
Allstate Corporation	B			B		B				B	B			B	B					
American Century Investments	S									S										
American Express Company	B	S		S					S	S	S	S		S	S B		S			
American National Insurance Company										B					B					
Anchor Capital Holdings		S																		
Angelo, Gordon & Co.										B										
AQR Capital Management									S B										B	
Argyll Research												S								

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DON'T BANK ON THE BOMB

	ALLIANT TECHSYSTEMS	BABCOCK & WILCOX	BABCOCK INTERNATIONAL	BAE SYSTEMS	BECHTEL	BOEING	EADS	FINMECCANICA	GENCORP	GENERAL DYNAMICS	HONEYWELL INTERNATIONAL	JACOBS ENGINEERING	LARSEN & TOUBRO	LOCKHEED MARTIN	NORTHROP GRUMMAN	REDHALL GROUP	ROLLS-ROYCE	SAFRAN	SERCO GROUP	THALES
Aronson Johnson Ortiz	S														S					
Arrowstreet Capital				S					S											
Artisan Partners			S									S								
Bank of America	S Bi L	L	Bi L	L	L	Bi L	L	Bi L		S Bi L S	Bi L	S		S Bi L	S		Bi L		Bi L	
BB&T Corporation	L	L																		
Beach Point Capital Management									S B											
Bessemer Group									B		S									
BlackRock	S	S	S	S		S B	S	S	S	S B	S B	S	S	S B	S		S B	S	S	S
Blaylock & Co						Bi														
BNY Mellon	S L	S		S	L	S Bi L			S	S Bi L	S L	S		S	S L				S	S
Brown Advisory Holdings									S			S								
Calamos Asset Management		S																		
CalPERS									S											
Cantillon Capital Management			S																	S
Capital Group				S		S	S	S		S	S B	S		S	S B				S	
Castle Creek Arbitrage	B																			
Causeway Capital Management																	S			
Chieftain Capital Management														S						
Citadel Investment Group	B								B											
Citi				Bi L	L	Bi L	L	Bi L	B		Bi L		Si Bi	Bi L	Bi L		L	L		L
CNH Partners									B											
CNO Financial Group													B	B						
Comerica		L				Bi														
Cowen & Company										Bi										
D.F. Dent & Company												S								
Davis Selected Advisers													S							
Dimensional Fund Advisors			S						S					S						
Dreman Value Management	S																			
Eaton Vance						S				S		S	S							
Eidelman Virant Capital									S											
Evercore Partners						S					S									
Farmers Insurance Group															B					
Fidelity	S B		S	B		S			B		S	S		S		S	S	S B	S	
Fiduciary Management	S																			
Fifth Third Bancorp		L																		
First Eagle Investment Management	S												S	S						
First Trust Advisors	B			S																
Fisher Investments						S					S									
Franklin Templeton			S	S					S	S						S	S			

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	ALLIANT TECHSYSTEMS	BARCOCK & WILCOX	BARCOCK INTERNATIONAL	BAE SYSTEMS	BECHTEL	BOEING	EADS	FINMECCANICA	GENCORP	GENERAL DYNAMICS	HONEYWELL INTERNATIONAL	JACOBS ENGINEERING	LARSEN & TOUBRO	LOCKHEED MARTIN	NORTHROP GRUMMAN	REDHALL GROUP	ROLLS-ROYCE	SAFRAN	SERCO GROUP	THALES
Gabelli Group									B S		S						S			
GenCorp Retirement Savings Plan									S											
General Electric	S L										S									
Genworth Financial				B		B					B			B	B					
Geode Capital Management						S				S	S	S		S	S					
Glazer Capital																			B	
GlenRock									S											
Glenview Capital Management		S																		
Goldman Sachs				Bi L	L	S Bi L	L	Si Bi L		Bi	S Bi L			Bi L	S Bi L		L		S	
Guardian Life Insurance Company	B																			
Hancock Holding		L																		
Hartford Financial Services Group				B		B		B		B				B	B					
Herndon Capital Management		S																		
Hotchkis and Wiley Capital Management	S													S	S					
Imperial Capital Group									Bi											
International Value Advisers																				S
Iridian Asset Management										S										
Jackson National Life Insurance				B		B								B	B					
Jacobs Levy Equity Management	S																			
Janus Capital		S										S								
Jefferies Group													B							
JP Morgan Chase	S B L	L	S Bi L	Bi L		Bi L	Bi L	Bi L	S	Bi L	S Bi L			S Bi L	S Bi L		Bi L			
Keeley Asset Management		S																		
Kennedy Capital Management									S B											
KeyCorp	L					S Bi L														
Knights of Columbus											B									
Lawson Kroeker Investment Management									S											
Lazard									Bi B	Bi	S									
Legg Mason		S							S		S	S			S					
Lehman Brothers (now bankrupt)								L												
Liberty Mutual Holding Company				B										B						
Lincoln National Corporation				B						B	B			B	B					
Loews Corporation				B											B					
Longview Asset Management										S										S
Loop Capital Markets						Bi														
Lord, Abnett & Co.	B											S								
Los Angeles Capital Management and Equity Research	S																			
LSV Asset Management														S	S					

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DON'T BANK ON THE BOMB

	ALLIANT TECHSYSTEMS	BABCOCK & WILCOX	BABCOCK INTERNATIONAL	BAE SYSTEMS	BECHTEL	BOEING	EADS	FINMECCANICA	GENCORP	GENERAL DYNAMICS	HONEYWELL INTERNATIONAL	JACOBS ENGINEERING	LARSEN & TOUBRO	LOCKHEED MARTIN	NORTHROP GRUMMAN	REDHALL GROUP	ROLLS-ROYCE	SAFRAN	SERCO GROUP	THALES	
M.R. Beal & Co						Bi															
Madison Investment Advisors												S									
Managed Account Advisors	S	S												S	S						
Manning & Napier Advisors						S															
Marsico Capital Management										S											
Mason Capital Management		S																			
MassMutual	B			B										B	B	S					
Matthews International Capital													B								
Medical Liability Mutual Insurance															B						
MetLife	B			B		B		B			B			B	B						
MFP Investors									S												
Michigan Department of Treasury												S		S							
Moody Aldrich Partners		S																			
Morgan Stanley	S			Bi L		S Bi L	Bi L	Si Bi L	Bi		S L			Bi L	Bi				Si		
Nationwide											B										
Neuberger Berman	S					S															
New Jersey Division of Investment												S									
New York Life	B			B		B			B	B	S B			B	B						
Northeast Investors	B																				
Northern Cross																	S				
Northern Trust	S B	S		S	L	S L			S	S L	S L	S		S L	S L						
Northwestern Mutual				B		B		B		B	B			B	B						
Nuveen Investments	S							S	B					S					B		S
Oaktree	B								B												
OppenheimerFunds	B	S					S														
Osterweis Capital Management									B										B		
Pacific Heights Asset Management										B											
Pacific Mutual Holding Company				B											B						
Palisade Capital Management									B												
Penn Mutual Life Insurance											B										
Pennant Capital Management		S																			
People's United Financial	L																				
PNC Bancorp	L	L				Bi L				Bi L											
Primecap Management Company		S				S	S				S										
Principal Financial Group	S			B		B			B		B			B							
Progressive Corporation															B						
Prospector Partners	B																				
Protective Life Corporation															B						
Prudential Financial	B		Bi	B		S B				B	B			B	S B						

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	ALLIANT TECHNOLOGIES	BARBOCK & WILCOX	BARBOCK INTERNATIONAL	BAE SYSTEMS	BECHTEL	BOEING	EADS	FINMECCANICA	GENCORP	GENERAL DYNAMICS	HONEYWELL INTERNATIONAL	JACOBS ENGINEERING	LARSEN & TOUBRO	LOCKHEED MARTIN	NORTHROP GRUMMAN	REDHALL GROUP	ROLLS-ROYCE	SAFRAN	SERCO GROUP	THALES
Pzena Investment Management				S											S					
QS Investors															S					
Radcliffe Capital Management									B									B		
Regions Financial Corporation		L																		
Relational Investors		S																		
Renaissance Technologies	S																			
Ruane, Cunniff & Goldfarb																	S			
Rydex		S																		
Samuel A Ramirez & Co						Bi														
Shapiro Capital Management		S																		
Siebert Financial Corporation						Bi														
Silchester International Investors				S																
State Farm									B	B			B	B						
State Street	S	S	S	S	S L			S	S	S	S	S	S L	S		S			S	
State Teachers Retirement System of Ohio												S								
Steel Partners								S B												
SunTrust	Bi L								Bi L						Bi L					
Symetra Financial				B	B					B			B	B						
T. Rowe Price Group		S			S					S			S				S		S	
Teton Advisors								S												
Thrivent Financial for Lutherans														B	B					
TIAA-CREF	S B	S		B	S B		B	S	B	S B	S		S B	S B						
Toussaint Capital Partners						Bi														
Travelers Companies	B																			
United Services Automobile Association															B					
Unum Group	B			B	B									B	B					
US Bancorp	Bi L	L			L	Bi L			Bi L	L				Bi L						
Utendahl Group						Bi														
Van Eck Associates Corporation												S								
Vanguard Group	S	S	S		S B			S	S B	S B	S	S	S B	S B						
Waddell & Reed Financial						S														
Weiss Asset Management								S												
Wellington Management						S			S	S	S		S	S					S	
Wells Fargo	Bi B L	L		L	L	S Bi L		S	Bi L	L	S		Bi L	S Bi L						
Western & Southern Financial	S																			
William Blair & Company			S									S					S			
Williams Capital Group						Bi			Bi											
Wolverine									B											

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Methodology

DEFINITIONS USED

- **Nuclear Weapons Producer:** For the purposes of this research, a nuclear weapons producer is defined broadly as a company involved in designing, manufacturing, modernizing or maintaining nuclear weapons, their significant, specific components, or the missiles, submarines or bombers to deliver them. The portion of the company's overall enterprise that is devoted to nuclear-weapons-related work is not relevant.
- **Financial Institution:** A financial institution is an institution that provides financial services for its clients or members. The definition includes deposit-taking institutions that accept and manage deposits and make loans, such as banks, credit unions and trust companies; insurance companies and pension funds; and brokers, underwriters and investment funds.
- **Substantive Involvement:** This report identifies financial institutions around the world that are "substantively involved" in the financing of nuclear weapons producers by providing corporate loans, project finance or working capital facilities; by underwriting share and bond issuances; and by (managing) investments in shares and bonds. All loans and underwriting deals since 1 July 2008 are considered to be of substantive importance. Share- and bondholdings are considered to be substantive if they were held in the past year and if they cross the threshold of 0.5 per cent of the company's outstanding shares or bonds.

SELECTION OF THE PRODUCERS

The selection of the 20 nuclear weapons companies included in this report was based on availability of information on the company's involvement in the production of nuclear weapons and the likelihood that the company is predominantly financed by financial institutions.

Most companies are therefore publicly listed companies. State-owned companies in nuclear-armed countries such as Russia, Pakistan and India, as well as smaller private companies in other nuclear-armed nations, were not included in the list.

Information was compiled using the websites and annual reports of military companies, military and government sources, research reports, trade magazines and general press reports.

INFORMATION ON FINANCING

Information on which financial institutions are involved in financing the 20 selected nuclear weapon producers was researched using annual reports, stock exchange filings and other publications of the companies concerned; archives of trade magazines, local newspapers and the financial press; as well as two specialized financial databases: Thomson ONE and Bloomberg. The report examines the following types of financing:

- **Corporate Loans:** The easiest way to obtain debt is to borrow money. In most cases, money is borrowed from commercial banks. Loans can be either short term or long term in nature. Short-term loans, including trade credits, current accounts and leasing agreements, have a maturity of less than a year. They are mostly used as working capital for day-to-day operations. Short-term debts are often provided by a single commercial bank, which does not ask for substantial guarantees from the company.

A long-term loan has a maturity of at least one year, but generally of three to ten years. Long-term corporate loans are particularly useful to finance expansion plans, which only generate rewards after some period of time.

The proceeds of corporate loans can be used for all activities of the company. Long-term loans are often extended by a loan syndicate – a group of banks brought together by one or more arranging banks. The syndicate will only undersign the loan agreement if the company can provide certain guarantees that interest and repayments on the loan will be fulfilled.

- **Share Issues:** Issuing shares on the stock exchange gives a company the opportunity to increase its equity by attracting a large number of new shareholders, or to increase the equity from its existing shareholders. When it is the first time a company offers its shares on the stock exchange, this is called an initial public offering, or IPO. When a company's shares are already traded on the stock exchange, it is called a secondary offering of additional shares. To arrange an IPO or a secondary offering, a company needs the assistance of one or more (investment) banks, which will promote the shares and find shareholders. Investment banks therefore play an important role in this process.

- **Bond Issues:** Issuing bonds can best be described as cutting a large loan into small pieces and selling each piece separately. Bonds are issued on a large scale by governments as well as corporations. Like shares, bonds are traded on the stock exchange. To issue bonds, a company needs the assistance of one or more (investment) banks, which underwrite a certain number of the bonds. Underwriting is in effect buying with the intention of selling to investors. In case the investment bank fails to sell all bonds it has underwritten, it will end up owning them.
- **(Managing) Shareholdings:** Banks can, through the funds they are managing, buy the shares of a certain company. This provides the company with new equity and gives the bank a direct influence on the company's strategy. The magnitude of this influence depends on the size of the shareholding.
- **(Managing) Bondholdings:** Banks can also buy bonds of a certain company. The main difference between owning shares and bonds is that the owner of a bond is not a co-owner of the issuing company, but a creditor of the company. The buyer of each bond is entitled to repayment after a certain number of years and to a certain interest during each of these years.

THE DETAILS INCLUDED

The report provides the following information for each form of financing: the name of the company receiving financing, the type of financing (loan, guarantee, share issuance, bond issuance, share ownership, bond ownership and so on), the total amount, the date and the purpose (if known).

For loans and bonds, we include the maturity and interest rate. For share and bond ownership, we note whether the shares and bonds are owned for the bank's own account or managed on behalf of clients, and we include the name and country of origin of the financial institutions involved and the amounts provided by each financial institution.

USE OF ESTIMATES

Where the amounts for financial transactions were not available, we used estimates based on the following rules of thumb. In the case of loans – corporate loans or revolving credit facilities – 40 per cent of the total amount is committed by bookrunners and 60 per cent by other participants of the syndicate. However, if the amount committed by bookrunners is (almost) equal to or higher than the amount by participants, the reverse is used: 60 per cent for bookrunners and 40 per cent for arrangers.

For example, if there are five bookrunners and four participants and the amount of the loan is €100, the estimate will be that the bookrunners commit 60 per cent, or €12 each, and the participants 40 per cent, or €10 each. The amount provided by bookrunners is always higher than the amount provided by participants. In the case of share and bond issuances, 75 per cent of the total amount is committed by bookrunners and 25 per cent by other participants. The amount provided by bookrunners should always be higher than the amount provided by participants. In the case of share- and bondholdings, the amounts are always known, so no estimate was needed.

bonds Bonds are debt and are issued for a period of more than one year. When an investor buys bonds, he or she is lending money. The seller of the bonds agrees to repay the principal amount of the loan at a specified time.

bookrunner The managing underwriter for a new bond or share issue. The book runner maintains the book of securities sold.

creditor Lender of money.

parent company A firm that owns or controls other firms which are legal entities in their own right.

revolving credit agreement A legal commitment wherein a bank promises to lend a customer up to a specified amount during a specified period.

shares Certificates or book entries representing ownership in a corporation or similar entity.

stock exchange A formal organization that is made up of members that use the facilities to exchange certain common stocks.

subsidiary A foreign-based affiliate that is a separately incorporated entity under the host country's law.

syndicate A group of banks that acts jointly, on a temporary basis, to loan money in a bank credit or to underwrite a new issue of bonds.

term loan A bank loan for a specified amount that matures in between one and ten years and requires a specified repayment schedule.

tranche One of several related securities offered at the same time, usually with different characteristics.

underwrite To guarantee, as to guarantee the issuer of securities a specified price.

Why Divest

The Humanitarian, Legal and Environmental Cases

Divestment sends a clear signal to defence contractors, the financial sector and governments that involvement in the nuclear weapons industry is unacceptable. It helps to build acceptance of the illegality and illegitimacy of nuclear weapons, and draws attention to their catastrophic humanitarian and environmental effects.

The active support of financial institutions will be crucial to the success of worldwide efforts to eliminate nuclear weapons. Divestment from nuclear weapons companies is an important way for banks, insurers, pension funds and asset managers to contribute to the delegitimization of nuclear weapons, challenge programmes to modernize existing nuclear arsenals, and prevent the further proliferation of nuclear weapons. The ultimate aim of divestment is to force nuclear weapons companies to withdraw from the nuclear weapons industry.

While it is unlikely that divestment by a single financial institution would create sufficient pressure on a company for it to end its involvement in nuclear weapons work, divestment by multiple institutions based on the same ethical objection could have a significant impact on the company's strategic direction. If institutions sold their shares in these corporations en masse – redirecting their funds towards less risky investment options – their directors may decide to reduce reliance on nuclear weapons contracts and expand into other areas.

10 Arguments for Divestment

- 1 Inhumane Weapons:** Financial institutions should not invest in companies that produce weapons which, through their ordinary use, cause catastrophic humanitarian harm.
- 2 Illegal Weapons:** Financial institutions should not assist the manufacture of weapons that are illegal to use and are subject to an international law obligation of elimination.
- 3 Environmental Harm:** Financial institutions should divest from companies that produce weapons that cause widespread, long-term and severe environmental damage.
- 4 Threat to the Peace:** Financial institutions should not invest in the modernization of nuclear weapons, as this undermines disarmament efforts and stimulates nuclear proliferation.
- 5 Reputational Risk:** Investing in nuclear weapons can harm a financial institution's public image. Opinion polls globally show strong public opposition to nuclear weapons.
- 6 Risk of a Consumer Boycott:** Financial institutions risk being targeted for consumer boycotts if they refuse to divest from nuclear weapons companies.
- 7 Unsafe Investments:** Investing in nuclear weapons companies is inherently risky given the danger of accidents involving radioactive contamination at nuclear weapons facilities.
- 8 Positive Contribution:** Divestment will make a positive contribution in the struggle to eliminate nuclear weapons by forcing companies to get out of the nuclear weapons business.
- 9 Happy Employees:** Investing in nuclear weapons companies can be bad for staff morale, while divestment makes employees proud to work for an ethically minded institution.
- 10 Improved Corporate Image:** Excluding nuclear weapons companies will improve a financial institution's corporate image, and give it a competitive edge over other companies.

BOX 3

Survivor's Testimony: When Hell Descended on Earth

Setsuko Thurlow survived the US atomic bombing of Hiroshima in 1945. She is now active in global efforts to eliminate nuclear weapons, having addressed the United Nations and visited schools to inspire the next generation to take action for a nuclear-free future. Here she describes the horror of the nuclear bombing and urges banks and other financial institutions to divest from companies that produce nuclear weapons.

ICAN: Why do you believe that nuclear divestment is so important?

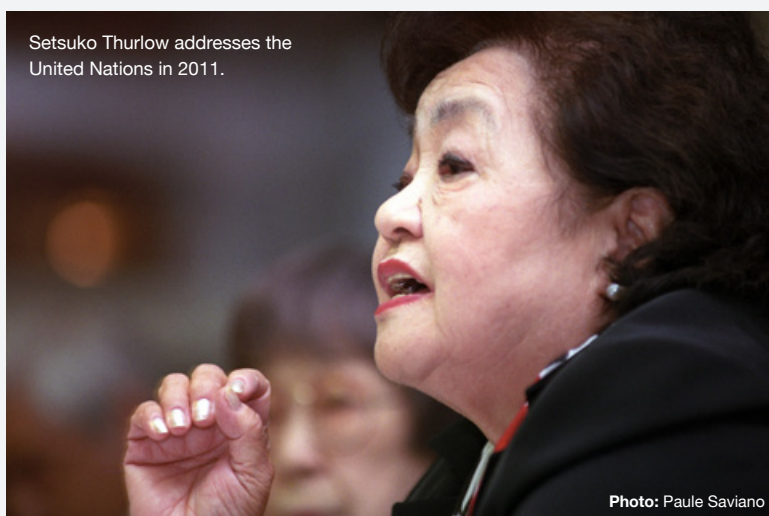
Setsuko Thurlow (ST): As a survivor of the atomic bombing of Hiroshima, I am outraged that nations continue to modernize their nuclear arsenals in spite of their leaders' repeated promises to work for disarmament. Billions of dollars are being wasted on nuclear weapons during a time of global financial restraint, when money should be directed towards meeting human needs.

The survival and wellbeing of humanity are vastly more important than the profits that banks and other financial institutions might make by investing in companies that produce nuclear weapons. In the interests of peace and security, financial institutions should divest from the makers of these immoral, inhumane and illegal weapons.

Divestment is one of the most effective ways to advance nuclear disarmament. By financing nuclear weapons companies, banks directly facilitate the build-up of nuclear forces globally and impede disarmament.

ICAN: What advice can you offer to fellow disarmament campaigners?

ST: Anyone with a bank account or pension fund has the power to choose to invest his or her money ethically – in a way that does not contribute to this earth-endangering enterprise. We must each speak out and take action. If we allow this industry to continue unimpeded, we are in a sense accepting that nuclear weapons will one day be used again. Any such use would have catastrophic consequences. I urge concerned citizens everywhere to do everything in their power to prevent such a disaster. Humanity and nuclear weapons simply cannot coexist.



Setsuko Thurlow addresses the United Nations in 2011.

Photo: Paule Saviano

ICAN: Could you describe what you experienced on 6 August 1945?

ST: I was a 13-year-old grade 8 student at the time. I was with about 30 other girls working at the army headquarters as a decoding assistant. The building was 1.8 kilometres from the hypocentre of the bombing. At 8.15 a.m. I saw a brilliant bluish-white flash outside the window, and I remember having the sensation of floating in the air. As I regained consciousness in the silence and the darkness, I found myself pinned by the ruins of the collapsed building.

I began to hear my classmates' faint cries, "Mother, help me." "God, help me." Then, suddenly, I felt hands touching my left shoulder, and heard a man's voice saying, "Don't give up. Keep moving. I am trying to free you." As I came out, the ruins were already on fire. Most of my classmates who were with me in the same room were burned alive.

Although it was morning, it was as dark as twilight, with dust and smoke rising in the air. I saw streams of ghostly figures, slowly shuffling from the centre of the city towards the nearby hills. They were naked and tattered, bleeding, burned, blackened and swollen. Parts of their bodies were missing. Flesh and skin were hanging from their bones. We girls joined the ghostly procession, carefully stepping over the dead and dying. The silence was broken only by the moans of the injured and their pleas for water. The foul stench of burned skin filled the air.

At the foot of the hill was an army

training ground, about the size of two football fields. It was covered with the dead and injured, who were desperately begging, often in faint whispers, "Water, water, please give me water." But we had no containers to carry any water. We went to a nearby stream to wash off the blood and dirt from our bodies. Then we tore off our blouses, soaked them with water, and hurried back to hold them to the mouths of the injured, who desperately sucked in the moisture.

When darkness fell, we sat on the hillside and all night watched the entire city burn, numbed by the massive and grotesque scale of death and suffering we had witnessed. My beloved city had suddenly become desolation, with heaps of ash and rubble, and blackened corpses. Its population of 360,000 – most of whom were non-combatant women, children and the elderly – had become victims of an indiscriminate massacre.

ICAN: What has been the long-term toll of the nuclear bombing?

ST: By the end of 1945 approximately 140,000 people had perished. As of the present day, at least 260,000 have perished because of the effects of the blast, heat and radiation.

Radiation – the unique characteristic of the atomic bombing – affected people in mysterious and random ways, with some dying immediately and others weeks, months or years later. Radiation is still killing survivors today, more than six decades on.

Humanitarian Case

Investing in nuclear weapons producers is unethical given the catastrophic humanitarian harm that nuclear weapons cause. A single nuclear bomb dropped on a large city could kill millions of people. In the event of a nuclear attack, medical infrastructure is destroyed and no effective humanitarian response is possible.¹ The lingering effects of radiation cause suffering and death many years after the explosion.

Those in the vicinity who survive the blast suffer from extreme dehydration and diarrhoea, as well as life-threatening infections and severe bleeding. They also have a significantly increased risk of developing cancers, and may pass on genetic damage to their children. The atomic bombs dropped on Hiroshima and Nagasaki in 1945 have claimed hundreds of thousands of lives, with many people dying long after the bombings from radiation-induced illnesses.

Catastrophic Harm

In May 2010, the 189 parties to the nuclear Non-Proliferation Treaty – including the five original nuclear-weapon states – acknowledged, for the first time collectively, “the catastrophic humanitarian consequences of any use of nuclear weapons”.²

More recently, the Red Cross and Red Crescent movement – the largest humanitarian relief organization in the world – described nuclear weapons as “unique in their destructive power, in the unspeakable human suffering they cause ... and in the threat they pose to the environment, to future generations and indeed to the survival of humanity”.³

Nuclear weapons have been categorically condemned by the World Health Organization, the American Medical Association and the British Medical Association, with each organization concluding that there could be no adequate medical response to a nuclear war. Upon visiting Hiroshima in September 1945, a Red Cross official reported: “There are no donors, no doctors ... consequently there is no treatment.”⁴ The average nuclear weapon today is 20 to 30 times the size of the Hiroshima bomb.

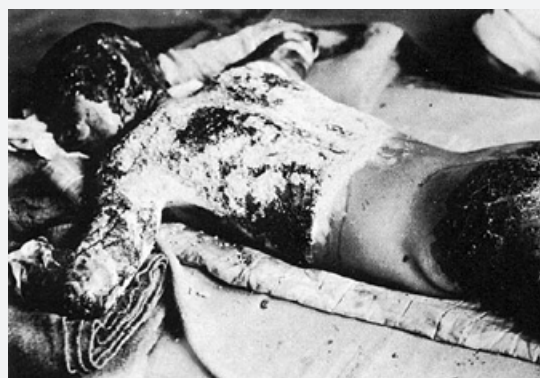
The only guarantee against the use of these inherently inhumane weapons is to eliminate them. By investing in nuclear weapons producers, financial institutions are not only facilitating the build-up and modernization of nuclear arms, but also heightening the risk of their use. Divestment will help to avert an unparalleled humanitarian catastrophe.

BOX 4

Fact Box: Effects of Nuclear Weapons

TYPES OF EFFECTS

- **Blast:** A nuclear explosion creates an enormous shockwave that reaches speeds of many hundreds of kilometres an hour. The blast kills people close to ground zero, and causes lung injuries, ear damage and internal bleeding further away. People sustain injuries from collapsing buildings and flying objects.
- **Heat:** Thermal radiation from the explosion is so intense that almost everything close to ground zero is vaporized. The extreme heat causes severe burns, and ignites fires over a very large area, which coalesce into a firestorm. Even people in underground shelters die due to the heat, lack of oxygen, and carbon monoxide/dioxide poisoning.
- **Radiation:** Unlike conventional weapons, nuclear weapons kill and wound through radiation. This damage is caused by gamma and neutron radiation in the initial blast, as well as beta, alpha and gamma radiation in the radioactive fallout.



A 100-KILOTON NUCLEAR BOMB

- 3-km radius** A radioactive fireball hotter than the sun and with the force of 100,000 tonnes of dynamite kills everyone.
- 5-km radius** The vast majority of people die quickly from blast injuries, asphyxiation and radiation sickness.
- 10-km radius** About half die from trauma and burns. Many succumb soon after to fires and radiation sickness.
- 80-km radius** Radioactive fallout spreads. Over time, many thousands will die from cancers and radiation sickness.

BOX 5

Ask a Doctor: Is Disarmament Necessary for Survival?

Any use of nuclear weapons would have catastrophic humanitarian consequences. **Tilman Ruff**, a medical doctor and chair of ICAN, argues that nuclear disarmament is a public health imperative of the highest order.

ICAN: Are nuclear weapons a global public health hazard?

Tilman Ruff (TR): Nuclear weapons are the biggest threat to global health. The world's peak health body, the World Health Organization (WHO), undertook detailed studies in the 1980s of the health dangers posed by nuclear weapons. In response to these authoritative reports, the World Health Assembly, made up of health ministers from every country, concluded that nuclear weapons constitute the greatest immediate threat to the health and welfare of humankind.

Since then, new evidence has emerged that the effects of nuclear explosions would be even worse than was then realized. Like rampant global warming, but on a timescale that could be ferociously acute, nuclear weapons could end human civilization, perhaps even human survival.

ICAN: Would any medical response be possible after a nuclear attack?

TR: The relatively "small" nuclear weapon (by today's standards) detonated over Hiroshima in 1945 killed or injured 90 per cent of the physicians and nurses, and only three out of 45 hospitals in the city were able to provide even the most meager care in the absence of services, supplies and staff. Most of the injured suffered combinations of burns, blast trauma and radiation injury – difficult and demanding to treat even in optimal circumstances.

WHO concluded that it was obvious that no health service in any area of the world would be capable of dealing adequately with the hundreds of thousands or millions of severely injured people from even a single nuclear weapon detonated on a city. Most injured people would suffer terrible agony without so much as relief for their pain. The International Committee of the Red Cross recently confirmed that there is no capacity anywhere worldwide to provide effective emergency assistance to the victims of even one nuclear explosion.



WHO concluded that the only feasible approach to treatment of the health effects of nuclear weapons is prevention of their use.

ICAN: What effects would the use of nuclear weapons have on the environment and food production?

TR: At the review conference of the nuclear Non-Proliferation Treaty in 2010, almost all the world's governments agreed that any use of nuclear weapons would cause catastrophic humanitarian consequences. Radioactive fallout would spread indiscriminately across borders and cause ongoing harm and genetic damage to current and future generations.

Scientists have shown that cooling, darkening and drying of the climate worldwide would persist for over a decade following a regional nuclear war using less than one half of 1 per cent of the world's nuclear weapons. Such a conflict could unfold between India and Pakistan, in the Middle East involving Israel, or on the Korean Peninsula, but the effects would be felt worldwide. Global food production even in lands distant from the conflict would plummet over successive years, global disease epidemics would follow, and starvation on a scale never seen before can be expected to claim not only the most vulnerable – the close to one billion people already persistently hungry – but others too.

ICAN: Why should banks be concerned about the humanitarian harm caused by nuclear weapons?

TR: Use of nuclear weapons anywhere would have major repercussions for social and commercial activities of all kinds around the world. A nuclear

war would be very bad for business. Because people everywhere share a completely globalized vulnerability to the consequences of nuclear weapons being used anywhere, and because of the profound existential danger that nuclear weapons pose to current and future generations, all people, organizations and sectors have a stake in ensuring – and responsibility to ensure – that nuclear weapons are banned before they are ever again used. This requires their elimination – a vital step to achieving this is ending the manufacture of nuclear weapons.

And even if nuclear weapons are never used, their production, testing and deployment involve ongoing costs of the order of US\$100 billion annually. Re-direction of such vast resources towards vital social and environmental goals such as eradicating poverty, improving health and education, rollout of benign, renewable energy systems, and environmental protection, would greatly enhance human security, equity and social and economic stability.

Curbing investment in nuclear weapons would directly help end their production, stigmatize these most inhumane of all weapons, show leadership, and encourage others. Banks and financial institutions which make clear that they will not invest in nuclear weapons demonstrate vision and leadership, win public support, do their staff proud, and deliver on their social responsibility and sustainability obligations. A world freed from nuclear weapons is good for everyone – the business case to do the right thing and help to bring it about is compelling.

For more information, visit the website of International Physicians for the Prevention of Nuclear War: www.ippnw.org

Legal Case

Financial institutions should not invest in companies that produce illegal weapons. International law prohibits all states from using or threatening to use nuclear weapons, and imposes a universal obligation to pursue and achieve the complete elimination of nuclear weapons. Nations must refrain from engaging in activities that would make nuclear disarmament less likely or impossible to achieve.

The Illegality of Use

Nuclear weapons are unlawful to use because they are incapable of distinguishing between civilians and combatants, their effects cannot be controlled in time or space, and they cause superfluous injury and unnecessary suffering. The International Committee of the Red Cross – the guardian of the Geneva

Conventions on the laws of armed conflict – has said that it finds it “difficult to envisage how any use of nuclear weapons could be compatible with the rules of international humanitarian law”.⁵






The International Court of Justice has also affirmed the illegality of nuclear weapons. In a landmark advisory opinion in 1996, it held that “the use of nuclear weapons would generally be contrary to the rules of international law”, and reminded nations of their legal duty to disarm.⁶

In addition, the UN General Assembly has declared that the use of nuclear weapons would violate the UN Charter and constitute a crime against humanity,⁷ and the UN Human Rights Committee has remarked that “nuclear weapons are among the greatest threats to the right to life which confront mankind today”.⁸

BOX 6

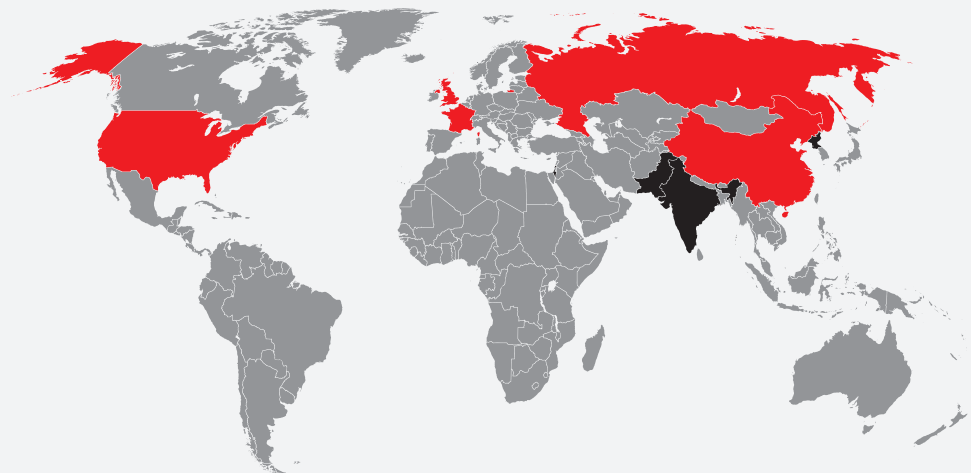
Fact Box: What Legal Obligations Is My Country Subject To?

NPT NUCLEAR-WEAPON STATES


-  United States
-  Russia
-  United Kingdom
-  France
-  China

STATES NOT PARTIES TO THE NPT


-  India
-  Pakistan
-  Israel
-  North Korea




NPT Nuclear-Weapon States

 These five nations – the United States, Russia, the United Kingdom, France and China – each possess nuclear arms. They are legally obliged, under Article VI of the Nuclear Non Proliferation Treaty (NPT), to pursue in good faith and conclude negotiations for the complete elimination of their nuclear forces. They are prohibited from engaging in activities (such as warhead modernization and the construction of new nuclear delivery vehicles) that would make this goal less likely or impossible to achieve.

NPT Non-Nuclear-Weapon States

 Under Article II of the NPT, these 184 nations are prohibited from ever receiving, manufacturing or otherwise acquiring nuclear weapons. Many of the non-nuclear-weapon states parties to the NPT also belong to regional nuclear-weapon-free zones. Such zones, like the NPT, prohibit the possession and manufacture of nuclear weapons. Along with all other nations, they are obliged to pursue nuclear disarmament and refrain from doing anything that would make the achievement of that objective less likely or impossible.

States Not Parties to the NPT

 These four nations – India, Israel, Pakistan and North Korea – possess nuclear weapons but are not subject to the requirements of the NPT, as they are not parties. Nonetheless, customary international law imposes on them the same obligation to disarm as is enshrined in Article VI of the NPT, according to the 1996 ruling of the International Court of Justice. Similarly, under customary international law, they may not engage in activities that would render achievement of nuclear disarmament less likely or impossible.

NUCLEAR DETERRENCE

Not only is it unlawful to use nuclear weapons; it is also unlawful to threaten to use them. Threats of use include specific signals of intent to use nuclear weapons if certain demands are not met, as well as general policies declaring the readiness to resort to nuclear weapons when vital interests are at stake.⁹ The doctrine of nuclear deterrence – which depends on a credible threat by a nation to use its nuclear forces – is therefore contrary to international law.¹⁰

As the United States argued at the International Court of Justice in The Hague in 1996, “it is impossible to separate the policy of deterrence from the legality of the use of the means of deterrence”.¹¹ The court stated: “If an envisaged use of weapons would not meet the requirements of humanitarian law, a threat to engage in such use would also be contrary to that law.”¹² The modernization of nuclear forces, carried out by governments and their corporate contractors, is intended to enhance the credibility of an illegal threat of use.

International Law Principles

The use and threat of use of nuclear weapons violates multiple fundamental principles of international law, including the following:

- **Distinction:** Nations are prohibited from using weapons that cannot distinguish in their effects between civilians and combatants, or between civilian and military objects.¹³ While international law accepts that weapons may cause some unintended “collateral damage”, all weapons must nonetheless be capable of being controlled and directed against a specific military target. Because the effects of nuclear weapons (especially radiation) are inherently uncontrollable, their use violates this principle.
- **Proportionality:** Nations are prohibited from launching attacks that may be expected to cause incidental loss of civilian life, injury to civilians or damage to civilian objects that would be “excessive in relation to the concrete and direct military advantage anticipated”.¹⁴ Given the catastrophic humanitarian and environmental consequences of any use of nuclear weapons, it is difficult to imagine a scenario in which the use of these weapons would be in conformity with this fundamental international humanitarian law principle.
- **Necessity:** The rule of military necessity establishes that the parties to an armed conflict do not have an “unlimited” right to choose the methods or means of warfare.¹⁵ They may only use such a level of force against their adversaries as is “necessary” or “imperatively necessary” to achieve their military objectives, and any additional level of force is unlawful. The use of nuclear weapons cannot be justified on the basis of necessity, given the availability of other, less harmful means of warfare.
- **Controllability:** The corollary requirement of controllability forbids nations from using weapons whose effects are uncontrollable.¹⁶ The International Court of Justice found in 1996 that radiation released by a nuclear explosion “has the potential to damage the future environment, food and marine ecosystem, and to cause genetic defects and illness in future generations”.¹⁷ It concluded that the effects of nuclear weapons cannot be controlled in “either time or space”.¹⁸
- **Unnecessary Suffering:** Nations are prohibited from using weapons that cause superfluous injury or unnecessary suffering.¹⁹ “Unnecessary suffering” is defined as “a harm greater than that unavoidable to achieve legitimate military objectives”.²⁰ Nuclear weapons clearly fall into the category of weapons that cause unnecessary suffering, given their blast, heat and radiation effects. Victims of a nuclear attack suffer long after a conflict has ended.
- **Protection of the Environment:** Nations are prohibited from using weapons intended or expected to cause “widespread, long-term and severe” damage to the natural environment.²¹ Any use of nuclear weapons would disperse radiation across a wide area, contaminating land, waters, seas and foodstuffs for millennia. The use of multiple nuclear weapons could cause global climatic disruption.
- **Neutrality:** Parties to a conflict are forbidden from using weapons whose effects cannot be contained within the territories of contending parties, as this would violate the international law principle of neutrality.²² The radioactive fallout from any nuclear explosion would be likely to cause damage to a large number of neutral states – not only those close to the conflict zone, but also nations far away.

THE LAW OF SELF-DEFENCE

The right of states to self-defence is subject to the constraints imposed by the UN Charter. When exercising force in self-defence, states must comply at all times with the rules of international humanitarian law, including distinction, proportionality and necessity.²³ Therefore, the right to self-defence cannot be invoked to justify the use of nuclear weapons.

Obligation to Disarm

In its 1996 advisory opinion on nuclear weapons, the International Court of Justice unanimously concluded that all nations are required by international law “to pursue in good faith and bring to a conclusion negotiations leading to nuclear disarmament in all its aspects under strict and effective international control”.²⁴ This legal obligation is based in Article VI of the Nuclear Non-Proliferation Treaty (NPT). It is not merely an “obligation of conduct”, but an “obligation to achieve a precise result – nuclear disarmament in all its aspects”.²⁵

GOOD-FAITH REQUIREMENT

Good faith is a fundamental principle of international law that requires the parties to a treaty to apply the treaty in a reasonable way and in such a manner that its purpose can be realized. In the case of the NPT, nations are prohibited from engaging in conduct that would delay or hinder the achievement of nuclear disarmament. By modernizing nuclear warheads and constructing new delivery vehicles, the five NPT nuclear-weapon states – the United States, Russia, the United Kingdom, France and China – are flouting their international legal obligations. Financial institutions are aiding their violation of international law by providing equity to the corporations carrying out the nuclear weapons work.

ABSENCE OF A UNIVERSAL BAN

Some financial institutions have contended that nuclear weapons are legitimate and legal weapons because they are not yet subject to a universal prohibition of the kind that exists for chemical and biological weapons. Yet, the NPT makes it unlawful for 184 nations ever to manufacture or acquire nuclear weapons,²⁶ and imposes an obligation on the existing nuclear-weapon states to disarm. In addition, more than 100 nations have joined nuclear-weapon-free zone treaties, further entrenching the global norm against the possession and use of nuclear weapons.

Investing in Nuclear Arms

While there is no specific treaty-based prohibition on investing in companies that produce nuclear weapons, some regional nuclear-weapon-free zones prohibit states from assisting or encouraging the manufacture of nuclear weapons. This prohibition could cover investments, depending on the nature and size of the investments. The zones include:

- **Latin American Nuclear-Weapon-Free Zone Treaty:** Nations must not take any action “to assist or encourage” the development or manufacture of nuclear weapons inside or outside the zone.²⁷
- **South Pacific Nuclear Free Zone Treaty:** Nations must not do anything “to assist or encourage the manufacture” of nuclear weapons by any other nation, whether it is in the zone or not.²⁸
- **African Nuclear-Weapon-Free Zone Treaty:** Nations must not “take any action to assist or encourage the research on, development, manufacture ... of any nuclear explosive device”.²⁹
- **Southeast Asian Nuclear-Weapon-Free Zone Treaty:** Nation must “refrain from engaging in, encouraging or authorizing, directly or indirectly, ... manufacture ... of any nuclear weapon”.³⁰

Additionally, some nations have enacted domestic legislation prohibiting companies from facilitating the manufacture of nuclear weapons. For example, in Australia it is a crime for a person or company to do “any act or thing to facilitate the manufacture, production, acquisition or testing” of nuclear weapons anywhere in the world.³¹ A company is also prohibited from providing services, including lending money, to another company if it “believes or suspects, on reasonable grounds, that the services will or may assist a weapons of mass destruction program”.³²

BOX 7

Ask a Lawyer: Are Nuclear Weapons Illegal?

*It is important that financial institutions are aware of the law relating to nuclear weapons. A leading international lawyer in this field, **John Burroughs** – director of the UN office of the International Association of Lawyers Against Nuclear Arms – explains why it is illegal to use nuclear weapons and why the modernization of nuclear forces conflicts with the universal obligation to disarm.*

ICAN: Does the use of nuclear weapons violate international law?

John Burroughs (JB): The threat or use of nuclear weapons violates fundamental rules of international humanitarian law, the law of armed conflict and the UN Charter. It is prohibited to inflict indiscriminate and disproportionate harm on civilians and civilian objects, to cause widespread, long-term and severe damage to the environment, and to cause damage to neutral states. Because the effects of a nuclear explosion are uncontrollable, those requirements cannot be met. It is also prohibited to threaten actions having those consequences.

ICAN: Are countries required by law to eliminate their nuclear weapons?

JB: The nuclear Non-Proliferation Treaty (NPT) prohibits acquisition of nuclear weapons by the vast majority of states, and there is a universal obligation, declared by the International Court of Justice and based in Article VI of the NPT and other international law, to achieve their elimination through good-faith negotiation. It cannot be lawful to continue indefinitely to possess weapons that are unlawful to use or threaten to use, are already banned for most states and are subject to an obligation of elimination.

ICAN: If a country is modernizing its nuclear forces, isn't that at odds with the duty to disarm?

JB: Under a fundamental principle of international law, the obligation to negotiate nuclear disarmament set forth in the NPT and affirmed by



The International Court of Justice ruled on the illegality of nuclear weapons in 1996.

the International Court of Justice must be implemented in good faith. Good faith means abiding by agreements in a manner true to their purposes and working sincerely and cooperatively to attain agreed objectives. Modernization of nuclear forces and the supporting technical infrastructures undermines or renders impossible achievement of the objective of global elimination of nuclear arsenals. It stimulates qualitative nuclear arms racing, instead of marginalization of nuclear forces as they are reduced and eliminated.

ICAN: What if the only aim of modernization is to maintain existing military capabilities?

JB: The long time frame for planning and executing such modernization, on the order of several decades, and the substantial spending involved, erodes the credibility of arms control and disarmament commitments and measures, and diverts governmental resources into bolstering rather than transforming the status quo. What we need are disarmament infrastructures – well-resourced governmental agencies devoted to achieving the abolition of nuclear weapons – not nuclear weapons infrastructures.

ICAN: Can countries enact laws to prohibit investments in foreign-based nuclear weapons companies?

JB: Yes, they can and should. A model is provided by the Ethical Guidelines for the Norwegian Petroleum Fund, a governmental entity. The guidelines provide that funds should not be invested in companies that produce weapons that, through their normal use, may violate fundamental humanitarian principles.

Nuclear weapons have been included among the covered weapons, and the fund has sold investments in certain companies that develop and produce them.

ICAN: Do you think that banks are generally aware of the illegality of nuclear weapons?

JB: No, but that's because banks, like others, don't want to think about it. Once you fulfil the basic responsibility owed by everyone to present and future generations of paying attention to the consequences of nuclear weapons, the conclusion is straightforward: nuclear weapons are inhumane, immoral, and illegal, and must be abolished.

Visit www.ialana.net

Environmental Case

In assessing the environmental impact of potential investment decisions, banks should take into account the environmental harm caused by the manufacture and use of nuclear weapons. Although some financial institutions have signed on to accords promoting environmental sustainability – such as the UN Principles for Responsible Investment, the Global Compact and the UN Environment Programme’s Financial Initiative – these institutions often continue to invest in nuclear weapons producers. Such investments are in no way compatible with their commitments to environmental sustainability, given the devastating environmental effects of the use, testing and production of nuclear weapons.

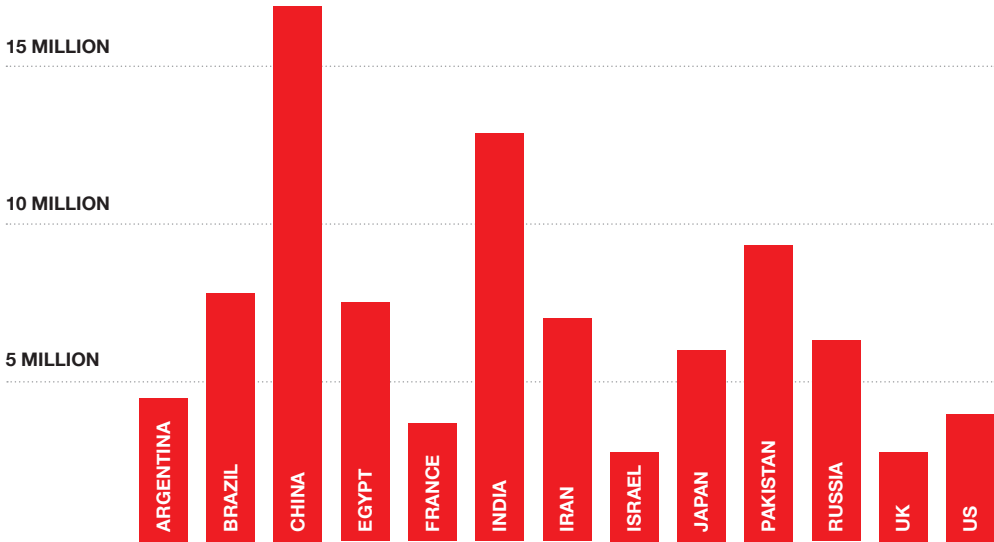
Global Climatic Disruption

Scientists predict that the use of even a small fraction of the world’s nuclear weapons – 100 Hiroshima-sized bombs – would lead to global climatic disruption, reduced sunlight and rainfall, mass starvation due to agricultural collapse, and the destruction of many plant and animal species.

Humans rely on the environment for food production, drinkable water and the natural conditions to continue life. Dramatic changes in the environment would have major effects on our own health and survival. A war fought with more than a thousand nuclear weapons would most likely leave the planet uninhabitable for all time.

NUCLEAR WEAPONS FATALITIES

This graph shows the estimated number of fatalities due to immediate radiation, blast and fire damage from an attack using 50 nuclear weapons with 15-kiloton yields on various countries.



Source: Science, 2007

BOX 8

Case Studies: Environmental Effects of Nuclear Weapons



Case Study #1: Nuclear Famine

Climate scientists have shown that a limited regional nuclear war involving 100 Hiroshima-sized nuclear weapons – a small fraction of the total number of nuclear weapons in the world today – would result in global climatic disruption. Nuclear explosions would cause smoke and soot from urban firestorms to rise into the upper troposphere and stratosphere, blocking 7–10 per cent of warming sunlight from reaching earth.

A regional nuclear war would also cause significant global cooling and reduce precipitation on average by 10 per cent. The lack of sunlight and rainfall, along with the drop in temperature, would dramatically decrease food production.

Growing seasons for many grain-producing areas would be shortened by 10 to 20 days, with some crops being unable to propagate at all. The reduced availability of food would lead to mass global famine. It is estimated that up to one billion deaths would occur from starvation alone.

This global famine would provide the perfect breeding ground for infectious diseases such as plague, typhus, malaria, dysentery and cholera. Competition for limited food would lead to further devastation, war and death caused by food riots and exacerbation of ethnic and regional animosities.



Case Study #2: Nuclear Ozone Hole

A regional or global nuclear conflict would dramatically deplete the earth's ozone layer. According to scientists, a conflict between India and Pakistan that used 50 Hiroshima-sized nuclear weapons would produce approximately 6.6 teragrams of black carbon, which would deplete the global mean ozone column by as much as 25 per cent for five years following the conflict. At mid and high latitudes, the depletion would be most severe and longest lasting.

The dramatic ozone layer depletion would have major environmental consequences, particularly due to the increase in ultraviolet radiation reaching the earth's surface. It would impact negatively on the reproduction and survival of aquatic and terrestrial plants and organisms, including phytoplankton, which absorb carbon dioxide from the atmosphere and release sulphur compounds. This has a major effect on the earth's climate, as the sulphur compounds promote cloud formation and increase global reflectance of the sun's rays.

A depletion of the ozone layer has also been proven to cause skin cancer and eye damage, and it decreases food production, as plants are unable to adapt quickly enough to the changes in the climate and ultraviolet exposure. This would therefore have negative implications for food security.



Case Study #3: Nuclear Winter

Using state-of-the-art atmospheric models developed to study global warming, scientists have demonstrated that a global nuclear war would result in the world spiralling into a winter worse than that experienced during the most recent ice age. They predict that a nuclear war using the world's entire current nuclear arsenal would cause 150 teragrams, or 5,000 megatons, of smoke to be released into the upper troposphere and upper stratosphere.

The effects would last more than a decade and include a global average drop in temperature of 7–8° C. People in North America and Eurasia would experience a drop in temperature of 20–30° C. The extreme temperatures would result in a period of no food production for several years.

The scientists have also conducted experiments to predict the results of a nuclear war using one-third of the world's current nuclear arsenal. They proved that even a limited nuclear war would result in temperature drops and reductions in precipitation of catastrophic proportions.

Although the reductions would not be extreme enough to cause a "nuclear winter", they would still cause severe and unprecedented changes in the global climate. Such a scenario has been referred to as a "nuclear autumn".

Nuclear Forces

An Overview of Nuclear Weapons Modernization

Nine nations today possess more than 20,000 nuclear weapons,³³ with a combined destructive force equivalent to 150,000 Hiroshima-sized bombs.³⁴ Despite being legally obliged to disarm, all are pursuing programmes to modernize or build up their nuclear forces – with financial institutions providing the funds to make it happen.

This chapter gives an overview of each country's nuclear weapons programme, with an emphasis on the modernization projects that are under way and the cost of such projects. The purpose is to highlight the magnitude of the problem of modernization – and the potential to tackle it through divestment.

These massive investments in the world's nuclear forces underscore the importance of building a global grassroots movement, supported by the financial sector, with the aim of strengthening the global norm against nuclear weapons, preventing further nuclear arms racing and creating the conditions for a universal ban on the use and possession of nuclear weapons.

The Nuclear Weapons Industry

In some of the nuclear-armed states – especially the United States, the United Kingdom and France – governments award contracts to corporations to carry out work on their nuclear arsenals. The corporations are responsible for designing new warheads, extending the lifetime of old ones, and building new nuclear missiles, heavy bombers and submarines.

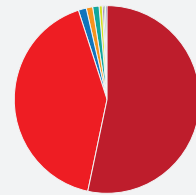
Chapter 4 profiles 20 companies that are heavily involved in the nuclear weapons industries of these three countries, as well as India. Most are listed on stock exchanges, making them effective targets of divestment campaigns. Even privately owned companies – such as Bechtel in the United States, which manages the Los Alamos and Lawrence Livermore nuclear weapons laboratories – can be challenged by persuading banks to deny them loans.

BOX 9

Fact Box: The Nuclear-Armed Nations

NUMBER OF NUCLEAR WARHEADS

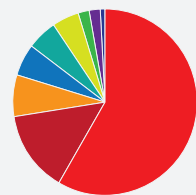
Russia	11,000
United States	8,500
France	300
China	240
United Kingdom	225
Pakistan	90–100
India	80–100
Israel	80
North Korea	<10
Total	20,530



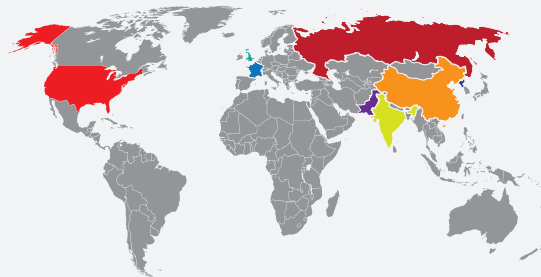
Source: SIPRI 2011

NUCLEAR WEAPONS SPENDING 2011

United States	US\$61.3b
Russia	US\$14.8b
China	US\$7.6b
France	US\$6.0b
United Kingdom	US\$5.5b
India	US\$4.9b
Pakistan	US\$2.2b
Israel	US\$1.9b
North Korea	US\$0.7b
Total	US\$104.9b



Source: Global Zero 2011



In other nuclear-armed countries – such as Russia, China, Pakistan and North Korea – the modernization of nuclear forces is carried out primarily or exclusively by government agencies. Options for divestment are therefore rather limited. A potentially more effective way to challenge their nuclear industries is to influence budgetary decision-making processes in national legislatures.

Nuclear Weapons Spending

The nine nuclear-armed nations are estimated to spend a combined total of more than US\$100 billion annually on their nuclear forces,³⁵ diverting vast public resources from health care, education, climate change mitigation, disaster relief and other services. The group Global Zero predicts that spending will exceed US\$1 trillion over the next decade, with the cost “likely [to] go significantly higher as numerous modernization programs underway are ramped up”.³⁶

THE OPPORTUNITY COSTS

Every dollar spent on nuclear weapons could be freed up and put to more effective use. In 2002 the World Bank estimated that an annual investment of just US\$40 to \$60 billion – roughly half the amount currently spent on nuclear weapons – would be enough to meet the Millennium Development Goals by the target date of 2015.³⁷ These goals include eradicating extreme poverty and hunger, achieving universal primary education, promoting general equality and women’s empowerment, reducing child mortality, improving maternal health, combating HIV/AIDS and ensuring environmental sustainability.

COMPARING THE COSTS

In 2010 official development assistance – the aid money given by industrialized nations to developing nations – totalled US\$128.7 billion.³⁸ Current nuclear weapons spending is equal to 80 per cent of this sum. The US aid contribution in 2010 was the largest in absolute terms at US\$30.2 billion³⁹ – about half the amount it spent on its nuclear arsenal that year.

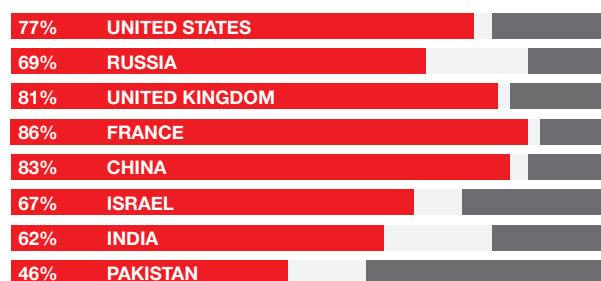
Official development assistance to Africa, the poorest continent on earth, was a paltry US\$29.3 billion in 2010,⁴⁰ or less than one-third the sum spent on nuclear weapons. As millions across the globe go hungry and are denied access to clean water, basic medicines and sanitation, the nuclear-armed nations spend US\$287 million every day – or US\$12 million an hour – on their nuclear forces.⁴¹

The total global nuclear weapons spending in 2011 of US\$104.9 billion was more than the gross domestic product of Bangladesh (US\$101 billion), a nation of 158.6 million people.⁴² One year’s nuclear weapons spending is equal to 42 years of the regular UN budget of US\$2.5 billion, or 14 years of UN peacekeeping missions.⁴³ The UN Office for Disarmament Affairs, which is the principal UN body responsible for advancing nuclear disarmament, has an annual operating budget of approximately US\$10 million⁴⁴ – less than what the nuclear-armed nations spend on their nuclear arsenals every hour. Nuclear weapons expenditure is more than 10,000 times greater than the UN disarmament budget.

Public Opinion

Opinion polls in all nuclear-armed nations (except for North Korea, where public polling is not readily available) show that a majority of people agree that a treaty should be negotiated to outlaw and eliminate all nuclear weapons.⁴⁵ Opposition to the modernization of nuclear forces has increased following major cuts in some countries to government programmes due to the global financial crisis.

SUPPORT FOR A NUCLEAR WEAPONS BAN



Source: World Public Opinion 2008

Warhead Dismantlement

Although spending on nuclear weapons appears to be increasing in most of the nuclear-armed nations, the total inventory of nuclear warheads globally is decreasing – due mainly to dismantlement of old warheads in the United States and Russia.⁴⁶

NO. NUCLEAR WARHEADS	YEAR
26,000	2007
25,000	2008
23,300	2009
22,600	2010
20,530	2011

BOX 10

Ask an Expert: How Can We Challenge Modernization?

A web of corporate players are involved in nuclear weapons modernization. **Ray Acheson**, the New York-based director of *Reaching Critical Will* – a programme of the Women’s International League for Peace and Freedom – explains the situation, and why we need to challenge the new nuclear arms race.

ICAN: Most people favour nuclear abolition, but some have a vested interest in these weapons. Who?

Ray Acheson (RA): The people who profit from the nuclear weapons industry include the owners and managers of the corporations and the laboratories that produce nuclear weapons and delivery systems, as well as their paid lobbyists.

ICAN: The military-industrial complex is a powerful force. Can individuals have any impact through divestment campaigns?

RA: Yes, divestment can have an impact. We have recently seen the success of divestment from cluster munitions production, for example. The companies that design, manufacture and modernize nuclear weapons have much to lose from divestment initiatives.

Once sub-contractors are factored in, the number of beneficiaries is immense. However, they often also receive contracts directly from their government, which means it will be important to highlight the role not just of pension plans and institutional investors in these companies, but also the role that the US Congress and other legislatures play in funnelling funds to these weapons contractors.

ICAN: There’s a lot of talk about achieving a nuclear-weapon-free world. Are governments genuine?

RA: Most government officials probably are genuine in their desire to eliminate nuclear weapons. These weapons waste billions of dollars every year, cause widespread death and environmental destruction when used, and their mere existence gives their possessors a tool with which to threaten or coerce other countries.

However, when leaders from nuclear-weapon states have merely said they “seek to achieve the vision” of a nuclear-weapon-free world, it is



Protesters challenge construction of a nuclear weapons facility in Kansas City, the United States, in 2010.

Photo: Joshua McElwee, National Catholic Reporter (US)

much less clear how genuine they are.

Their security policies that maintain nuclear weapons as either strategic or defensive tools, as well as their plans for modernization of their arsenals and related infrastructure, indicate that they are in reality paying lip service to the goal of nuclear disarmament.

They are certainly against the further proliferation of nuclear weapons, but most of them have said that they will keep their own nuclear weapons until all other nuclear weapons are eliminated. This is quite a catch-22 for disarmament.

ICAN: You said that nuclear weapons cost billions of dollars. Where exactly is the money going?

RA: Most of the money goes to the laboratories and factories where the nuclear weapons and delivery systems are manufactured, assembled and so on, and to the firms that manage these laboratories. Some money is also spent on building or replacing the facilities used to create these weapons. Money also goes to universities and firms for research and design of new and “better” nuclear weapons or delivery systems.

ICAN: How does modernization affect the chances of abolition?

RA: The modernization of nuclear weapons directly undermines the opportunities for achieving nuclear abolition. Modernization significantly

extends the lifetime of weapons and/or adds new military capabilities to them. Even while some nuclear-weapon states have agreed to “reduce” their nuclear arsenals, their modernization means that they need fewer weapons to wield the same threat.

By investing billions of dollars in nuclear weapons, delivery systems and the infrastructure to create them, governments are investing in a future where arsenals of weapons of mass destruction continue to be construed as providers of security rather than as direct impediments to security.

ICAN: Are any governments investing in disarmament?

RA: Some governments invest in disarmament by supporting non-governmental work in this area. Others invest time and resources in their diplomats to work on concrete initiatives for promoting disarmament.

The United Nations is vastly under-resourced in this area. Its Weapons of Mass Destruction branch, which is tasked with nuclear disarmament issues, is the smallest substantive branch of the UN Office for Disarmament Affairs. The overall UN budget is a pittance compared with the billions being spent on nuclear weapons every year.

For more information, visit www.reachingcriticalwill.org

United States



Summary

The United States spends more on its nuclear arsenal than all other nuclear-armed nations combined. Despite President Barack Obama's stated commitment to seek "the peace and security of a world without nuclear weapons",⁴⁷ the current administration is pursuing a long-term programme to modernize each component of the US nuclear arsenal. This includes the construction of three new nuclear warhead production facilities.

Under the Obama presidency, spending on nuclear arms has risen, and major outlays are projected for the coming decade. Meanwhile, funding for warhead dismantlement has dropped off steeply, resulting in a decline in the rate of disassembly. Several US companies are directly involved in nuclear weapons production, and many banks and other institutions finance these companies. Universities are also heavily involved in the nuclear weapons programme.

Nuclear Arsenal

The United States possesses approximately 8,500 nuclear warheads, of which 2,150 are ready for use, 2,850 are held in reserve and 3,500 are "awaiting dismantlement".⁴⁸ Its warheads are deliverable by land-based intercontinental ballistic missiles, ballistic missile submarines and heavy bomber planes. Hundreds of US nuclear weapons are set to launch automatically on warning of an enemy attack.⁴⁹

The US nuclear posture review of 2010 committed the country to maintaining its air-, sea- and land-based nuclear war-fighting capability for decades to come.⁵⁰ It decided that the nation should retain 420 deployed land-based intercontinental ballistic missiles, 14 submarines with 240 deployed ballistic missiles (each carrying multiple warheads), and 60 nuclear-armed heavy bombers equipped with gravity bombs and cruise missiles. Eight of the US nuclear-armed submarines are based in the Pacific Ocean and six in the Atlantic Ocean, with "a patrol rate comparable to that during the cold war".⁵¹

The United States is the only nation to station its nuclear weapons on foreign soil. As part of a NATO nuclear-sharing arrangement, five European nations – Belgium, Germany, Italy, the Netherlands and Turkey – host US nuclear weapons on their territory.⁵² Due to strong and persistent pressure from campaigners and governments in Europe, as well as US concerns about cost, it appears likely that these weapons will be removed in the near future. Their presence in Europe violates the nuclear Non-Proliferation Treaty.⁵³

Modernization

The United States is in the process of modernizing its entire nuclear arsenal. Its warhead "life-extension" programme involves equipping existing warheads with "new, improved and significantly modified components".⁵⁴ It is constructing three new nuclear weapons factories – in Oak Ridge, Los Alamos and Kansas City – with the capacity to produce 80 nuclear warheads a year. The estimated cost of building the factories is US\$180 billion.⁵⁵

In addition to its nuclear warhead life-extension programme, the United States is developing new nuclear weapons delivery vehicles and modernizing existing ones. For example, it is extending the service life of the Minuteman III intercontinental ballistic missiles, with a projected completion date of 2030.⁵⁶ It also plans to replace its fleet of *Ohio*-class nuclear-armed ballistic missile submarines, with construction scheduled to begin in 2019.⁵⁷

In recent years, the United States has conducted several "sub-critical" nuclear tests as part of its nuclear weapons modernization programme.⁵⁸ Unlike standard nuclear tests, they do not involve a chain reaction. Nonetheless, such tests allow the United States to make qualitative improvements to its nuclear arsenal, and are against the spirit of the Comprehensive Nuclear-Test-Ban Treaty.

Weapons Industry

Of the 20 nuclear weapons producers examined in this report, half are based in the United States. They are involved in all aspects of the US nuclear weapons programme, from designing and assembling warheads to building nuclear missiles and carrying out simulated nuclear tests. More than half of the banks and other institutions that finance nuclear weapons producers are also based in the United States.

The US nuclear weapons industry has close ties with a number of major academic institutions – particularly the University of California, which, along with Bechtel, manages the Los Alamos and Lawrence Livermore nuclear weapons laboratories.⁵⁹ These facilities have “researched, designed and tested every nuclear weapon in the US arsenal”.⁶⁰ The involvement of academia provides intellectual resources to the industry, as well as a cloak of legitimacy.

Dismantlement

During the 1990s, the United States took apart on average more than 1,000 nuclear warheads annually. In more recent years, the rate of dismantlement has slowed down considerably. An estimated 320 warheads were dismantled in 2011 compared with 648 in 2008.⁶¹ There has been a corresponding decline in expenditure on dismantlement. In the 2009 fiscal year it was US\$186 million, which was slashed to US\$96 million in 2010 and just US\$58 million in 2011.⁶²

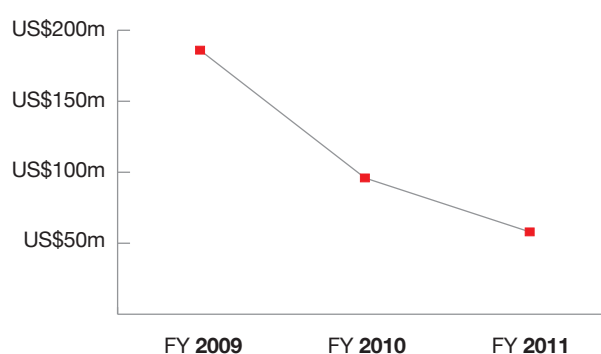
As spending on the modernization of nuclear weapons has increased, disarmament work has been scaled back because the same facilities are used for disassembly as for warhead modernization. In other words, “refurbishing” old nuclear warheads has taken priority over dismantlement. The United States now spends at least 1,000 times more maintaining, manufacturing and modernizing nuclear weapons than it does on dismantling warheads.

Expenditure

Annual expenditure by the United States on nuclear weapons exceeds that of all other nuclear-armed nations put together. In 2011 it spent an estimated US\$61.3 billion.⁶³ By comparison, Russia spent US\$14.8 billion. Massive increases in spending are projected. According to the Ploughshares Fund, the total cost of implementing the Obama administration’s modernization plans over the coming decade will be US\$700 billion – including US\$100 billion to sustain and modernize delivery systems and US\$92 billion to modernize and maintain nuclear warheads and warhead production facilities.⁶⁴

The United States spends twice as much on its nuclear weapons as it does on foreign aid.⁶⁵ Its annual nuclear weapons budget of US\$61.3 billion is roughly equivalent to the gross domestic product of Sudan and South Sudan (US\$62 billion), whose combined population is 45 million.⁶⁶ One year of US spending on nuclear weapons could fund the United Nations for a quarter of a century.⁶⁷

DROP IN US SPENDING ON WARHEAD DISMANTLEMENT



 **Russia**

 NO. WARHEADS 11,000	 SPENDING 2011 \$14.8b	 NUCLEAR TESTS 715
		
<p>Photo: A Topol-M mobile launcher used to delivery nuclear missiles.</p>		

Summary

Russia has the largest nuclear arsenal of any nation, consisting of approximately 11,000 warheads, with 2,400 of them ready for use.⁶⁸ Many are maintained on constant hair-trigger alert.⁶⁹ Russia is overhauling much of its nuclear arsenal and has plans to deploy new intercontinental ballistic missiles and a new type of submarine-launched ballistic missile.

Nuclear Arsenal

Russia’s nuclear arsenal comprises heavy bombers, intercontinental ballistic missiles and submarine-launched ballistic missiles. Its 76 deployed bombers each carry between six and 16 nuclear warheads, and the 300 or so land-based intercontinental ballistic missiles in the Russian arsenal have ranges up to 15,000 km and yields up to 800 kilotons⁷⁰ – more than 50 times greater in destructive force than the Hiroshima bomb. Russia deploys 11 nuclear-armed submarines carrying a total of 576 warheads.⁷¹ Each warheads has an explosive yield of up to 100 kilotons.

Modernization

Russia is in the process of upgrading and extending the service life of all of its nuclear-armed heavy bombers.⁷² Its intercontinental ballistic missiles are also undergoing “life-extension” work, with plans to develop a new intercontinental ballistic missile system in the near future, to be completed by 2018.⁷³

The missile modernization programme has involved several test launches in recent years. From 2013, Russia intends to double its production of ballistic missiles.⁷⁴ It also plans to build up to eight new *Borey*-class nuclear-armed submarines, which will form the centrepiece of its nuclear arsenal up until 2040. Each will be equipped with 16 new Bulava missiles with a range of up to 9,000 km.⁷⁵

Weapons Industry

Rosatom, a government-owned and -operated corporation, controls the civilian and military nuclear industry in Russia. It is responsible for the country’s highly enriched uranium production, plutonium production and warhead dismantling processes. Rosatom has facilities spread throughout the country, with major storage sites and processing centres located in Ozersk and Zheleznogorsk.⁷⁶

Dismantlement

Russia is currently dismantling some of its nuclear forces, according to government statements. Many of the nation’s nuclear weapons are in storage and are said to be awaiting dismantlement. However, Russia has reaffirmed its nuclear strategy with regard to the United States, saying that it will “maintain numerical parity with the USA’s offensive strategic weapons in the most cost-effective way”.⁷⁷

Expenditure

In 2011 Russia spent an estimated US\$14.8 billion on its nuclear forces – a significant increase from the previous year (US\$9.7 billion).⁷⁸ The projected cost of modernizing the land-, sea- and air-based components of its nuclear arsenal until 2020 is US\$70 billion.⁷⁹

United Kingdom



Summary

The United Kingdom maintains a fleet of four nuclear-armed submarines, which are nearing the end of their operational lives. The decision on whether to replace them has been put off until after the next general election. Following major budget cuts to education and health care, the UK government is under mounting pressure to abandon the costly proposal to build a new class of submarines.

Nuclear Arsenal

The UK nuclear arsenal consists of up to 225 nuclear warheads, of which 160 are operationally deployed.⁸⁰ Its nuclear-armed submarines are equipped with Trident II missiles, which it leases from the US navy. The missiles are fitted with warheads designed and built at the Atomic Weapons Establishment in the United Kingdom.⁸¹ One nuclear-armed submarine is on patrol at any given time, equipped with 16 missiles carrying up to 48 nuclear warheads in total.⁸² Each warhead has a yield of approximately 100 kilotons – equivalent to seven Hiroshima bombs.

Modernization

The United Kingdom's nuclear-armed submarines will reach the end of their service lives from 2024. A strategic defence and security review by the Ministry of Defence in 2010 affirmed the country's commitment to a sea-based "nuclear deterrent" equipped with Trident missiles.⁸³ For budgetary reasons, the main decision on the acquisition, design and number of submarines has been delayed until about 2016.⁸⁴ Pending construction of the new submarines, the United Kingdom intends to extend the service lives of the existing fleet.⁸⁵

Weapons Industry

Work on the United Kingdom's nuclear arsenal is carried out primarily by the Atomic Weapons Establishment, which is operated by a consortium of Jacobs Engineering, Lockheed Martin and Serco.⁸⁶ These companies have a contract to run the nuclear weapons facilities at Aldermaston and Burghfield until 2025. Other companies, such as Redhall Group, are also contracted to provide services to the AWE.⁸⁷

The UK Ministry of Defence is working in collaboration with BAE Systems, Rolls-Royce and Babcock International to develop the proposed new submarine that will replace the existing fleet.⁸⁸ Work on the Trident missiles will be carried out in the United States, while work on the warheads will be the responsibility of the AWE.

Expenditure

The cost of designing and constructing the new nuclear-armed submarines was initially estimated at US\$40 billion, "even without missiles, warheads or running costs".⁸⁹ The UK Campaign for Nuclear Disarmament has forecast that, if the project is given parliamentary approval, the total cost of construction will be closer to US\$160 billion.⁹⁰ In 2011 the United Kingdom spent an estimated US\$5.5 billion on its nuclear weapon programme.⁹¹ According to Ministry of Defence documents, US\$1.2 billion has been committed for the construction of a new uranium enrichment facility in Berkshire.

France



Summary

France is nearing the end of its most recent nuclear force modernization cycle. All four of its new nuclear-armed submarines are now complete and operational, and its new nuclear-capable fighter aircraft has entered service. French President Nicolas Sarkozy has affirmed his country's commitment to maintaining its nuclear arsenal for the foreseeable future

Nuclear Arsenal

France possesses approximately 300 nuclear weapons of varying yields, deliverable by air and sea.⁹² Most are deployed on *Triumphant*-class submarines, one of which is on patrol at any given time. The submarines are equipped with M45 and M51 ballistic missiles. The M45 is the main strike weapon of the French military and has a range of up to 4,000 km, while the M51 can reach between 6,000 and 9,000 km.⁹³ The air component of France's nuclear arsenal consists of approximately 50 land- and carrier-based fighter aircraft, each equipped with a 300-kiloton warhead.⁹⁴

Modernization

In 2010 France deployed the fourth and final *Triumphant*-class ballistic missile submarine. These new vessels are gradually being equipped with M51 ballistic nuclear missiles, which have a significantly greater range and yield capacity than the existing M45 missiles. Several companies are involved in the production of the M51 missiles, including EADS, Safran, SNPE, DCN and Thales.

France is also modernizing its air-based nuclear component. The *Mirage* 2000N is slowly being retired and replaced by the more advanced *Rafale*, both of which are capable of delivering nuclear weapons. By 2018 all French nuclear air delivery vehicles will be completely modernized.⁹⁵ A new and improved cruise missile is being deployed with the *Rafale*, with a longer range and greater reliability than its predecessor.

France remains committed to sustaining its nuclear weapons complex, including research and development capabilities.⁹⁶

Dismantlement

In a 2008 speech given at the Cherbourg shipyard, President Sarkozy announced that France would reduce the airborne components of its nuclear weapons stockpile.⁹⁷ However, with the full deployment of the new *Triumphant*-class ballistic missile submarines, this reduction amounts to no real change to the country's nuclear weapons capacity.

Expenditure

French expenditure on nuclear weapons and their associated platforms is kept classified. However, it is estimated that in 2011 total spending was around US\$6 billion, a small increase from 2010.⁹⁸ Budgetary pressure caused by the global financial crisis has kept spending steady. Under a deal struck with the United Kingdom in 2010, French nuclear weapons facilities will be used for British nuclear weapons maintenance and computer simulations – a service for which France will charge in order to subsidize its own nuclear weapons programme.⁹⁹

China



Summary

China has approximately 240 nuclear weapons, which are deliverable from land, air and sea.¹⁰⁰ Although it does not appear to be increasing the number of warheads in its stockpile, it is enhancing the sea-based component of its nuclear forces and building new medium- and long-range nuclear missile delivery systems. The Chinese government is not known to provide contracts to private companies to carry out modernization work on its nuclear weapons.

Nuclear Arsenal

Of China's 240 nuclear weapons, roughly 185 are deployed, with rest in reserve.¹⁰¹ China's nuclear arsenal consists primarily of land-based ballistic missiles with ranges from 2,100 km to 13,000 km.¹⁰² Each missile carries one nuclear warhead. The long-range missiles are thought to be targeted at the United States and Russia, and possibly also India.¹⁰³ The newer missiles are solid-fuelled, meaning that they can be launched more rapidly than previous models. All but a few of the missiles are road-mobile.

In addition to its land-based nuclear forces, China also maintains approximately 20 nuclear bombs for delivery on H-6 bombers. The sea-based component of its arsenal is believed to consist of three submarines, each carrying 12 intermediate-range single-warhead ballistic missiles, although not all three submarines are fully operational at present.¹⁰⁴

Modernization

China is increasing the number of DF-31A road-mobile intercontinental ballistic missiles in its arsenal, as well as developing a new missile capable of delivering multiple individually targeted nuclear warheads.¹⁰⁵ It is thought to be building anti-satellite weapons and decoys designed to counter other nations' ballistic missile defences.

Between three and five nuclear-armed submarines are under construction. They are designed to carry ballistic missiles with an estimated range of 7,200 km. Once construction is complete, China will have the capacity to have at least one submarine on patrol at all times. Over coming decades, it is expected that China will increase the size of its nuclear arsenal to approximately 300 warheads.

Expenditure

It is estimated that the total cost of China's nuclear weapons programme in 2011 was US\$7.6 billion.¹⁰⁶ This accounted for roughly 5 per cent of its overall military spending. Its nuclear weapons spending is projected to increase significantly in coming years.

 **India**

 NO. WARHEADS 80-100	 SPENDING 2011 \$4.9b	 NUCLEAR TESTS 6
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Photo: An Indian Agni-II ballistic missile on a road-mobile launcher.

Summary

India is steadily increasing the size of its nuclear arsenal and enhancing its nuclear weapons delivery capabilities, with new nuclear-capable ballistic missiles and submarines under construction.

Its production of weapons-grade plutonium is set to increase in coming years. India has no nuclear disarmament programme in place and is outside the nuclear Non-Proliferation Treaty.

Nuclear Arsenal

India is thought to possess between 80 and 100 nuclear weapons, of which 50 are fully operational and actively deployed.¹⁰⁷ India has not disclosed any details about the size and composition of its nuclear arsenal. Many of its military platforms are dual-capable, meaning that they can be used to launch conventional weapons as well as nuclear weapons. This includes India's jet fighter forces and the short-range ballistic missile, Prithvi I.

Modernization

The largest area of growth in India's nuclear weapons programme is in the area of delivery systems. In 2009 India launched its first ballistic missile submarine, the *INS Arihant*, which will be capable of carrying out a nuclear strike from sea. Four other submarines of the same class are also in development.¹⁰⁸

India's ballistic missile capability is also going through a period of rapid expansion. The Agni I, with a range of 700 km, is entering its last stages of construction and could be deployed in 2012. The Agni II was successfully tested in 2010 and is reported to have a range of 2,000 km. The Agni IV, which is being developed, will have a range of 5,000 km. An intercontinental version is also under consideration.

The Indian military is researching advanced nuclear warhead technology with the aim of developing multiple-warhead ballistic missiles. This would allow it to increase the destructive capacity of its current and future ballistic missile capability. The projected deployment date is 2020.¹⁰⁹

Weapons Industry

The government-owned Defence Research and Development Organisation conducts the majority of India's nuclear weapons research.¹¹⁰ It is involved in testing and constructing the nation's ballistic missile capability, including its sea-based component.

India's plutonium is provided by several fast-breeder reactors. A number of new reactors are nearing completion. This would allow India to increase its nuclear weapons production rate by a factor of five to an estimated 28 to 35 weapons a year.¹¹¹ Some of these reactors are not under International Atomic Energy Agency safeguards.

Expenditure

In 2011 India spent an estimated US\$4.9 billion maintaining and expanding its nuclear arsenal.¹¹² This includes expenditure on delivery vehicles and the associated technology.

Pakistan



NO. WARHEADS

90–110

SPENDING 2011

\$2.2b

NUCLEAR TESTS

6

Photo: Pakistani nuclear-capable missiles.

Summary

Pakistan is making substantial improvements to its nuclear arsenal and associated infrastructure. It has no nuclear disarmament programme in place and is not a party to the nuclear Non-Proliferation Treaty.

Nuclear Arsenal

Pakistan possesses between 90 and 110 nuclear weapons.¹¹³ Its arsenal has grown substantially in recent years, from 60 to 80 nuclear weapons in 2008. Government and other sources report that the nation aims to double the size of its nuclear arsenal in the next 5 to 10 years, with the eventual goal of 250 to 350 nuclear weapons of varying yields.¹¹⁴

Pakistan's military is able to launch nuclear weapons from land and air. It possesses an estimated 50 Hatf-3 nuclear-capable ballistic missiles, with a short range of 400 km. A further 10 Hatf-4 missiles are operational, with a range of 450 km, and 25 Hatf-5 missiles, with an estimated range of 1,200 km.¹¹⁵ The primary aircraft for delivering nuclear weapons is the US-manufactured F-16.

Modernization

Pakistan is rapidly improving its ballistic missile technology. The Shaheen II missile is under development. If successful, it will have an operational range of 2,000 km. Several nuclear-capable cruise missiles are also nearing design completion. The Hatf-7 and Hatf-8 are short-range cruise missiles capable of penetrating air-defence systems.¹¹⁶

Pakistan is also improving its nuclear infrastructure to allow for an increase in its production of weapons-grade plutonium and highly enriched uranium. Two new plutonium reactors are under construction, along with a reprocessing plant. According to some analysts, these investments will help Pakistan replace its heavy uranium-based nuclear weapons with lighter and more advanced plutonium-based ones, giving its ballistic missiles a greater range.¹¹⁷

Expenditure

In 2011 Pakistan spent an estimated US\$2.2 billion on its nuclear weapons programme, up from US\$1.8 billion in 2010. Expenditure is projected to increase substantially due to maintenance costs for its new plutonium infrastructure.¹¹⁸

 **Israel**

		
NO. WARHEADS	SPENDING 2011	NUCLEAR TESTS
80	\$1.9b	?



Photo: F-15E Strike Eagle aircraft capable of carrying nuclear weapons.

Nuclear Arsenal

Israel will neither confirm nor deny that it possesses nuclear weapons. Estimates of the size of its nuclear arsenal vary considerably. Based on its production of plutonium, it is generally thought that Israel has approximately 80 nuclear warheads.¹¹⁹

Israel has a large and modern air force, mainly consisting of F-16 fighter aircraft, some of which are nuclear-capable.¹²⁰ Its ballistic missile capability is also advanced. The Jericho II ballistic missile is Israel's main nuclear strike option, with a range of 1,500 to 1,800 km. Fifty were deployed in 1990.




In addition, Israel recently acquired a sea-based nuclear option in the form of three *Dolphin*-class submarines purchased from Germany. It is widely believed that they possess nuclear-capable ballistic missiles with a range of up to 1,500 km.¹²¹

Modernization

Israel is continuing to modernize its nuclear arsenal. In recent years, several satellites have been launched into orbit with the Shavit rocket. These launches are also believed to be tests for the Shavit's intercontinental capability. The Jericho III, based upon the Shavit's design, is under development, with an estimated range of 4,000 to 6,000 km.¹²²

In 2010 Israel spent an estimated US\$1.9 billion on its nuclear weapons programme, with no significant increase in expenditure in 2011.¹²³

 **North Korea**

		
NO. WARHEADS	SPENDING 2011	NUCLEAR TESTS
<10	\$700m	2




Photo: North Korean nuclear-capable missiles.

Nuclear Arsenal

North Korea announced its withdrawal from the nuclear Non-Proliferation Treaty in 2003, and conducted its first nuclear test in 2006, with a second carried out in 2009. It is not yet known whether the North Korea possesses a weaponized nuclear capability.¹²⁴ If it does, its operational nuclear stockpile would likely consist of fewer than 10 warheads.

The nation's main nuclear facility is located at Yongbyon, North Pyongan. In November 2010, a delegation of US scientists were shown a uranium enrichment facility there, which was reported to contain 2,000 centrifuges in six cascades producing uranium with an average enrichment level of 3.5 per cent.¹²⁵

Modernization

North Korea is investing mainly in its ballistic missile programme. In October 2010, it unveiled a new missile, the BM/25, with an estimated range of 2,500 to 4,000 km, which makes it capable of hitting targets in both Japan and Guam. North Korea has also successfully tested the Taepodong-2, with a possible range greater than 10,000 km.¹²⁶

It is difficult to estimate how much North Korea spends on its nuclear weapons programme. Global Zero suggests that the figure for 2011 was approximately US\$700 million, representing about 6 per cent of overall military spending.¹²⁷

Producers

Companies Involved in Nuclear Weapons Work

The 20 companies described in this chapter are involved in the design, development, manufacture, modernization and maintenance of nuclear weapons and their delivery vehicles for the United States, the United Kingdom, France and India. Details are provided on the specific role of each company in the nuclear weapons industry.

Information on how the 20 companies were selected can be found in the introduction to this report under the section on methodology. The list is slightly more expansive than the nuclear weapons exclusion lists maintained, for example, by the Dutch financial institutions Pensioenfond Zorg en Welzijn and PGGM.¹²⁸ A dozen of the companies on our list are excluded by the Norwegian Government Pension Fund due to their involvement in the production of

either nuclear weapons or cluster munitions.¹²⁹ Bechtel generally does not appear on exclusion lists, as it is a privately owned company; nor does Redhall Group, perhaps because it is small compared with the others. In Chapter 5, we provide details on the financing of each of the 20 selected nuclear weapons companies. While our list of companies captures most of the major companies involved in the nuclear weapons complex, it is by no means exhaustive.

COMPANY	HEADQUARTERS	WEBSITE	REVENUES*	NET PROFIT*	EMPLOYEES
 Alliant Techsystems	Mineapolis, MN	atk.com	US\$4.8b	US\$313m	18,000
 Babcock & Wilcox	Charlotte, NC	babcock.com	US\$2.7b	US\$153m	12,000
 Babcock International	London	babcock.co.uk	US\$4.3b	US\$163m	27,000
 BAE Systems	London	baesystems.com	US\$32.6b	US\$1,600m	107,000
 Bechtel	San Francisco, CA	bechtel.com	US\$27.9b	n/a	49,000
 Boeing	Chicago, IL	boeing.com	US\$64.3b	US\$3,300m	164,000
 EADS	Leiden	eads.com	US\$60.7b	US\$759m	122,000
 Finmeccanica	Rome	finmeccanica.com	US\$24.8b	US\$766m	75,000
 GenCorp	Rancho Cordova, CA	gencorp.com	US\$0.86b	US\$7m	3,000
 General Dynamics	West Falls Church, VA	gd.com	US\$32.5b	US\$2,600m	92,000
 Honeywell International	Morristown, NJ	honeywell.com	US\$33.4b	US\$2,000m	130,000
 Jacobs Engineering	Pasadena, CA	jacobs.com	US\$9.9b	US\$313m	60,000
 Larsen & Toubro	Mumbai	larsentoubro.com	US\$11.3b	US\$977m	38,000
 Lockheed Martin	Bethesda, MD	lockheedmartin.com	US\$45.8b	US\$2,900m	126,000
 Northrop Grumman	Falls Church, VA	northropgrumman.com	US\$34.8b	US\$2,100m	75,000
 Redhall Group	Wakefield	redhallgroup.co.uk	US\$0.3b	US\$6m	1,500
 Rolls-Royce	London	rolls-royce.com	US\$17.1b	US\$839m	40,000
 Safran	Paris	safran-group.com	US\$14.6b	US\$675m	53,000
 Serco	Hook	serco.com	US\$6.7b	US\$243m	100,000
 Thales	Paris	thalesgroup.com	US\$17.4b	-US\$143m	64,000

* Figures are generally from the most recent financial year. However, where that information was not available, figures are from the previous financial year.

Alliant Techsystems

Company Profile

Alliant Techsystems (ATK), based in the United States, supplies aerospace and defence products to the US government, allied nations and prime contractors. The company's main business segments are aerospace systems, armament systems, missile products, and security and sporting.⁸⁹ In the financial year ended 31 March 2011, ATK reported revenues of US\$4.8 billion, resulting in an operating profit of US\$526 million and a net profit of US\$313 million.¹³¹

Nuclear Weapons

The aerospace systems segment of ATK produces rocket propulsion systems for the Trident II D5 fleet ballistic missile.¹³² The Trident II D5 is a three-stage, solid propellant, inertial guided missile system that is the primary strategic weapons programme in the US navy's fleet ballistic missile system. Deployed in 1990, the Trident II D5 is the only US submarine-launched strategic missile system still in production. The D5 missiles are launched underwater from Trident submarines, which have 24 launch tubes.

Lockheed Martin is the prime contractor for the rocket propulsion systems. In November 2009 Alliant Techsystems received a US\$100-million contract from Lockheed Martin to produce rocket propulsion systems for all three stages of the US navy's Trident II D5 through calendar year 2013.¹³³

In addition, the aerospace systems segment of ATK produces rocket propulsion systems for the Minuteman III intercontinental ballistic missile, the core component of the US nuclear arsenal for the past four decades. ATK is responsible for refurbishing all three solid propellant stages of the missile, with Northrop Grumman as the project leader. During 2010 the 10-year Minuteman Propulsion Replacement Program was completed. ATK produced approximately 1,800 remanufactured motors.¹³⁴

Production continues in 2011 and 2012 at a lower rate under the Minuteman Solid Rocket Motor Warm Line program, headed by Northrop Grumman. ATK will produce up to ten motor sets over two years.¹³⁵



Babcock & Wilcox

Company Profile

Babcock & Wilcox, based in the United States, provides energy technology and services primarily for the nuclear, fossil fuel and renewable power markets worldwide. The company's four business units are nuclear energy, nuclear operations, power generation and technical services.¹³⁶

In the financial year ended 31 December 2010, Babcock & Wilcox reported revenues of US\$2.7 billion, resulting in an operating profit of US\$264 million and a net profit of US\$153 million.¹³⁷

Nuclear Weapons

Babcock & Wilcox supplies nuclear components to the US government for defence programmes and also provides various services, including uranium processing, environmental site restoration and operating services, for a number of government-owned facilities, primarily within the nuclear weapons complex of the Department of Energy.

The nuclear operations division of the company specializes in the design and manufacture of components for the US government. The division engages in uranium processing as well as the manufacture of heavy-walled nuclear components and vessels. Its subsidiary Nuclear Fuel Services operates a uranium fuel materials production facility to support the US fleet of nuclear-powered submarines and aircraft carriers.¹³⁸

The technical services division of the company operates the Pantex plant of the National Nuclear Security Administration, where it modernizes nuclear warheads for the Trident missiles of the US navy.¹³⁹



Babcock International

Company Profile

Babcock International, based in the United Kingdom, provides engineering support services. It operates in four divisions: marine, defence and security, support services and international.¹⁴⁰ In the financial year ended 31 March 2011, it reported revenues of £2.8 billion (US\$4.3 billion), resulting in an operating profit of £158 million (US\$246 million) and a net profit of £105 million (US\$163 million).¹⁴¹

Nuclear Weapons

The marine division of Babcock International in 2007 started the Future Submarines project with BAE Systems and Rolls-Royce. The objective of this project is to develop *Successor*, a new class of nuclear-armed submarine for the British navy, which will replace the present *Vanguard*-class submarines armed with nuclear Trident ballistic missiles.¹⁴²

The marine division of the company is also involved in the maintenance of the *Vanguard*-class submarines. In its 2011 annual report, Babcock International states that the British government committed to retain the current submarine-based nuclear deterrent, providing a key role for the division in the so-called “*Vanguard* life extension project”.¹⁴³

Additionally, the nuclear services division of Babcock International is a frequent subcontractor for the United Kingdom’s Atomic Weapons Establishment for decommissioning and waste management activities.¹⁴⁴



BAE Systems

Company Profile

BAE Systems, based in the United Kingdom, operates as a defence, security and aerospace company worldwide. The company’s main segments are electronics, intelligence and support, land and armaments, programmes and support, and international.¹⁴⁵ In the financial year ended 31 December 2010, BAE Systems reported revenues of £21.1 billion (US\$32.6 billion), resulting in an operating profit of £1.6 billion (US\$2.5 billion) and a net profit of £1.1 billion (US\$1.6 billion).¹⁴⁶

Nuclear Weapons

BAE Systems’ international division holds a 37.5% share in MBDA, a joint venture with EADS and Finmeccanica. MBDA is a world leader in missiles and missile systems, producing over 3,000 missiles in 2010.¹⁴⁷ MBDA builds the ASMPA nuclear missiles for the French air force, which can be launched from the *Mirage* 2000N fighter plane and the new *Rafale* fighter plane. The manufacturing of the missiles does not include the manufacturing of the nuclear warhead itself, which is done by the government agency *Commissariat à l’énergie atomique*. The ASMPA was taken into service in November 2010.¹⁴⁸

The current *Vanguard*-class submarines, which are equipped with Trident nuclear missiles, were developed by BAE Systems between 1986 and 1999.¹⁴⁹ Together with Babcock Marine and Rolls-Royce, BAE Systems in 2007 started the Future Submarines project. The objective of this project is to develop *Successor*, a new class of nuclear-armed submarine for the British navy, which will replace the present *Vanguard*-class submarines armed with nuclear Trident ballistic missiles.¹⁵⁰

BAE SYSTEMS

Bechtel

Company Profile

Bechtel Group, a private company based in the United States, operates as an engineering, construction and project management company. Its business units are civil infrastructure, communications, mining and metals, oil, gas and chemicals, power and US government services.¹⁵¹ In the financial year ended 31 December 2010, it reported revenues of US\$27.9 billion. Profits are not reported by the company.¹⁵²

Nuclear Weapons

Bechtel's business unit Bechtel National assists the US Department of Energy in the areas of national security, scientific research and environmental clean-up. It manages two laboratories for the department: Los Alamos National Laboratory in New Mexico (since 2006) and Lawrence Livermore National Laboratory in California (since 2007).¹⁵³

Lawrence Livermore is responsible for monitoring the "safety and reliability" of the US nuclear stockpile. The laboratory also engages in the design and production of nuclear weapons.¹⁵⁴ The Stockpile Stewardship programme, which provides experimental capabilities to maintain confidence in the safety and performance of US nuclear weapons, is placed under this laboratory. The Stockpile Stewardship is also responsible for maintaining the ability to resume underground nuclear testing.¹⁵⁵

Bechtel is constructing the Hanford Waste Treatment Plant for the US Department of Energy, a facility in Washington State on the site of a former nuclear production facility, which will be the world's largest radioactive waste treatment plant.¹⁵⁶



Boeing

Company Profile

Boeing, based in the United States, is the world's largest aerospace company and a leading manufacturer of jetliners and defence, space and security systems. Its products and services include commercial and military aircraft, satellites, weapons, electronic and defence systems and launch systems.¹⁵⁷

In the financial year ended 31 December 2010, Boeing reported revenues of US\$64.3 billion, resulting in an operating profit of US\$5 billion and a net profit of US\$3.3 billion.¹⁵⁸

Nuclear Weapons

Since 1958 Boeing has been responsible for the development and production of the US long-range nuclear LGM-30 Minuteman ballistic missiles (versions I, II and III). These are intercontinental ground-to-ground missiles, of which the United States had roughly 1,000 in operation around 1975.¹⁵⁹

As a member of the ICBM Prime Integration Team, Boeing is involved in the maintenance of the 500 Minuteman III nuclear intercontinental ballistic missiles in the US arsenal. It is responsible for guidance, flight controls, secure codes, ground subsystems, weapons systems testing and engineering in this project led by Northrop Grumman, which will continue into 2012¹⁶⁰ and likely be extended.¹⁶¹

Until 2005, Boeing also carried out sustained engineering work for the United States' 50 *Peacekeeper* intercontinental ballistic missiles. This project was also led by Northrop Grumman.¹⁶² The *Peacekeeper* missiles were taken out of service in September 2005.¹⁶³

Boeing also produces the B-52 *Stratofortress*, which is a long-range, strategic heavy bomber capable of dropping or launching the widest array of weapons in the US inventory. It entered service in 1954. The latest version, the B-52H, can carry up to 20 air-launched cruise missiles. The B-52H can carry nuclear or precision-guided conventional ordnance.¹⁶⁴





Company Profile

European Aeronautic Defence and Space Company (EADS), based in the Netherlands, engages in the manufacture and sale of commercial aircraft, civil and military helicopters, commercial space launch vehicles, missiles, military aircraft, satellites, defence systems and defence electronics.¹⁶⁵ In the year ended 31 December 2010, EADS generated revenues of €45.8 billion (US\$60.7 billion), resulting in an operating profit of €1.2 billion (US\$1.6 billion) and a net profit of €572 million (US\$759 million).¹⁶⁶

Nuclear Weapons

EADS is involved in the French nuclear weapons programme. Its subsidiary Astrium develops and produces the M4 generation of ballistic missiles, which feature multiple warheads and have a range of over 4,000 km. Astrium also developed an enhanced version, the M45, with higher-performance TN75 nuclear warheads. The M45 entered service aboard the *Triomphant* submarine in 1997. Astrium is responsible maintaining these missiles.¹⁶⁷

In December 2004 Astrium entered into a contract to build the new M51 nuclear missile for the new French submarines, with an estimated value of €3 billion. Astrium is the lead contractor, whereas Safran, SNPE, DCN and Thales are the main subcontractors.¹⁶⁸ The M51 features multiple warheads, with far greater payload mass and volume, than the M4. It also offers a longer range, enabling submarines to expand their patrol zones. The nuclear submarine *Le Terrible* has been equipped with the M51 since late 2010.

The missile will also enter operational service aboard the other new-generation submarines, *Triomphant* and *Téméraire*, after retrofit. A second version, the missile upper stage with new nuclear warheads, will be commissioned from 2015.¹⁶⁹

EADS also holds a 37.5 per cent share in MBDA, a joint venture with BAE Systems and Finmeccanica. MBDA produced over 3,000 missiles in 2010.¹⁷⁰ It builds the ASMPA nuclear missiles for the French air force, which can be launched from the *Mirage 2000N* fighter plane and the new *Rafale* fighter plane.¹⁷¹




Company Profile

Finmeccanica, based in Italy, mainly engages in the development and manufacture of helicopters, defence and security electronics, and aeronautics.¹⁷² In the financial year ended 31 December 2010, Finmeccanica generated revenues of €18.7 billion (US\$24.8 billion), resulting in an operating profit of €866 million (US\$1.2 billion) and a net profit of €577 million (US\$766 million).¹⁷³

Nuclear Weapons

Finmeccanica holds a 25 per cent share in MBDA, a joint venture with EADS and BAE Systems. MBDA is a world leader in missiles and missile systems, producing over 3,000 missiles in 2010.¹⁷⁴ MBDA builds the ASMPA nuclear missiles for the French air force, which can be launched from the *Mirage 2000N* fighter plane and the new *Rafale* fighter plane. The manufacturing of the missiles does not include the manufacturing of the nuclear warhead itself, which is done by the government agency *Commissariat à l'énergie atomique*. The ASMPA was taken into service in November 2010.¹⁷⁵



 **GenCorp**

Company Profile

GenCorp, based in the United States, is a major technology-based manufacturer divided into two businesses: Easton (real state) and Aerojet (aerospace and defence).¹⁷⁶ In the financial year ended 30 November 2010, GenCorp generated revenues of US\$858 million, resulting in an operating profit of US\$37.5 million and a net profit of US\$6.8 million.¹⁷⁷

Nuclear Weapons

Aerojet, GenCorp's aerospace and defence company, has been involved in nuclear weapon production for 50 years and claims to be a leader in the design, development and production of US land- and sea-based nuclear ballistic missile systems, including Polaris, Minuteman, Peacekeeper and D5.

Aerojet produces solid and liquid propulsion systems for both the US air force's Minuteman III and the navy's D5 Trident nuclear missile systems.¹⁷⁸ The company is also a manufacturer of propulsion control systems for critical missile defence applications supporting the US Missile Defense Agency.¹⁷⁹

According to the Tennessee Department of Health, Aerojet Ordnance Tennessee, a subsidiary of Aerojet, is a leading producer of depleted uranium and tungsten munitions for the US military.¹⁸⁰



 **General Dynamics**

Company Profile

General Dynamics, based in the United States, provides business aviation, land and expeditionary combat systems, armaments and munitions, shipbuilding and marine systems, and information systems, technologies, and mission-critical information systems and technology.¹⁸¹

In the financial year ended 31 December 2010, General Dynamics generated revenues of US\$32.5 billion, resulting in an operating profit of US\$2.6 billion and a net profit of US\$2.6 billion.¹⁸²

Nuclear Weapons

General Dynamics Electric Boat, a subsidiary of General Dynamics, built the *Ohio*-class nuclear submarines of the US navy, which are equipped with Trident missiles.¹⁸³ As the website of General Dynamics Electric Boat claims, these submarines are "the most powerful ships ever put to sea", referring to the nuclear explosive power aboard the submarines.¹⁸⁴

In 2011 General Dynamics Electric Boat was awarded a US\$429-million contract modification by the US navy to provide maintenance, engineering and technical support for nuclear submarines.¹⁸⁵ Other nuclear-related contracts awarded in 2011 by the US navy were a US\$16.6-million contract to support nuclear aircraft carrier repair work at Norfolk Naval Shipyard¹⁸⁶ and a US\$16.6-million contract to support nuclear aircraft carrier repair work there.¹⁸⁷

Since 2005 General Dynamics' Advanced Information Systems has been involved in a project with partners Honeywell International and Raytheon to stretch the lifecycle of the guidance systems of the Trident II D5 nuclear missiles of the US navy.¹⁸⁸

GENERAL DYNAMICS

Honeywell International

Company Profile

Honeywell International, based in the United States, operates as a diversified technology and manufacturing company. The company's business units are aerospace, automation and control solutions, transportation systems and specialty materials.¹⁸⁹ In the financial year ended 31 December 2010, Honeywell International generated revenues of US\$33.4 billion, resulting in an operating profit of US\$2.4 billion and a net profit of US\$2 billion.¹⁹⁰

Nuclear Weapons

Honeywell Federal Manufacturing & Technologies manages and operates the Kansas City Plant, a facility of the National Nuclear Security Administration, where around 85 per cent of the non-nuclear components for US nuclear weapons are produced, according to the organization Nuclear Watch.¹⁹¹

Honeywell Technology Solutions Inc (HTSI) has a contract with the US government's Defense Threat Reduction Agency. As the instrumentation support contractor, HTSI is responsible for maintaining an inventory of instrumentation to monitor and record data associated with the testing on the White Sands Missile Range in New Mexico of simulated nuclear weapons and conventional weapons.¹⁹²

Honeywell is also involved, with General Dynamics and Raytheon, in a project that aims to stretch the lifecycle of the Trident II D5 nuclear missiles of the US navy.¹⁹³ In December 2009 this contract was extended. Honeywell International is the most important subcontractor and will produce components for integrated circuits at its factory in Plymouth, the United Kingdom.¹⁹⁴

Honeywell

Jacobs Engineering

Company Profile

Jacobs Engineering Group, based in the United States, provides professional, technical and construction services. Among its primary markets are aerospace and defence, energy, oil and gas and infrastructure.¹⁹⁵ In the financial year ended 1 October 2010, Jacobs Engineering generated revenues of US\$9.9 billion, resulting in an operating profit of US\$487 million and a net profit of US\$312 million.¹⁹⁶

Nuclear Weapons

In December 2008, Jacobs Engineering acquired a one-third share in the joint venture AWE-ML, the company that manages the United Kingdom's Atomic Weapons Establishment (AWE). The AWE provides and maintains the warheads for the country's Trident nuclear arsenal. Trident is a submarine-launched, intercontinental ballistic missile system carried by the fleet of *Vanguard*-class submarines.

The other partners in the joint venture are Lockheed Martin and Serco. AWE's involvement with Trident missiles covers the entire life cycle, from initial concept to assessment, design, component manufacture and assembly, in-service support and decommissioning and disposal.¹⁹⁷ AWE-ML has a quarter-century-long non-revocable contract, revised in 2003, to run the AWE.¹⁹⁸

JACOBS™

Larsen & Toubro

Company Profile

Larsen & Toubro, based in India, is a technology, engineering, construction and manufacturing company. It has nine operating divisions, among which are heavy engineering, construction and power.¹⁹⁹ In the financial year ended 31 March 2011, Larsen & Toubro generated revenues Rp 515.5 billion (US\$11.3 billion), resulting in an operating profit of Rp 65.3 billion (US\$1.4 billion) and a net profit of Rp 44.6 billion (US\$977 million).²⁰⁰

Nuclear Weapons

As one of India's major construction companies, Larsen & Toubro is involved in designing and building the Advanced Technology Vessel, which is the future nuclear-armed submarine of the Indian navy. The project, with a total value of US\$3 billion, was initiated in 1970 and its objective was to build five nuclear submarines, each equipped with a dozen K-15 nuclear missiles. In 2008 the company started construction of the second submarine.²⁰¹ In addition, L&T tested a launch system built for India's nuclear missiles with a range of 300 km.²⁰²



Lockheed Martin

Company Profile

Lockheed Martin, based in the United States, focuses on aeronautics, space systems, electronic systems and information systems.²⁰³ In the financial year ended 31 December 2010, it generated revenues of US\$45.8 billion, resulting in an operating profit of US\$3.8 billion and a net profit of US\$2.9 billion.²⁰⁴

Nuclear Weapons

Lockheed Martin produces a wide variety of conventional weapons as well as nuclear weapons for both the United States and the United Kingdom.²⁰⁵ It is responsible for the construction of the Trident II D5 nuclear missiles for the US *Ohio*-class submarines and the British *Vanguard*-class submarines.²⁰⁶ The United States plans on keeping the Trident II missiles in service until 2042.²⁰⁷

Lockheed Martin also has a one-third share in the joint venture AWE-ML, the company that manages the United Kingdom's Atomic Weapons Establishment (AWE). The AWE provides and maintains the warheads for the nuclear-armed *Vanguard*-class submarines. The other partners in the joint venture are Jacobs Engineering and Serco.²⁰⁸ AWE-ML has a 25-year non-revocable contract, revised in 2003, to run the AWE programme.²⁰⁹

As a member of the Northrop Grumman-led ICBM Prime Integration Team, Lockheed Martin is involved in the production and maintenance of the Minuteman III intercontinental ballistic missiles.²¹⁰ Lockheed Martin is responsible for the weapons systems, control systems and re-entry systems.²¹¹

In March 2011, the company received a US\$12.5-million contract for the refurbishment of re-entry vehicle arming and fusing assemblies for the Minuteman III missiles. According to the latest plans, these nuclear missiles will continue to be part of the US nuclear defence programme until at least 2030.²¹²

Lockheed Martin in May 2009 acquired the Scottish company Imes Strategic Support, a supplier of key components for British nuclear weaponry.²¹³





Northrop Grumman

Company Profile

Northrop Grumman Corporation, based in the United States, provides products, services and solutions in the aerospace, electronics, information systems and shipbuilding sectors.²¹⁴ In the financial year ended 31 December 2010, Northrop Grumman generated revenues of US\$34.8 billion, resulting in an operating profit of US\$3.1 billion and a net profit of US\$2.1 billion.²¹⁵

Nuclear Weapons

After acquiring TRW Inc in 2002, Northrop Grumman inherited the leadership over the ICBM Prime Integration Team. This project was initiated in 1997 and has a value of US\$6.5 billion. Northrop Grumman and its partners, including Boeing and Lockheed Martin, are responsible for the production and maintenance of the Minuteman III nuclear intercontinental ballistic ground-to-ground missiles.²¹⁶ Approximately 500 missiles of the Minuteman III missiles form the core of the land-based US nuclear arsenal.²¹⁷ After 2012, the maintenance project is likely to be extended, as the US air force plans to keep the Minuteman III as part of the US nuclear defence programme until at least 2030.²¹⁸

NORTHROP GRUMMAN




Redhall Group

Company Profile

The Redhall Group, based in the United Kingdom, consists of several niche engineering service businesses operating internationally in the defence, energy and processing plant sectors.²¹⁹ In the financial year ended 30 September 2010, Redhall Group generated revenues of £144.7 million (US\$225.6 million), resulting in an operating profit of £4.5 million (US\$7.1 million) and a net profit of £3.6 million (US\$5.6 million).²²⁰

Nuclear Weapons

Redhall Group operates within the nuclear weapons industry via contracts with the British Ministry of Defence to carry out mechanical and electrical engineering activities at the Atomic Weapons Establishments (AWE).²²¹ The group has been carrying out work at AWE Aldermaston – the United Kingdom's nuclear weapons factory – for over 12 years.²²² It is also a contractor of AWE Burghfield, the United Kingdom's facility for assembling and disassembling nuclear warheads.²²³

Redhall Group plc

Rolls-Royce

Company Profile

Rolls-Royce plc, based in the United Kingdom, provides integrated power systems for use on land, at sea and in the air. The company's main business divisions are civil aerospace, defence aerospace, marine and energy.²²⁴ The manufacturer of Rolls-Royce automobiles is now a subsidiary of BMW and not part of Rolls-Royce plc. In the financial year ended 31 December 2010, Rolls-Royce generated revenues of £11.1 billion (US\$17.1 billion), resulting in an operating profit of £702 million (US\$1.1 billion) and a net profit of £543 million (US\$839 million).²²⁵

Nuclear Weapons

Together with Babcock Marine and BAE Systems, Rolls-Royce started the Future Submarines (FSM) project in 2007. The objective of this project is to develop *Successor*, a new class of nuclear-armed submarine for the British navy, which will replace the present Trident-armed *Vanguard*-class submarines.²²⁶

Rolls-Royce has also been involved with the development and maintenance of the current fleet of submarines. It was initially responsible for developing its nuclear-powered propulsion system. In 2007 Rolls-Royce was awarded a 10-year contract worth £1 billion to support power plant systems for the British fleet of nuclear-powered submarines, which includes the nuclear-armed *Vanguard* class.²²⁷



Safran

Company Profile

Safran, based in France, is a high-technology group that focuses on the three core businesses: aerospace, defence and security.²²⁸ In the financial year ended 31 December 2010, Safran generated revenues of €11 billion (US\$14.6 billion), resulting in an operating profit of €878 million (US\$1.2 billion) and a net profit of €508 million (US\$675 million).²²⁹

Nuclear Weapons

Safran is involved, with EADS, Thales and others, in a contract concluded in December 2004 to build the new M51 nuclear missile for the new French submarines, with an estimated value of €3 billion. EADS's subsidiary Astrium is the lead contractor, whereas Safran, SNPE, DCN and Thales are the main subcontractors.²³⁰ The M51 features multiple warheads, with far greater payload mass and volume including warheads and penetration aids, than the M4. It also offers longer range than the M4, enabling submarines to expand their patrol zones.

The nuclear submarine *Le Terrible* has been equipped with the M51 since late 2010. The missile will also enter operational service on board the other French new-generation submarines, *Triomphant* and *Téméraire*, after retrofit. A second version, the missile upper stage with new nuclear warheads, will be commissioned from 2015.²³¹ Safran's subsidiary Snecma is a preferred supplier of the propulsion system for the M51 missile project. Sagem, another subsidiary of Safran, developed the navigation systems for the M51, which will improve the accuracy of the missile.²³²



 **Serco**

Company Profile

Serco Group, based in the United Kingdom, operates as a service company to governments and commercial customers worldwide. Its main business areas in public service are health, education, transport, science and defence, while private-sector customers are leading companies operating in various markets.²³³ In the financial year ended 31 December 2010, Serco generated revenues of £4.3 billion (US\$6.7 billion), resulting in an operating profit of £214 million (US\$331 million) and a net profit of £157 million (US\$243 million).²³⁴

Nuclear Weapons

Serco has a one-third share in the joint venture AWE-ML, the company that manages the United Kingdom's Atomic Weapons Establishment (AWE). The AWE provides and maintains the warheads for the country's Trident nuclear arsenal. Trident is a submarine-launched, intercontinental ballistic nuclear missile system, carried by *Vanguard*-class submarines.

The other partners in the joint venture are Lockheed Martin and the Jacobs Engineering. AWE's involvement with Trident missiles covers the entire life cycle from initial concept to assessment, design, component manufacture and assembly, in-service support, and decommissioning and disposal.²³⁵ AWE-ML has a 25-year non-revocable contract, revised in 2003, to run the AWE programme.²³⁶


 **Thales**

Company Profile

Thales, based in France, provides information systems for the defence and security, aerospace and transportation markets. The company's main business divisions are aerospace, defence and security.²³⁷ In the financial year ended 31 December 2010, Thales generated revenues of €13.1 billion (US\$17.4 billion), resulting in an operating loss of €205 million (US\$273 million) and a net loss of €108 million (US\$143 million).²³⁸

Nuclear Weapons

Thales is involved, with EADS, Safran and others, in a contract concluded in December 2004 to build the new M51 nuclear missile for the new French submarines, with an estimated value of €3 billion. EADS's subsidiary Astrium is the lead contractor, whereas Safran, SNPE, DCN and Thales are the main subcontractors.²³⁹ The M51 features multiple warheads, with far greater payload mass and volume including warheads and penetration aids, than the M4. It also offers longer range than the M4, enabling submarines to expand their patrol zones. The nuclear submarine *Le Terrible* has been equipped with the M51 since late 2010. The missile will also enter operational service on board the other French new-generation submarines, *Triomphant* and *Téméraire*, after retrofit. A second version, the missile upper stage with new nuclear warheads, will be commissioned from 2015.²⁴⁰



BOX 11

Case Study: General Electric – A Former Nuclear Weapons Producer

Can the people take on corporate giants and win? The mass boycott of General Electric (GE) in the 1980s was successful in putting pressure on the company to end its decades-long involvement in the nuclear weapons industry. Kelle Louaillier, the executive director of Corporate Accountability International (formerly Infact), explains how it was done.



Photo: Corporate Accountability International

ICAN: What involvement did GE have in nuclear weapons production when you initiated your campaign?

Kelle Louaillier (KL): In 1984 in the United States, thousands of companies were involved in some way in producing parts for nuclear weapons systems. GE produced more parts to more major nuclear weapons systems than any other corporation. GE was involved in the promotion of nuclear weapons to the government and in production since day one, with its role in the Manhattan Project.

Specifically, GE was responsible for the critical components, including, for example, the neutron “trigger” for every US nuclear bomb. Notably, before becoming president, Ronald Reagan was a spokesman for GE.

ICAN: How did you put pressure on GE to end its involvement in nuclear weapons production?

KL: Corporate Accountability International, then called Infact, organized an international grassroots campaign, including a consumer boycott of all General Electric products and services.

We used the full range of tactics, from engaging more than 500 campaign-endorsing allied organizations to calling on medical professionals to stop purchasing expensive life-saving medical equipment from GE. We produced a short documentary film, *Deadly Deception*, that was shown in movie theatres and on TV stations in more than 40 nations.

Our organizing strategies focused on key corporate vulnerabilities: exposing the truth behind GE’s corporate image; creating internal conditions demanding the company move out of the nuclear weapons business, impacting sales; altering the cost-benefit ratio for GE to be in the nuclear weapons business; and more.

ICAN: How did people respond? Was there any public resistance to your campaign?

KL: Once the public began to understand industry’s role in the nuclear weapons build-up – both creating the demand for and directly providing the weapons – the campaign was met with overwhelming public support. For the campaign’s kick-off, events were held in 36 cities in 26 states, with 18 million people participating.

By 1990 four million people in the United States alone were boycotting GE. Campaign activities continued in all 50 US states, across Canada and into Western Europe.

In 1989, three years into the boycott and five years into the overall campaign, GE spent four times more on brand advertising – *not* product advertising – to defend its brand image than in the past four years combined.

ICAN: When and why did GE finally decide to end its involvement in nuclear weapons production?

KL: In April of 1993, General Electric completed its move out of the nuclear weapons business. GE announced this move as a “business decision” – underscoring a key approach to Corporate Accountability International’s campaigns. By altering the cost-benefit ratio (which takes years when engaging a multi-billion-dollar transnational corporation), we can all make change real.

Our international boycott of GE products cost the company over \$50 million in lost medical equipment sales. Major retail stores including Safeway and Target began stocking light bulbs made by other companies.

When our campaign began, 50,000 nuclear warheads were on constant alert and the United States was building five nuclear bombs a day. At the close of the campaign, no nuclear bombs were in production on US soil. Allied organizations continue to work toward the elimination of weapons of mass destruction.

ICAN: What advice do you have for campaigners wanting to challenge the nuclear weapons complex?

KL: This isn’t a numbers game: big business will always have more resources than campaigners. What we have at the core of it all is righteous truth that puts people’s lives (public health and human rights), environmental safety, and democracy ahead of corporate greed.

Think and organize with boldness: the stakes are high enough to ask people to do what might seem impossible. Be smart, be strategic, have a laser focus, be clear about what you are campaigning to achieve – and let your adversary know what is required of them. Dig in for the long haul. Keep your friends close and your adversaries closer ... there are people within these corporations making decisions: know them, expose them, and call on them to change. With enough pressure, they will.

Investments

The Financing of Nuclear Weapons Companies

In this chapter, we identify the major share- and bondholders of each of the 20 selected nuclear weapons producers from the United States, Europe and India. We also reveal which financial institutions from around the world loaned these companies money or participated in their share or bond issuances from July 2008 to December 2011.

A summary of the financing of the selected nuclear weapons producers can be found in the introduction of this report. Here we provide details about the nature and value of specific transactions and holdings. The financial institutions identified include banks, pension funds, sovereign wealth funds, insurance companies and asset managers. They are involved in financing the selected companies through:

- **Share Issues** – which allow the nuclear weapons producers to increase their equity by attracting new shareholders.
- **Shareholdings** – which provide the nuclear weapons producers with equity; shareholders can directly influence companies' strategies.
- **Bond Issues** – which allow nuclear weapons companies to borrow money from a large number of investors.
- **Bondholdings** – which provide nuclear weapons companies with credit; bondholders receive interest and are entitled to repayment.
- **Bank Loans** – which provide nuclear weapons companies with capital that can be used for any activities; the money must be repaid.

Some of the information on bank loans provided in this chapter may be incomplete. For our methodology, see the introductory chapter. If a company did not issue bonds or shares or receive capital loans within the relevant period – that is, since 2008 – this is indicated at the end of the company's section.

NUMBER OF FINANCIAL INSTITUTIONS

The number of financial institutions identified as investing substantively in each of the 20 nuclear weapons producers varies significantly:

COMPANY	COUNTRY	NO. INVESTORS
Alliant Techsystems	US	70
Babcock & Wilcox	US	44
Babcock International	UK	44
BAE Systems	UK	70
Bechtel	US	24
Boeing	US	85
EADS	Netherlands	46
Finmeccanica	Italy	54
GenCorp	US	51
General Dynamics	US	62
Honeywell International	US	73
Jacobs Engineering	US	32
Larsen & Toubro	India	23
Lockheed Martin	US	64
Northrop Grumman	US	68
Redhall Group	UK	22
Rolls-Royce	UK	53
Safran	France	29
Serco	UK	31
Thales	France	27


Alliant Techsystems

Shareholders

INSTITUTIONAL SHAREHOLDERS OF ALLIANT TECHSYSTEMS (0.5% OR MORE OF OUTSTANDING SHARES)

FINANCIAL INSTITUTION	COUNTRY	% SHARES	VALUE US\$M	FILING DATE (RANGE)
First Eagle Investment Management	US	12.44	260.22	31/08/2011
BlackRock	US	8.74	205.05	30/06/2011
JP Morgan Chase	US	4.70	110.42	30/06/2011
Allianz	Germany	4.45	104.77	30/09/2010, 30/06/2011
Vanguard Group	US	3.96	93.14	30/06/2011
Invesco	UK	3.90	91.57	30/06/2011
Neuberger Berman	US	3.54	83.31	30/06/2011
Nuveen Investments	US	3.42	80.36	30/06/2011
Hotchkis and Wiley Capital Management	US	2.70	63.46	30/06/2011
Fidelity	US	2.56	60.19	30/06/2011
Fiduciary Management	US	2.50	58.71	30/06/2011
State Street	US	2.47	57.94	30/06/2011
Deutsche Bank	Germany	1.97	46.26	30/06/2011
Dreman Value Management	US	1.70	39.98	30/06/2011
Fort Washington Investment Advisors*	US	1.45	34.03	30/06/2011
American Century Investments	US	1.29	30.32	30/06/2011
GE Asset Management*	US	1.13	26.49	30/06/2011
Principal Financial Group	US	1.00	23.55	30/06/2011
Los Angeles Capital Management and Equity Research	US	0.88	20.63	30/06/2011
Vaughan Nelson Investment Management*	France	0.84	19.69	30/06/2011
Northern Trust	US	0.78	18.45	30/06/2011
Renaissance Technologies	US	0.76	17.83	30/06/2011
Old Mutual	UK	0.70	16.39	30/06/10–30/09/2011
TIAA-CREF	US	0.69	16.22	30/06/2011
Morgan Stanley	US	0.66	15.73	30/06/2011
Jacobs Levy Equity Management	US	0.66	15.45	30/06/2011
Managed Account Advisors	US	0.64	15.05	30/06/2011
Bank of America	US	0.59	13.80	30/06/2011
BNY Mellon	US	0.72	12.91	30/09/2011
Affiliated Managers Group	US	0.51	11.93	30/06/2011
Aronson Johnson Ortiz	US	0.50	11.83	30/06/2011
Total		72.84	1,675.68	

* Fort Washington Investment Advisors is part of Western & Southern Financial Group; GE Asset Management is part of General Electric; Vaughan Nelson Investment Management is part of Groupe BPCE.

Source: Thomson ONE Banker, November 2011

Bond Issues

In September 2010 Alliant Techsystems issued ten-year bonds with an interest rate of 6.875% and a total value of US\$350 million. The proceeds were used for general corporate purposes and to reduce indebtedness. Seven banks were part of the syndicate,²⁴¹ underwriting the following amounts:

Bank of America	US	US\$129.0m
Mitsubishi UFJ Financial	Japan	US\$18.4m
Royal Bank of Canada	Canada	US\$18.4m
Royal Bank of Scotland	UK	US\$73.7m
SunTrust Bank	US	US\$36.8m
US Bancorp	US	US\$36.8m
Wells Fargo	US	US\$36.8m

Bondholders**BONDHOLDERS OF ALLIANT TECHSYSTEMS (0.5% OR MORE OF OUTSTANDING BONDS)**

FINANCIAL INSTITUTION	COUNTRY	% BONDS	VALUE US\$M	FILING DATE (RANGE)
New York Life*	US	4.78	45.40	30/06/11–31/08/11
Metropolitan Life Insurance (MetLife)	US	4.27	40.62	30/06/11
Oaktree	US	4.15	39.41	30/09/11
Citadel Investment Group	US	3.29	31.24	30/06/11
TIAA-CREF	US	3.13	29.63	30/06/11–31/08/11
Castle Creek Arbitrage	US	2.82	26.79	30/06/11
Allstate Corporation	US	2.80	26.55	30/06/11
Zazove Associates	US	2.21	21.00	30/06/11
Prudential Financial	US	2.21	20.98	30/06/11–31/08/11
Unum Group*	US	2.10	20.00	30/06/11
Royal Bank of Scotland	UK	2.11	20.00	30/06/11
JP Morgan Chase*	US	1.89	17.98	31/05/11–31/08/11
American Express Company*	US	1.80	17.10	30/06/11
Wells Fargo	US	1.76	16.68	31/08/11
Allianz*	Germany	1.62	15.33	31/03/11–01/11/11
AXA	France	1.48	14.14	31/12/10–30/09/11
Fidelity	US	1.41	13.37	30/06/11–31/07/11
MassMutual	US	1.14	10.87	30/06/11
Northeast Investors	US	1.05	10.00	30/06/11
M & G Investment Management*	UK	1.02	9.65	30/06/11
Lord, Abnett & Co.	US	0.96	9.13	12/12/10–30/09/11
Putnam*	Canada	0.91	8.62	30/06/11–31/07/11
Jabre Capital Partners	Switzerland	0.79	7.50	30/06/11
OppenheimerFunds	US	0.75	7.06	30/06/11–31/08/11
Prospector Partners	US	0.74	7.00	30/06/11
Northern Trust	US	0.68	6.43	30/06/11
Guardian Life Insurance Company	US	0.67	6.40	30/06/11
Transamerica*	Netherlands	0.59	5.57	30/06/11
First Trust Advisors	US	0.56	5.30	31/07/11
Travelers Companies	US	0.56	5.30	30/06/11
Total		54.25	515.05	

* New York Life includes Mackay Shields Financial; Unum Group includes Unum Life Insurance Company of America and mProvident Life & Accident Insurance; JP Morgan Chase includes Bank One; American Express Company includes Ameriprise Financial with subsidiary Riversource; Allianz includes Pimco; M & G Investment Management is part of Prudential; Putnam is part of Power Corporation of Canada; Transamerica is part of AEGON.

Source: Bloomberg Database, November 2011

Bank Loans

In October 2010 Alliant Techsystems secured a US\$1-billion five-year credit facility, comprising a US\$600-million revolver and a US\$400-million term loan. The proceeds were used for refinancing, to increase working capital (including capital to enable the company and its subsidiaries to perform their obligations under government contracts), and to finance capital expenditures and acquisitions. Twenty financial institutions were part of the syndicate,²⁴² committing the following amounts:

Bank of America	US	US\$100m
BNY Mellon	US	US\$35m
Bank of the West*	France	US\$30m
Bank of Tokyo-Mitsubishi*	Japan	US\$75m
Branch Banking & Trust*	US	US\$35m
Chang Hwa Commercial Bank	Taiwan	US\$10m
First Commercial Bank	Taiwan	US\$10m
GE Capital*	US	US\$70m
Hua Nan Commercial Bank	Taiwan	US\$15m
JP Morgan Chase	US	US\$35m
KeyBank*	US	US\$50m
Mizuho Bank	Japan	US\$70m
People's United Bank*	US	US\$20m
PNC Bank*	US	US\$25m
Royal Bank of Scotland	UK	US\$80m
Royal Bank of Canada	Canada	US\$70m
SunTrust Bank	US	US\$80m
United Overseas Bank	Singapore	US\$30m
US Bank*	US	US\$80m
Wells Fargo	US	US\$80m

* Bank of the West is part of BNP Paribas; Bank of Tokyo-Mitsubishi is part of Mitsubishi UFJ Financial; Branch Banking & Trust is part of BB&T Corporation; GE Capital is part of General Electric; Hua Nan Commercial Bank is part of Hua Nan Financial Holdings; KeyBank is part of KeyCorp; People's United Bank is part of People's United Financial; PNC Bank is part of PNC Bancorp; US Bank is part of US Bancorp.

Other Types of Investment

Alliant Techsystems did not issue new shares in the relevant research period (since 2008).


Babcock & Wilcox
Shareholders
INSTITUTIONAL SHAREHOLDERS OF BABCOCK & WILCOX (0.5% OR MORE OF OUTSTANDING SHARES)

FINANCIAL INSTITUTION	COUNTRY	% SHARES	VALUE US\$M	FILING DATE (RANGE)
T. Rowe Price Group	US	15.36	501.13	30/06/11
Mason Capital Management	US	11.73	294.19	23/09/11
Primecap Management Company	US	7.79	254.09	30/06/11
Shapiro Capital Management	US	4.71	153.86	30/06/11
BlackRock	US	4.44	144.59	30/06/11
Vanguard Group	US	3.78	123.47	30/06/11
Columbia Management Investment Advisers*	US	2.86	93.49	30/06/11
Relational Investors	US	2.77	90.31	30/06/11
Anchor Capital Holdings	US	2.73	89.11	30/06/11
Legg Mason	US	2.41	78.44	30/06/11
AllianceBernstein*	France	2.37	77.50	30/06/11
Herndon Capital Management	US	2.07	67.49	30/06/11
Glenview Capital Management	US	1.65	53.80	30/06/11
Keeley Asset Management	US	1.49	48.74	30/06/11
State Street	US	1.45	47.24	30/06/11
Janus Capital	US	1.35	43.96	30/06/11
Managed Account Advisors	US	1.24	40.36	30/06/11
Invesco	UK	1.13	36.86	30/06/11
Rydex	US	1.09	35.52	30/06/11
Calamos Asset Management	US	0.92	30.16	30/06/11
Pennant Capital Management	US	0.88	28.71	30/06/11
TIAA-CREF	US	0.81	26.55	30/06/11
Northern Trust	US	0.81	26.34	30/06/11
OppenheimerFunds	US	0.68	22.27	30/06/11
Moody Aldrich Partners	US	0.60	19.66	30/06/11
Government Pension Fund Global	Norway	0.65	19.57	31/12/10
BNY Mellon	US	0.53	12.01	30/09/11
Total		78.3	2,459.4	

* Columbia Management Investment Advisers is part of American Express Company; AllianceBernstein is part of AXA.

Source: Thomson ONE Banker, November 2011

Bank Loans

In May 2010 Babcock & Wilcox Investment Company, a subsidiary of Babcock & Wilcox, secured a four-year revolving credit facility with a value of US\$700 million. The proceeds were used for working capital, capital expenditure, refinancing and general corporate purposes. Eighteen banks participated in the syndicate,²⁴³ committing the following amounts (estimates only):

Allied Irish Investment Bank*	Ireland	US\$28m
Bank of America	US	US\$93.3m
BBVA	Spain	US\$28m
BNP Paribas	France	US\$93.3m
Branch Banking and Trust*	US	US\$28m
Comerica Bank*	US	US\$28m
Compass Bank*	Spain	US\$28m
Crédit Agricole	France	US\$28m
Fifth Third Bank*	US	US\$28m
JP Morgan Chase	US	US\$93.3m
PNC Bank*	US	US\$28m
Regions Bank*	US	US\$28m
Scotiabank	Canada	US\$28m
Sumitomo Mitsui Banking	Japan	US\$28m
Union Bank*	Japan	US\$28m
US Bank*	US	US\$28m
Wells Fargo	US	US\$28m
Whitney National Bank*	US	US\$28m

* Allied Irish Investment Bank is part of Allied Irish Banks; Branch Banking and Trust is part of BB&T Corporation; Comerica Bank is part of Comerica; Compass Bank is part of BBVA; Fifth Third Bank is part of Fifth Third Bancorp; PNC Bank is part of PNC Bancorp; Regions Bank is part of Regions Financial Corporation; Union Bank is part of Mitsubishi UFJ Financial; US Bank is part of US Bancorp; Whitney National Bank is part of Hancock Holdings.

Other Types of Investment

Babcock & Wilcox did not issue new shares or bonds in the relevant research period (since 2008). It does not have any bonds outstanding.

 **Babcock International**
Shareholders**INSTITUTIONAL SHAREHOLDERS OF BABCOCK INTERNATIONAL (0.5% OR MORE OF OUTSTANDING SHARES)**

FINANCIAL INSTITUTION	COUNTRY	% SHARES	VALUE US\$M	FILING DATE (RANGE)
Standard Life	UK	5.99	244.12	20/05/11–14/06/11
JP Morgan Chase	US	4.75	186.97	12/05/11–31/08/11
Cantillon Capital Management	US	5.00	183.40	19/08/11
Fidelity	US	4.98	183.00	14/06/11–11/08/11
BlackRock	US	4.43	163.42	15/06/11–30/09/11
Ignis Asset Management	UK	3.91	159.46	12/05/11
William Blair & Company	US	3.71	152.14	30/06/11
Legal & General	UK	3.19	130.10	12/05/11
Schroder Investment Management	UK	3.19	129.91	13/04/11–12/05/11
Affiliated Managers Group	US	2.98	93.09	02/07/10
Invesco	UK	1.85	68.14	31/01/11–31/08/11
F&C Asset Management	UK	1.65	60.67	01/09/11
Kames Capital*	Netherlands	1.66	53.24	16/06/10
Hermes	UK	1.45	46.62	22/06/10
Old Mutual	UK	1.28	46.12	01/03/10–31/08/11
Lloyds Banking Group	UK	1.13	41.66	01/09/11
BAE Systems Pension Funds Investment Management	UK	1.12	35.90	16/04/10
Prudential	UK	0.91	33.30	31/08/11
Government Pension Fund Global	Norway	1.07	33.27	07/07/10
Majedie Asset Management	UK	0.97	30.27	01/07/10
Kuwait Investment Authority (KIA)	Kuwait	0.79	30.02	24/05/11–01/09/11
Dimensional Fund Advisors	US	0.78	28.59	01/09/11
Artisan Partners	US	0.75	27.71	01/09/11
Royal London Mutual Insurance Society	UK	0.74	27.17	31/08/11
Credit Suisse	Switzerland	0.78	26.40	13/04/11–01/09/11
Jupiter Asset Management	UK	0.63	25.95	15/06/11
Aviva	UK	0.83	25.93	06/07/10
Vanguard Group	US	0.67	25.00	14/06/11–30/09/11
State Street	US	0.68	24.72	31/08/11–01/09/11
Premier Asset Management	UK	0.60	24.65	15/06/11
TT International	UK	0.63	23.37	01/09/11
Universities Superannuation Scheme	UK	0.62	22.70	01/09/11
National Farmers Union Mutual Insurance Society	UK	0.55	22.59	14/06/11
Egerton Capital	UK	0.63	20.27	21/06/10
Franklin Templeton	US	0.63	19.63	01/07/10
Barclays	UK	0.54	16.90	07/07/10
Total		66.07	2,466.40	

* Kames Capital is the new name of AEGON.

Source: Thomson ONE Banker, November 2011

Bond Issues

JUNE 2009

In June 2009 Babcock International entered into an uncommitted multi-currency note facility agreement with Prudential Investment Management, which is part of **Prudential Financial** (US). Under this agreement Babcock International would be able to issue to Prudential loan notes for a total amount of (the equivalent of) US\$100 million, with a maturity of up to 10 years after the date of issue.

In January 2010 the amount was increased to US\$175 million. In the same month, Babcock issued two tranches of loan notes to Prudential under this agreement: a £60-million (US\$95.9-million) 4.995% tranche due January 2017 and a £40-million (US\$63.9-million) 5.405% tranche due January 2020.²⁴⁴

MARCH 2011

In March 2011 Babcock International issued US\$650 million worth of loan notes on the US private placement market. The issue comprised US\$150-million seven-year 4.940% notes and US\$500-million ten-year 5.640% notes. The proceeds were swapped into pounds and used to repay the bridge loan facility secured by the company in March 2010. **JP Morgan Chase** (US) and **Bank of America** (US) acted as joint bookrunners of placement, both underwriting an estimated amount of US\$325 million.²⁴⁵

Bank Loans

MARCH 2009

In March 2009 VT Group, which is (since June 2010) a subsidiary of Babcock International, extended a bilateral loan facility from **Barclays** (UK), which was originally entered into in March 2008. The facility has an amount of £80 million (US\$113.7 million) and was due March 2011. The proceeds were used for general corporate purposes.²⁴⁶

MARCH 2010

In March 2010 Babcock International secured a £400-million (US\$601.4-million) bridge loan due October 2011. The company also entered into a £600-million (US\$902.2-million) backstop facility, which comprised a £305-million (US\$458.6-million) revolver due June 2012 and a £295-million (US\$443.6-million) term loan due March 2011.

The proceeds of the facilities were used to back the company's £1.3-billion (US\$2.0-billion) bid for VT Group, a British defence and services company. The acquisition was completed in June 2010. Five banks participated in the syndicate,²⁴⁷ committing the following amounts (estimates only):

ANZ*	Australia	US\$135.5m
BayernLB*	Germany	US\$135.5m
JP Morgan Chase	US	US\$661.6m
Lloyds Banking Group	UK	US\$661.6m
Royal Bank of Scotland*	UK	US\$135.5m

* Only backstop facility.

JUNE 2011

In June 2011 Babcock International secured a £500-million (US\$809.7-million) five-year revolving credit facility. The proceeds were used to refinance debt secured by the company in March 2010. Ten banks participated in the syndicate,²⁴⁸ committing the following amounts (estimates only):

ANZ	Australia	US\$81m
Bank of America	US	US\$81m
Barclays	UK	US\$81m
BayernLB	Germany	US\$81m
Credit Industriel Commercial*	France	US\$81m
HSBC	UK	US\$81m
JP Morgan Chase	US	US\$81m
Lloyds TSB Capital*	UK	US\$81m
Mitsubishi UFJ Financial	Japan	US\$81m
Royal Bank of Scotland	UK	US\$81m

* Credit Industriel Commercial is part of Crédit Mutuel; Lloyds TSB Capital is part of Lloyds Banking Group.

Other Types of Investment

Babcock International did not issue new shares in the relevant research period (since 2008). It does not have any (stock-exchange-listed) bonds outstanding.

 **BAE Systems**
Shareholders**INSTITUTIONAL SHAREHOLDERS OF BAE SYSTEMS (0.5% OR MORE OF OUTSTANDING SHARES)**

FINANCIAL INSTITUTION	COUNTRY	% SHARES	VALUE US\$M	FILING DATE (RANGE)
Invesco	UK	11.29	1,551.51	30/01/11–30/09/11
AXA	France	6.18	1,050.17	22/09/10–03/10/11
Franklin Templeton	US	5.91	1,025.63	31/03/11–03/10/11
BlackRock	US	5.81	1,010.16	16/02/11–30/09/11
Capital Group	US	4.70	846.60	21/09/10–01/08/11
Legal & General	UK	4.14	728.90	16/02/11
Barclays	UK	4.13	727.07	16/02/11
Silchester International Investors	US	3.13	526.95	22/06/11
BNY Mellon	US	2.24	307.14	27/07/11–03/10/11
Majedie Asset Management	UK	2.02	298.05	04/08/11
UBS	Switzerland	1.87	250.23	30/06/11–03/10/11
Prudential	UK	1.83	241.10	03/10/11
Lloyds Banking Group	UK	1.26	181.67	03/10/11
State Street	US	1.27	180.89	20/06/11–03/10/11
Standard Life	UK	1.30	171.41	03/10/11
Jupiter Asset Management	UK	1.10	161.95	03/08/11
Deutsche Bank	Germany	1.09	144.57	04/08/11–03/10/11
American Express Company	US	0.98	144.13	03/08/11–04/08/11
Allianz	Germany	0.80	115.91	22/06/11–03/10/11
Aviva	UK	0.85	112.39	30/06/11–03/10/11
F&C Asset Management	UK	0.76	100.83	03/10/11
Pzena Investment Management	US	0.64	94.93	01/08/11
Ontario Teachers' Pension Plan Board	Canada	0.71	93.88	03/10/11
Marathon Asset Management	UK	0.67	88.57	03/10/11
Arrowstreet Capital	US	0.66	87.21	03/10/11
Northern Trust	US	0.54	82.82	24/01/11–31/08/11
First Trust Advisors	US	0.50	73.66	31/08/11
Total		66.38	10,398.33	

Source: Thomson ONE Banker, November 2011

Bondholders**BONDHOLDERS OF BAE SYSTEMS (0.5% OR MORE OF OUTSTANDING BONDS)**

FINANCIAL INSTITUTION	COUNTRY	% BONDS	VALUE US\$M	FILING DATE (RANGE)
AIG*	US	3.86	199.26	30/06/11
Northwestern Mutual	US	3.32	171.34	30/06/11
Metropolitan Life Insurance (MetLife)	US	3.23	166.14	30/06/11
Lincoln National Corporation	US	2.70	139.23	30/06/11
Hartford Financial Services Group	US	2.47	127.46	30/06/11
New York Life	US	2.09	107.48	30/06/11
Symetra Financial	US	1.82	94.02	30/06/11
TIAA-CREF	US	1.66	85.45	30/06/11
Jackson National Life Insurance	US	1.65	85.11	30/06/11
Liberty Mutual Holding Company	US	1.42	73.11	30/06/11
Allstate Corporation	US	1.42	73.00	30/06/11
Fidelity	US	1.34	69.32	31/12/10–30/09/11
John Hancock*	Canada	1.31	67.50	30/06/11
Prudential Financial	US	1.30	66.74	30/06/11–31/08/11
Allianz*	Germany	1.26	64.96	30/06/11
Sun Life Financial*	Canada	1.04	53.99	30/06/11–31/08/11
MassMutual	US	1.04	53.77	30/06/11–31/08/11
Unum Group*	US	0.95	49.50	30/06/11
Genworth Financial	US	0.91	47.02	30/06/11
M & G Investment Management*	UK	0.87	45.05	30/06/11
Munich Reinsurance America*	Germany	0.84	43.24	30/06/11
Continental Casualty Company*	US	0.82	42.53	30/06/11
Principal Financial Group	US	0.72	37.26	30/06/11
Transamerica*	Netherlands	0.68	34.94	30/06/11
Pacific Mutual Holding Company	US	0.62	32.00	30/06/11
Aviva	UK	0.58	29.65	30/06/11
Total		39.92	2,059.07	

* AIG includes American General Life, Western National Life, Variable Annuity Life Insurance Company and Sunamerica Life Insurance Company; John Hancock is part of Manulife Financial; Allianz includes Pimco; Sun Life Financial includes MFS; Unum Group includes Unum Life Insurance Company of America and Provident Life & Accident Insurance; M & G Investment Management is part of Prudential; Munich Reinsurance America is part of Munich Re; Continental Casualty Company is part of Loews Corporation; Transamerica is part of AEGON.

Source: Bloomberg Database, November 2011

Bond Issues

JUNE 2009

In June 2009 BAE Systems issued bonds for a total value of US\$1.5 billion. The issue was split in two tranches: a US\$1-billion 6.375% tranche due June 2019 and a 4.950% US\$500-million tranche due June 2014. The proceeds were used for general corporate purposes. Six banks participated in the syndicate,²⁴⁹ underwriting the following amounts (estimates only):

Barclays	UK	US\$281.3m
BNP Paribas	France	US\$187.5m
Citi	US	US\$281.3m
Deutsche Bank	Germany	US\$187.5m
Goldman Sachs	US	US\$281.3m
JP Morgan Chase	US	US\$281.3m

OCTOBER 2011

In October 2011 BAE Systems issued bonds for a total value of US\$1.25 billion. The issue was divided in three tranches: a US\$500-million 4.750% tranche due October 2021, a US\$350-million 3.500% tranche due October 2016 and a US\$400-million 5.800% tranche due October 2041.

The proceeds were used for general corporate purposes and to reduce indebtedness. Five financial institutions participated in the syndicate,²⁵⁰ underwriting the following amounts (estimates only):

Credit Suisse	Switzerland	US\$250m
Deutsche Bank	Germany	US\$250m
Goldman Sachs	US	US\$250m
JP Morgan Chase	US	US\$250m
Morgan Stanley	US	US\$250m

Bank Loans

DECEMBER 2011

In December 2010 BAE Systems secured a five-year revolving credit facility with a value of £2 billion (US\$3.16 billion). The proceeds were used for refinancing and general corporate purposes. Twenty-four banks participated in the syndicate,²⁵¹ committing the following amounts (estimates only):

ANZ	Australia	US\$131.7m
Bank of America	US	US\$131.7m
Barclays	UK	US\$131.7m
BayernLB	Germany	US\$131.7m
BNP Paribas	France	US\$131.7m
Citi	US	US\$131.7m
Commerzbank	Germany	US\$131.7m
Commonwealth Bank of Australia	Australia	US\$131.7m
Crédit Agricole	France	US\$131.7m
Credit Industriel Commercial*	France	US\$131.7m
Credit Suisse	Switzerland	US\$131.7m
Deutsche Bank	Germany	US\$131.7m
Goldman Sachs	US	US\$131.7m
JP Morgan Chase	US	US\$131.7m
Lloyds TSB Bank*	UK	US\$131.7m
Mitsubishi UFJ Financial	Japan	US\$131.7m
Morgan Stanley	US	US\$131.7m
Royal Bank of Scotland	UK	US\$131.7m
Skandinaviska Enskilda Banken	Sweden	US\$131.7m
Société Générale	France	US\$131.7m
Sumitomo Mitsui Banking	Japan	US\$131.7m
Toronto-Dominion Bank	Canada	US\$131.7m
UBS	Switzerland	US\$131.7m
Wells Fargo	US	US\$131.7m

* Credit Industriel Commercial is part of Crédit Mutuel; Lloyds TSB Bank is part of Lloyds Banking Group.

Other Types of Investment

BAE Systems did not issue new shares in the relevant research period (since 2008).

 **Bechtel**
Bank Loans

In June 2011 Bechtel Corporation signed a five-year revolving credit facility with a value of US\$2.5 billion. The facility is split in two tranches: a US\$1.55-billion letter of credit and a US\$950-million revolver. The proceeds would be used to refinance debt and for working capital purposes. Twenty-four banks participated in the syndicate,²⁵² committing the following amounts (estimates only):

Abu Dhabi Commercial Bank	UAE	US\$75m
Bank of America	US	US\$250m
Bank of New York*	US	US\$75m
Barclays	UK	US\$75m
BNP Paribas	France	US\$250m
Citi	US	US\$250m
Compass Bank*	Spain	US\$75m
Credit Industriel Commercial*	France	US\$75m
Europe Arab Bank*	Jordan	US\$75m
Goldman Sachs	US	US\$75m
Gulf International Bank	Bahrain	US\$75m
HSBC	UK	US\$75m
Intesabci*	Italy	US\$75m
Lloyds Banking Group	UK	US\$75m
Mizuho Bank	Japan	US\$75m
National Bank of Kuwait	Kuwait	US\$75m
Northern Trust Bank*	US	US\$75m
Riyad Bank	Saudi Arabia	US\$75m
Royal Bank of Scotland	UK	US\$250m
Société Générale	France	US\$75m
Scotiabank	Canada	US\$75m
Union Bank of California*	Japan	US\$75m
US Bank*	US	US\$75m
Wells Fargo	US	US\$75m

* Bank of New York is part of BNY Mellon; Compass Bank is part of BBVA; Credit Industriel Commercial is part of Crédit Mutuel; Europe Arab Bank is part of Arab Bank; Intesabci is part of Intesa Sanpaolo; Northern Trust Bank is part of Northern Trust; Union Bank of California is part of Mitsubishi UFJ Financial.

Other Types of Investment

Bechtel is a private company and therefore does not have public shareholders. It does not have any bonds outstanding.



Shareholders

INSTITUTIONAL SHAREHOLDERS OF BOEING (0.5% OR MORE OF OUTSTANDING SHARES)

FINANCIAL INSTITUTION	COUNTRY	% SHARES	VALUE US\$M	FILING DATE (RANGE)
Evercore Partners	US	11.06	6,058.12	30/06/11
Capital Group	US	6.31	3,460.19	30/06/11
BlackRock	US	5.37	2,932.33	30/06/11–31/07/11
State Street	US	4.32	2,365.02	30/11/10–31/08/11
Vanguard Group	US	3.72	2,037.03	30/06/11
T. Rowe Price Group	US	2.88	1,577.19	30/06/11
Fidelity	US	2.54	1,394.47	30/06/11
UBS	Switzerland	1.39	762.75	30/06/11–31/08/11
Jennison Associates*	US	1.36	744.48	30/06/11
Northern Trust	US	1.17	642.59	30/06/11
Goldman Sachs	US	1.16	632.73	30/06/11–31/08/11
TIAA-CREF	US	1.04	570.64	30/06/11
Primecap Management Company	US	1.02	557.00	30/06/11
Groupe BPCE	France	0.84	460.88	30/06/11
Wellington Management	US	0.83	456.22	30/06/11
KeyCorp	US	0.79	432.30	30/06/11
BNY Mellon	US	0.89	398.35	30/09/11
Fisher Investments	US	0.70	381.90	30/06/11
Neuberger Berman	US	0.67	368.50	30/06/11
Wells Fargo	US	0.66	363.79	30/06/11
Allianz	Germany	0.65	353.21	30/09/10–30/06/11
Geode Capital Management	US	0.62	340.85	30/06/11
Waddell & Reed Financial	US	0.61	334.66	30/06/11
Morgan Stanley	US	0.61	330.49	30/06/11
Manning & Napier Advisors	US	0.54	295.50	30/06/11
Eaton Vance	US	0.52	231.91	30/09/11
Total		52.27	28,483.10	

* Jennison Associates is part of Prudential Financial.

Source: Thomson ONE Banker, November 2011

Bond Issues

MARCH 2009

In March 2009 Boeing issued bonds for a total value of US\$1.85 billion. The issue was split in three tranches: a US\$500-million 6.875% tranche due March 2039, a US\$700-million 5.000% tranche due March 2014 and a US\$650-million 6.000% tranche due March 2019. The proceeds were used for general corporate purposes, stock repurchase, working capital purposes, capital expenditures, future acquisitions, investments and to reduce indebtedness. Thirty-five financial institutions participated in the syndicate,²⁵³ underwriting the following amounts:

ANZ	Australia	US\$18.5m
Banca IMI*	Italy	US\$18.5m
Bank of America	US	US\$111.6m
Barclays	UK	US\$92.6m
BBVA	Spain	US\$18.5m
Blaylock & Co	US	US\$3.8m
BNP Paribas	France	US\$111.6m
BNY Capital Markets*	US	US\$18.5m
Calyon*	France	US\$45.1m
Citi	US	US\$92.6m
Comerica	US	US\$18.5m
Credit Suisse	Switzerland	US\$92.6m

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Daiwa Securities Group	Japan	US\$45.1m
Deutsche Bank	Germany	US\$106.8m
Goldman Sachs	US	US\$111.6m
Greenwich Capital*	UK	US\$29.3m
ING	Netherlands	US\$18.5m
JP Morgan Chase	US	US\$220.8m
KeyBank*	US	US\$18.5m
Lloyds TSB Bank*	UK	US\$18.5m
Loop Capital Markets	US	US\$3.8m
M.R. Beal & Co	US	US\$4.9m
Mitsubishi UFJ Financial	Japan	US\$45.1m
Mizuho Bank	Japan	US\$45.1m
Morgan Stanley	US	US\$106.8m
Muriel Siebert & Co*	US	US\$5.3m
Royal Bank of Scotland	UK	US\$77.6m
Samuel A Ramirez & Co	US	US\$4.9m
SG Americas Securities*	France	US\$18.5m
Standard Chartered	UK	US\$18.5m
UBS	Switzerland	US\$220.8m
US Bancorp	US	US\$18.5m
Utendahl Capital Partners*	US	US\$5.3m
Wachovia*	US	US\$45.1m
Williams Capital Group	US	US\$18.5m

* Banca IMI is part of Intesa SanPaolo; BNY Capital Markets is part of BNY Mellon; Calyon is part of Crédit Agricole; Greenwich Capital is part of Royal Bank of Scotland; KeyBank is part of KeyCorp; Lloyds TSB Bank is part of Lloyds Banking Group; Muriel Siebert & Co is part of Siebert Financial Corp; SG Americas Securities is part of Société Générale; Utendahl Capital Partners is part of Utendahl Group; Wachovia is part of Wells Fargo.

JULY 2009

In July 2009 Boeing issued bonds for a total value of US\$1.95 billion. The issue was split in three tranches: a US\$750-million 3.500% tranche due February 2015, a US\$450-million 5.875% tranche due February 2040 and a US\$750-million 4.875% tranche due February 2020. The proceeds were used for general corporate purposes and to reduce indebtedness. Thirty banks participated in the syndicate,²⁵⁴ underwriting the following amounts:

ANZ	Australia	US\$19.5m
Banca IMI*	Italy	US\$19.5m
Bank of America	US	US\$221.3m
Barclays	UK	US\$109.1m
BBVA	US	US\$19.5m
Blaylock & Co	US	US\$4.05m
BNP Paribas	France	US\$81.1m
BNY Mellon	US	US\$19.5m
Calyon*	France	US\$109.1m
Citi	US	US\$39.0m
Credit Suisse	Switzerland	US\$81.1m

Daiwa Securities Group	Japan	US\$109.1m
Deutsche Bank	Germany	US\$221.3m
Goldman Sachs	US	US\$39.0m
ING	Netherlands	US\$19.5m
JP Morgan Chase	US	US\$39.0m
Lloyds TSB Bank*	UK	US\$19.5m
Loop Capital Markets	US	US\$19.5m
M.R. Beal & Co	US	US\$6.75m
Mitsubishi UFJ Financial	Japan	US\$109.1m
Mizuho Bank	Japan	US\$109.1m
Morgan Stanley	US	US\$221.3m
Royal Bank of Scotland	UK	US\$81.1m
SG Americas*	France	US\$19.5m
Standard Chartered	UK	US\$19.5m
UBS	Switzerland	US\$39.0m
US Bancorp	US	US\$19.5m
Utendahl Capital Partners*	US	US\$6.5m
Wells Fargo	US	US\$109.1m
Williams Capital Group	US	US\$19.5m

* Banca IMI is part of Intesa SanPaolo; Calyon is part of Crédit Agricole; Lloyds TSB Bank is part of Lloyds Banking Group; SG Americas is part of Société Générale; Utendahl Capital Partners is part of Utendahl Group.

OCTOBER 2009

In October 2009 Boeing Capital Corporation, a subsidiary of Boeing, issued bonds with a total value of US\$1 billion. The issue was split in two tranches: a US\$500-million 3.250% tranche due October 2014 and a US\$500-million 4.700% tranche due October 2019. The proceeds were used for general corporate purposes and to reduce indebtedness. Thirteen banks participated in the syndicate,²⁵⁵ underwriting the following amounts (estimates only):

Bank of America	US	US\$40m
Barclays	UK	US\$40m
BNP Paribas	France	US\$40m
Calyon*	France	US\$40m
Citi	US	US\$40m
Credit Suisse	Switzerland	US\$200m
Deutsche Bank	Germany	US\$40m
Goldman Sachs	US	US\$200m
JP Morgan Chase	US	US\$200m
Morgan Stanley	US	US\$40m
Royal Bank of Scotland	UK	US\$40m
UBS	Switzerland	US\$40m
Wells Fargo	US	US\$40m

* Calyon is part of Crédit Agricole.

NOVEMBER 2009

In November 2009 Boeing issued bonds for a total value of US\$1.2 billion. The issue was split in two tranches: a US\$500-million 3.750% tranche due November 2016 and a US\$700-million 1.875% tranche due November 2012. Thirty-eight banks participated in the syndicate,²⁵⁶ underwriting the following amounts:

ANZ	Australia	US\$8.4m
Banca IMI*	Italy	US\$12.0m
Bank of America	US	US\$20.2m
Barclays Capital	UK	US\$217.2m
BBVA Securities	Spain	US\$20.2m
Blaylock & Co	US	US\$4.9m
BNP Paribas	France	US\$60.2m
BNY Mellon	US	US\$12.0m
Calyon*	France	US\$20.2m
Citi	US	US\$217.2m
Comerica	US	US\$3.5m
Commerzbank	Germany	US\$12.0m
Credit Suisse	Switzerland	US\$20.2m
Daiwa Securities Group	Japan	US\$20.2m
Deutsche Bank	Germany	US\$20.2m
Goldman Sachs	US	US\$20.2m
JP Morgan Chase	US	US\$20.2m
KeyCorp	US	US\$3.5m
Lloyds Banking Group	UK	US\$12.0m
Loop Capital Markets	US	US\$12.0m
M.R. Beal & Co	US	US\$4.9m
Mitsubishi UFJ Financial	Japan	US\$20.2m
Mizuho Bank	Japan	US\$20.2m
Morgan Stanley	US	US\$20.2m
Muriel Siebert & Co*	US	US\$3.5m
PNC Bank*	US	US\$12.0m
RBC Capital Markets*	Canada	US\$12.0m
Royal Bank of Scotland	UK	US\$217.2m
Samuel A. Ramirez & Co	US	US\$3.5m
Santander Investment Bank*	Spain	US\$12.0m
SG Americas Securities*	France	US\$12.0m
Standard Chartered	UK	US\$12.0m
Toussaint Capital Partners	US	US\$4.9m
UBS	Switzerland	US\$20.2m
US Bancorp	US	US\$12.0m
Utendahl Capital Partners*	US	US\$4.9m
Wells Fargo	US	US\$60.2m
Williams Capital Group	US	US\$12.0m

* Banca IMI is part of Intesa SanPaolo; Calyon is part of Crédit Agricole; Muriel Siebert & Co is part of Siebert Financial Corp; PNC Bank is part of PNC Bancorp; RBC Capital Markets is part of Royal Bank of Canada; Santander Investment Bank is part of Banco Santander; SG Americas Securities is part of Société Générale; Utendahl Capital Partners is part of Utendahl Group.

JULY 2011

In July 2011 Boeing Capital Corporation, a subsidiary of Boeing, issued bonds for a total value of US\$750 million. The issue was split in two tranches: a US\$500 million 2.125% tranche due August 2016 and a US\$250 million 2.900% tranche due August 2018. Thirty-one banks participated in the syndicate,²⁵⁷ underwriting the following amounts:

ANZ	Australia	US\$7.5m
Banca IMI*	Italy	US\$7.5m
Banco Santander	Spain	US\$15.0m
Bank of America	US	US\$122.5m
Barclays	UK	US\$22.5m
BBVA	Spain	US\$22.5m
BNP Paribas	France	US\$22.5m
BNY Mellon	US	US\$15.0m
Citi	US	US\$22.5m
Commerzbank	Germany	US\$7.5m
Crédit Agricole	France	US\$15.0m
Credit Suisse	Switzerland	US\$40.8m
Deutsche Bank	Germany	US\$81.7m
Goldman Sachs	US	US\$22.5m
ICICI Bank	India	US\$7.5m
JP Morgan Chase	US	US\$81.7m
Lloyds Banking Group	UK	US\$7.5m
Loop Capital Markets	US	US\$7.5m
Mitsubishi UFJ Financial	Japan	US\$15.0m
Mizuho Bank	Japan	US\$15.0m
Morgan Stanley	US	US\$22.5m
Natixis*	France	US\$7.5m
Royal Bank of Canada	Canada	US\$15.0m
Royal Bank of Scotland	UK	US\$40.8m
SG Americas Securities*	France	US\$7.5m
Standard Chartered	UK	US\$15.0m
Sumitomo Mitsui Banking	Japan	US\$15.0m
UBS	Switzerland	US\$22.5m
US Bancorp	US	US\$15.0m
Wells Fargo	US	US\$22.5m
Williams Capital Group	US	US\$7.5m

* Banca IMI is part of Intesa SanPaolo; Natixis is part of Groupe BPCE; SG Americas Securities is part of Société Générale.

Bondholders

BONDHOLDERS OF BOEING (0.5% OR MORE OF OUTSTANDING BONDS)

FINANCIAL INSTITUTION	COUNTRY	% BONDS	VALUE US\$M	FILING DATE (RANGE)
Prudential Financial	US	2.79	325.99	30/06/11–31/08/11
Vanguard Group	US	2.24	261.59	30/06/11–30/09/11
TIAA-CREF	US	1.63	190.25	30/06/11
Hartford Financial Services Group	US	1.40	164.20	30/06/11
AIG*	US	1.38	163.11	30/06/11
Genworth Financial*	US	1.34	157.34	30/06/11
New York Life	US	1.33	154.89	30/06/11
AXA	France	1.19	139.23	30/06/11
Transamerica*	Netherlands	1.09	128.60	30/06/11
Northwestern Mutual	US	1.02	118.83	30/06/11
Allianz*	Germany	1.01	117.99	30/06/11
Metropolitan Life Insurance (MetLife)	US	0.91	106.97	30/06/11
Aviva	UK	0.89	104.48	30/06/11
John Hancock*	Canada	0.88	103.02	30/06/11
Allstate Corporation	US	0.75	87.40	30/06/11
BlackRock	US	0.73	84.36	31/07/11–01/11/11
Unum Group*	US	0.69	80.52	30/06/11
Principal Financial Group	US	0.68	79.20	30/06/11–30/09/11
Symetra Financial	US	0.66	77.36	30/06/11
Jackson National Life Insurance	US	0.56	65.77	30/06/11
Total		23.17	2,711.10	

* AIG includes American General Life, Western National Life and Variable Annuity Life Insurance Company; Genworth Financial includes Union Fidelity Life Insurance; Transamerica is part of AEGON; Allianz includes Pimco; John Hancock is part of Manulife Financial; Unum Group includes Unum Life Insurance Company of America and Provident Life & Accident Insurance.

Source: Bloomberg Database, November 2011

Bank Loans

NOVEMBER 2008

In November 2008 Boeing secured a US\$1-billion one-year revolving credit facility. Thirty-two banks participated in the syndicate,²⁵⁸ committing the following amounts (estimates only):

Abu Dhabi International Bank*	UAE	US\$20m
ANZ	Australia	US\$20m
Bank of America	US	US\$20m
Bank of Tokyo-Mitsubishi*	Japan	US\$20m
Barclays	UK	US\$20m
BBVA	Spain	US\$20m
BNP Paribas	France	US\$20m
BNY Mellon	US	US\$20m
Calyon*	France	US\$20m
Citi*	US	US\$200m
Credit Suisse	Switzerland	US\$20m
Deutsche Bank	Germany	US\$20m
ING	Netherlands	US\$20m
Intesa SanPaolo	Italy	US\$20m

JP Morgan Chase	US	US\$200m
KeyBank*	US	US\$20m
Lloyds TSB Bank*	UK	US\$20m
Merrill Lynch*	US	US\$20m
Mizuho Bank	Japan	US\$20m
Morgan Stanley	US	US\$20m
Northern Trust	US	US\$20m
Royal Bank of Scotland	UK	US\$20m
Société Générale	France	US\$20m
Standard Chartered	UK	US\$20m
State Street Bank and Trust*	US	US\$20m
Sumitomo Mitsui Banking	Japan	US\$20m
UBS	Switzerland	US\$20m
US Bank*	US	US\$20m
Wachovia Bank*	US	US\$20m
Wells Fargo	US	US\$20m
Westpac	Australia	US\$20m
William Street Commitment Corporation*	US	US\$20m

* Abu Dhabi International Bank is part of National Bank of Abu Dhabi; Bank of Tokyo-Mitsubishi is part of Mitsubishi UFJ Financial; Calyon is part of Crédit Agricole; KeyBank is part of KeyCorp; Lloyds TSB Bank is part of Lloyds Banking Group; Merrill Lynch is part of Bank of America; State Street Bank and Trust is part of State Street; US Bank is part of US Bancorp; Wachovia Bank is part of Wells Fargo; William Street Commitment Corporation is part of Goldman Sachs.

JUNE 2009

In June 2009 Aviall Inc – a subsidiary of Boeing that provides components for the aerospace and defence – secured a US\$200-million one-year revolving credit facility from **JP Morgan Chase** (US). Proceeds were used for general corporate purposes.²⁵⁹

NOVEMBER 2009

In November 2009 Boeing secured a US\$1.525-billion one-year revolving credit facility. The proceeds were used to refinance a loan and for general purposes. Thirty-three banks participated in the syndicate,²⁶⁰ committing the following amounts (estimates only):

Abu Dhabi International Bank*	UAE	US\$29.5m
ANZ	Australia	US\$29.5m
BBVA	Spain	US\$29.5m
Banco Santander	Spain	US\$29.5m
Bank of New York*	US	US\$29.5m
Bank of America	US	US\$29.5m
Bank of Tokyo-Mitsubishi UFJ*	Japan	US\$29.5m
Barclays	UK	US\$29.5m
BNP Paribas	France	US\$29.5m
Calyon*	France	US\$29.5m
Citi	US	US\$305.0m
Commerzbank	Germany	US\$29.5m
Credit Suisse	Switzerland	US\$29.5m
Deutsche Bank	Germany	US\$29.5m
Goldman Sachs	US	US\$29.5m
Intesa SanPaolo	Italy	US\$29.5m
KeyBank*	US	US\$29.5m
Lloyds TSB Bank*	UK	US\$29.5m
JP Morgan Chase	US	US\$305.0m
Mizuho Bank	Japan	US\$29.5m
Morgan Stanley	US	US\$29.5m
Northern Trust	US	US\$29.5m
PNC Bank*	US	US\$29.5m
Royal Bank of Canada	Canada	US\$29.5m
Royal Bank of Scotland	UK	US\$29.5m
Société Générale	France	US\$29.5m
Standard Chartered	UK	US\$29.5m
State Street Bank and Trust*	US	US\$29.5m
Sumitomo Mitsui Banking	Japan	US\$29.5m
UBS	Switzerland	US\$29.5m
US Bank*	US	US\$29.5m
Wells Fargo	US	US\$29.5m
Westpac	Australia	US\$29.5m

* Abu Dhabi International Bank is part of National Bank of Abu Dhabi; Bank of New York is part of BNY Mellon; Bank of Tokyo is part of Mitsubishi UFJ Financial; Calyon is part of Crédit Agricole; KeyBank is part of KeyCorp; Lloyds TSB Bank is part of Lloyds Banking Group; PNC Bank is part of PNC Bancorp; State Street Bank and Trust is part of State Street; US Bank is part of US Bancorp.

MARCH 2010

In March 2010 Boeing secured a credit facility with a value of US\$865 million, due October 2011. The proceeds were used for general corporate purposes. Twelve banks participated in the syndicate,²⁶¹ committing the following amounts:

Abu Dhabi International Bank*	UAE	US\$300m
Arab Banking Corporation	Bahrain	US\$50m
Banco Santander	Spain	US\$60m
BayernLB	Germany	US\$60m
BNP Paribas	France	US\$15m
Europe Arab Bank*	Jordan	US\$50m
ING	Netherlands	US\$50m
Mizuho Bank	Japan	US\$40m
PNC Bank*	US	US\$50m
Riyad Bank	Saudi Arabia	US\$100m
Royal Bank of Canada	Canada	US\$50m
Sumitomo Mitsui Banking	Japan	US\$40m

* Abu Dhabi International Bank is part of National Bank of Abu Dhabi; Europe Arab Bank is part of Arab Bank; PNC Bank is part of PNC Bancorp.

NOVEMBER 2010

In November 2010 Boeing secured a one-year revolving credit facility with a value of US\$2.376 billion. The proceeds were used to refinance the loan from November 2009 and for general corporate purposes. Thirty-seven banks participated in the syndicate,²⁶² committing the following amounts (estimates only):

Abu Dhabi International Bank*	UAE	US\$40.7m
ANZ	Australia	US\$40.7m
BBVA	Spain	US\$40.7m
Banco Santander	Spain	US\$40.7m
Bank of America	US	US\$40.7m
Bank of China	China	US\$40.7m
Bank of Tokyo-Mitsubishi UFJ*	Japan	US\$40.7m
Barclays	UK	US\$40.7m
BayernLB	Germany	US\$40.7m
BNP Paribas	France	US\$40.7m
BNY Mellon	US	US\$40.7m
Citi	US	US\$475.2m
Commerzbank	Germany	US\$40.7m
Crédit Agricole	France	US\$40.7m
Credit Suisse	Switzerland	US\$40.7m
DBS	Singapore	US\$40.7m
Deutsche Bank	Germany	US\$40.7m
Goldman Sachs	US	US\$40.7m
ICBC	China	US\$40.7m

DON'T BANK ON THE BOMB

ICICI Bank	India	US\$40.7m
Intesa SanPaolo	Italy	US\$40.7m
JP Morgan Chase	US	US\$475.2m
Lloyds TSB Bank*	UK	US\$40.7m
Mizuho Bank	Japan	US\$40.7m
Morgan Stanley	US	US\$40.7m
Northern Trust	US	US\$40.7m
Riyad Bank	Saudi Arabia	US\$40.7m
Royal Bank of Canada	Canada	US\$40.7m
Royal Bank of Scotland	UK	US\$40.7m
Société Générale	France	US\$40.7m
Standard Chartered	UK	US\$40.7m
State Street Bank and Trust*	US	US\$40.7m
Sumitomo Mitsui Banking	Japan	US\$40.7m
UBS	Switzerland	US\$40.7m
US Bank*	US	US\$40.7m
Wells Fargo	US	US\$40.7m
Westpac	Australia	US\$40.7m

* Abu Dhabi International Bank is part of National Bank of Abu Dhabi; Bank of Tokyo-Mitsubishi UFJ is part of Mitsubishi UFJ Financial; Lloyds TSB Bank is part of Lloyds Banking Group; State Street Bank and Trust is part of State Street; US Bank is part of US Bancorp.

Other Types of Investment

Boeing did not issue new shares in the relevant research period (since 2008).



Shareholders

EADS has two major shareholders: German car company Daimler and French holding company Société de gestion de l'aéronautique, de la défense et de l'espace (Sogead), both owning 22.36% of the shares of EADS.²⁶³ In addition, the following financial institutions own or manage 0.5% or more of the shares of EADS:

INSTITUTIONAL SHAREHOLDERS OF EADS (0.5% OR MORE OF OUTSTANDING SHARES)

FINANCIAL INSTITUTION	COUNTRY	% SHARES	VALUE US\$M	FILING DATE (RANGE)
Vnesheconombank	Russia	5.01	1,269.48	06/04/11
Capital Group	US	1.57	432.15	31/01/11–30/06/11
OppenheimerFunds	US	1.48	386.10	31/08/11
BlackRock	US	0.85	204.83	31/08/11–30/09/11
Primecap Management Company	US	0.62	170.37	30/06/11
Groupe BPCE	France	0.59	169.10	31/07/11
Total		10.12	2632.03	

Source: Thomson ONE Banker, November 2011

Bond Issues

In August 2009 EADS Finance BV, a subsidiary of EADS, issued bonds with a value of €1 billion (US\$1.441 billion) under the company's Euro Medium Term Note programme.

The bonds have an interest rate of 4.625% and are due August 2016. The proceeds were used for general corporate purposes. Thirteen financial institutions participated in the syndicate,²⁶⁴ underwriting the following amounts (estimates only):

Barclays	UK	US\$45.0m
BayernLB	Germany	US\$45.0m
BBVA	Spain	US\$45.0m
BNP Paribas	France	US\$216.2m
Calyon*	France	US\$216.2m
Commerzbank	Germany	US\$45.0m
Deutsche Bank	Germany	US\$216.2m
JP Morgan Chase	US	US\$45.0m
Mitsubishi UFJ Financial	Japan	US\$45.0m
Morgan Stanley	United States	US\$216.2m
Calyon*	France	US\$45.0m
Royal Bank of Scotland	UK	US\$45.0m
Société Générale	France	US\$216.2m

* Calyon is part of Crédit Agricole; Calyon is part of Crédit Agricole.

Bondholders

BONDHOLDERS OF EADS (0.5% OR MORE OF OUTSTANDING BONDS)

FINANCIAL INSTITUTION	COUNTRY	% BONDS	VALUE US\$M	FILING DATE (RANGE)
DekaBank	Germany	0.52	12.80	31/03/11–31/08/11
John Hancock*	Canada	1.54	37.89	30/06/11
UBS	Switzerland	0.67	16.46	31/07/11
Total		2.73	67.15	

* John Hancock is part of Manulife Financial.

Source: Bloomberg Database, November 2011

Bank Loans

In April 2011 EADS secured a five-year revolving credit facility with a value of €3 billion (US\$4.345 million). The proceeds were used for refinancing and for general corporate purposes. Thirty-nine financial institutions participated in the syndicate,²⁶⁵ committing the following amounts (estimates only):

ANZ	Australia	US\$111.4m
Bank of America	United States	US\$111.4m
Banco Santander	Spain	US\$111.4m
Bank of Tokyo-Mitsubishi UFJ*	Japan	US\$111.4m
Barclays	UK	US\$111.4m
BayernLB	Germany	US\$111.4m
BBVA	Spain	US\$111.4m
BNP Paribas	France	US\$111.4m
Citi	US	US\$111.4m
Commerzbank	Germany	US\$111.4m
Commonwealth Bank of Australia	Australia	US\$111.4m
Crédit Agricole	France	US\$111.4m
Crédit Mutuel	France	US\$111.4m
Credit Suisse	Switzerland	US\$111.4m
DBS	Singapore	US\$111.4m
Deutsche Bank	Germany	US\$111.4m
DZ Bank	Germany	US\$111.4m
Erste Bank	Austria	US\$111.4m
Goldman Sachs	US	US\$111.4m
Helaba	Germany	US\$111.4m
HSBC	UK	US\$111.4m
ICBC	China	US\$111.4m
ING	Netherlands	US\$111.4m
Intesa SanPaolo	Italy	US\$111.4m
JP Morgan Chase	US	US\$111.4m
KfW	Germany	US\$111.4m
Lloyds Banking Group	UK	US\$111.4m
Mizuho Bank	Japan	US\$111.4m
Morgan Stanley	US	US\$111.4m
Natixis*	France	US\$111.4m
Royal Bank of Canada	Canada	US\$111.4m
Royal Bank of Scotland	UK	US\$111.4m
Skandinaviska Enskilda Banken	Sweden	US\$111.4m
Société Générale	France	US\$111.4m
Sumitomo Mitsui Banking	Japan	US\$111.4m
Toronto-Dominion Bank	Canada	US\$111.4m
UBS	Switzerland	US\$111.4m
UniCredit	Italy	US\$111.4m
Westpac	Australia	US\$111.4m

* Bank of Tokyo-Mitsubishi UFJ is part of Mitsubishi UFJ Financial; Natixis is part of Groupe BPCE.

Other Types of Investment

EADS did not issue new shares in the relevant research period (since 2008).

Finmeccanica

Shareholders

The major shareholder of Finmeccanica is the Italian government, which owns 32.45% of its shares.²⁶⁶ In addition, the following financial institutions own or manage at least 0.5% of the shares of Finmeccanica.

INSTITUTIONAL SHAREHOLDERS OF FINMECCANICA (0.5% OR MORE OF OUTSTANDING SHARES)

FINANCIAL INSTITUTION	COUNTRY	% SHARES	VALUE US\$M	FILING DATE (RANGE)
Nuveen Investments	US	5.83	250.64	10/08/11–31/08/11
Capital Group	US	1.78	124.56	30/06/11
Libyan Investment Authority (LIA)	Libya	2.01	116.35	08/07/11
BlackRock	US	2.38	105.56	08/07/11–30/09/11
UBS	Switzerland	2.23	99.15	30/06/11–31/08/11
Bestinver*	Spain	0.55	38.30	30/06/11
Total		14.78	734.56	

* Bestinver is part of Grupo Entrecanales.

Source: Thomson ONE Banker, November 2011

Bondholders

BONDHOLDERS OF FINMECCANICA (0.5% OR MORE OF OUTSTANDING BONDS)

FINANCIAL INSTITUTION	COUNTRY	% BONDS	VALUE US\$M	FILING DATE (RANGE)
Northwestern Mutual	US	2.03	107.83	30/06/11
AIG*	US	1.82	96.73	30/06/11
Hartford Financial Services Group	US	1.69	88.99	30/06/11
BNP Paribas*	France	1.50	79.62	31/07/10–31/08/11
TIAA-CREF	US	1.49	79.00	30/06/11
Transamerica*	Netherlands	0.95	50.29	30/06/11
Intesa SanPaolo*	Italy	0.86	45.93	30/06/11–31/10/11
Lloyds Banking Group*	UK	0.73	38.89	30/04/11–30/09/11
Delaware Investments*	Australia	0.72	38.19	30/09/11
Groupe BPCE*	France	0.68	36.88	28/02/11–30/09/11
Metropolitan Life Insurance (MetLife)	US	0.51	27.00	30/06/11
Total		12.98	689.35	

* AIG includes American General Life, Western National Life and Variable Annuity Life Insurance Company; BNP Paribas includes Fortis and Parvest; Transamerica is part of AEGON; Intesa SanPaolo includes Fideuram and Eurizon Capital; Lloyds Banking Group includes Scottish Widows and Lloyds TSB; Delaware Investments is part of Macquarie Group; Groupe BPCE includes Natixis, Natexis and Loomis Sayles.

Source: Bloomberg Database, November 2011

Share Issues

In November 2008 Finmeccanica issued new shares for a total value of €1.22 billion (US\$1.56 billion). The proceeds were used for general corporate purposes, future acquisitions, investments and to reduce indebtedness. Twelve banks participated in the syndicate,²⁶⁷ underwriting the following amounts:

Banca Euromobiliare*	Italy	US\$77.9m
Banca IMI*	Italy	US\$148.0m
BBVA	Spain	US\$77.9m
BNP Paribas	France	US\$148.0m
Credit Suisse	Switzerland	US\$148.0m
Deutsche Bank	Germany	US\$148.0m
Goldman Sachs	US	US\$179.1m
Mediobanca	Italy	US\$179.1m
Morgan Stanley	US	US\$148.0m
Nomura	Japan	US\$77.9m
Société Générale	France	US\$77.9m
UniCredit	Italy	US\$148.0m

* Banca Euromobiliare, part of Credito Emiliano; Banca IMI, part of IntesaSanPaolo.

Bond Issues

NOVEMBER 2008 & FEBRUARY 2009

In November 2008 and February 2009 Finmeccanica Finance, a subsidiary of Finmeccanica, issued bonds for a total value of €1 billion (US\$1.29 billion). The issue was divided in two tranches: the first tranche with a value of €750 million (US\$967 million) was issued in November 2008. The second tranche with a value of €250 million (US\$321 million) was issued in February 2009. Both tranches have an interest rate of 8.125% and are due December 2013. Six financial institutions participated in the syndicate,²⁶⁸ underwriting the following amounts (estimates only):

Abax Bank* (only first tranche)	Italy	US\$161.2m
Banca IMI*	Italy	US\$225.5m
BNP Paribas	France	US\$225.5m
Merrill Lynch*	US	US\$225.5m
UBS	Switzerland	US\$225.5m
UniCredit	Italy	US\$225.5m

* Abax Bank is part of Credito Emiliano; Banca IMI is part of IntesaSanPaolo; Merrill Lynch is part of Bank of America.

* Only first tranche

APRIL 2009

In April 2009 Finmeccanica Finance, a subsidiary of Finmeccanica, issued bonds for a total value of £400 million (US\$584 million). The bonds have an interest rate of 8% and are due December 2019. The proceeds were used for general corporate purposes. **Barclays (UK)**, **Deutsche Bank (Germany)** and **Royal Bank of Scotland (UK)** acted as joint bookrunners in the syndicate,²⁶⁹ each underwriting an estimated amount of US\$194.5 million.

JULY 2009

In July 2009 Meccanica Holdings USA, a subsidiary of Finmeccanica, issued bonds for a total value of US\$792.3 million. The issue was split in two tranches: a US\$496.1-million 6.250% tranche due July 2019 and a US\$296.2-million 7.375% tranche due July 2039. The proceeds were used for general corporate purposes and for future acquisitions. The following seven banks acted as joint bookrunners in the syndicate,²⁷⁰ each underwriting US\$113.3 million:

Bank of America	US	US\$113.3m
Barclays	UK	US\$113.3m
Citi	US	US\$113.3m
JP Morgan Chase	US	US\$113.3m
Morgan Stanley	US	US\$113.3m
Royal Bank of Scotland	UK	US\$113.3m
Société Générale	France	US\$113.3m

OCTOBER 2009

In October 2009 Finmeccanica Finance, a subsidiary of Finmeccanica, issued bonds for total proceeds of €595.1 million (US\$888.8 million). The bonds have an interest rate of 5.250% and are due January 2022. Ten banks participated in the syndicate,²⁷¹ underwriting the following amounts (estimates only):

Banca IMI*	Italy	US\$133.3m
BBVA	Spain	US\$44.4m
BNP Paribas	France	US\$133.3m
Calyon*	France	US\$44.4m
Commerzbank	Germany	US\$44.4m
Deutsche Bank	Germany	US\$133.3m
MPS Capital Services*	Italy	US\$44.4m
Natixis*	France	US\$44.4m
Société Générale	France	US\$133.3m
UniCredit	Italy	US\$133.3m

* Banca IMI is part of IntesaSanPaolo; Calyon is part of Crédit Agricole; MPS is part of Banca Monte dei Paschi di Siena; Natixis is part of Groupe BPCE.

OCTOBER 2009

In October 2009 Meccanica Holdings USA, a subsidiary of Finmeccanica, issued bonds with a value of US\$500 million. The bonds have an interest rate of 6.250% and are due January 2040. The proceeds were used for general corporate purposes. Eight banks acted as joint bookrunners in the syndicate,²⁷² each underwriting an estimated US\$62.5 million:

Banco Santander	Spain	US\$62.5m
Bank of America	US	US\$62.5m
Citi	US	US\$62.5m
Goldman Sachs	US	US\$62.5m
JP Morgan	US	US\$62.5m
Morgan Stanley	US	US\$62.5m
Nomura	Japan	US\$62.5m
UBS	Switzerland	US\$62.5m

Bank Loans**JULY 2008**

In July 2008 Finmeccanica secured a €3.2-billion (US\$5.07-billion) credit facility. The loan was split in three tranches: a €1-billion (US\$1.59-billion) term loan due July 2009, a €1.5-billion (US\$2.38-billion) term loan due July 2009 with a one-year extension option, and a €700-million (US\$1.11-billion) term loan due July 2011. The proceeds were used to fund the acquisition of DRS Technologies, a US-based defence contractor. Thirty-seven banks participated in the syndicate,²⁷³ committing the following amounts (estimates only):

Banca Popolare di Lodi*	Italy	US\$92.2m
Banca Popolare di Milano	Italy	US\$92.2m
Banca Popolare di Sondrio	Italy	US\$92.2m
Banca Popolare Emilia Romagna	Italy	US\$92.2m
Banca Popolare di Vicenza	Italy	US\$92.2m
Banco di Sardegna*	Italy	US\$92.2m
Banco Santander	Spain	US\$92.2m
Bank of America	US	US\$92.2m
Bank of Tokyo-Mitsubishi UFJ*	Japan	US\$92.2m
Barclays	UK	US\$92.2m
BayernLB	Germany	US\$92.2m
BBVA	Spain	US\$92.2m
BNP Paribas	France	US\$92.2m
Casa de Bolsa del Caribe	Venezuela	US\$92.2m
Centrobanca*	Italy	US\$92.2m
Commerzbank	Germany	US\$92.2m
Credit Industriel Commercial*	France	US\$92.2m

Credit Suisse	Switzerland	US\$92.2m
Credito Bergamasco*	Italy	US\$92.2m
Credito Risparmio Parma*	France	US\$92.2m
Deutsche Bank	Germany	US\$92.2m
Dexia	Belgium	US\$92.2m
DZ Bank	Germany	US\$92.2m
Fortis*	France	US\$92.2m
Goldman Sachs	US	US\$507.2m
Gruppo Carige	Italy	US\$92.2m
Intesa SanPaolo	Italy	US\$507.2m
JP Morgan Chase	US	US\$92.2m
Landesbank Baden-Wuerttemberg	Germany	US\$92.2m
Lehman Brothers*	US	US\$92.2m
Mediobanca	Italy	US\$507.2m
Morgan Stanley	US	US\$92.2m
Natixis*	France	US\$92.2m
Royal Bank of Scotland	UK	US\$92.2m
Société Générale	France	US\$92.2m
UBS	Switzerland	US\$92.2m
UniCredit	Italy	US\$507.2m

* Banca Popolare di Lodi is part of Banco Popolare; Banco di Sardegna is part of Banca Popolare Emilia Romagna; Bank of Tokyo-Mitsubishi UFJ is part of Mitsubishi UFJ Financial; Centrobanca is part of Ubi Banca; Credit Industriel Commercial is part of Crédit Mutuel; Credito Bergamasco is part of Banco Popolare; Credito Risparmio Parma is part of Crédit Agricole; Fortis is now part of BNP Paribas; Lehman Brothers is now bankrupt.

JULY 2009

In July 2009 Finmeccanica secured a 1.5-year revolving credit facility with a value of €140 million (US\$199.5 million). The proceeds were used for general corporate purposes. Four banks participated in the syndicate,²⁷⁴ each committing an estimated US\$49.9 million:

Banca Popolare di Milano	Italy	US\$49.9m
Banca Popolare di Sondrio	Italy	US\$49.9m
Centrobanca*	Italy	US\$49.9m
Credito Bergamasco*	Italy	US\$49.9m

* Centrobanca is part of Ubi Banca; Credito Bergamasco is part of Banco Popolare.

JULY 2009

In July 2009 Finmeccanica secured a €500-million (US\$704-million) loan from the **European Investment Bank** (Europe). The loan was intended for Alenia Aeronautica, a wholly owned subsidiary of Finmeccanica, to be used for the production and development of technologically innovative aeronautical components. The maturity date of the loan is July 2022.²⁷⁵

DON'T BANK ON THE BOMB

JULY 2010

In July 2010 Finmeccanica secured a five-year revolving credit facility with a value of €2.4 billion (US\$3.18 billion). The proceeds were used for general corporate purposes and to refinance debt. Twenty-five financial institutions participated in the syndicate,²⁷⁶ each committing an estimated US\$127.3 million:

Banca Monte dei Paschi di Siena	Italy	US\$127.3m
Banca Popolare di Milano	Italy	US\$127.3m
Banca Popolare di Sondrio	Italy	US\$127.3m
Banca Popolare Emilia Romagna	Italy	US\$127.3m
Banco di Sardegna*	Italy	US\$127.3m
Banco Santander	Spain	US\$127.3m
Bank of America	US	US\$127.3m
Bank of Tokyo-Mitsubishi UFJ*	Japan	US\$127.3m
Barclays	UK	US\$127.3m
BBVA	Spain	US\$127.3m
BNP Paribas	France	US\$127.3m
Cassa di Ris di Genova & Imperia*	Italy	US\$127.3m
Centrobanca*	Italy	US\$127.3m
Citi	US	US\$127.3m
Commerzbank	Germany	US\$127.3m
Credit Industriel Commercial*	France	US\$127.3m
Credito Bergamasco*	Italy	US\$127.3m
Goldman Sachs	US	US\$127.3m
HSBC	UK	US\$127.3m
Intesa SanPaolo	Italy	US\$127.3m
JP Morgan Chase	US	US\$127.3m
Royal Bank of Scotland	UK	US\$127.3m
Société Générale	France	US\$127.3m
Sumitomo Mitsui Banking	Japan	US\$127.3m
UniCredit	Italy	US\$127.3m

* Banco di Sardegna is part of Banca Popolare Emilia Romagna; Bank of Tokyo-Mitsubishi UFJ is part of Mitsubishi UFJ Financial; Cassa di Ris di Genova & Imperia is part of Gruppo Carige; Centrobanca is part of Ubi Banca; Credit Industriel Commercial is part of Crédit Mutuel; Credito Bergamasco is part of Banco Popolare.



Shareholders

INSTITUTIONAL SHAREHOLDERS OF GENCORP (0.5% OR MORE OF OUTSTANDING SHARES)

FINANCIAL INSTITUTION	COUNTRY	% SHARES	VALUE US\$M	FILING DATE (RANGE)
GAMCO Investors*	US	12.72	47.95	30/06/11
BlackRock	US	7.98	30.12	30/06/11
GenCorp, Inc. Retirement Savings Plan	US	7.12	21.59	31/12/10
Franklin Templeton	US	5.23	19.73	30/06/11
Vanguard Group	US	4.88	18.40	30/06/11
Steel Partners	US	6.92	16.30	17/10/11
GlenRock	US	3.95	14.88	30/06/11
Kennedy Capital Management	US	3.64	13.71	30/06/11
Legg Mason	US	3.53	13.30	30/06/11
State Street	US	2.52	9.50	30/06/11
Beach Point Capital Management	US	2.21	8.35	30/06/11
Dimensional Fund Advisors	US	1.71	6.45	30/06/11
JP Morgan Chase	US	1.68	6.33	30/06/11
Teton Advisors	US	1.60	6.03	30/06/11
TIAA-CREF	US	1.54	5.82	30/06/11
Northern Trust	US	1.39	5.26	30/06/11
MFP Investors	US	1.30	4.90	30/06/11
Brown Advisory Holdings	US	1.78	4.70	30/09/11
Prudential	UK	1.11	4.19	30/06/11
Wells Fargo	US	1.10	4.14	30/06/11
AQR Capital Management	US	0.79	2.96	30/06/11
Lawson Kroeker Investment Management	US	1.10	2.91	30/09/11
Weiss Asset Management	US	0.67	2.52	30/06/11
Deutsche Bank	Germany	0.67	2.49	30/06/11
Invesco	UK	0.66	2.48	30/06/11
Arrowstreet Capital	US	0.65	2.46	30/06/11
Algert Coldiron Investors	US	0.63	2.37	30/06/11
Eidelman Virant Capital	US	0.59	2.22	30/06/11
California Public Employees' Retirement System	US	0.55	2.08	30/06/11
American Express Company	US	0.50	1.89	30/06/11
BNY Mellon	US	0.70	1.86	30/09/11
Total		81.42	287.89	

* GAMCO Investors is part of Gabelli Group Capital Partners (GGCP).

Source: Thomson ONE Banker, November 2011

Bondholders

BONDHOLDERS OF GENCORP (0.5% OR MORE OF OUTSTANDING BONDS)

FINANCIAL INSTITUTION	COUNTRY	% BONDS	VALUE US\$M	FILING DATE (RANGE)
Osterweis Capital Management	US	13.61	43.79	30/06/11–30/09/11
Citadel Investment Group	US	7.31	23.50	30/06/11
Palisade Capital Management	US	6.89	22.17	30/06/11
UBS	Switzerland	6.53	21.00	30/06/11
Lazard	US	5.63	18.10	30/06/11
Steel Partners	US	4.82	15.50	31/03/11
Radcliffe Capital Management	US	4.81	15.48	30/06/11
Mackay Shields Financial*	US	4.51	14.50	30/09/11
Bessemer Group	US	4.35	14.00	30/06/11
Symphony Asset Management*	US	3.91	12.58	30/06/11
Beach Point Capital Management	US	3.48	11.21	30/09/11
Angelo, Gordon & Co.	US	2.81	9.05	30/06/11
Wolverine	US	2.49	8.00	30/09/11
Fidelity	US	2.43	7.83	30/06/11
Principal Financial Group*	US	2.37	7.63	31/05/11–30/09/11
Deutsche Bank	Germany	2.37	7.26	30/06/11
Gabelli Group	US	2.16	6.95	30/06/11
Citi	US	1.92	6.19	30/06/11
Daiwa Securities Group	Japan	1.71	5.51	30/09/11
CNH Partners	US	1.41	4.55	30/06/11
AQR Capital Management	US	0.95	3.05	30/06/11
Aviva	UK	0.93	3.00	30/09/11
Kennedy Capital Management	US	0.87	2.80	30/06/11
Oaktree	US	0.78	2.50	30/09/11
Total		89.05	286.15	

* Mackay Shields Financial is part of New York Life; Symphony Asset Management is part of Nuveen Investments; Principal Financial Group includes Edge Asset Mgmt.

Source: Bloomberg Database, November 2011

Bond Issues

In December 2009 GenCorp issued subordinated convertible debentures in a private placement, raising US\$200 million. The debentures have an interest rate of 4.0625% and are due December 2039. The proceeds were used for refinancing purposes. Three banks participated in the syndicate,²⁷⁷ underwriting the following amounts (estimates only):

Imperial Capital Group	US	US\$25m
Lazard	US	US\$25m
Morgan Stanley	US	US\$150m

Other Types of Investment

GenCorp did not issue new shares in the relevant research period (since 2008); nor did it secure any bank loans in this period.



General Dynamics

Shareholders

INSTITUTIONAL SHAREHOLDERS OF GENERAL DYNAMICS (0.5% OR MORE OF OUTSTANDING SHARES)

FINANCIAL INSTITUTION	COUNTRY	% SHARES	VALUE US\$M	FILING DATE (RANGE)
Capital Group	US	10.20	2,749.24	30/06/11
Longview Asset Management	US	9.23	2,488.56	30/06/11
BlackRock	US	6.45	1,734.95	30/06/11–30/09/11
Vanguard Group	US	4.09	1,103.37	30/06/11
State Street	US	3.70	995.51	30/11/10–31/08/11
Wellington Management	US	3.04	818.97	30/06/11
Groupe BPCE	France	2.58	696.76	30/06/11
UBS	Switzerland	1.72	462.96	30/06/11–31/08/11
Northern Trust	US	1.25	340.01	30/06/11
American Express Company	US	0.98	264.11	30/06/11
Iridian Asset Management	US	0.88	237.73	30/06/11
Bank of America	US	0.87	235.34	30/06/11
BNY Mellon	US	1.09	223.59	30/09/11
American Century Investments	US	0.79	214.29	30/06/11
Franklin Templeton	US	0.79	212.55	30/06/11
Invesco	UK	0.72	195.44	30/06/11
Eaton Vance	US	0.88	180.96	30/09/11
Geode Capital Management	US	0.64	171.99	30/06/11
Deutsche Bank	Germany	0.66	171.79	30/06/11–30/09/11
Adage Capital Management	US	0.59	160.12	30/06/11
Standard Life	UK	0.57	154.09	30/06/11–31/08/11
Abrams Bison Investments	US	0.57	153.32	30/06/11
Marsico Capital Management	US	0.56	150.80	30/06/11
Wells Fargo	US	0.52	141.82	30/06/11
Total		53.37	14,258.27	

Source: Thomson ONE Banker, November 2011

Bond Issues

DECEMBER 2008

In December 2008 General Dynamics issued bonds with a total value of US\$1 billion. The bonds have an interest rate of 5.250% and are due February 2014. The proceeds were used for general corporate purposes and to reduce indebtedness. **Bank of America** (US) and **JP Morgan Chase** (US) acted as joint bookrunners in the syndicate of two banks, both underwriting US\$500 million.²⁷⁸

JUNE 2009

In June 2009 General Dynamics issued bonds with a total value of US\$750 million. The bonds have an interest rate of 1.8% and were due July 2011. The

proceeds were used for general corporate purposes and acquisition finance. Fifteen banks participated in the syndicate,²⁷⁹ underwriting the following amounts:

ANZ	Australia	US\$18.8m
Banca IMI*	Italy	US\$33.8m
Bank of America	US	US\$127.5m
Bank of Montreal	Canada	US\$18.8m
BBVA	Spain	US\$52.5m
BNY Mellon	US	US\$18.8m
JP Morgan Chase	US	US\$127.5m
Lloyds TSB Bank*	UK	US\$52.5m
Mitsubishi UFJ Securities*	Japan	US\$18.8m
PNC Capital Markets*	US	US\$18.8m
Royal Bank of Scotland	UK	US\$127.5m

DON'T BANK ON THE BOMB

SunTrust Robinson Humphrey*	US	US\$33.8m
US Bancorp	US	US\$18.8m
Wachovia*	US	US\$52.5m
Williams Capital Group	US	US\$30.0m

* Banca IMI is part of Intesa SanPaolo; Lloyds TSB Bank is part of Lloyds Banking Group; Mitsubishi UFJ Securities is part of Mitsubishi UFJ Financial; PNC Capital Markets is part of PNC Bancorp; SunTrust Robinson Humphrey is part of SunTrust Bank; Wachovia is part of Wells Fargo.

JULY 2011

In July 2011 General Dynamics issued bonds for a total value of US\$1.5 billion. The issue was split in three tranches: a US\$500-million 2.250% tranche due July 2016, a US\$500-million 1.375% tranche due January 2015 and a US\$500-million 3.875% tranche due July 2021. Twenty-one banks participated in the syndicate,²⁸⁰ underwriting the following amounts:

ANZ	Australia	US\$30m
Bank of America	US	US\$180m
Barclays	UK	US\$30m
BBVA	Spain	US\$180m

BNY Mellon	US	US\$30m
Cowen & Company	US	US\$30m
Goldman Sachs	US	US\$52.5m
JP Morgan Chase	US	US\$180m
Lazard	US	US\$52.5m
Lloyds TSB Group*	UK	US\$52.5m
Mitsubishi UFJ Securities*	Japan	US\$52.5m
Mizuho Bank	Japan	US\$52.5m
PNC Capital Markets*	US	US\$30m
Royal Bank of Scotland	UK	US\$180m
Scotia Capital*	Canada	US\$15m
SMBC Nikko Securities*	Japan	US\$30m
SunTrust Robinson Humphrey*	US	US\$30m
TD Securities*	Canada	US\$30m
US Bancorp	US	US\$52.5m
Wells Fargo	US	US\$180m
Williams Capital Group	US	US\$30m

* Lloyds TSB Group is part of Lloyds Banking Group; Mitsubishi UFJ Securities is part of Mitsubishi UFJ Financial; PNC Capital Markets is part of PNC Bancorp; Scotia Capital is part of Scotiabank; SMBC Nikko Securities is part of Sumitomo Mitsui Banking; SunTrust Robinson Humphrey is part of SunTrust Bank; TD Securities is part of Toronto-Dominion Bank.

Bondholders

BONDHOLDERS OF GENERAL DYNAMICS (0.5% OR MORE OF OUTSTANDING BONDS)

FINANCIAL INSTITUTION	COUNTRY	% BONDS	VALUE US\$M	FILING DATE (RANGE)
Vanguard Group	US	4.51	175.59	30/06/11–30/09/11
New York Life	US	4.01	156.59	30/06/11
State Farm	US	2.75	107.00	30/06/11
TIAA-CREF	US	2.18	85.00	30/06/11
Prudential Financial	US	1.90	74.37	30/06/11–31/08/11
Northwestern Mutual	US	1.90	74.00	30/06/11
American National Insurance Company	US	1.57	61.20	30/06/11
Allstate Corporation	US	1.34	52.04	30/06/11
BlackRock	US	0.93	36.25	01/11/11
Pacific Heights Asset Management	US	0.86	33.53	30/09/11
Employers Reassurance Corporation*	Switzerland	0.85	33.00	30/06/11
Hartford Financial Services Group	US	0.79	30.76	30/06/11–30/09/11
Allianz	Germany	0.57	22.18	30/06/11
Lincoln National Corporation	US	0.51	20.00	30/06/11
Woodmen of the World Life Insurance Society	US	0.51	20.00	30/06/11
Total		25.18	981.51	

* Employers Reassurance Corporation is part of Swiss Reinsurance Company.

Source: Bloomberg Database, November 2011

Bank Loans

JULY 2009

In July 2009 General Dynamics secured a one-year revolving credit facility with a value of US\$815 million. The proceeds were used for general corporate purposes and to refinance debt. Ten banks participated in the syndicate,²⁸¹ committing the following amounts (estimates only):

Bank of America	US	US\$108.7m
Bank of Montreal	Canada	US\$69.9m
Bank of Tokyo-Mitsubishi Trust*	Japan	US\$69.9m
JP Morgan Chase	US	US\$108.7m
Lloyds Banking Group	UK	US\$69.9m
PNC Bancorp	US	US\$69.9m
Royal Bank of Scotland	UK	US\$108.7m
SunTrust Bank	US	US\$69.9m
US Bank*	US	US\$69.9m
Wells Fargo	US	US\$69.9m

* Bank of Tokyo-Mitsubishi Trust is part of Mitsubishi UFJ Financial; US Bank is part of US Bancorp.

JULY 2010

In July 2010 General Dynamics secured a three-year revolving credit facility with a value of US\$1 billion. The proceeds were used to refinance the loan secured in July 2009 and to provide a back-up for commercial paper. Twenty-one banks participated in the syndicate,²⁸² committing the following amounts (estimates only):

Abu Dhabi International Bank*	UAE	US\$37.5m
ANZ	Australia	US\$37.5m
Banesto*	Spain	US\$37.5m
Bank of America	US	US\$80.0m
Bank of Montreal	Canada	US\$37.5m
Bank of New York*	US	US\$37.5m
Bank of Taiwan	Taiwan	US\$37.5m
Bank of Tokyo-Mitsubishi*	Japan	US\$37.5m
BBVA	Spain	US\$80.0m
JP Morgan Chase	US	US\$80.0m
Lloyds TSB Capital*	UK	US\$37.5m
Mizuho Bank	Japan	US\$37.5m
Northern Trust	US	US\$37.5m
PNC Bancorp	US	US\$37.5m
Royal Bank of Scotland	UK	US\$80.0m
Sumitomo Mitsui Banking	Japan	US\$37.5m
SunTrust Bank	US	US\$37.5m
Svenska Finans International*	Sweden	US\$37.5m
Toronto-Dominion Bank	Canada	US\$37.5m

US Bank*	US	US\$37.5m
Wells Fargo	US	US\$80.0m

* Abu Dhabi International Bank is part of National Bank of Abu Dhabi; Banesto is part of Banco Santander; Bank of New York is part of BNY Mellon; Bank of Tokyo-Mitsubishi is part of Mitsubishi UFJ Financial; Lloyds TSB Capital is part of Lloyds Banking Group; Svenska Finans International is part of Svenska Handelsbanken; US Bank is part of US Bancorp.

JULY 2011

In July 2011 General Dynamics secured a revolving credit facility with a value of US\$2 billion. The facility was split in two tranches: a US\$1-billion tranche due July 2016 and a US\$1-billion tranche due July 2013, which replaced the loan secured in July 2010. The proceeds were used for refinancing and for general corporate purposes. Twenty-two financial institutions participated in the syndicate,²⁸³ committing the following amounts (estimates only):

Abu Dhabi International Bank*	UAE	US\$78.1m
ANZ	Australia	US\$78.1m
Banesto*	Spain	US\$78.1m
Bank of America	US	US\$160.0m
Bank of New York*	US	US\$78.1m
Bank of Tokyo*	Japan	US\$78.1m
Barclays^	UK	US\$35.5m
BBVA	Spain	US\$160.0m
JP Morgan Chase	US	US\$160.0m
Lloyds TSB Bank*	US	US\$78.1m
Mizuho Bank	Japan	US\$78.1m
Northern Trust	US	US\$78.1m
PNC Bancorp	US	US\$78.1m
Riyad Bank^	Saudi Arabia	US\$35.5m
Royal Bank of Scotland	UK	US\$160.0m
Scotiabank^	Canada	US\$35.5m
Sumitomo Mitsui Banking	Japan	US\$78.1m
SunTrust Bank	US	US\$78.1m
Svenska Handelsbanken	Sweden	US\$78.1m
Toronto-Dominion Bank	Canada	US\$78.1m
US Bank*	US	US\$78.1m
Wells Fargo	US	US\$160.0m

* Abu Dhabi International Bank is part of National Bank of Abu Dhabi; Banesto is part of Banco Santander; Bank of New York is part of BNY Mellon; Bank of Tokyo is part of Mitsubishi UFJ Financial; Lloyds TSB Bank is part of Lloyds Banking Group; US Bank is part of US Bancorp.

^ Only the 2016 loan.

Other Types of Investment

General Dynamics did not issue new shares in the relevant research period (since 2008).


Honeywell International
Shareholders
INSTITUTIONAL SHAREHOLDERS OF HONEYWELL INTERNATIONAL (0.5% OR MORE OF OUTSTANDING SHARES)

FINANCIAL INSTITUTION	COUNTRY	% SHARES	VALUE US\$M	FILING DATE (RANGE)
State Street	US	10.10	4,649.74	30/11/10–30/09/11
BlackRock	US	5.16	2,378.62	30/06/11–30/09/11
Vanguard Group	US	3.78	1,741.32	30/06/11
Sun Life Financial	Canada	3.22	1,486.95	30/06/11
Fidelity	US	2.76	1,271.85	30/06/11–31/08/11
Wellington Management	US	2.59	1,194.92	30/06/11
Evercore Partners	US	2.55	1,174.72	30/06/11
Old Mutual	UK	2.37	1,093.17	30/06/11
T. Rowe Price Group	US	2.36	1,089.39	30/06/11
JP Morgan Chase	US	1.95	899.95	30/06/11
Capital Group	US	1.90	876.81	30/06/11
Primecap Management Company	US	1.90	875.98	30/06/11
Goldman Sachs	US	1.59	722.60	30/06/11–31/08/11
TIAA-CREF	US	1.46	672.15	30/06/11
American Express Company	US	1.24	573.13	30/06/11
Legg Mason	US	1.17	543.09	30/06/11
Bank of America	US	1.16	532.90	30/06/11
Northern Trust	US	1.13	522.77	30/06/11
New York Life	US	1.10	507.78	30/06/11
Morgan Stanley	US	1.06	488.62	30/06/11
BNY Mellon	US	1.39	468.82	30/09/11
Société Générale	France	0.95	437.44	30/06/11
Invesco	UK	0.93	428.46	30/06/11
Fisher Investments	US	0.71	329.38	30/06/11
Lazard	US	0.67	309.15	31/03/10–30/06/11
Geode Capital Management	US	0.64	293.39	30/06/11
GE Asset Management*	US	0.63	292.56	30/06/11
GAMCO Investors*	US	0.58	267.30	30/06/11
The Bessemer Group	US	0.50	230.06	30/06/11
Total		57.55	26,353.02	

* GE Asset Management is part of General Electric; GAMCO Investors is part of Gabelli Group Capital Partners (GGCP).

Source: Thomson ONE Banker, November 2011

Bond Issues
FEBRUARY 2009

In February 2009 Honeywell International issued bonds for a total value of US\$1.5 billion. The issue was split in two tranches: a US\$600-million 3.875% tranche due February 2014 and a US\$900-million 5% tranche due February 2019. The proceeds were used for general corporate purposes. Fourteen banks participated in the syndicate,²⁸⁴ underwriting:

Banca IMI*	Italy	US\$15m
Bank of America	US	US\$60m
Barclays	UK	US\$60m
BBVA	Spain	US\$21m
BNP Paribas	France	US\$21m
Citi	US	US\$60m
Deutsche Bank	Germany	US\$300m
Goldman Sachs	US	US\$60m
Greenwich Capital Markets*	UK	US\$300m

HSBC	UK	US\$21m
JP Morgan Chase	US	US\$300m
Mitsubishi UFJ Securities Int'l*	Japan	US\$21m
SG Americas Securities*	France	US\$21m
UBS	Switzerland	US\$240m

* Banca IMI is part of Intesa SanPaolo; Greenwich Capital Markets is part of Royal Bank of Scotland; Mitsubishi UFJ Securities International is part of Mitsubishi UFJ Financial; SG Americas Securities is part of Société Générale.

FEBRUARY 2011

In February 2011 Honeywell International issued bonds for a total value of US\$1.4 billion. The issue was split in two tranches: a US\$800-million 4.250% tranche due March 2021 and a US\$600-million 5.375% tranche due March 2041. The proceeds were used for general corporate purposes. Fourteen banks participated in the syndicate,²⁸⁵ underwriting:

Banca IMI*	Italy	US\$14.0m
Barclays	UK	US\$280.0m
BBVA	Spain	US\$21.0m
BNP Paribas	France	US\$21.0m
Citi	US	US\$280.0m
Deutsche Bank	Germany	US\$88.2m
Goldman Sachs	US	US\$88.2m
HSBC	UK	US\$21.0m
JP Morgan Chase	US	US\$88.2m
Merrill Lynch*	US	US\$280.0m
Mitsubishi UFJ Securities*	Japan	US\$21.0m
Royal Bank of Scotland	UK	US\$88.2m
SG Americas Securities*	France	US\$21.0m
UBS	Switzerland	US\$88.2m

* Banca IMI is part of Intesa SanPaolo; Merrill Lynch is part of Bank of America; Mitsubishi UFJ Securities is part of Mitsubishi UFJ Financial; SG Americas Securities is part of Société Générale.

Bondholders

BONDHOLDERS OF HONEYWELL INTERNATIONAL (0.5% OR MORE OF OUTSTANDING BONDS)

FINANCIAL INSTITUTION	COUNTRY	% BONDS	VALUE US\$M	FILING DATE (RANGE)
Metropolitan Life Insurance (MetLife)*	US	4.17	276.93	30/06/11
Allianz	Germany	2.90	192.74	30/06/11
Vanguard Group	US	2.84	189.25	30/06/11–30/09/11
Prudential Financial*	US	2.80	186.54	30/06/11
State Farm	US	2.55	168.0	30/06/11
New York Life*	US	2.17	145.07	30/06/11
TIAA-CREF	US	1.89	126.20	30/06/11
Lincoln National Corporation	US	1.87	124.61	30/06/11
Genworth Financial*	US	1.73	115.47	30/06/11
AIG*	US	1.62	107.46	30/06/11
Northwestern Mutual	US	1.54	103.05	30/06/11
Allstate Corporation	US	1.43	94.69	30/06/11
Transamerica*	Netherlands	1.42	94.47	30/06/11
Aviva	UK	1.29	85.96	30/06/11
ING	Netherlands	1.03	68.55	30/06/11–30/09/11
Nationwide	US	1.03	68.17	30/06/11–30/09/11
BlackRock	US	1.00	66.90	01/11/11
Symetra Financial	US	0.90	60.00	30/06/11
Woodmen of the World Life Insurance Society	US	0.79	52.43	30/06/11
Employers Reassurance Corporation*	Switzerland	0.74	49.00	30/06/11
Capital Group	US	0.67	44.92	30/06/11
AXA	France	0.62	40.50	30/06/11
Principal Financial Group	US	0.54	35.68	30/06/11–30/09/11
Knights of Columbus	US	0.52	34.87	30/06/11
Penn Mutual Life Insurance Company	US	0.51	33.86	30/06/11
Total		38.57	2,565.32	

* MetLife includes American Life Insurance Company and First Metlife Investors Insurance Company; Prudential Financial includes Pruco; New York Life includes Mackay Shields Financial; Genworth Financial includes Union Fidelity Life Insurance; AIG includes American General Life, Western National Life and Variable Annuity Life Insurance Company; Transamerica is part of AEGON; Employers Reassurance Corporation is part of Swiss Reinsurance Company. Source: Bloomberg Database, November 2011

Bank Loans

DECEMBER 2008

In December 2008 Honeywell International secured a one-year revolving credit facility with a value of US\$36 million. The proceeds were used for general corporate purposes. Two banks participated in the syndicate,²⁸⁶ committing the following amounts (estimates only):

Citi	US	US\$21.6m
Royal Bank of Scotland	UK	US\$14.4m

JANUARY 2010

In January 2010 Honeywell International secured a one-year revolving credit facility with a value of US\$20 million. The proceeds were used for general corporate purposes. Three banks participated in the syndicate,²⁸⁷ committing the following amounts (estimates only):

Bank of America	US	US\$6m
Citi	US	US\$8m
Royal Bank of Scotland	UK	US\$6m

MARCH 2011

In March 2011 Honeywell International secured a five-year revolving credit facility with a value of US\$2.8 billion. The proceeds were used for general corporate purposes. Twenty-nine banks participated in the syndicate,²⁸⁸ committing the following amounts:

Bank of America	US	US\$160.0m
Barclays	UK	US\$160.0m
Bank of Tokyo-Mitsubishi UFJ*	Japan	US\$90.0m
BBVA	Spain	US\$100.0m
BNP Paribas	France	US\$100.0m
BNY Mellon	US	US\$80.0m
Citi	US	US\$215.0m
Crédit Agricole	France	US\$50.0m
Danske Bank	Denmark	US\$50.0m
DBS	Singapore	US\$50.0m
Deutsche Bank	Germany	US\$160.0m
DnB	Norway	US\$50.0m
Goldman Sachs	US	US\$160.0m
HSBC	UK	US\$100.0m
Intesa SanPaolo	Italy	US\$100.0m
JP Morgan Chase	US	US\$215.0m
Mizuho Bank	Japan	US\$100.0m
Morgan Stanley	US	US\$70.0m
Northern Trust	US	US\$80.0m
Royal Bank of Canada	Canada	US\$100.0m
Royal Bank of Scotland	UK	US\$160.0m
Société Générale	France	US\$100.0m
Sovereign Bank*	Spain	US\$50.0m
Standard Chartered	UK	US\$50.0m
Sumitomo Mitsui Banking	Japan	US\$50.0m
UniCredit	Italy	US\$50.0m
US Bank*	US	US\$50.0m
Wells Fargo	US	US\$50.0m
Westpac	Australia	US\$50.0m

* Bank of Tokyo-Mitsubishi UFJ is part of Mitsubishi UFJ Financial; Sovereign Bank is part of Banco Santander; US Bank is part of US Bancorp.

Other Types of Investment

Honeywell International did not issue new shares in the relevant research period (since 2008).


Jacobs Engineering
Shareholders
INSTITUTIONAL SHAREHOLDERS OF JACOBS ENGINEERING (0.5% OR MORE OF OUTSTANDING SHARES)

FINANCIAL INSTITUTION	COUNTRY	% SHARES	VALUE US\$M	FILING DATE (RANGE)
BlackRock	US	9.15	504.93	30/06/11
Vanguard Group	US	5.20	286.97	30/06/11
Fidelity	US	4.60	253.94	30/06/11
Artisan Partners	US	3.79	208.92	30/06/11
State Street	US	3.67	202.18	31/11/10–31/08/11
Platinum Investment Management	Australia	2.73	150.64	30/06/11
William Blair & Company	US	2.61	144.23	30/06/11
Janus Capital	US	2.44	134.36	30/06/11
Wellington Management	US	2.28	125.62	30/06/11
Legg Mason	US	2.08	114.73	30/06/11
Eaton Vance	US	1.90	94.50	30/06/11–30/09/11
Bank of America	US	1.56	86.32	30/06/11
Northern Trust	US	1.36	75.25	30/06/11
Argyll Research	US	1.35	74.39	30/06/11
American Express Company	US	1.31	72.23	30/06/11
D.F. Dent & Company	US	1.63	67.29	30/09/11
Lord, Abbett & Co.	US	1.21	66.73	30/06/11
Capital Group	US	1.14	63.24	30/06/11
Swedbank	Sweden	1.14	62.70	30/06/11
Brown Advisory Holdings	US	1.23	60.51	30/09/11
Wells Fargo	US	0.93	51.55	30/06/11
New Jersey Division of Investment	US	1.23	50.86	30/09/11
BNY Mellon	US	1.18	48.57	30/09/11
Madison Investment Advisors	US	0.84	46.22	30/06/11
TIAA-CREF	US	0.80	44.18	30/06/11
Van Eck Associates Corporation	US	0.73	40.08	30/06/11
UBS	Switzerland	0.66	36.95	30/06/11
Government Pension Fund Global	Norway	0.62	36.50	31/12/10
Old Mutual	UK	0.55	30.37	30/06/11
Geode Capital Management	US	0.54	29.65	30/06/11
Michigan Department of Treasury	US	0.53	29.40	30/06/11
State Teachers Retirement System of Ohio	US	0.56	23.09	30/09/11
Total		61.55	3,317.1	

Source: Thomson ONE Banker, November 2011

Other Types of Investment

Jacobs Engineering did not issue new shares or bonds in the relevant research period (since 2008); nor did it secure any bank loans in this period. It does not have any bonds outstanding.


Larsen & Toubro
Shareholders**INSTITUTIONAL SHAREHOLDERS OF LARSEN & TOUBRO (0.5% OR MORE OF OUTSTANDING SHARES)**

FINANCIAL INSTITUTION	COUNTRY	% SHARES	VALUE US\$M	FILING DATE (RANGE)
Life Insurance Corporation of India	India	19.21	4,361.20	31/03/11
L&T Employees Welfare Foundation	India	12.16	2,760.74	31/03/11
UTI Asset Management	India	8.54	1,939.78	31/03/11
General Insurance Corporation of India	India	2.06	467.60	31/03/11
New India Assurance Company	India	1.19	269.85	31/03/11
BlackRock	US	1.15	254.47	31/12/10–30/09/11
Vanguard Group	US	0.79	198.03	30/06/11
Reliance Anil Dhirubhai Ambani Group	India	0.51	85.60	30/09/11
Total		45.61	10,337.27	

Source: Thomson ONE Banker, November 2011

Bondholders**BONDHOLDERS OF LARSEN & TOUBRO (0.5% OR MORE OF OUTSTANDING BONDS)**

FINANCIAL INSTITUTION	COUNTRY	% BONDS	VALUE US\$M	FILING DATE (RANGE)
Matthews International Capital	US	2.66	35.70	30/06/11
Jefferies Group	US	0.82	11.00	30/09/11
Schroder Investment Management	UK	0.63	8.50	30/06/11
Total		4.11	55.20	

Source: Bloomberg Database, November 2011

Share Issues**OCTOBER 2009**

In October 2009 Larsen & Toubro issued new shares, raising US\$405.4 million. The proceeds were used for general corporate purposes. **Citi** (US) was the sole bookrunner of the issue, underwriting the whole amount of US\$405.4 million.²⁸⁹

Barclays	UK	US\$46.6m
Citi	US	US\$46.6m
Credit Suisse	Switzerland	US\$46.6m
Equirus Capital	India	US\$46.6m
HSBC	UK	US\$46.6m
JM Financial	India	US\$46.6m

JULY 2011

In July 2011 L&T Finance Holdings, a subsidiary of Larsen & Toubro, issued shares through an initial public offering, raising INR 12,360 million (US\$279.7 million). The proceeds were used to pay fees and expenses, to invest in other companies, for capital expenditures, to reduce indebtedness and for general corporate purposes. Six banks participated in the syndicate,²⁹⁰ underwriting the following amounts (estimates only):

Bond Issues**JANUARY 2009**

In January 2009 Larsen & Toubro issued bonds with a value of INR 4 billion (US\$83 million). The bonds have an interest rate of 9.15% and are due January 2019. The proceeds were used for general corporate purposes. **Standard Chartered** (UK) was the sole bookrunner for the issue, underwriting the whole amount of US\$83 million.²⁹¹

JANUARY 2009

In January 2009 Larsen & Toubro issued bonds with a value of INR 2.5 billion (US\$51.5 million). The bonds have an interest rate of 9.2% and are due January 2012. The proceeds were used for general corporate purposes. **Yes Bank** (India) was the sole bookrunner for the issue, underwriting the whole amount of US\$51.5 million.²⁹²

JULY 2009

In July 2009 L&T Finance, a subsidiary of Larsen & Toubro, issued bonds with a value of INR 2.5 billion (US\$51.5 million). The bonds have an interest rate of 8.1% and are due July 2011. The proceeds were used for general corporate purposes. **Standard Chartered** (UK) was the sole bookrunner for the issue, underwriting the whole amount of US\$51.5 million.²⁹³

AUGUST 2009

In August 2009 L&T Finance, a subsidiary of Larsen & Toubro, issued bonds with a total value of INR 10 billion (US\$205 million). The issue was split in four tranches: a 9.510% INR 2.5-billion (US\$51.3-million) tranche due September 2014, a 9.950% INR 2.5-billion (US\$51.3-million) tranche due January 2017, a 9.620% INR 2.5-million (US\$51.3-million) tranche due September 2014 and a 10.240% INR 2.5-million (US\$51.3-million) tranche due September 2019. The proceeds were used for general corporate purposes, capital expenditures and working capital. **State Bank of India** (India), **JM Financial** (India) and **Standard Chartered** (UK) participated as joint bookrunners in the syndicate, each underwriting an estimated amount of US\$68.4 million.²⁹⁴

OCTOBER 2009

In October 2009 Larsen & Toubro issued five-year convertible bonds with a value of US\$200 million. The proceeds were used for general corporate purposes, capital expenditures and future acquisitions. **Citi** (US) was the sole bookrunner of the issue, underwriting the whole amount of US\$200 million.²⁹⁵

FEBRUARY 2010

In February 2010 L&T Finance Holdings, a subsidiary of Larsen & Toubro, issued bonds with a total value of INR 5 billion (US\$108 million). The issue was split in two tranches: a INR 2.5-billion (US\$53.9-million) 8.5% tranche due March 2013 and a INR 2.5-billion (US\$53.9-million) 8.4% tranche due March 2013. **JM Financial** (India), **Citi** (US) and **Kotak Mahindra Bank** (India) acted as joint bookrunners in the syndicate of three banks, each underwriting an estimated amount of US\$35.9 million.²⁹⁶

APRIL 2010

In April 2010 L&T Finance, a subsidiary of Larsen & Toubro, issued bonds with a value of INR 1.75 billion (US\$39.4 million). The bonds have an interest rate of 7.45% and are due April 2012. **HSBC** (UK) acted as the sole bookrunner for the issue, underwriting the whole amount of US\$39.4 million.²⁹⁷

APRIL 2010

In April 2010 Larsen & Toubro issued bonds with a value of INR 2 billion (US\$44.9 million). The bonds have an interest rate of 8.8% and are due April 2012. The proceeds were used for general corporate purposes. **HSBC** (UK) acted as the sole bookrunner for the issue, underwriting the whole amount of US\$44.9 million.²⁹⁸

MAY 2010

In May 2010 Larsen & Toubro issued step-up bonds with a value of INR 3 billion (US\$63.7 million). This bond will have an interest rate of 8.75% in the second year and 9.15% in the years thereafter. The bond is due May 2020. **Barclays** (UK) was the sole bookrunner of the issue, underwriting the whole amount of US\$44.9 million.²⁹⁹

MAY 2011

In May 2011 L&T Finance, a subsidiary of Larsen & Toubro, issued floating rate bonds with a value of INR 1 billion (US\$22.2 million). The bonds are due May 2014. The proceeds were used for general corporate purposes. **Edelweiss Capital** (India) was the sole bookrunner of the issue, underwriting the whole amount of US\$22.2 million.³⁰⁰

SEPTEMBER 2011

In September 2011 L&T Finance, a subsidiary of Larsen & Toubro, issued bonds with a value of INR 1.1 billion (US\$23.9 million). The bonds have an interest rate of 9.96% and are due September 2013.

Barclays (UK) was the sole bookrunner of the issue, underwriting the whole amount of US\$23.9 million.³⁰¹

Bank Loans

In August 2008 L&T Finance, a subsidiary of Larsen & Toubro, secured a term loan with a value of INR 3 billion (US\$69.3 million). The facility was split in four tranches: a INR 1-billion (US\$23.1-million) tranche due August 2011, a INR 500-million (US\$11.6-million) tranche due November 2008, a INR 750-million (US\$17.3-million) tranche due February 2009 and a INR 750-million (US\$17.3-million) tranche due August 2009. Two banks participated in the syndicate,³⁰² committing the following amounts (estimates only):

ICICI Bank	India	US\$41.6m
Reliance Mutual Fund*	India	US\$27.7m

* Reliance Mutual Fund is part of the Reliance Anil Dhirubhai Ambani Group.


Lockheed Martin
Shareholders
INSTITUTIONAL SHAREHOLDERS OF LOCKHEED MARTIN (0.5% OR MORE OF OUTSTANDING SHARES)

FINANCIAL INSTITUTION	COUNTRY	% SHARES	VALUE US\$M	FILING DATE (RANGE)
State Street	US	20.03	5,441.06	30/11/10–30/09/11
Capital Group	US	16.78	4,561.12	30/06/11
Sun Life Financial	Canada	5.61	1,523.15	30/06/11
BlackRock	US	4.99	1,357.23	30/06/11
Vanguard Group	US	3.30	895.98	30/06/11
Nuveen Investments	US	2.04	556.31	30/06/11
Davis Selected Advisers	US	1.71	464.09	30/06/11
Hotchkis and Wiley Capital Management	US	1.70	461.76	30/06/11
T. Rowe Price Group	US	1.19	323.73	30/06/11
Wellington Management	US	1.13	307.94	30/06/11
Allianz	Germany	1.08	294.65	31/12/10–30/09/11
BNY Mellon	US	1.18	288.52	30/09/11
Northern Trust	US	1.03	280.89	30/06/11
First Eagle Investment Management	US	1.02	277.60	30/06/11
American Express Company	US	0.92	249.92	30/06/11
Chieftain Capital Management	US	0.79	215.40	30/06/11
TIAA-CREF	US	0.71	193.95	30/06/11
LSV Asset Management	US	0.69	188.22	30/06/11
Managed Account Advisors	US	0.67	183.20	30/06/11
Michigan Department of Treasury	US	0.66	180.32	30/06/11
Bank of America	US	0.66	178.67	30/06/11
Fidelity	US	0.63	173.57	30/06/11–31/08/11
Deutsche Bank	Germany	0.62	163.78	30/06/11–30/09/11
Geode Capital Management	US	0.54	146.81	30/06/11
JP Morgan Chase	US	0.50	132.54	30/06/11–31/08/11
Eaton Vance	US	0.53	128.71	30/09/11
Total		70.71	19,169.12	

Source: Thomson ONE Banker, November 2011

Bond Issues
NOVEMBER 2009

In November 2009 Lockheed Martin issued bonds with a total value of US\$1.5 billion. The issue was split in two tranches: a US\$900-million 4.25% tranche due November 2019 and a US\$600-million 5.5% tranche due November 2039. The proceeds were used for general corporate purposes and to reduce indebtedness. Twelve banks participated in the syndicate,³⁰³ underwriting the following amounts:

Bank of America	US	US\$150.0m
BNP Paribas	France	US\$30.0m
Citi	US	US\$450.0m
Goldman Sachs	US	US\$60.0m
JP Morgan Chase	US	US\$450.0m
Lloyds TSB Bank*	UK	US\$30.0m
Mitsubishi UFJ Securities*	Japan	US\$30.0m
Mizuho Bank	Japan	US\$30.0m
Morgan Stanley	US	US\$150.0m
Royal Bank of Scotland	UK	US\$60.0m
UBS	Switzerland	US\$30.0m
Wells Fargo	US	US\$30.0m

* Lloyds TSB Bank is part of Lloyds Banking Group; Mitsubishi UFJ Securities is part of Mitsubishi UFJ Financial.

DON'T BANK ON THE BOMB

MAY 2010

In May 2010 Lockheed Martin issued bonds due 2040 for a total value of US\$728.2 million. These notes were issued in exchange for a portion of the company's outstanding bonds that would mature between 2016 and 2036. Six banks participated in the syndicate,³⁰⁴ underwriting the following amounts (estimates only):

ANZ	Australia	US\$36.4m
Banca IMI*	Italy	US\$36.4m
Crédit Agricole	France	US\$36.4m
Goldman Sachs	US	US\$291.3m
Royal Bank of Scotland	UK	US\$36.4m
UBS	Switzerland	US\$291.3m

* Banca IMI is part of Intesa SanPaolo.

SEPTEMBER 2011

In September 2011 Lockheed Martin issued bonds with a total value of US\$2 billion. The issue was split in three tranches: a US\$500-million 2.125% tranche due September 2016, a US\$900-million 3.35% tranche due September 2021 and a US\$600-million 4.85% tranche due September 2041. The proceeds were used for general corporate purposes and to reduce indebtedness. Fifteen banks participated in the syndicate,³⁰⁵ underwriting the following amounts:

ANZ	Australia	US\$10.0m
Bank of America	US	US\$220.0m
Citi	US	US\$410.0m
Crédit Agricole	France	US\$80.0m
Goldman Sachs	US	US\$80.0m
JP Morgan Chase	US	US\$410.0m
Lloyds TSB Group*	UK	US\$10.0m
Mitsubishi UFJ Securities*	Japan	US\$80.0m
Mizuho Bank	Japan	US\$80.0m
Morgan Stanley	US	US\$220.0m
RBC Capital Markets*	Canada	US\$10.0m
SMBC Nikko Securities*	Japan	US\$10.0m
UBS	Switzerland	US\$80.0m
US Bancorp	US	US\$80.0m
Wells Fargo	US	US\$220.0m

* Lloyds TSB Group is part of Lloyds Banking Group; Mitsubishi UFJ Securities is part of Mitsubishi UFJ Financial Group; SMBC Nikko Securities is part of Sumitomo Mitsui Banking Corporation.

Bank Loans

In August 2011 Lockheed Martin secured a five-year revolving credit facility with a value of US\$1.5 billion. The proceeds were used for general corporate purposes. Twenty-one banks participated in the syndicate,³⁰⁶ committing the following amounts:

ANZ	Australia	US\$55.0m
Bank of America	US	US\$120.0m
Bank of Tokyo Mitsubishi*	Japan	US\$85.0m
Barclays	UK	US\$55.0m
Citi	US	US\$120.0m
Crédit Agricole	France	US\$55.0m
DBS Bank	Singapore	US\$37.5m
Goldman Sachs	US	US\$55.0m
JP Morgan Chase	US	US\$120.0m
Lloyds Banking Group	UK	US\$55.0m
Mizuho Bank	Japan	US\$85.0m
Morgan Stanley	US	US\$55.0m
Northern Trust	US	US\$37.5m
Riyad Bank	Saudi Arabia	US\$37.5m
Royal Bank of Canada	Canada	US\$55.0m
Royal Bank of Scotland	UK	US\$120.0m
State Street	US	US\$55.0m
Sumitomo Mitsui Banking	Japan	US\$37.5m
UBS	Switzerland	US\$55.0m
US Bank*	US	US\$85.0m
Wells Fargo	US	US\$120.0m

* Bank of Tokyo Mitsubishi is part of Mitsubishi UFJ Financial; US Bank is part of US Bancorp.

Bondholders

BONDHOLDERS OF LOCKHEED MARTIN (0.5% OR MORE OF OUTSTANDING BONDS)

FINANCIAL INSTITUTION	COUNTRY	% BONDS	VALUE US\$M	FILING DATE (RANGE)
Northwestern Mutual	US	3.97	278.40	30/06/11
New York Life*	US	2.85	197.88	30/06/11
Metropolitan Life Insurance (MetLife)	US	2.71	189.84	30/06/11
Prudential Financial*	US	2.19	153.57	30/06/11–31/08/11
Allianz*	Germany	2.15	150.34	30/06/11–01/11/11
TIAA-CREF	US	2.07	145.35	30/06/11
Symetra Financial	US	1.50	104.94	30/06/11
Genworth Financial*	US	1.36	94.76	30/06/11
AIG*	US	1.30	92.31	30/06/11
Lincoln National Corporation	US	1.16	81.72	30/06/11
Hartford Financial Services Group	US	1.13	79.88	30/06/11
Allstate Corporation	US	1.12	78.61	30/06/11
Unum Group*	US	0.97	67.97	30/06/11
Vanguard Group	US	0.95	66.91	30/06/11–30/09/11
Principal Financial Group	US	0.90	63.05	30/06/11–30/09/11
BlackRock	US	0.80	56.78	31/03/11–01/11/11
Jackson National Life Insurance	US	0.72	50.68	30/06/11
Bankers Life & Casualty Company*	US	0.66	46.41	30/06/11
MassMutual	US	0.64	44.77	30/06/11–31/08/11
Liberty Mutual Holding Company	US	0.57	40.82	30/06/11
Thrivent Financial for Lutherans	US	0.57	40.00	30/06/11
Aviva	UK	0.52	36.66	30/06/11
State Farm	US	0.50	35.00	30/06/11
Total		31.31	2,196.65	

* New York Life includes Mackay Shields Financial; Prudential Financial includes Pruco; Allianz includes Pimco; Genworth Financial includes Union Fidelity Life Insurance; AIG includes American General Life, Western National Life, Variable Annuity Life Insurance Company, Sunamerica Life Insurance Company; Unum Group includes Unum Life Insurance Company of America, Provident Life & Accident Insurance, Paul Revere Life Insurance; Bankers Life & Casualty Company is part of CNO Financial Group.

Source: Bloomberg Database, November 2011

Other Types of Investment

Lockheed Martin did not issue new shares in the relevant research period (since 2008).


Northrop Grumman
Shareholders**INSTITUTIONAL SHAREHOLDERS OF NORTHROP GRUMMAN (0.5% OR MORE OF OUTSTANDING SHARES)**

FINANCIAL INSTITUTION	COUNTRY	% SHARES	VALUE US\$M	FILING DATE (RANGE)
State Street	US	11.90	2289.41	30/11/10–31/08/11
BlackRock	US	8.09	1557.25	30/06/11–30/09/11
Capital Group	US	7.85	1513.52	30/06/11
AXA	France	7.07	1357.73	30/11/10–31/08/11
Wellington Management	US	4.99	961.89	30/06/11
Vanguard Group	US	3.97	765.63	30/06/11
Sun Life Financial	Canada	2.77	534.28	30/06/11
Pzena Investment Management	US	2.41	464.29	30/06/11
LSV Asset Management	US	2.01	387.59	30/06/11
Allianz	Germany	1.76	338.83	31/09/10–30/06/11
Credit Suisse	Switzerland	1.63	299.28	31/12/10–31/08/11
Hotchkis and Wiley Capital Management	US	1.23	237.32	30/06/11
Northern Trust	US	1.22	235.52	30/06/11
Wells Fargo	US	1.19	228.82	30/06/11
Legg Mason	US	1.18	226.63	30/06/11
First Eagle Investment Management	US	1.15	221.78	30/06/11
Putnam*	Canada	1.11	214.00	30/06/11
BNY Mellon	US	1.46	212.72	30/09/11
Dimensional Fund Advisors	US	1.07	206.25	30/06/11
Macquarie Group	Australia	1.00	193.04	30/06/11
Old Mutual	UK	1.32	191.97	30/09/11
Deutsche Bank	Germany	0.99	189.84	30/06/11–30/09/11
Aronson Johnson Ortiz	US	0.95	184.05	30/06/11
Groupe BPCE	France	0.72	138.34	30/06/11
Bank of America	US	0.68	130.26	30/06/11
Longview Partners	UK	0.87	126.32	30/09/11
Managed Account Advisors	US	0.64	124.12	30/06/11
American Express Company	US	0.60	115.65	30/06/11
Jennison Associates*	US	0.60	115.12	30/06/11
Geode Capital Management	US	0.57	110.46	30/06/11
JP Morgan Chase	US	0.56	106.65	30/06/11
Goldman Sachs	US	0.54	104.08	30/06/11
UBS	Switzerland	0.50	95.85	30/06/11
TIAA-CREF	US	0.50	95.53	30/06/11
QS Investors	US	0.53	76.50	30/09/11
Total		75.63	14.350.52	

* Putnam is part of Power Corporation of Canada; Jennison Associates is part of Prudential Financial.

Source: Thomson ONE Banker, November 2011

Bondholders

BONDHOLDERS OF NORTHROP GRUMMAN (0.5% OR MORE OF OUTSTANDING BONDS)

FINANCIAL INSTITUTION	COUNTRY	% BONDS	VALUE US\$M	FILING DATE (RANGE)
Northwestern Mutual	US	4.90	192.42	30/06/11
Metropolitan Life Insurance (MetLife)	US	4.24	166.34	30/06/11
New York Life	US	4.10	160.75	30/06/11
Genworth Financial*	US	4.08	160.09	30/06/11
Prudential Financial	US	3.94	154.51	30/06/11–30/09/11
TIAA-CREF	US	3.85	150.76	30/06/11
Allstate Corporation	US	2.83	111.48	30/06/11
Unum Group*	US	2.57	100.76	30/06/11
Symetra Financial	US	2.40	94.22	30/06/11
AIG*	US	2.18	85.44	30/06/11
Lincoln National Corporation	US	2.14	84.25	30/06/11
Allianz	Germany	1.95	76.60	30/06/11
Jackson National Life Insurance	US	1.63	64.00	30/06/11
Aviva	UK	1.53	60.12	30/06/11
American Express Company*	US	1.47	57.68	30/06/11
Vanguard Group	US	1.35	52.88	30/06/11–30/09/11
State Farm	US	1.33	52.00	30/06/11
Capital Group	US	1.08	42.36	30/06/11
Hartford Financial Services Group	US	0.99	39.10	30/06/11
AXA	France	0.75	29.60	30/06/11
United Services Automobile Association	US	0.71	28.00	30/06/11
Loews Corporation*	US	0.71	27.88	30/06/11
Great West Life & Annuity Insurance*	Canada	0.70	27.50	30/06/11
Thrivent Financial for Lutherans	US	0.65	25.50	30/06/11
Bankers Life & Casualty Company*	US	0.64	25.00	30/06/11
Progressive Corporation	US	0.65	25.00	30/06/11
Pacific Mutual Holding Company	US	0.62	24.00	30/06/11
Farmers Insurance Group	US	0.60	23.45	30/06/11
American National Insurance Company	US	0.56	22.00	30/06/11
Protective Life Corporation	US	0.56	22.00	30/06/11
MassMutual	US	0.51	19.91	30/06/11
Medical Liability Mutual Insurance Company	US	0.50	19.78	30/06/11
Total		56.72	2,225.38	

* Genworth Financial includes Union Fidelity Life Insurance; Unum Group includes Unum Life Insurance Company of America and Provident Life & Accident Insurance; AIG includes American General Life, Western National Life and Variable Annuity Life Insurance Company; American Express Company includes Ameriprise Financial with subsidiary Riversource; Loews Corporation includes Continental Casualty Company and Continental Assurance Company; Great West Life & Annuity Insurance is part of Power Corporation of Canada; Bankers Life & Casualty Company is part of CNO Financial Group.

Source: Bloomberg Database, November 2011

Bond Issues

JULY 2009

In July 2009 Northrop Grumman issued bonds with a total value of US\$850 million. The issue was split in two tranches: a US\$500-million 5.05% tranche due August 2019 and a US\$350-million 3.7% tranche due August 2014. Twelve banks participated in the syndicate,³⁰⁷ underwriting the following amounts:

BNP Paribas	France	US\$59.5m
Citi	US	US\$106.3m
Credit Suisse	Switzerland	US\$127.5m
Deutsche Bank	Germany	US\$127.5m
Goldman Sachs	US	US\$19.1m
Intesa SanPaolo	Italy	US\$19.1m
JP Morgan Chase	US	US\$127.5m
Mitsubishi UFJ Securities*	Japan	US\$19.1m
Morgan Stanley	US	US\$59.5m
Royal Bank of Scotland	UK	US\$106.3m
SunTrust Bank	US	US\$19.1m
Wells Fargo	US	US\$59.5m

* Mitsubishi UFJ Securities is part of Mitsubishi UFJ Financial.

NOVEMBER 2010

In November 2010 Northrop Grumman issued bonds with a total value of US\$1.5 billion. The issue was split in three tranches: a US\$500-million 1.85% tranche due November 2015, a US\$300-million 5.05% tranche due November 2040 and a US\$700-million 3.5% tranche due March 2021. The proceeds were used for general corporate purposes, to reduce indebtedness and for working capital. Twelve financial institutions participated in the syndicate,³⁰⁸ underwriting the following amounts:

Banca IMI*	Italy	US\$50m
BNP Paribas	France	US\$75m
Citi	US	US\$225m
Credit Suisse	Switzerland	US\$150m
Deutsche Bank	Germany	US\$150m
Goldman Sachs	US	US\$50m
JP Morgan Chase	US	US\$225m
Mitsubishi UFJ Securities*	Japan	US\$75m
Morgan Stanley	US	US\$50m
Royal Bank of Scotland	UK	US\$225m
SunTrust Robinson Humphrey*	US	US\$75m
Wells Fargo	US	US\$150m

* Banca IMI is part of Intesa SanPaolo; Mitsubishi UFJ Securities is part of Mitsubishi UFJ Financial; SunTrust Robinson Humphrey is part of SunTrust Bank.

Bank Loans

In September 2011 Northrop Grumman secured a revolving credit facility with a value of US\$2 billion. The facility was divided in two tranches: a US\$500-million tranche due September 2012 and a US\$1.5-billion tranche due September 2016. The proceeds were used for general corporate purposes. Eleven financial institutions participated in the syndicate,³⁰⁹ committing the following amounts (estimates only):

Bank of New York*	US	US\$171.4m
BNP Paribas	France	US\$171.4m
Citi	US	US\$200.0m
Goldman Sachs	US	US\$171.4m
JP Morgan Chase	US	US\$200.0m
Northern Trust	US	US\$171.4m
Royal Bank of Scotland	UK	US\$200.0m
Scotiabank	Canada	US\$171.4m
Sumitomo Mitsui Banking	Japan	US\$171.4m
SunTrust Bank	US	US\$171.4m
Wells Fargo	US	US\$200.0m

* Bank of New York is part of BNY Mellon.

Other Types of Investment

Northrop Grumman did not issue new shares in the relevant research period (since 2008).

The Redhall Group

Shareholders

INSTITUTIONAL SHAREHOLDERS OF THE REDHALL GROUP (0.5% OR MORE OF OUTSTANDING SHARES)

FINANCIAL INSTITUTION	COUNTRY	% SHARES	VALUE US\$M	FILING DATE (RANGE)
Prudential	UK	14.93	5.71	25/08/11
North Atlantic Value	UK	15.28	5.17	05/07/11
Octopus Investments	UK	7.15	4.41	30/11/10
Charles Stanley Group	UK	3.84	2.37	30/11/10
Fidelity	US	3.70	2.28	30/11/10–31/07/11
SVG Capital	UK	3.60	2.22	30/11/10
Universities Superannuation Scheme	UK	3.53	2.18	30/11/10
Brown Shipley*	Belgium	3.32	2.05	30/11/10
Close Brothers Group	UK	5.11	1.85	01/04/11
J. M. Finn & Co.*	Belgium	1.87	1.20	01/03/10
Swedbank	Sweden	1.13	0.84	23/02/10
Barclays	UK	1.35	0.82	22/10/10
Universal-Investment-Gesellschaft	Germany	2.19	0.74	29/06/11
Liontrust Asset Management	UK	1.69	0.65	15/08/11
Unilever Pensioenfonds Progress	Netherlands	0.95	0.61	23/07/10
MassMutual	US	0.53	0.34	24/06/10
Franklin Templeton	US	0.81	0.27	23/06/11
Collins Stewart Hawkpoint	UK	0.68	0.23	25/05/11
Royal Bank of Scotland	UK	0.66	0.22	24/06/11
Lewis Trust Group	UK	0.56	0.19	28/06/11
Total		72.88	34.35	

* J. M. Finn & Co. is now part of Ackermans & van Haaren; Brown Shipley is a subsidiary of KBC Group NV through its subsidiary KBL epb.; it will soon become part of Precision Capital.

Source: Thomson ONE Banker

Share Issues

In October 2008 the Redhall Group issued new shares, raising £20 million (US\$32.1 million). The proceeds were used to finance the acquisition of Chieftain Group, an industrial and engineering support services company for the marine, petrochemical, power, oil and gas, and process sectors. **Altium Capital** (UK) was the sole bookrunner, underwriting the whole amount of US\$32.1 million.³¹⁰

Bank Loans

In January 2011 the Redhall Group secured a four-year revolving credit facility with a value of £20 million (US\$31.7 million), along with a £5-million (US\$7.9-million) overdraft facility. The proceeds were used to replace the group's existing debt, which would have expired in April 2012, and for general corporate purposes. **HSBC** (UK) was the sole bookrunner of the facilities, committing the whole amount.³¹¹

Other Types of Investment

Redhall Group did not issue new bonds in the relevant research period (since 2008). It does not have any bonds outstanding.


Rolls-Royce

Shareholders

INSTITUTIONAL SHAREHOLDERS OF ROLLS-ROYCE (0.5% OR MORE OF OUTSTANDING SHARES)

FINANCIAL INSTITUTION	COUNTRY	% SHARES	VALUE US\$M	FILING DATE (RANGE)
Invesco	UK	6.95	1,307.11	31/03/10–30/09/11
BlackRock	US	6.75	1,251.10	09/02/11–30/09/11
AXA	France	5.18	971.05	28/06/10–31/08/11
Legal & General	UK	3.96	743.44	09/02/11
Prudential	UK	2.40	417.45	01/09/11
T. Rowe Price Group	US	2.02	403.47	12/07/11
Baillie Gifford & Co.	UK	2.11	366.40	01/09/11
Government Pension Fund Global	Norway	1.78	356.41	12/07/11
Fidelity	US	1.78	310.03	01/09/11
Schroder Investment Management	UK	1.68	293.82	30/09/10–01/09/11
Lloyds Banking Group	UK	1.68	291.53	01/09/11
State Street	US	1.28	241.68	27/06/11–01/09/11
Standard Life	UK	1.26	218.62	01/09/11
American Express Company	US	1.09	216.86	29/06/11–12/07/11
Northern Cross	US	1.20	208.01	01/09/11
Kames Capital*	Netherlands	1.19	207.03	01/09/11
Causeway Capital Management	US	1.13	205.89	01/09/11
Ruane, Cunniff & Goldfarb	US	1.02	197.29	28/06/11
Ignis Asset Management	UK	1.11	192.99	01/09/11
Gulf International Bank	Bahrain	1.10	190.72	01/09/11
William Blair & Company	US	0.96	185.55	30/06/11
Franklin Templeton	US	0.84	151.35	27/04/10–01/09/11
TT International	UK	0.77	133.47	01/09/11
Aberdeen Asset Management	UK	0.68	118.25	01/09/11
Pictet & Cie	Switzerland	0.64	115.54	02/12/2010
Sun Life Financial	Canada	0.60	101.42	28/04/10–01/09/11
GAMCO Investors*	US	0.54	93.12	01/09/2011
Total		51.70	9,489.60	

* Kames Capital is the new name of AEGON; GAMCO Investors is part of Gabelli Group Capital Partners (GGCP).

Source: Thomson ONE Banker, November 2011

Bond Issues

In April 2009 Rolls-Royce issued bonds with a value of £500 million (US\$728.3 million) as part of the company's Euro Medium Term Note programme. The bonds have an interest rate of 6.75% and are due April 2019. The proceeds were used for general corporate purposes. Three financial institutions each underwrote an estimated US\$242.8 million:³¹²

Barclays	UK	US\$242.8m
BNP Paribas	France	US\$242.8m
JP Morgan Chase	US	US\$242.8m

JUNE 2009

In June 2009 Rolls-Royce issued bonds through a US\$195-million private placement in the United States. The bonds have an interest rate of 5.98% and are due July 2016. **Bank of America** (US) and **Royal Bank of Scotland** (UK) were the joint placement agents of the deal, both underwriting an estimated amount of US\$97.5 million.³¹³

Bondholders

BONDHOLDERS OF ROLLS-ROYCE (0.5% OR MORE OF OUTSTANDING BONDS)

FINANCIAL INSTITUTION	COUNTRY	% BONDS	VALUE US\$M	FILING DATE (RANGE)
Co-operative Group	UK	2.03	22.60	31/10/10
M & G Investment Management*	UK	1.14	12.69	30/06/11
Investec Asset Management	UK	1.09	12.13	31/07/11
Santander	Spain	0.95	10.63	30/09/11
BlackRock	US	0.69	7.68	31/07/11–01/11/11
Swisscanto	Switzerland	0.55	6.05	31/08/11
Total		6.45	71.78	

* M & G Investment Management is part of Prudential.

Source: Bloomberg Database, November 2011

Bank Loans

FEBRUARY 2009

In February 2009 Rolls-Royce secured a five-year credit facility with a value of £200 million (US\$290.7 million) from the **European Investment Bank** (Europe). The facility is due February 2014. According to Rolls-Royce's annual report of 2008, this facility was secured during 2008 and the loan was related to research and development.³¹⁴

OCTOBER 2011

In October 2011 Rolls-Royce secured a five-year revolving credit facility with a value of £1 billion (US\$1.54 billion). The proceeds were used to refinance two existing syndicated facilities and for general corporate purposes. Twenty-three banks participated in the syndicate,³¹⁵ committing the following amounts (estimates only):

ANZ	Australia	US\$46.3m
Banco Santander	Spain	US\$46.3m
Bank of America	US	US\$46.3m
Bank of Tokyo-Mitsubishi*	Japan	US\$205.8m
Barclays	UK	US\$46.3m
BayernLB	Germany	US\$46.3m
BNP Paribas	France	US\$46.3m
Citi	US	US\$205.8m
Commerzbank	Germany	US\$46.3m
Commonwealth Bank of Australia	Australia	US\$46.3m
Crédit Agricole	France	US\$205.8m
DBS Bank	Singapore	US\$46.3m
Deutsche Bank	Germany	US\$46.3m
Goldman Sachs	US	US\$46.3m
HSBC	UK	US\$46.3m
JP Morgan Chase	US	US\$46.3m
Lloyds TSB Bank*	UK	US\$46.3m
Nordea Bank	Sweden	US\$46.3m
Royal Bank of Canada	Canada	US\$46.3m
Royal Bank of Scotland	UK	US\$46.3m
Société Générale	France	US\$46.3m
Sumitomo Mitsui Banking	Japan	US\$46.3m
Toronto-Dominion Bank	Canada	US\$46.3m

* Bank of Tokyo-Mitsubishi is part of Mitsubishi UFJ Financial; Lloyds TSB Bank is part of Lloyds Banking Group.

Other Types of Investment

Rolls-Royce did not issue new shares in the relevant research period (since 2008).



Shareholders

Major shareholders of Safran are the French government, which owns 30.2% of the company, and the employees of Safran, which own 16.1%. In addition, French companies Club Sagem (6.27%) and Areva (1.80%) are also substantial shareholders of Safran.³¹⁸ The following financial institutions own or manage 0.5% or more of the outstanding shares of Safran:

INSTITUTIONAL SHAREHOLDERS OF SAFRAN (0.5% OR MORE OF OUTSTANDING SHARES)

FINANCIAL INSTITUTION	COUNTRY	% SHARES	VALUE US\$M	FILING DATE (RANGE)
Fidelity	US	2.34	378.89	31/08/11
Wellington Management	US	1.55	250.88	31/08/11
Allianz	Germany	1.12	195.76	30/06/11–31/08/11
BlackRock	US	0.70	111.22	28/02/11–30/09/11
Oddo & Cie	France	0.63	93.03	31/03/11
Total		6.34	1,029.78	

Source: Thomson ONE Banker, November 2011

Bondholders

BONDHOLDERS OF SAFRAN (0.5% OR MORE OF OUTSTANDING BONDS)

FINANCIAL INSTITUTION	COUNTRY	% BONDS	VALUE US\$M	FILING DATE (RANGE)
Glazer Capital	US	4.12	49.07	30/06/11
Radcliffe Capital Management	US	1.80	21.46	30/06/11
Fidelity	US	1.43	17.12	31/12/10–30/09/11
Osterweis Capital Management	US	1.39	16.60	30/06/11
Symphony Asset Management*	US	1.37	16.32	30/06/11
AQR Capital Management	US	1.19	14.11	30/06/11
Allianz*	Germany	1.02	12.12	30/06/11
MMA Finance*	France	0.74	8.80	30/06/11
Julius Baer	Switzerland	0.63	7.53	30/06/11
BNP Paribas*	France	0.63	7.45	31/05/10–31/05/11
Swisscanto	Switzerland	0.63	7.45	31/08/11
DNCA Finance*	Italy	0.55	6.50	30/06/11
Total		15.5	184.53	

* Symphony Asset Management is part of Nuveen Investments; Allianz includes Pimco; MMA Finance is part of Covea Mutal Insurance Group; BNP Paribas includes Fortis and Parvest; DNCA Finance is part of Banca Leonardo.

Source: Bloomberg Database, November 2011

Share Issues

OCTOBER 2010

In October 2010 Safran issued new shares, raising €310.7 million (US\$432.5 million). The proceeds were used for general corporate purposes and for investments. **HSBC** (UK) was the sole bookrunner of the issue, underwriting the whole amount.³¹⁶

JULY 2011

In July 2011 Safran issued new treasury shares, raising €188.5 million (US\$270.2 million). The proceeds were used for general corporate purposes. **Morgan Stanley** (US) was the sole bookrunner of the issue, underwriting the whole amount.³¹⁷

Bond Issues

In November 2009 Safran issued bonds with a value of €750 million (US\$1.12 billion). The bonds have an interest rate of 4% and are due November 2014. The proceeds were used for general corporate purposes. Four financial institutions participated as joint bookrunners in the syndicate,³¹⁹ each underwriting an estimated amount of US\$279.7 million:

BNP Paribas	France	US\$279.7m
Calyon*	France	US\$279.7m
Royal Bank of Scotland	UK	US\$279.7m
Société Générale	France	US\$279.7m

* Calyon is part of Crédit Agricole.

Bank Loans

DECEMBER 2008 & JUNE 2009

In December 2008 Safran secured a €200 million (US\$253.8 million) credit facility from the **European Investment Bank**. The loan is due July 2012.³²⁰ It secured another loan from the European Investment Bank in June 2009, which was used specifically for non-nuclear purposes (cleaner aircraft engines).³²¹

DECEMBER 2010

In December 2010 Safran secured a five-year revolving credit facility with a value of €1.6 billion (US\$2.12 billion). The proceeds were used for general corporate purposes. Twelve banks participated in the syndicate,³²² committing the following amounts (estimates only):

Banco Santander	Spain	US\$121.3m
Bank of Tokyo-Mitsubishi UFJ*	Japan	US\$121.3m
BNP Paribas	France	US\$121.3m
Citi	US	US\$121.3m
Commerzbank	Germany	US\$121.3m
Crédit Agricole	France	US\$254.7m
Crédit Mutuel	France	US\$254.7m
Deutsche Bank	Germany	US\$121.3m
HSBC	UK	US\$254.7m
ING	Netherlands	US\$121.3m
Royal Bank of Scotland	UK	US\$254.7m
Société Générale	France	US\$254.7m

* Bank of Tokyo-Mitsubishi UFJ is part of Mitsubishi UFJ Financial.

OCTOBER 2011

In October 2011 Safran secured a five-year revolving credit facility with a value of €950 million (US\$1.32 billion). The proceeds were used to replace an existing back-up facility that was due to mature in January 2012. Seven banks participated in the syndicate,³²³ committing the following amounts (estimates only):

Bank of Tokyo-Mitsubishi UFJ*	Japan	US\$198.1m
BNP Paribas	France	US\$176.1m
Crédit Agricole	France	US\$176.1m
Credit Industriel Commercial*	France	US\$198.1m
HSBC	UK	US\$176.1m
Natixis*	France	US\$198.1m
Société Générale	France	US\$198.1m

* Bank of Tokyo-Mitsubishi UFJ is part of Mitsubishi UFJ Financial; Credit Industriel Commercial is part of Crédit Mutuel; Natixis is part of Groupe BPCE.



Shareholders

INSTITUTIONAL SHAREHOLDERS OF SERCO GROUP (0.5% OR MORE OF OUTSTANDING SHARES)

FINANCIAL INSTITUTION	COUNTRY	% SHARES	VALUE US\$M	FILING DATE (RANGE)
AXA	France	10.78	484.69	31/12/10–01/07/11
Capital Group	US	7.53	330.92	16/02/11–27/07/11
Fidelity	US	6.90	288.47	31/12/10–07/10/11
Lansdowne Partners	UK	5.07	222.51	24/05/10
BlackRock	US	4.85	213.25	01/07/11–30/09/11
BNY Mellon	US	4.89	210.77	31/12/10–27/06/11
Baillie Gifford & Co.	UK	4.83	207.96	31/12/10
Lloyds Banking Group	UK	4.83	207.96	31/12/10
Legal & General	UK	3.93	168.97	31/12/10
Ignis Asset Management	UK	3.13	137.62	22/02/11
Invesco	UK	2.27	88.15	31/01/11–07/10/11
Majedie Asset Management	UK	1.92	84.40	01/07/11
Longview Asset Management	US	1.64	72.25	01/07/11
Cantillon Capital Management	US	1.45	63.74	01/07/11
T. Rowe Price Group	US	1.41	61.92	27/06/11
Kames Capital*	Netherlands	1.44	55.78	07/10/11
Allianz	Germany	1.05	44.07	30/06/11–07/10/11
Co-operative Group	UK	1.08	41.76	07/10/11
Gryphon International Investment Corporation	Canada	0.94	41.36	27/06/11
State Street	US	1.00	41.17	15/04/11–07/10/11
Mondrian Investment Partners	UK	0.93	40.71	01/07/11
Goldman Sachs	US	0.89	40.44	01/03/10
SAFE Investment Company	China	0.83	38.64	06/04/11
Financière de l'Echiquier	France	0.75	33.10	01/03/11
Standard Life	UK	0.67	26.37	31/07/11–07/10/11
Henderson Group	UK	0.66	25.60	07/10/11
Total		75.67	3,272.58	

* Kames Capital is the new name of AEGON.

Source: Thomson ONE Banker, November 2011

Bondholders

BONDHOLDERS OF SERCO GROUP (0.5% OR MORE OF OUTSTANDING BONDS)

FINANCIAL INSTITUTION	COUNTRY	% BONDS	VALUE US\$M	FILING DATE (RANGE)
CIBC	Canada	1.46	0.35	31/12/10
Total		1.46	0.35	

Source: Bloomberg Database, November 2011

Bond Issues

In May 2011 Serco Group issued bonds for a total value of US\$300 million. The issue was split in three tranches: a US\$50-million 3.62% tranche due May 2016, a US\$150-million 4.94% tranche due May 2021 and a US\$100-million 4.35% tranche due May 2018. The proceeds were used for general corporate purposes. **Bank of America** (US) was the sole bookrunner of the issue, underwriting the whole amount of US\$300 million.³²⁴

Bank Loans

SEPTEMBER 2008

In September 2008 Serco Group secured a multi-currency credit facility totalling £700 million (US\$1.26 billion). The facility was divided in two tranches: a US\$550-million term loan due September 2013 and a £400-million (US\$717.6-million) revolving credit facility due September 2013. The proceeds were used for general corporate purposes, to refinance debt and to fund the acquisition of SI International, which provides information services, outsourcing, technology and network solutions to the US Department of Defense and civil government agencies. The following financial institutions participated as joint bookrunners,³²⁵ each committing an estimated amount of US\$181.1 million:

Bank of America	US	US\$181.1m
Barclays	UK	US\$181.1m
BayernLB	Germany	US\$181.1m
Calyon*	France	US\$181.1m
HSBC	UK	US\$181.1m
Lloyds TSB Bank*	UK	US\$181.1m
Royal Bank of Scotland	UK	US\$181.1m

* Calyon is part of Crédit Agricole; Lloyds TSB Bank is part of Lloyds Banking Group.

JUNE 2011

In June 2011 Serco Group secured a credit facility with a total value of £300 million (US\$485.8 million). The facility was divided in two tranches: a £225-million bridge loan due June 2012 and a £75-million term loan due June 2014. The proceeds were used for general corporate purposes and to acquire Intelenet, an Indian company which provides business process outsourcing services. The following financial institutions participated in the syndicate,³²⁶ each committing an estimated US\$161.9 million:

Bank of America	US	US\$161.9m
Barclays	UK	US\$161.9m
Royal Bank of Scotland	UK	US\$161.9m

Other Types of Investment

Serco Group did not issue new shares in the relevant research period (since 2008).



Shareholders

Two major shareholders of Thales are the French government, owning 26.57% of the shares of the company, and the diversified French group of companies Dassault Group, owning 25.48%. The employees of Thales are also substantial shareholders (2.87%).³²⁷ In addition, the following financial institutions own or manage at least 0.5% of the shares of Thales:

INSTITUTIONAL SHAREHOLDERS OF THALES (0.5% OR MORE OF OUTSTANDING SHARES)

FINANCIAL INSTITUTION	COUNTRY	% SHARES	VALUE US\$M	FILING DATE (RANGE)
Nuveen Investments	US	6.34	405.87	31/08/11–07/10/11
Bestinver*	Spain	2.70	235.39	30/06/11
BNY Mellon	US	1.13	85.06	31/08/11
International Value Advisers	US	0.91	79.06	30/06/11
Government Pension Fund Global	Norway	0.77	54.21	31/12/10
Total		11.85	859.59	

* Bestinver is part of Grupo Entrecanales.

Source: Thomson ONE Banker, November 2011

Bond Issues

DECEMBER 2008

In December 2008 Thales issued bonds with a value of €275 million (US\$367.2 million). The bonds have an interest rate of 4.375% and were due July 2011. The proceeds were used for general corporate purposes. **BNP Paribas** (France) and **Royal Bank of Scotland** (UK) were the joint bookrunners of the issue, both underwriting an estimated amount of US\$183.6 million.³²⁸

MARCH 2009

In March 2009 Thales issued bonds with a value of €600 million (US\$808.2 million). The bonds have an interest rate of 4.375% and are due April 2013. The proceeds were used for general corporate purposes. Four financial institutions participated as joint bookrunners in the syndicate,³²⁹ each underwriting an estimated amount of US\$201.1 million:

BNP Paribas	France	US\$202.1m
Deutsche Bank	Germany	US\$202.1m
Natixis*	France	US\$202.1m
Société Générale	France	US\$202.1m

* Natixis is part of Groupe BPCE.

OCTOBER 2010

In October 2010 Thales issued bonds with a value of €600 million (US\$835.2 million). The bonds have an interest rate of 2.75% and are due October 2016. The proceeds were used for general corporate purposes and for refinancing. Six financial institutions participated as joint bookrunners in the syndicate,³³⁰ each underwriting an estimated US\$139.2 million:

BNP Paribas	France	US\$139.2m
Crédit Agricole	France	US\$139.2m
Deutsche Bank	Germany	US\$139.2m
Royal Bank of Scotland	UK	US\$139.2m
Banco Santander	Spain	US\$139.2m
Société Générale	France	US\$139.2m

Bondholders

BONDHOLDERS OF THALES (0.5% OR MORE OF OUTSTANDING BONDS)

FINANCIAL INSTITUTION	COUNTRY	% BONDS	VALUE US\$M	FILING DATE (RANGE)
UBI Banca	Italy	0.86	14.08	30/09/11
Crédit Agricole*	France	0.71	11.53	31/07/11–31/08/11
BNP Paribas*	France	0.67	11.05	28/02/11–30/09/11
DekaBank	Germany	0.64	10.43	31/03/11–30/06/11
Groupe BPCE	France	0.52	8.46	30/06/11–31/08/11
Union Investment*	Germany	0.51	8.33	31/03/11
Total		3.91	63.88	

* Crédit Agricole includes 75 per cent of Amundi; BNP Paribas includes Fortis and Parvest; Union Investment is part of DZ Bank.

Source: Bloomberg Database, November 2011

Bank Loans

In December 2010 Thales secured a five-year revolving credit facility with a value of €1.5 billion (US\$1.98 billion). The proceeds were used to refinance a loan which was due to mature in December 2011 and for general corporate purposes. Twenty banks participated in the syndicate,³³¹ committing the following amounts (estimates only):

ANZ	Australia	US\$87.9m
Banco Santander	Spain	US\$107.9m
Bank of Tokyo-Mitsubishi UFJ*	Japan	US\$107.9m
Barclays	UK	US\$87.9m
BBVA	Spain	US\$87.9m
BNP Paribas	France	US\$107.9m
CADIF*	France	US\$87.9m
Citi	US	US\$87.9m
Commerzbank	Germany	US\$107.9m
Crédit Agricole	France	US\$107.9m
Credit Industriel Commercial*	France	US\$107.9m
Deutsche Bank	Germany	US\$107.9m
HSBC	UK	US\$107.9m
Intesa SanPaolo	Italy	US\$87.9m
Natixis*	France	US\$107.9m
Riyad Bank	Saudi Arabia	US\$87.9m
Royal Bank of Scotland	UK	US\$107.9m
Société Générale	France	US\$107.9m
Sumitomo Mitsui Banking	Japan	US\$87.9m
UniCredit	Italy	US\$87.9m

* Bank of Tokyo-Mitsubishi UFJ is part of Mitsubishi UFJ Financial; CADIF is part of Crédit Agricole; Credit Industriel Commercial is part of Crédit Mutuel; Natixis is part of Groupe BPCE.

Other Types of Investment

Thales did not issue new shares in the relevant research period (since 2008).

BOX 12

Sample Letter: **Call on a Financial Institution to Divest**

Engaging in dialogues with financial institutions about their investments in nuclear weapons companies can help to raise their understanding of the effects of nuclear weapons and their status under international law. Here are some tips for letter-writing:

- **How to Begin:** Let the financial institution know who you are. Do you hold a bank account with them? Are you a member of their superannuation plan? Do you own shares in their company? Are you writing as a representative of a particular organization? Are you simply a concerned citizen?
- **What to Include:** Inform the financial institution that you are aware of their investments in nuclear weapons companies. Specify which companies and briefly describe the activities these companies are engaged in. Outline why you believe that financing nuclear weapons is illegitimate.
- **Ask for Information:** Inquire as to whether the financial institution has a policy on investing in the arms industry. If you are already aware that such a policy exists, ask the institution to explain how its investments in nuclear weapons companies can be justified under the terms of the policy.
- **Call for Action:** Call on the financial institution to divest from all nuclear weapons companies. Explain that nuclear weapons are illegal to use and have catastrophic humanitarian consequences. End by making it clear that you expect a response.

Dear Chief Executive Officer,

I am writing to you as a concerned customer of your bank. I recently read a report indicating that your bank has provided capital loans to three companies involved in the production of nuclear weapons. Those companies are:

- **Alliant Techsystems**, which produces rocket propulsion systems for Trident II and Minuteman III nuclear missiles;
- **Honeywell International**, which produces 85 per cent of the non-nuclear components for US nuclear weapons;
- **BAE Systems**, which is involved in the British and French nuclear weapons programmes.

The financing of these companies contributes to the build-up and modernization of nuclear arms and undermines efforts to achieve nuclear disarmament. It also heightens the risk that one day these inhumane weapons will be used again.

Any use of nuclear weapons would violate fundamental rules of international law and have catastrophic humanitarian and environmental consequences. I strongly encourage you to divest from these companies without delay.

The support of your bank and other financial institutions will be crucial to the success of worldwide efforts to abolish nuclear weapons. I hope that you will assist rather than impede efforts to eliminate this ultimate threat to our future.

I want my savings to help secure my future and that of my family, not undermine it. Unless you can reassure me that you will no longer invest in nuclear weapons producers, I intend to move my funds elsewhere.

I look forward to your response to these concerns.

Yours sincerely,

C.C.

Concerned Customer

Policies

What Banks Say about Financing Nuclear Weapons

Many financial institutions apply ethical standards – such as the UN Principles for Responsible Investment – when deciding how to invest their funds. These standards take into account environmental, social and corporate governance factors. This chapter examines selected institutions’ policies on financing nuclear weapons.

Investing in companies that manufacture and modernize nuclear weapons is a grave breach of ethical investment norms, as nuclear weapons are illegal to use and cause catastrophic humanitarian and environmental harm. Some financial institutions, in addition to maintaining general policies on ethical or sustainable investment, specifically state that they will not invest in nuclear armaments.

However, as this chapter shows, their policies on nuclear weapons investments often fall short of imposing a blanket ban on the financing of nuclear weapons companies. For example, some banks rule out providing loans specifically for nuclear weapons projects, but they are willing to provide loans to nuclear arms makers for general purposes.

All nuclear weapons companies are engaged in a diversity of enterprises, many of which are non-nuclear in nature (for example, Boeing builds commercial jetliners). These companies generally do not source direct finance from banks solely for the purpose of carrying out nuclear weapons work.

Instead, they raise money through corporate loans, syndicated loans, bond issues, share placements and share ownership. This money is allocated in whatever way a company sees fit. Whether or not the financier or investor intended the money to be used for nuclear weapons production makes little practical difference.

When nuclear weapons companies raise finance for “general corporate purposes”, a proportion of the funds they raise will likely be used to produce nuclear weapons. If banks and other financial institutions wish to avoid facilitating the manufacture of nuclear

arms, they must adopt more stringent policies that exclude the financing of nuclear weapons companies altogether. The existing policies of some financial institutions have little if any practical effect.

Policies Examined

In this chapter, we examine the nuclear weapons policies of 14 mainstream banks, asset managers and pension funds in nine countries. Only two of them – Rabobank and PGGM – were found not to invest substantively in any of the 20 nuclear weapons companies studied. The policies here provide a snapshot of financial institutions’ nuclear weapons stances, not an exhaustive list. Selection of the financial institutions was based on a desire to show a diversity of institutions from a diversity of nations.

SELECTED FINANCIAL INSTITUTIONS	
BBVA	Spain
Commerzbank	Germany
Crédit Agricole	France
DNB	Norway
Government Pension Fund Global	Norway
HSBC	UK
ING	Netherlands
Intesa Sanpaolo	Italy
KBC Group	Belgium
PGGM	Netherlands
Rabobank	Netherlands
Royal Bank of Canada	Canada
Toronto-Dominion Bank	Canada
Unicredit	Italy

BBVA

SPAIN

BBVA is a Spanish banking group that offers individual and corporate customers a range of financial and non-financial products and services. The group is present in 30 countries and has over seven million customers.³³² BBVA Group's defence policy was last updated in 2008 and states that the group will not be involved in financing operations that "include cluster bombs and any weapons of mass destruction (nuclear, chemical and/or bacteriological)".³³³

Investments: We found BBVA to be involved in financing Babcock & Wilcox, Bechtel, Boeing, EADS, Finmeccanica, General Dynamics, Honeywell International and Thales.

Commerzbank

GERMANY

Commerzbank is a leading bank for private and corporate customers in Germany. It serves more than 14 million private clients as well as one million business and corporate clients worldwide.³³⁴

Under its reputation risk management policy, Commerzbank states: "All financial arrangements, products and customer relations in which environmental, ethical or social aspects play a significant role are closely scrutinized and assessed by the Commerzbank Reputation Risk Management department and either rejected or accepted with conditions attached. This covers sensitive areas such as weapons and armaments ... nuclear power and the exploitation of commodities".³³⁵

Commerzbank's policy about nuclear weapons appears to have regressed in terms of clarity and strictness: up until early 2011 Commerzbank clearly stated that its guidelines governing armaments transactions did "not accompany financial transactions that are related to so-called controversial weapons". The bank considers the following weapons as "controversial": cluster bombs, anti-personnel mines, incendiary weapons, laser weapons with the capacity to blind, nuclear weapons, uranium core ammunition, biological and chemical weapons.³³⁶

Investments: We found Commerzbank to be involved in financing BAE Systems, Boeing, EADS, Finmeccanica, Rolls-Royce, Safran and Thales.

Crédit Agricole

FRANCE

Crédit Agricole is France's biggest and Europe's second-biggest retail bank, offering insurance, private banking, asset management, leasing and factoring, and corporate and investment banking. It has a total of 49 million customers in 70 countries.³³⁷

Crédit Agricole's latest guidelines on the financing of nuclear weapons were issued via an internal memorandum in November 2010. In this memorandum, nuclear weapons fall into the sensitive weapons category, which also includes biological and chemical weapons. The whole group is forbidden from financing the international trade of sensitive weapons. However, less strict rules apply for non-trading activities. The financing of nuclear weapons is governed by the following specific rules: "Any investment/holding, financing or provision of services (insurance, merger and acquisition, advisory, etc.) involving companies specializing in these types of weapons must be considered a sensitive transaction, unless it is lawful in the jurisdiction in question, and must be submitted for opinion to the ... Sustainable Development Unit."³³⁸

Investments: We found Crédit Agricole to be involved in financing Babcock & Wilcox, BAE Systems, Boeing, EADS, Finmeccanica, Honeywell International, Lockheed Martin, Rolls-Royce, Safran, Serco Group and Thales.

DNB

NORWAY

DNB is Norway's largest financial services group with around three million retail customers and over 200,000 corporate customers. It provides banking, insurance, brokerage and investment services.³³⁹

In its "Ethical Investments Guidelines", the group states that it "will not finance or invest in companies which develop and produce central components for use in weapons of mass destruction as a key part of their operations". Weapons of mass destruction are defined as atomic, biological and chemical.³⁴⁰

Investments: We found DNB to be involved in financing Honeywell International.

Government Pension Fund Global

NORWAY

The Norwegian Government Pension Fund Global is one of the largest pension funds in the world with a total size of over US\$520 billion. The fund is part of the Norwegian Ministry of Finance and is filled with the state petroleum revenues. It is not used for pension expenditures, but is used to cover the non-oil budget deficits of the government. The operational management is delegated to Norges Bank.³⁴¹

In March 2010 the Norwegian Ministry of Finance adopted revised guidelines for observation and exclusion from the Government Pension Fund Global's investment universe, which state that the "assets in the Fund shall not be invested in companies which themselves or through entities they control produce weapons that violate fundamental humanitarian principles through their normal use".³⁴²

Although the guidelines do not define which weapons meet this criterium, the Council of Ethics has proposed excluding nine companies from investments because of their involvement in the production of nuclear weapons. These exclusions were formalized by the Ministry of Finance.³⁴³ All nine are among the companies we researched.

Investments: We found the Government Pension Fund Global to be involved in financing Babcock International, Babcock & Wilcox, Jacobs Engineering, Rolls-Royce and Thales.

HSBC

UNITED KINGDOM

Headquartered in London, HSBC is one of the world's largest banking and financial services organizations. Its international network comprises around 7,500 offices in 87 countries and territories in Europe, the Asia-Pacific region, the Americas, the Middle East and Africa.³⁴⁴

HSBC states that, since 2000, it has been withdrawing progressively from financing the manufacture and trading of weapons. The group now has a "Defense Equipment Sector Policy", which splits weapons into two categories: 1) anti-personnel mines and cluster bombs and 2) other weapons. Although there is no specific reference to nuclear weapons, it is likely that they would fall into the second category. Its policy states: "HSBC does not provide financial services to customers who solely or primarily manufacture or sell other weapons. We do not provide financial services for transactions for

the purchase of other weapons". Notably, this policy may fail to stop services being provided to companies involved in the manufacture or trade of weapons if this is not their sole or primary activity. A stricter treatment is given to category-one weapons: "HSBC does not provide financial services to customers – including holding companies – which manufacture or sell anti-personnel or cluster bombs".³⁴⁵

Investments: We found HSBC to be involved in financing Babcock International, Bechtel, EADS, Finmeccanica, Honeywell International, Larsen & Toubro, Redhall Group, Rolls-Royce, Safran, Serco Group and Thales.

ING

THE NETHERLANDS

ING is a global financial institution of Dutch origin, which offers banking, investments, life insurance and retirement services to its customers. It is one of the largest savings banks in the world.³⁴⁶

ING has a defence policy that excludes the financing of companies that produce, maintain or trade controversial weapons. This includes "anti-personnel landmines, cluster munitions, biological/chemical weapons and weapons containing depleted uranium ... We therefore do not finance nuclear weapons". ING states that it "will not invest its own money in these companies and where possible ensure customer funds are not placed in them through ING managed funds (except in the case of discretionary mandates and trackers)".³⁴⁷

Investments: We found ING to be involved in financing Boeing, EADS, Honeywell International and Safran.

Intesa Sanpaolo

ITALY

Intesa Sanpaolo is Italy's leading bank in the retail, corporate and wealth management sectors. The group has 19.1 million customers and operates in 13 countries in Europe, the Americas and Africa.³⁴⁸

In July 2007, Intesa Sanpaolo issued an "Arms Policy", which relates to weapons in general without breaking them into categories. The policy "envisage[s] the discontinuation of its involvement in financial transactions related to the trading and manufacture of weapons, weapon components and related products". It states that, with immediate effect, the group must "conform with the ban from entering into new financial transactions concerning the trading and

manufacture of weapons, weapon components and related products”. However, the policy also states: “Possible transactions considered consistent with the spirit of an ‘unarmed bank’ may, as an exception, be authorised by the Chief Executive Officer”.³⁴⁹

Investments: We found Intesa Sanpaolo to be involved in financing Bechtel, Boeing, EADS, Finmeccanica, General Dynamics, Honeywell International, Lockheed Martin, Northrop Grumman and Thales.

KBC Group

BELGIUM

KBC is a Belgian banking and insurance group. It operates in Belgium, the Czech Republic, Slovakia, Hungary, Poland and Bulgaria and has around 12 million customers overall.³⁵⁰

KBC Group claims to have “the most far-reaching policy on controversial weapons in the world”, although its policy does not refer specifically to nuclear weapons. It drew up the policy in 2004, which asserts that the group “no longer invests in companies that are involved in developing, manufacturing or trading in weapons whose deployment has caused disproportionate suffering among innocent civilians over the past 50 years”.

Weapons considered to be controversial by the bank are: biological weapons, anti-personnel mines, cluster bombs and munitions and weapons containing depleted uranium. However, KBC adds to such statements that exceptions may be made to “certain index-linked investment funds for institutional investors”. It also highlights in its statement that it “is of course still bound by the terms of the contracts that apply to existing loans”.³⁵¹

Investments: We found KBC to be involved in financing Redhall Group through its subsidiary Brown Shipley, which it is in the process of selling off.

PGGM

THE NETHERLANDS

PGGM is a leading Dutch pension administrator with its roots in the healthcare and social work sector. PGGM manages over €109 billion of pension assets for more than 2.3 million Dutch participants, especially on behalf of its parent company Pensioenfonds Zorg en Welzijn.³⁵²

In January 2010 PGGM adopted a revised version of its exclusions policy, which states that it “will exclude companies from investment if they are

involved in the manufacturing or trading of weapons of which the use will cause violation of fundamental human rights. PGGM Investments’ focus in this respect is on controversial weapons. These are weapons that (can) cause harm on a large scale and target civilians, or mainly cause civilian casualties.”

PGGM defines weapons of mass destruction as nuclear weapons, chemical weapons and biological weapons. It states: “Any company with a substantial involvement in the manufacturing or trading of these weapons will be directly excluded from our investments. Involvement will be deemed to be substantial if the company manufactures or supplies one or more of the types of weapons listed above as a finished product or supplies essential and/or customised semi-finished parts and/or services for one or more of these weapons. Companies will also be excluded if they have a controlling interest formally or in practice in a subsidiary or joint venture with a substantial involvement in the manufacturing or trading of such weapons.”³⁵³

Investments: We did not find PGGM to be involved in financing any of the 20 researched companies since July 2008.

Rabobank

THE NETHERLANDS

Rabobank Group is a Dutch cooperative banking group comprising independent local Rabobanks plus Rabobank Nederland, and a number of other specialist subsidiaries. Overall, Rabobank Group has about 10 million customers in 48 countries.³⁵⁴

Rabobank Group’s policy on weapons follows what they call a “no, unless” principle. Rabobank explains this principle as follows: “From a moral point of view, Rabobank should refrain from facilitating the armaments industry, unless the player is a company that only supplies non-controversial or armaments-related products. Rabobank currently deems the following armaments to be controversial: cluster munitions, anti-personnel mines, nuclear, biological and chemical weapons”. The policy also states: “Rabobank does not therefore provide finance to companies that are involved in controversial armaments or are involved in armaments that can be used for controversial purposes.”³⁵⁵

Investments: We did not find Rabobank to be involved in financing any of the 20 researched companies since July 2008.

Royal Bank of Canada

CANADA

Royal Bank of Canada (RBC) is Canada's largest bank, being also among the largest banks in the world. It provides personal and commercial banking services, wealth management services, insurance, corporate and investment banking as well as transaction processing services. Its client base totals 15 million personal, business, public sector and institutional clients in Canada, the United States and 55 other countries.³⁵⁶

RBC states that there are certain types of clients and transactions it "avoids in all cases". Such clients and transactions include "the financing of companies manufacturing or trading in equipment or material for nuclear, chemical or biological warfare, landmines or cluster bombs".³⁵⁷

Investments: We found RBC to be involved in financing Alliant Techsystems, Boeing, EADS, Honeywell International, Lockheed Martin and Rolls-Royce.

Toronto-Dominion Bank

CANADA

Headquartered in Toronto, Canada, the TD Bank Group offers banking, wealth management and insurance services to approximately to 20 million personal and corporate customers worldwide.³⁵⁸

TD Bank Group's social responsibility policies specifically address the financing of nuclear weapons: "We do not lend money for transactions that are directly related to the trade in or manufacturing of material for nuclear, chemical or biological weapons or for landmines or cluster bombs".³⁵⁹

Investments: We found Toronto-Dominion Bank to be involved in financing BAE Systems, EADS, General Dynamics and Rolls-Royce since July 2008.

Unicredit

ITALY

UniCredit Group is an Italian financial institution operating in 22 European countries. Its international network is present in approximately 50 markets and has 9,518 branches.³⁶⁰

The Group has a defence sector policy that states: "UniCredit Group abstains from any involvement with companies manufacturing, maintaining or trading such controversial products as nuclear or biological weapons of mass destruction, cluster bombs, mines and Uranium 238."

Its involvement with weapons companies in general is also restricted to countries that comply with international guidelines and regulations on nuclear weapons, biological and chemical weapons, conventional weapons, missiles, small arms, light weapons and dual-use goods.³⁶¹

Investments: We found Unicredit to be involved in financing EADS, Finmeccanica, Honeywell International and Thales.

Ask an Economist: Why Should Financial Institutions Divest?

Financial institutions are becoming increasingly aware of the social and environmental impacts of their investment decisions. Simon O'Connor, an economic adviser to the Australian Conservation Foundation, explains why they should rule out financing nuclear arms makers.

ICAN: Why should financial institutions be concerned about investing in or lending money to nuclear weapons companies?

Simon O'Connor (SO): There is a distinct risk to the reputation of financial institutions that invest in or loan money to companies involved in the nuclear weapons supply chain. They are implicitly supporting nuclear weapons whether they intend it or not.

Beyond supporting an industry that goes against ethical norms for most people, the nuclear weapons industry itself holds unique and severe risks, such as the risks of containment breaches of dangerous radioactive materials in the manufacturing process. Financiers are exposed to all of these risks through association. In light of the increased sensitivity and sophistication of informed investors, including the strong trend towards ethical and responsible investing, financial institutions should be staying clear of these companies.

ICAN: What ethical codes can financial institutions subscribe to? Do these exclude investments in nuclear weapons?

SO: There are now numerous international codes that can be interpreted to have implications for companies investing in nuclear weapons, such as the UN Global Compact, OECD Guidelines for Multinational Enterprises and the Equator Principles. Although none of these explicitly exclude investments in nuclear weapons, many signatories are interpreting them as such.

The UN Principles for Responsible Investment commit investors to consider the environmental, social and corporate governance risks inherent in the companies in which they invest. This code has been strongly supported by the world's largest financial institutions, particularly pension funds, as part of a movement towards more active and responsible share

ownership. Although not excluding investments in nuclear weapons, the UN investment principles do require active engagement with companies owned by investors, resulting in many investors pressuring companies to mitigate risks and improve business performance.

ICAN: Have most financial institutions adopted policies on nuclear weapons?

SO: From my experience, only a minority of financial institutions have adopted policies that explicitly exclude nuclear weapons from investment or lending mandates. These are usually very active funds, including ethical investment funds, which often have their own voluntary ethical code explicitly excluding investments in nuclear weapons.

Nevertheless, some of the world's largest financial companies have declared they will not invest in nuclear weapons companies, indicating two important points: that support for the manufacture of nuclear weapons is unacceptable to many of the largest and most conservative companies across the globe, and that financial returns need not suffer by not doing business with nuclear weapons companies.

ICAN: If banks provide loans to nuclear weapons companies for "general corporate purposes", does that still facilitate nuclear weapons production?

SO: From the perspective of the average person on the street, there is little distinction between doing a lot of business with a nuclear weapons company and only a little bit of business. This is a question of the degree of involvement in the actual manufacture of nuclear weapons that financial institutions are willing to accept, and appears to be somewhat arbitrary when looking at the research results presented in this report.

A "general corporate loan" to a nuclear weapons company supports that company to continue doing its weapons manufacturing, whether directly or indirectly, in the same way that exporting uranium to a country for nuclear power frees up other uranium supplies for use in a weapons programme.

ICAN: What if nuclear weapons work is only a small part of a company's overall enterprise?

SO: Many financial institutions will set a materiality threshold to define whether a company is substantially involved in nuclear weapons or not, such as 5 per cent of revenues being earned through the weapons business. Where a company's weapons business is below the threshold, a financial institution may deem that the weapons component of the business is "immaterial". This makes some sense only from a theoretical perspective. However, when considered from an ethical perspective, there is no level of involvement in nuclear weapons that is "immaterial", which is why ethical investors will exclude investment in these companies no matter how small a part of the overall enterprise.

ICAN: Can shareholders of nuclear weapons companies pressure those companies to end their nuclear weapons work?

SO: Shareholders have a critical role to play in directing the activities of the companies in which they invest. Whether that be on issues such as the appropriate remuneration of executives or involvement in nuclear weapons, shareholders need to be aware of the activities their investments are supporting and work to change those companies.

Boards of companies are there to act in the interests of shareholders – the ultimate owners of the company – so the message that manufacture of nuclear weapons is not acceptable needs to be made loud and clear to those boards.

ICAN: What practical effect can nuclear weapons divestment have?

SO: Divestment sends the strongest signal that the activities of a company are not acceptable. Although it is rare that a share price will be materially impacted upon by a divestment decision of a single investor, the divestment can send a strong signal to the board of the company that its activities will not be tolerated, and can catalyse change within the business. It also sends a strong signal to other investors that the company is engaged in activities that are unacceptable.

Take Action

How to Challenge Nuclear Weapons Investments

This report provides the basis for coordinated campaigning to discourage financial institutions from investing in nuclear weapons companies. Taking action can involve meeting with bank representatives, organizing protests outside their headquarters or branches, raising public awareness, finding allies and promoting boycotts.

Meeting with Financial Institutions

Face-to-face meetings with representatives of financial institutions provide individuals and organizations with an opportunity to outline why investing in nuclear weapons companies is unethical, and why divestment is in the best interests of financial institutions from a commercial point of view.

People with funds invested in financial institutions that support the nuclear weapons industry should make it clear that, unless the institutions are prepared to change their policies and practices, they will move their funds to a more ethical alternative.

WHAT RESPONSES TO EXPECT

ICAN has contacted each of the financial institutions identified in this report as being involved in financing nuclear weapons companies. While some indicated that they were moving towards adopting policies against financing nuclear weapons, others presented various arguments justifying their investments:

- **Insignificant Investments:** Some banks claimed that their investments in nuclear weapons companies were insignificant, either as a proportion of their own overall investments, or as a proportion of the total outstanding shares or bonds of the companies. For example, Swiss Reinsurance Company, which invests in General Dynamics and Honeywell International, stated that its “holdings in these two companies represent only 0.02% of our overall investments” and “constitute an insignificant

fraction of the outstanding shares and bonds issued by these companies”.³⁶² However, Swiss Re’s bondholdings in the two companies are worth US\$82 million – hardly insignificant.

- **Not a Nuclear Weapons Company:** Some banks disputed the fact that the companies in question were indeed nuclear weapons companies, either because they do not work on nuclear warheads or because nuclear weapons work is only a small proportion of their overall enterprise. For example, Swisscanto said it did not classify either Rolls-Royce or Safran as producers of nuclear weapons, and therefore “we do not consider ourselves as involved in the financing of nuclear weapons producers”.³⁶³ Yet the companies play an integral role in the modernization of British and French nuclear forces, respectively.
- **Legitimate Industry:** Some financial institutions claimed that their investments were legitimate because nuclear weapons are legitimate. British financial institution Lloyds TSB stated: “Whilst the UK government remains committed to maintaining its nuclear deterrent, and considers this vital to our national security, we must continue to provide the essential finance to the companies that make this deterrent possible. Should the UK government stance on this issue change at any future point, then clearly we would seek to adapt our policies appropriately.”³⁶⁴ Here it is important to emphasize the illegality of nuclear weapons and their catastrophic humanitarian effects.

- **Indirect Financing:** One financial institution, the European Investment Bank, stated that its loans to nuclear weapons companies had been used only for specific projects that were unrelated to nuclear weapons: “The European Investment Bank does not fund companies in general but only specific projects, which might have a variety of companies involved in their construction. The EIB monitors its loans to ensure that they are only used for these agreed purposes.”³⁶⁵ While this situation is preferable to providing funding for general purposes, the funding of specific projects still frees up the company’s other capital for nuclear weapons work.
- **Index Funds:** Some financial institutions have argued that they cannot exclude nuclear weapons producers from their investments because their investments follow an index. (An index fund is a collective investment scheme that aims to replicate the movements of an index of a specific financial market.) Although it may be more difficult to divest in this situation, it is certainly not impossible. In the cluster munitions divestment campaign, for example, many banks chose to divest even when they had invested only through an index. The same standard should apply for nuclear weapons.
- **Fiduciary Duty:** Some pension funds, such as the Ontario Teachers’ Pension Plan, asserted that divestment is inconsistent with their fiduciary duties to maximize profits. This assumes that an unconstrained portfolio is more likely to have a higher rate of return. However, there are strong financial reasons to divest from nuclear weapons producers (in addition to the legal and ethical considerations). Investing in the nuclear weapons industry is inherently risky due to the chances of major accidents occurring at nuclear weapons facilities. Further, funding nuclear weapons companies can damage an institution’s reputation, which will likely affect its profits.
- **Protests at Banks:** Handing out pamphlets to bank customers as they enter branch offices or use automated teller machines will alert them to the unethical way in which their funds are being used, and encourage them to consider transferring to a more socially responsible bank. Youth campaigners from the Norwegian Red Cross have used this tactic to persuade banks in their country to divest. Street theatre or flashmobs could also be used in a similar way.
- **Letter-Writing and Petitions:** It is important that banks and other financial institutions are made aware that both the general public and their own customers disapprove of their investments in nuclear weapons producers. Writing letters to the chief executive officer, chief financial officer or chairperson can help to achieve this objective. Collecting petition signatures outside bank branches can also be effective.
- **Events and Endorsers:** Financial institutions often purchase naming rights for major events such as sporting tournaments. These events provide campaigners with a unique opportunity to raise public awareness about the institutions’ investments in nuclear arms makers, either through protests or media interviews. Banks also often use celebrity spokespeople to enhance their brand image. These individuals can be encouraged (through Twitter, for example) to take a stand against the investments.
- **Shareholder Activism:** Campaigners may choose to purchase shares in financial institutions, or obtain proxy voting rights from existing shareholders, in order to influence their investment decisions. Shareholders are generally entitled to ask questions of senior executives at annual general meetings, and may also have the right to put forward resolutions suggesting that the financial institutions divest from nuclear weapons companies. Shareholders’ meetings provide an important forum for raising awareness among this key target audience.

Action Ideas

If financial institutions are unpersuaded by ethical arguments, campaigners should demonstrate to them the risks of refusing to divest from the nuclear weapons industry. The following actions will help to raise public awareness about the financial support provided by particular institutions to this grossly unethical industry:

When banks, pension funds and other financial institutions express a clear unwillingness to divest from nuclear weapons producers, individuals should take their money elsewhere, and encourage others to do the same. If a sufficient number of people boycott a particular financial institution, it may reconsider its support for this illegitimate industry.

Engaging the Media

Campaigners can use the media – television, newspapers, radio, magazines, newsletters and blogs – to publicize which financial institutions are investing in nuclear weapons companies. Here are some ideas for getting the message out widely:

- **Press Releases:** Press releases are a useful way to share new research, advise the media of important developments or promote actions.
- **Spokespeople:** Finding effective spokespersons who are knowledgeable about nuclear weapons as well as financial issues is important.
- **Opinion Pieces:** Many newspapers and online news sites publish opinion articles from guest writers. These could provide a useful outlet.
- **Social Media:** Social media sites such as Facebook and Twitter can also be used to raise awareness about and build support for divestment.

Finding Allies

Divestment campaigns benefit from having a strong coalition of organizations determined to achieve specific results. Bringing key stakeholders on board significantly increases the chances of success. For example, enlisting the support of teachers' unions would assist efforts to persuade a teachers' pension plan to divest from nuclear weapons companies.

Campaigning should seek to involve a diverse range of environmental, social justice, international development and human rights groups. Having strong allies in the financial world is also a major advantage, as they can help to explain to financial institutions why divestment is important not only from an ethical standpoint, but also for commercial reasons.

Celebrity endorsers can help to raise the profile of divestment campaigns, and attract large numbers of people to the cause. Parliamentarians and mayors can use official avenues to pursue divestment.

BOX 14

Case Study: The Norwegian Divestment Experience

***Pia A. Gaarder** heads the ethics and business section of the Norwegian chapter of the Future in Our Hands. Here she describes the campaign for the Norwegian government to divest from nuclear weapons stocks.*

ICAN: How have you promoted nuclear divestment in Norway?

Pia Gaarder (PG): In 1995 my organization, Future in Our Hands, initiated a project to scrutinize private and public Norwegian investments in developing countries, as well as export and import ethics – or the lack thereof. In 1999 we started to look into the investment portfolio of the Norwegian Government Pension Fund (SPU),* with a focus on its investments in weapon-producing companies.

In 2001 the Socialist Left Party – an opposition party in the Norwegian parliament at that time – disclosed that the SPU owned shares in a producer of landmines. The Norwegian government had been one of the leading actors in the process that led to the signing of the Landmine Convention in 1997, and the fact that the SPU – a fund owned and managed by the government – invested in the production of these weapons was a shock and an eye-opener to many.

ICAN: What was the government's response to this revelation?

PG: The SPU withdrew its investments from landmine production and the Ministry of Finance established the International Law Council. This body was assigned the task of scrutinizing and monitoring the investments of the SPU in order to ensure that they were in line with Norway's international legal obligations.

However, when in 2002, after months of research, we could demonstrate that the SPU, through its investments in Lockheed Martin and Honeywell, was financially involved in the production of nuclear weapons, the Norwegian Ministry of Foreign Affairs dismissed our claim by arguing that nuclear weapons were not in conflict with international law.

We allied ourselves with a leading Norwegian newspaper and some key politicians in the Norwegian parliament. Pushed by a wave of attention and negative publicity, the government finally had to give in.

The Norwegian parliament decided to establish a committee assigned with the task of exploring the ethical guidelines for the SPU, which led to the establishment of the Ethical Council in 2004. Consequently, SPU

decided to divest from producers of both nuclear weapons and cluster munitions, although there were no international conventions banning these weapons.

ICAN: What lessons did you learn from this experience?

PG: In our view, our divestment campaign demonstrates the potential of this kind of campaigning – if done accurately and with a critical eye to details and references. The government needs the investments of the SPU to be perceived as legitimate in the eyes of the Norwegian population. When they are not, as was clearly demonstrated in 2002, it became politically impossible for the government not to divest, or in this case not to start the process that made divestment possible.

For private actors it is probably not only a question of reputation, but also a question of market shares. If they offer people a fund portfolio that, for ethical reasons, people are reluctant to buy, they will lose out to other financial institutions.

For more information, visit:
www.framtiden.no

* Known as Norwegian Petroleum Fund until 2006.

Take Action: What Parliamentarians Can Do

Alyn Ware is the global coordinator of *Parliamentarians for Nuclear Non-Proliferation and Disarmament* – a network of more than 800 legislators in 80 countries committed to achieving a world free of nuclear weapons. Here he describes the role that lawmakers can play in promoting nuclear weapons divestment.

ICAN: How have parliamentarians promoted divestment from nuclear weapons companies?

Alyn Ware (AW): In Norway and New Zealand, parliamentarians were instrumental in moving public funds to divest from corporations involved in the manufacture of nuclear weapons. In 2004 the Norwegian government pension fund, following pressure from parliamentarians, media and non-governmental organizations, established ethical guidelines for its investments and appointed an advisory council on ethics to make recommendations on implementation of these guidelines.

In 2005 the advisory council discussed and came out with a recommendation regarding nuclear weapons production. Following this, the pension fund excluded the following companies from its investment portfolio and divested from shares in them due to their production of nuclear-weapons-related components: BAE Systems, Boeing, EADS, Finmeccanica, Honeywell International, Northrop Grumman, Safran and United Technologies.

Other nuclear-weapons-related corporations such as Lockheed Martin, General Dynamics and Alliant Techsystems had already been excluded due to their involvement in the production of anti-personnel landmines or cluster munitions.

In New Zealand, the minister responsible for the Accident Compensation Fund directed the fund to divest from nuclear weapons corporations after being approached by the New Zealand section of Parliamentarians for Nuclear Non-Proliferation and Disarmament, which had been inspired by the Norwegian example. A coalition of members of parliament and non-governmental organizations also moved the Government Superannuation Fund to divest from such corporations.

ICAN: Politicians are asked to support many different causes. Why should they care about nuclear disarmament?

AW: As long as nuclear weapons are maintained under policies of nuclear deterrence – that is, the threat to use them against other states – there is a risk that they could be used by accident, miscalculation or design.

The disaster of Fukushima indicates that even when we have the best technical controls in place, unforeseen events or combinations of events can lead to a disaster. Any disaster with nuclear weapons would cause catastrophic and unprecedented devastation.



The continuing possession of nuclear weapons by some states is a recipe for proliferation. It stimulates other states to acquire them and means that there are bomb-making materials, or actual bombs, susceptible to theft by terrorist organizations. In addition, the US\$100 billion spent annually on nuclear weapons is sorely needed for economic and social development and to invest in renewable energies to combat climate change.

ICAN: Aside from promoting divestment, what other practical things can parliamentarians do to help abolish nuclear weapons?

AW: Members of parliament in nuclear-weapon states can advocate

in their legislatures for a reduction in spending on nuclear weapons, an immediate change in nuclear weapons doctrines to rule out any first use of nuclear weapons and affirm the norm of non-use, and a committed programme to develop verification technologies and mechanisms to support nuclear disarmament.

Parliamentarians in states covered by extended nuclear deterrence – Australia, Japan, South Korea and the NATO states – can call for a parliamentary review of such security policies and an examination of non-nuclear security mechanisms at national, regional and global levels to abandon, or phase out, reliance on extended nuclear deterrence.

Parliamentarians in non-nuclear-weapon states can adopt legislation prohibiting and criminalizing nuclear weapons, similar to legislation adopted in Austria, Mongolia, New Zealand and the Philippines, and prohibiting public investment in corporations making nuclear weapons and their components or delivery vehicles, as has been done in Norway and New Zealand.

Parliamentarians in regions not covered by nuclear-weapon-free zones – such as Europe, North-East Asia, the Middle East and the Arctic (circumpolar nations) – can initiate inquiries, hold parliamentary discussions and adopt resolutions on establishing such zones in their region.

Parliamentarians in any parliament can hold events – film screenings, debates, receptions, award ceremonies – on the incompatibility of nuclear weapons with international humanitarian law, morality and cooperative security; endorse international parliamentary appeals (such as those calling for a Middle East nuclear-weapon-free zone and the immediate de-alerting of nuclear weapons); adopt resolutions supporting key initiatives such as the UN Secretary-General's five-point proposal for nuclear disarmament or the proposed nuclear weapons convention; and call for parliamentary hearings on developing the legal, technical, institutional and political framework for the global abolition of nuclear weapons.

For more information, visit www.pnnd.org

BOX 16

Take Action: What Mayors Can Do

Over five thousand cities have joined *Mayors for Peace* to build momentum for a nuclear abolition. **Aaron Tovish**, coordinator of the network's 2020 Vision Campaign, outlines how mayors can get involved in divestment.

ICAN: What motivates mayors to join the Mayors for Peace network?

Aaron Tovish (AT): Nuclear weapons are “good” for only one thing: annihilating cities. For mayors who strive to provide security and promote prosperity of cities, being against nuclear weapons is a no-brainer. They have heard the deterrence arguments, but they simply cannot support a “security” policy that consists of holding cities hostage.

ICAN: Are mayors concerned that money is being spent on nuclear weapons instead of communities?

AT: Absolutely. The US Conference of Mayors adopted a very strong resolution on this in 2011. Why is so much “loving care” lavished on nuclear weapons, when cities are in depression? In the non-nuclear world, there is an awareness that aid crucial to meeting the Millennium Development Goals also goes lacking because of these skewed priorities.

ICAN: Are any of your members involved in nuclear divestment?

AT: Yes, I would venture to say that wherever there's a city involved in

divestment, it's a member of Mayors for Peace. But a lot of our members are not yet involved. The 2020 Vision Campaign will be encouraging cities to hold poster exhibitions in 2012 and 2013 which, among other things, will increase awareness of this area.

ICAN: What links might cities have to nuclear weapons companies?

AT: I would guess that most cities are completely unaware of the links. After all, these links are rarely advertised. The first challenge is to raise awareness about these hidden links. I am hoping that ICAN can help us with this.

Visit: www.mayorsforpeace.org

BOX 17

Take Action: What Religious Groups Can Do

Religious groups have a long tradition of advocacy against war and weapons. **Jonathan Frerichs**, a programme executive at the World Council of Churches, explains how these groups can get involved in nuclear weapons divestment work.

ICAN: Are religious groups actively promoting nuclear disarmament?

Jonathan Frerichs (JF): Yes, many are active in a variety of ways. For example, Buddhist groups in Japan and North-East Asia have kept the abolition flame of hope burning brightly in response to the bombings of Hiroshima and Nagasaki. Among Christians, there are churches taking positions against nuclear weapons, educating their members, speaking out in public and talking to governments. Some are working at the parish level, some nationally and some internationally.

The groups that have been advocating against nuclear weapons the longest are the Roman Catholic Church, the World Council of Churches and peace churches like Mennonites and Quakers. Others have taken up the issue more recently, including the groups known as Evangelicals.

The most advocacy activity takes place in countries that have some connection to nuclear weapons – as possessors, allies of possessors, places where nuclear arms are stationed, countries where nuclear weapons have been tested, or countries that produce uranium. There are also many places where churches are not active on nuclear issues.

Some of these same dynamics would help explain where other religions are involved, as in the Buddhist case. The picture should also include opposition to nuclear power plants. We are seeing some cases where this is the reason why youth are becoming involved.

ICAN: How can religious groups promote divestment from nuclear weapon producers?

JF: In one sense, the research, outreach, advocacy and persistence that divestment requires is no different for religious groups than for others in civil society. In another sense, there are religious groups with a lot of experience in pursuing the work of divestment as an expression of their faith. Also, divestment is an advocacy strategy that in some cases has become a collaborative effort among

groups from different faiths.

Some religious communities are the kind of “constituency” that may be mobilized in a coherent and committed fashion that can support divestment actions. The strongest examples I am aware of are among Catholic orders – sisters and nuns – who combine solidarity and tenacity with a commitment to pursuing justice. Certain church groups choose to hold shares, rather than divest, in order to engage with the company in question.

In the World Council of Churches, member churches from different regions agreed to divest from companies doing business in South Africa during the apartheid era. When it comes to nuclear weapons producers, mainline US member churches generally have avoided investing their institutional funds as part of their commitment not to support arms manufacturers. This is a longstanding practice.

A huge and largely unmet challenge, however, would be to go beyond church headquarters and make the case for nuclear divestment with local congregations and individual church members.

For more information, visit www.oikoumene.org

Further Research

The information on nuclear weapons investments provided in this report is by no means comprehensive. Further research is needed for a more complete picture of the global financing of nuclear weapons companies. Such research could examine more closely the financial institutions of a certain country, target investors in a particular nuclear weapons company, or look at a specific type of investor, such as universities.

Ethical investment groups with expertise in this area may be available to assist with research. At the very least, they will be in a position to advise how to obtain information about a company's share- and bondholdings, loans and so on. The following investors, for example, deserve further attention:

- **Sovereign Wealth Funds:** These are of particular interest because they invest taxpayers' money and their investment decisions are often subject to government oversight processes. Concerned citizens can pressure their elected representatives to take a stand in favour of divestment from nuclear weapons companies. In many countries, information about the investments of publicly owned funds can be obtained through freedom of information laws. Public funds may exist at the national, state and municipal levels.
- **Universities:** Public universities in many countries have large endowments, which they invest in various ways, including on the stock exchange. University students – who often pay fees for their education, and are the major stakeholders in universities – have a legitimate interest in knowing precisely how these funds are invested. Information about a university's investments could be obtained through freedom of information laws or the university's governing body, which most likely includes a student representative. Students should initiate campaigns encouraging their universities to divest from nuclear weapons stocks.
- **Pension Funds:** In many countries, people can choose how their pension is invested. Some pension funds exclude companies involved in unethical enterprises, including the manufacture of nuclear weapons, while others do not. Research into the investment policies and practices of pension funds would help people to make an informed decision about which fund they participate in.

USING FREEDOM OF INFORMATION LAWS

Freedom of information laws exist in roughly 85 countries. They guarantee access to documents and data held by the state, subject to certain exemptions. Where access to the documents is deemed in the public interest, fees are typically waived. Freedom of information laws can be used to find out whether government pension funds or statutory bodies such as universities invest in nuclear weapons companies.

In May 2011, for example, ICAN campaigners in Australia used freedom of information laws to discover that a major government fund, the Future Fund, had equities worth A\$135.4 million in 15 companies that produce nuclear weapons for the United States, the United Kingdom, France and India.³⁶⁶ The freedom of information request sought documents providing details of the fund's investments in a list of nuclear weapons companies.

It may also be possible to use parliamentary processes to obtain information about how governments invest their funds. For example, depending on how a particular legislature operates, campaigners could approach supportive politicians to ask questions of ministers.

RESEARCHING FINANCIAL INSTITUTIONS

The details of a financial institution's investments are not always publicly available. It is particularly difficult to obtain information on a company if it is not listed on a stock exchange. Companies argue that keeping their investment strategies secret is necessary in order to maintain commercial competitiveness.

In some countries, however, financial institutions are required by law to publish details of investments over a certain threshold. Stock exchange filings are also available. In addition, many financial institutions publish sustainability reports, which sometimes contain information on whether they invest in the arms industry, but such policies should not necessarily be taken at face value, as this report shows.

UPDATING INFORMATION

The information in this report will need to be updated periodically. Which financial institutions are investing in nuclear weapons companies and the value of their investments are subject to change quickly.

In addition, the companies that are involved in nuclear weapons work will also change as existing contracts wind up and new contracts (or subcontracts) are awarded.

Conclusion

The nuclear weapons industry is the most illegitimate of all industries. It threatens the peace and security of people everywhere. Yet mainstream financial institutions across the world continue to invest in companies that are heavily involved in this grossly unethical industry. It is time for a global campaign to challenge the build-up and modernization of the world's most destructive weapons by pressuring financial institutions to divest. Such a campaign will be vital to the success of a total ban on these worst weapons of terror.

In today's globalized economy, many thousands of individuals and institutions are indirectly involved – in most cases, unwittingly – in the financing of nuclear weapons companies. Any person with a bank account or pension fund has the power to choose not to invest in nuclear arms producers, and can encourage friends, family members and colleagues to withdraw their money from banks that refuse to divest. Divestment is a mechanism with which we can harness the widespread and overwhelming public opposition to nuclear weapons to achieve tangible outcomes.

BOX 18

Case Study: The Boycott to End French Nuclear Testing

French nuclear testing in the South Pacific was widely condemned, and resulted in a mass boycott of French products. Helen Caldicott, an Australian paediatrician and veteran anti-nuclear campaigner, describes the global movement that forced France to stop testing its nuclear arms.

ICAN: How did the idea for a boycott of French products come about?

Helen Caldicott (HC): The idea spontaneously arose out of a very disturbed populace. It was the obvious thing to do. It wasn't orchestrated at all – it was like spontaneous combustion. People had an almost anaphylactic reaction to all things French. There were whole pages full of letters to the editor opposing the nuclear testing. They got more calls at the Adelaide Children's Hospital – where I was working – about French nuclear tests than they got about patients. There were demonstrations in the city streets involving hundreds of thousands of people.

ICAN: What did the boycott involve? What were people asked to do?

HC: People stopped buying French wine, French cheese and other French products. Postal workers wouldn't deliver French mail. It was full-on. The boycott was, at every level, a personal expression of how people felt. People were really angry with the French. Within nine months, 75 per cent of Australians opposed the French nuclear testing in the Pacific.

France conducts a nuclear test in French Polynesia in 1970.



ICAN: What role did you personally play in the campaign?

HC: I was involved in mobilizing Australians to oppose the French nuclear tests. In response to public pressure, the Australian and New Zealand governments took France to the International Court of Justice, and they were forced to test underground.

I remember visiting the French government in Paris and asking them why they were doing it, and they said that their bombs were perfectly safe. We said, "Why don't you blow them up in the Mediterranean?" Their faces turned bright white, and they said, "Mon Dieu, there are too many people living around the Mediterranean!"

For the first time in my life, I realized I was sitting next to wicked politicians who didn't give a damn

about kids in another part of the world getting leukaemia. At the time I was working as a paediatrician, so it was pretty profound. For me, this wasn't a political issue; it was a medical issue.

ICAN: Is now the right time for a global nuclear divestment campaign?

HC: A global campaign now on nuclear weapons divestment would tie in beautifully with the Occupy Wall Street movement. We need to go after the banks that are financing the companies manufacturing and modernizing nuclear weapons, and hit them hard. People are profiting from this deadly industry, and must be stopped. We need to focus on the vested interests that are preventing us from achieving disarmament.

Case Study: Divesting from Cluster Bomb Makers

Has divestment helped to eliminate other categories of inherently inhumane weapons? **Roos Boer** – a policy adviser at the Dutch peace organization *IKV Pax Christi* and co-author of the first global report on cluster bomb investments – describes worldwide efforts to pressure banks and governments to divest from these large canister bombs, which disperse multiple smaller explosives.

ICAN: What humanitarian harm do cluster munitions cause?

Roos Boer (RB): Used in more than 30 countries, cluster bombs have killed and injured tens of thousands of civilians and devastated the livelihoods of countless more. Over 380 million “bomblets” were used in Cambodia, Laos and Vietnam in the 1970s. Many did not explode on impact and, functioning as de-facto landmines, are still killing people today.

ICAN: Is it illegal to manufacture and use cluster munitions?

RB: Yes. The Convention on Cluster Munitions opened for signature in December 2008 and entered into force in August 2010. This treaty categorically bans the use, stockpiling, production and transfer of cluster munitions. It came about as a result of strong cooperation between governments and civil society groups belonging to the Cluster Munition Coalition. Today over 110 nations have joined the treaty.

ICAN: How have you promoted divestment from companies that produce cluster munitions?

RB: In October 2009, *IKV Pax Christi* and *Netwerk Vlaanderen* – both members of the Cluster Munition Coalition – published a report on divestment titled *Worldwide Investment in Cluster Munitions: A Shared Responsibility*.

Divestment from cluster munitions had been on the agenda for years but this was the first time worldwide research was published. The research focused on financial institutions that invested in cluster munition producers, but also highlighted good examples of financial institutions that had taken measures to prevent involvement with these companies.

Abdullah Yaqoob was injured in a British cluster bomb strike on Basra, Iraq, in 2003.



Photo: DanChurchAid

ICAN: What about the investment policies of governments?

RB: Besides our focus on financial institutions, we also included a chapter on government practice on banning investments. The Convention on Cluster Munitions provided a solid base to do so. Although the treaty does not explicitly mention investments in cluster munition producers, it bans “assistance” in the production of cluster munitions. Over the years, more and more governments have stated that, in their understanding, investments should be seen as falling under this prohibition.

ICAN: How have you campaigned to ensure that your report's findings are acted upon?

RB: On the day that we released the report, the Cluster Munition Coalition launched the global “Stop Explosive Investments” campaign. The combination of the research publication and worldwide engagement from campaigners has proven to be a strong force for change. On our first global day of action to stop explosive investments,

campaigners from around 20 countries organized press briefings and letter sending actions.

Media coverage has been strong. Campaigners have engaged with financial institutions to achieve policy changes, have targeted banks with public actions and have created spin-off reports about investments in their respective countries.

ICAN: What effect has “Stop Explosive Investments” had in ending cluster bomb financing?

RB: Many financial institutions have introduced new policies or strengthened existing ones to exclude investments in cluster munition producers from their portfolios. A number of governments that are parties to the Convention on Cluster Munitions have also either introduced legislation to ban these investments or issued interpretive statements that the convention includes a prohibition on investments. *IKV Pax Christi* and *Netwerk Vlaanderen* have issued updates of the report in 2010 and 2011, and will do so again in 2012

www.stopexplosiveinvestments.org

Financial Institutions

Companies Financing Nuclear Weapons Producers

This chapter profiles each of the 322 financial institutions identified in this report as investing in nuclear weapons companies, either directly or through subsidiaries. It provides information on their business activities, areas of operation, trading names, profits and revenue, customers and employees, and any major sponsorship deals.

Australia

ANZ

ANZ is the third-largest bank in Australia and New Zealand. It has operations in 25 other nations. In 2010 it recorded a profit of A\$4.51 billion. It has approximately 47,000 employees. Its Australian operations make up the largest part of its business, with commercial and retail banking dominating.

Invests in: Babcock International, BAE Systems, Boeing, EADS, General Dynamics, Lockheed Martin, Rolls-Royce, Thales

Headquarters: Melbourne

Website: www.anz.com

Commonwealth Bank of Australia

The Commonwealth Bank of Australia is a multinational bank with businesses across New Zealand, Fiji, Asia, the United States and the United Kingdom. It provides a variety of financial services including banking, funds management, superannuation, insurance and investment. It is the largest bank in Australia and the second-largest Australian company listed on the stock exchange. Its brands include BankWest, Colonial First State Investments and ASB Bank, which operates in New Zealand. In 2009 it recorded a profit of A\$4.72 billion. It has more than 45,000 employees.

Invests in: BAE Systems, EADS, Rolls-Royce

Headquarters: Sydney

Website: www.commbank.com.au

Macquarie Group

Macquarie Group Limited is a global investment banking and diversified financial services group, providing banking, financial, advisory, investment and funds management services to institutional, corporate and retail clients and counterparties around the world. It is the largest investment bank in Australia. In 2009 it recorded a net income of A\$1.05 billion. It has approximately 23,000 employees.

Invests in: Finmeccanica, Northrop Grumman

Headquarters: Sydney

Website: www.macquarie.com.au

Platinum Investment Management

Platinum Investment Management is an Australian fund manager specializing in investing in international equities. It manages in excess of A\$15 billion with around 11 per cent of this from investors in New Zealand, Europe, the United States and Asia.

Invests in: Jacobs Engineering

Headquarters: Sydney

Website: www.platinum.com.au

Westpac

Westpac is the fourth-largest bank in Australia and the second-largest in New Zealand, with over 12.2 million customers and 1200 branches. In 2011 it recorded a net income of A\$6.99 billion. It has more than 40,000 employees. About 570,000 people and institutions are Westpac shareholders.

Invests in: Boeing, EADS, Honeywell International
Headquarters: Sydney
Website: www.westpac.com.au

Austria

Erste Bank

Erste Group Bank is one of the largest financial services providers in Central and Eastern Europe, with more than 50,000 employees and 3,000 branches in eight countries: Austria, the Czech Republic, Slovakia, Romania, Hungary, Croatia, Serbia and Ukraine. It has more than 17 million customers, mostly within the European Union. It sponsors the Erste Bank Open, an indoor tennis tournament.

Invests in: EADS
Headquarters: Vienna
Website: www.erstegroup.com

Bahrain

Arab Banking Corporation

Arab Banking Corporation is headquartered in Bahrain, with subsidiaries and affiliates in 21 countries around the world. Its major shareholders include the Kuwait Investment Authority, the Central Bank of Libya and Abu Dhabi Investment Authority. It recorded a net income of US\$143 million in 2010.

Invests in: Boeing
Headquarters: Manama
Website: www.arabbanking.com

Gulf International Bank

Gulf International Bank provides wholesale commercial and investment banking services primarily in countries that are part of the Gulf Cooperation Council. It operates in Manama, London, Riyadh and New York. It has approximately 500 employees.

Invests in: Bechtel, Rolls-Royce
Headquarters: Manama
Website: www.gibonline.com

Belgium

Ackermans & van Haaren

Ackermans & van Haaren is a Belgian holding company. Through its subsidiaries, it is active in four key sectors: dredging and construction, real estate, financial services and private equity. In 2010 it recorded a profit of €160.8 million. It has approximately 1,060 employees.

Invests in: Redhall Group
Headquarters: Antwerp
Website: www.avh.be

Dexia

Dexia is a Belgian–French financial institution active in public finance, providing retail and commercial banking services, asset management and insurance. The company has about 35,200 employees and recorded a profit of €723 million in 2010. It is a casualty of the 2011 European sovereign debt crisis, and negotiations are under way for its break-up.

Invests in: Finmeccanica
Headquarters: Brussels
Website: www.dexia.com

KBC Group

KBC Group is a Belgian company involved in retail banking, insurance and asset management. It is the 18th-largest bank in Europe and a major financial player in Central and Eastern Europe, employing some 57,000 staff and serving 11 million customers. It recorded a profit of €1.86 billion in 2010.

Invests in: Redhall Group through subsidiary Brown Shipley
Headquarters: Brussels
Website: www.kbc.com

Canada

Bank of Montreal

The Bank of Montreal is the fourth-largest bank in Canada by deposits. It has more than 900 branches in Canada, serving over seven million customers. The company also has substantial operations in the United States, where it operates as BMO Harris Bank. BMO Capital Markets is its investment and corporate banking division, while the wealth management division is branded as BMO Nesbitt Burns. It recorded a profit of C\$2.8 billion in 2010.

Invests in: General Dynamics
Headquarters: Montreal
Website: www.bmo.com

CIBC

CIBC (Canadian Imperial Bank of Commerce) is the fifth-largest chartered bank in Canada by deposits. Its two strategic business units, CIBC World Markets and CIBC Retail Markets, have operations in the United States, the Caribbean, Asia and the United Kingdom. Globally, CIBC serves more than 11 million clients and has over 40,000 employees. It recorded a net income of C\$2.5 billion in 2010.

Invests in: Serco Group
Headquarters: Toronto
Website: www.cibc.com

Gryphon International Investment Corp.

Gryphon International Investment Corporation is an independent, privately held investment management firm providing specialist investment services. Its clients include pension funds, charities, foundations, endowments, trusts and estates.

Invests in: Serco Group
Headquarters: Toronto
Website: www.gryphonintl.com

Manulife Financial

Manulife Financial is a Canadian insurance company and financial services provider with operations in 21 countries. The company operates in Canada and Asia as Manulife Financial and in the United States primarily through its John Hancock division. It is one of the largest life insurance companies in the world, with approximately 24,000 employees.

Invests in: BAE Systems, Boeing, EADS
Headquarters: Toronto
Website: www.manulife.com

Ontario Teachers' Pension Plan Board

The Ontario Teachers' Pension Plan Board is responsible for administering pensions for public school teachers of Ontario. It is one of the largest and most powerful investment groups in Canada. The plan is a multi-employer pension plan, jointly sponsored by the government of Ontario and the Ontario Teachers' Federation. Its total assets in 2010 were C\$107.5 billion.

Invests in: BAE Systems
Headquarters: Toronto
Website: www.otpp.com

Power Corporation of Canada

Power Corporation of Canada is a Canadian company with assets in industries including media, pulp and paper, and financial services. The company is known for its active participation in Canadian politics. It recorded a net income of C\$907 million in 2010, and has approximately 15,500 employees.

Invests in: Alliant Techsystems, Northrop Grumman
Headquarters: Montreal
Website: www.powercorporation.com

Royal Bank of Canada

The Royal Bank of Canada is the largest financial institution in Canada, as measured by deposits, revenues and market capitalization. It serves 17 million clients and has more than 80,000 employees worldwide. Its retail banking subsidiary in the United States is RBC Bank, which has 439 branches.

Invests in: Alliant Techsystems, Boeing, EADS, Honeywell International, Lockheed Martin, Rolls-Royce
Headquarters: Toronto
Website: www.rbc.com

Scotiabank

The Bank of Nova Scotia, or Scotiabank, is the third-largest bank in Canada by deposits and market capitalization. It serves some 19 million customers in more than 55 countries and provides personal, commercial, corporate and investment banking. In 2011 it recorded a net income of C\$5.27 billion.

Invests in: Babcock & Wilcox, Bechtel, General Dynamics, Northrop Grumman
Headquarters: Toronto
Website: www.scotiabank.com

Sun Life Financial

Sun Life Financial is an international financial services company known primarily as a life insurance company. Sun Life and its partners provide insurance, retirement and investment solutions for individuals and businesses around the world. It recorded a net income of C\$622 million in 2009, and has approximately 30,000 employees.

Invests in: BAE Systems, Honeywell International, Lockheed Martin, Northrop Grumman, Rolls-Royce
Headquarters: Montreal
Website: www.sunlife.com

Toronto-Dominion Bank

The Toronto-Dominion Bank is the second-largest bank in Canada by market capitalization and based on assets, and the sixth-largest bank in North America. It has over 79,000 employees and 19 million clients worldwide. In Canada the bank operates as TD Canada Trust and in the United States as TD Bank. In 2010 it recorded a net income of C\$4.64 billion.

Invests in: BAE Systems, EADS, General Dynamics, Rolls-Royce
Headquarters: Toronto
Website: www.td.com

China

Bank of China

Bank of China is one of the four main state-owned commercial banks in China. It is the second-largest lender in China overall, and the fifth-largest bank in the world by market capitalization. It operates in 28 countries, more than any other Chinese bank. In 2010 it recorded a net income of US\$18.8 billion. It has approximately 390,000 employees.

Invests in: Boeing
Headquarters: Beijing
Website: www.boc.cn

ICBC

Industrial and Commercial Bank of China is the largest bank in the world by profit and market capitalization. It is one of China's main four state-owned commercial banks. As of March 2010, it had assets of US\$1.9 trillion, with over 18,000 outlets including 106 overseas branches and agents. In 2009 it recorded a net income of US\$18.92 billion. It has approximately 390,000 employees.

Invests in: Boeing, EADS
Headquarters: Beijing
Website: www.icbc.com.cn

SAFE Investment Company

SAFE Investment Company is a Hong Kong-based subsidiary of SAFE (State Administration of Foreign Exchange). SAFE is responsible for managing China's foreign exchange reserves. SAFE Investment Company makes investments in foreign equity markets. Although it is a privately held firm, SAFE officials serve on its board.

Invests in: Serco Group
Headquarters: Hong Kong

Denmark

Danske Bank

Danske Bank is one of the largest banks in Denmark. In Norway it is known as Fokus Bank and in Sweden it operates under various brand names, including Östgöta Enskilda Bank. It maintains corporate service branches in Hamburg, Poland and London, and an outpost serving high-net-worth clients in Luxembourg. In 2010 it recorded a profit of DKK 3.66 billion. It has more than 21,000 employees.

Invests in: Honeywell International

Headquarters: Copenhagen

Website: www.danskebank.com

European Union

European Investment Bank

The European Investment Bank is the European Union's long-term lending institution. It supports the Union's policy objectives, especially European integration and the development of economically weak regions. It is also active in 150 countries outside of the European Union. The bank is owned by the member states of the Union, which subscribe to its capital (worth €232 billion at the end of 2009). As shareholders, the member states are represented on the bank's main independent decision-making bodies.

Invests in: Finmeccanica, Rolls-Royce, Safran

Headquarters: Luxembourg

Website: www.eib.org

France

AXA

AXA is a French global insurance group. It is a conglomerate of independently run businesses. It operates primarily in Western Europe, North America, Asia-Pacific and the Middle East. The AXA group of companies engage in life, health and other forms of insurance, as well as investment management. Based on revenue, AXA ranks as the ninth-largest company in the world on the 2010 Fortune Global 500 list. In 2010 it recorded a profit of €2.75 billion. It has over 100,000 employees.

Invests in: Alliant Techsystems, Babcock & Wilcox, BAE Systems, Boeing, Honeywell International, Northrop Grumman, Rolls-Royce, Serco Group

Headquarters: Paris

Website: www.axa.com

BNP Paribas

BNP Paribas is the largest bank in France. It is also a global banking group with domestic markets in France, Italy, Belgium and Luxembourg. It has retail operations in the United States, Poland, Turkey, Ukraine and North Africa, as well as large-scale investment banking operations in New York, London, Hong Kong and Singapore. In October 2010 Bloomberg and Forbes ranked it as the largest company in the world, with assets over US\$3.1 trillion. In 2010 it recorded a profit of €7.84 billion. It has approximately 205,000 employees.

Invests in: Alliant Techsystems, Babcock & Wilcox, BAE Systems, Bechtel, Boeing, EADS, Finmeccanica, Honeywell International, Lockheed Martin, Northrop Grumman, Rolls-Royce, Safran, Thales

Headquarters: Paris

Website: www.bnpparibas.com

Covéa Mutal Insurance Group

Covéa Mutal Insurance Group provides insurance solutions and services for businesses and private individuals in France and internationally. Its three main brands are GMF, MAAF and MMA. One in four French households is insured by this group. It has approximately €13.6 billion in gross premiums, and roughly 25,000 employees.

Invests in: Safran

Headquarters: Paris

Website: www.covea.eu

Crédit Agricole

Crédit Agricole is the second-largest banking group in France. According to *Global Finance* magazine, it is also the fourth-largest banking group in the world. Through all of its subsidiaries, it has in excess of 21 million clients and a presence in over 60 countries. In 2010 it recorded a profit of €3.61 billion. It has approximately 160,000 employees.

Invests in: Babcock & Wilcox, BAE Systems, Boeing, EADS, Finmeccanica, Honeywell International, Lockheed Martin, Rolls-Royce, Safran, Secro Group, Thales

Headquarters: Paris

Website: www.credit-agricole.com

Crédit Mutuel

Crédit Mutuel is a major French bank. It has approximately 7.4 million customers.

Invests in: Babcock International, BAE Systems, Bechtel, EADS, Finmeccanica, Safran, Thales

Headquarters: Strasbourg

Website: www.creditmutuel.fr

Financière de l'Echiquier

Financière de l'Echiquier is an independent asset management company. It employs approximately 70 staff. It is fully owned by its founding partners and employees. It ranks among the top French private capital asset management companies.

Invests in: Serco Group

Headquarters: Paris

Website: www.fin-echiquier.fr

Groupe BPCE

Groupe BPCE is the third-largest bank in France, with more than 8,000 branches and 36 million customers. Through its subsidiaries, it provides banking, financial and real-estate financing services. The company also offers insurance services, including life insurance and credit insurance. It has approximately 117,000 employees. Groupe BPCE is the official partner of the French Olympic team and the French Sailing Federation. It claims on its website to be a socially committed group. It provides support for environmental projects, young musicians and people with physical disabilities.

Invests in: Alliant Techsystems, Boeing, EADS, Finmeccanica, General Dynamics, Northrop Grumman, Safran, Thales

Headquarters: Paris

Website: www.bpce.fr/en

Oddo & Cie

Oddo & Cie is a French financing company. It has offices in Paris, Lyon, Strasbourg, Madrid, New York, Dubai, Tunis and Hong Kong. In 2010 it recorded a net banking income of €255 million.

Invests in: Safran

Headquarters: Paris

Website: www.oddo.eu

Société Générale

Société Générale is a major banking and financial services company. It is the fourth-largest bank in France, and also one of the oldest. Its three main divisions are Retail Banking & Specialized Financial Services, Corporate and Investment Banking and Global Investment Management and Services. In 2010 it recorded a profit of €3.92 billion. It has approximately 160,000 employees.

Invests in: BAE Systems, Bechtel, Boeing, EADS, Finmeccanica, Honeywell International, Rolls-Royce, Safran, Thales

Headquarters: Paris

Website: www.societegenerale.com

Germany

Allianz

Allianz is a global financial services company, operating in more than 70 countries. Its core business and focus is insurance. It also provides asset management and banking services. According to *Forbes* magazine, it was the world's 12th-largest financial services group and 23rd-largest company in 2010. Allianz is a major sponsor of the Formula One Mercedes GP Petronas team and the German Paralympic Team. In 2010 it recorded a profit of €5.05 billion. It has approximately 150,000 employees.

Invests in: Alliant Techsystems, BAE Systems, Boeing, General Dynamics, Honeywell International, Lockheed Martin, Northrop Grumman, Safran, Serco Group

Headquarters: Munich

Website: www.allianz.com

BayernLB

BayernLB is a publicly regulated bank. It is the eighth-largest financial institution in Germany. It is 94 per cent owned by the state of Bavaria and 6 per cent owned by the Sparkassenverband Bayern, the umbrella organization of Bavarian Sparkassen. It has a balance of €416 billion and about 19,200 employees.

Invests in: Babcock International, BAE Systems, Boeing, EADS, Finmeccanica, Rolls-Royce, Serco Group

Headquarters: Munich

Website: www.bayernlb.de

Commerzbank

Commerzbank is the second-largest bank in Germany, operating mainly in commercial banking, retail banking and mortgaging. It has branch offices throughout Germany and Europe, including offices in London, Luxembourg, Poland, Spain and Switzerland. The bank also has representatives in many commercial and financial centres in Asia and the Americas. In 2010 it recorded a profit of €1.43 billion. It has approximately 59,000 employees.

Invests in: BAE Systems, Boeing, EADS, Finmeccanica, Rolls-Royce, Safran, Thales

Headquarters: Frankfurt

Website: www.commerzbank.com

DekaBank

DekaBank is the central asset manager for the Sparkassen-Finanzgruppe, the world's biggest financial network. It has three divisions and one central sales unit: Asset Management Capital Markets, Asset Management Property, Corporates and Markets, and Savings Banks Sales. In 2007 its total assets were €191.3 billion. It has approximately 3,900 employees.

Invests in: EADS, Thales

Headquarters: Frankfurt

Website: www.dekabank.de

Deutsche Bank

Deutsche Bank is a global banking and financial services company. It operates in more than 70 countries worldwide. It has a large presence in Europe, the Americas and Asia-Pacific. It has offices in major financial centres including New York, London, Frankfurt, Paris, Moscow, Amsterdam, Dublin, Toronto, São Paulo, Singapore, Hong Kong, Tokyo, Sydney, Dubai, Riyadh and Mumbai. It is the largest foreign exchange dealer in the world with a market share of 21 per cent. The bank's services include sales, trading, research and origination of debt and equity, mergers and acquisitions and risk management products. In 2010 it recorded a profit of €2.31 billion. It has more than 102,000 employees.

Invests in: Alliant Techsystems, BAE Systems, Boeing, EADS, Finmeccanica, GenCorp, General Dynamics, Honeywell International, Lockheed Martin, Northrop Grumman, Rolls-Royce, Safran, Thales

Headquarters: Frankfurt

Website: www.db.com

DZ Bank

DZ Bank is the fourth-largest bank in Germany by asset size. It is the central institution for more than 900 cooperative banks and their 12,000 branch offices. It functions both as a central institution and a corporate and investment bank. DZ Bank is based in the financial district of Frankfurt and maintains branches, subsidiaries and representative offices in key financial centres and economic regions worldwide. It has approximately 30 million clients.

Invests in: EADS, Finmeccanica, Thales

Headquarters: Frankfurt

Website: www.dzbank.com

Helaba

Helaba is a commercial bank operating mainly in the Hesse and Thuringia regions. It has branches in Kassel, New York, London, Paris and Dublin. It also has representative offices in Madrid, Moscow and Shanghai. In 2011 its total assets were €157,724 billion. It has approximately 6,000 employees.

Invests in: EADS

Headquarters: Frankfurt

Website: www.helaba-group.com

KfW

KfW banking group is a development bank owned by the Federal Republic of Germany and its constituent states. It is led by a five-member managing board, which reports to a 37-member supervisory board that is chaired by the Federal Minister of Economy and Technology. In 2008 it had a recorded revenue of €70.6 billion. It has approximately 4,228 employees.

Invests in: EADS
Headquarters: Frankfurt
Website: www.kfw.de

Landesbank Baden-Württemberg

Landesbank Baden-Württemberg is a commercial bank and central bank for savings banks in Baden-Württemberg, Rhineland-Palatinate and Saxony. It focuses on industrial technologies, information technology, software, telecommunication, innovative services and life science. It invests mainly in southern Germany. In 2007 its total assets were €443.42 billion. It has approximately 13,000 employees.

Invests in: Finmeccanica
Headquarters: Stuttgart
Website: www.lbbw.de

Munich Re

Munich Re Group is one of the world's leading reinsurance companies. Its subsidiary, ERGO, is the group's primary insurance arm. In 2010 it recorded a profit of €2.42 billion. It has approximately 47,000 employees. Warren Buffet is the largest shareholder in the company, owning a 10.2 per cent stake. Warren Buffet is also a major funder of the US-based Nuclear Threat Initiative, having pledged \$50 million to the organization. He is also one of its advisers.

Invests in: BAE Systems
Headquarters: Munich
Website: www.munichre.com

Universal-Investment-Gesellschaft

Universal-Investment-Gesellschaft is a privately owned investment manager. The firm provides services to institutional and private investors, and manages mutual funds for its clients. It invests in public equity and fixed income markets. In 2011 it had more than €131 billion in funds under management. It has more than 400 employees.

Invests in: Redhall Group
Headquarters: Frankfurt
Website: www.universal-investment.de

India

Edelweiss Capital

Edelweiss Capital is a financial services company operating from 43 offices in 19 Indian cities. It provides investment banking, institutional equities, private client broking, asset management, wealth management, insurance broking and wholesale financing services to individual, corporate and institutional clients. Its total equity is approximately INR 2,500 crores. It has roughly 2,600 employees.

Invests in: Larson & Toubro
Headquarters: Mumbai
Website: www.edelweiss.in

Equirus Capital

Equirus Capital is a boutique investment banking firm that provides financial advisory services in the areas of mergers and acquisition, private equity, merchant banking and structured financing, including real-estate and infrastructure financing. It has offices in Mumbai, Bangalore and Ahmedabad.

Invests in: Larsen & Toubro
Headquarters: Mumbai
Website: www.equirus.com

General Insurance Corporation of India

General Insurance Corporation of India is the sole reinsurance company in the Indian insurance market. It is fully owned by the Indian government. It has operations in Southeast Asia, the Middle East and Africa. It also has international operations through branches in London and Moscow.

Invests in: Larsen & Toubro
Headquarters: Mumbai
Website: www.gicofindia.com

ICICI Bank

ICICI Bank is India's second-largest financial services company. It offers a range of banking products and financial services to corporate and retail customers. It has a network of 2,533 branches in India and a presence in other 19 countries, including subsidiaries in the United Kingdom, Russia and Canada. The company's British subsidiary has established branches in Belgium and Germany. In 2011 it recorded a profit of US\$1.37 billion. It has roughly 80,000 employees.

Invests in: Boeing, Larsen & Toubro
Headquarters: Mumbai
Website: www.icicibank.com

JM Financial

JM Financial is an integrated financial services group. Through its subsidiaries, it provides services to corporations, financial institutions, high-net-worth individuals and retail investors in India. It has approximately 1,129 employees.

Invests in: Larsen & Toubro
Headquarters: Mumbai
Website: www.jmfinancial.in

Kotak Mahindra Bank

Kotak Mahindra Bank is one of India's largest financial institutions. In 2011 it recorded a net income of US\$298 million. It has over 20,000 employees.

Invests in: Larsen & Toubro
Headquarters: Mumbai
Website: www.kotak.com

L&T Employees Welfare Foundation

L&T Employees Welfare Foundation is a welfare scheme for the employees of Larsen & Toubro.

Invests in: Larsen & Toubro
Headquarters: Mumbai

Life Insurance Corporation of India

Life Insurance Corporation of India is the largest state-owned life insurance company in India. It funds 24.6 per cent of the Indian government's expenses. It has assets worth an estimated US\$251.75 billion.

Invests in: Larsen & Toubro
Headquarters: Mumbai
Website: www.licindia.in

New India Assurance Company

New India Assurance is the largest general insurance company in India. It is one of the five public sector insurance companies in India.

Invests in: Larsen & Toubro
Headquarters: Mumbai
Website: www.newindia.co.in

Reliance Anil Dhirubhai Ambani Group

Reliance Anil Dhirubhai Ambani Group is one of India's largest financial conglomerates. It operates in over 20,000 towns and 450,000 villages in India. It has a customer base of more than 100 million and shareholder base of 12 million. The interests of the group include communications and financial services, electrical power, infrastructure and entertainment. In 2009 the group recorded a revenue of US\$15.4 billion. It has approximately 120,000 employees.

Invests in: Larsen & Toubro
Headquarters: Mumbai
Website: www.relianceadagroup.com

State Bank of India

The State Bank of India is the largest Indian banking and financial services company. It is fully owned by the government of India. It provides a range of banking products through its vast network of branches in India and abroad. It has over 16,000 branches in India, making it the nation's largest banking network. It also has around 130 branches overseas. In 2011 it recorded a profit of US\$2.12 billion. It has approximately 223,000 employees.

Invests in: Larsen & Toubro

Headquarters: Mumbai

Website: www.statebankofindia.com

UTI Asset Management

UTI Asset Management Company is a privately owned investment manager. It has approximately 10 million investors and 1,114 employees. Its subsidiary UTI International Limited has branches in London, Dubai and Bahrain. It has a joint venture with Shinsei Bank in Singapore.

Invests in: Larsen & Toubro

Headquarters: Mumbai

Website: www.utimf.com

YES Bank

YES Bank Limited is an Indian Bank that provides a range of banking and financial services. Its business segments include treasury, corporate and wholesale banking, retail banking, corporate finance and transaction banking. In 2010 it recorded a profit of US\$138.15 million. It has roughly 3,000 employees.

Invests in: Larsen & Toubro

Headquarters: Mumbai

Website: www.yesbank.in

Ireland

Allied Irish Banks

Allied Irish Banks is a major commercial bank based in Ireland. It is partially owned by the Republic of Ireland. It offers a range of personal and corporate banking services and general insurance products. It has operations in the United Kingdom, Poland, Latvia, Estonia and Lithuania. In 2009 it accepted a €3.5-billion bailout from the Irish government.

Invests in: Babcock & Wilcox

Headquarters: Dublin

Website: www.aib.ie

Italy

Banca Leonardo

Banca Leonardo is a private independent investment bank involved in wealth management and market-related activities. It has offices in Milan, Lecco, Rome and Turin. The bank is also active in Europe through subsidiaries in Germany, Belgium, Spain, France and the Netherlands. In 2010 its revenue was €192 million.

Invests in: Safran

Headquarters: Milan

Website: www.bancaleonardo.com

Banca Monte dei Paschi di Siena

Banca Monte dei Paschi di Siena claims to be the oldest bank in the world. It has approximately 3,000 branches, 33,000 employees and 4.5 million customers in Italy. It also has branches and businesses abroad. It is the primary sponsor of Italian basketball club Mens Sana Basket of Siena. In 2010 it recorded a profit of €985.5 million.

Invests in: Finmeccanica

Headquarters: Siena

Website: www.mps.it

Banca Popolare di Milano

Banca Popolare di Milano is an Italian cooperative bank. It works primarily in the northern and central regions of Italy, with a strong presence in Lombardia and Piemonte. In 2010 it recorded a profit of €106 million. It employs about 9,000 people in 792 branches and it has some 1.4 million customers.

Invests in: Finmeccanica
Headquarters: Milan
Website: www.bpm.it

Banca Popolare di Sondrio

Banca Popolare di Sondrio is a major Italian bank. Its customers include individuals, small and large companies and public institutions. It provides banking, financial and insurance services. It has around 278 branches and 2,450 employees. The bank has capital of approximately €925 million.

Invests in: Finmeccanica
Headquarters: Sondrio
Website: www.popso.it

Banca Popolare Emilia Romagna

Banca Popolare Emilia Romagna provides various banking and financial services in Italy and internationally. Its network of banks includes Banca Popolare di Ravenna, Banca Popolare di Lanciano e Sulmona, Carispaq-Cassa di Risparmio della provincia dell'Aquila, Banca Popolare del Mezzogiorno, Banca della Campania, Banca Popolare dell'Emilia Romagna International and Sardaleasing. It has representative offices in Ireland, Luxembourg, Slovenia, Ukraine, Hungary and China. It has roughly 12,000 employees.

Invests in: Finmeccanica
Headquarters: Modena
Website: www.bper.it

Banca Popolare di Vicenza

Banca Popolare Di Vicenza provides retail and corporate banking services to private and corporate customers in Italy and other European Union countries. It operates 638 branches in Italy, two representative offices in China and one representative office in India. It has approximately 5,579 employees.

Invests in: Finmeccanica
Headquarters: Vicenza
Website: www.popolarevicenza.it

Banco Popolare

Banco Popolare is an Italian cooperative bank. In June 2009 the company became the first Italian bank to receive state aid from the government of Italy due to the ongoing financial crisis. It also sold €1.5 billion in convertible bonds to the state. In 2010 it recorded a profit of €308 million.

Invests in: Finmeccanica
Headquarters: Verona
Website: www.bancopopolare.it

Credito Emiliano

Credito Emiliano provides regional banking services primarily in Italy. In 2010 it recorded a revenue of €401.1 million. It has approximately 5,500 employees.

Invests in: Finmeccanica
Headquarters: Reggio Emilia
Website: www.credem.it

Gruppo Carige

Banca Carige heads one of Italy's main banking, financial, insurance and welfare groups. It has over 1,000 branches in Italy and around two million clients.

Invests in: Finmeccanica
Headquarters: Genoa
Website: www.gruppocarige.it

Intesa SanPaolo

Intesa Sanpaolo is a major banking group in Italy. It also has a growing international presence in Central and Eastern Europe, the Middle East and North Africa. In 2010 it recorded a profit of €2.71 billion. It has approximately 100,000 employees.

Invests in: Bechtel, Boeing, EADS, Finmeccanica, General Dynamics, Honeywell International, Lockheed Martin, Northrop Grumman, Thales
Headquarters: Turin
Website: www.intesasanpaolo.com

Mediobanca

Mediobanca is an Italian investment bank and international banking group. It has offices in Frankfurt, London, Madrid, Moscow, New York and Paris. In 2010 it recorded a profit of €386.6 million.

Invests in: Finmeccanica
Headquarters: Milan
Website: www.medioibanca.it

UBI Banca

UBI Banca is the fifth-largest banking group in Italy by market capitalization and number of branches. In 2009 the group had 1,945 branches in Italy, half of which were in Lombardy and Piedmont. UBI Banca is principally involved in retail banking. It is also a holding company for a number of Italian cooperative banks and controls the publicly traded online bank IWBank and various insurance and asset management interests. In 2010 it recorded a profit of €172.1 million. It has roughly 19,700 employees.

Invests in: Finmeccanica, Thales
Headquarters: Bergamo
Website: www.ubibanca.it

Unicredit

UniCredit SpA is a banking organization operating in 22 countries. Its core markets are Italy, Austria and Southern Germany. It also has operates in Central and Eastern Europe. The UniCredit Group has investment banking divisions in London, Milan, Munich, Vienna, Budapest and Warsaw. It has some 40 million customers and 162,000 employees. In 2010 it recorded a profit of €1.32 billion.

Invests in: EADS, Finmeccanica, Honeywell International, Thales
Headquarters: Rome
Website: www.unicreditgroup.eu

● Japan

Daiwa Securities Group

Daiwa Securities Group is Japan's second-largest securities brokerage. Group members include Daiwa Securities Co. Ltd and Daiwa Securities Capital Markets Co. Ltd. These companies participate in online trading and provide asset management, research and private equity fund services.

Invests in: Boeing, GenCorp
Headquarters: Tokyo
Website: www.daiwa-grp.jp

Mitsubishi UFJ Financial

Mitsubishi UFJ Financial Group is a major Japanese bank holding and financial services company. It is Japan's largest financial group and the world's second-largest bank holding company. In 2010 it recorded a profit of US\$6.81 billion. It has 84,000 employees.

Invests in: Alliant Techsystems, Babcock & Wilcox, Babcock International, BAE Systems, Bechtel, Boeing, EADS, Finmeccanica, General Dynamics, Honeywell International, Lockheed Martin, Northrop Grumman, Rolls-Royce, Safran, Thales
Headquarters: Tokyo
Website: www.mufg.jp

Mizuho Bank

Mizuho Bank is the core retail banking unit of Mizuho Financial Group. The group is the second-largest financial services company in Japan and one of the three so-called Japanese megabanks. Mizuho Bank has 515 branches and serves over 26 million Japanese households. In 2010 it recorded a net income of ¥149.8 billion. It has some 19,000 employees.

Invests in: Alliant Techsystems, Bechtel, Boeing, EADS, General Dynamics, Honeywell International, Lockheed Martin
Headquarters: Tokyo
Website: www.mizuhobank.co.jp

Nomura

The Nomura Group is one of the major industrial and financial conglomerates in Japan. The group is involved in industries including oil, gas, construction, chemicals and foodstuffs. It is known internationally as a financial powerhouse. Nomura Securities is Japan's best-known stock brokerage firm and an internationally known conglomerate of financial services. Nomura has major offices in New York, Hong Kong and London. Other large group members are Resona Bank and Osaka Gas.

Invests in: Finmeccanica
Headquarters: Tokyo
Website: www.numuraholdings.com

Sumitomo Mitsui Banking

Sumitomo Mitsui Banking is a Japanese bank and member of the Sumitomo Group and Mitsui Group. As of 2009 it was the second-largest bank in Japan by assets. In 2011 it recorded a profit of ¥421.2 billion. It has approximately 22,500 employees.

Invests in: Babcock & Wilcox, BAE Systems, Boeing, EADS, Finmeccanica, General Dynamics, Honeywell International, Lockheed Martin, Northrop Grumman, Rolls-Royce, Thales
Headquarters: Tokyo
Website: www.smbc.co.jp

Jordan

Arab Bank

Arab Bank is one of the largest financial institutions in the Middle East. It sells products in personal banking, corporate and investment banking, private banking and treasury. It has over 500 branches in 30 countries. It participates in financial markets and centres in London, New York, Dubai, Singapore, Cyprus, Zurich, Paris, Frankfurt, Sydney and Bahrain.

Invests in: Bechtel, Boeing
Headquarters: Aman
Website: www.arabbank.com

Kuwait

Kuwait Investment Authority

The Kuwait Investment Authority is Kuwait's sovereign wealth fund and managing body of local and foreign investment. It manages the funds of the Kuwaiti government including the Kuwait General Reserve Fund, the Kuwait Future Generations Fund, and other assets committed by the Ministry of Finance. Kuwait's finance minister heads the board of directors and other seats are allocated to the energy minister, governor of the Central Bank of Kuwait and undersecretary of the Ministry of Finance. KIA is estimated to hold in excess of \$200 billion of assets. It is also reportedly one of the largest sovereign wealth funds in the world.

Invests in: Babcock International
Headquarters: Kuwait City
Website: www.kia.gov.kw

National Bank of Kuwait

The National Bank of Kuwait is a major bank of Kuwait. It operates in 17 countries worldwide. The bank offers various financial and investment services for individuals and corporate and institutional clients. In 2010 it recorded revenue of US\$2.21 billion.

Invests in: Bechtel
Headquarters: Kuwait City
Website: www.nbk.com

Libya

Libyan Investment Authority

The Libyan Investment Authority is a holding company that oversees and manages government investment funds in various areas including agriculture, real estate, infrastructure, oil and gas, and shares and bonds. It is a sovereign wealth fund.

Invests in: Finmeccanica
Headquarters: Tripoli
Website: www.lia.ly

Netherlands

AEGON

Aegon is one of the world's largest life insurance and pension groups. It is also a provider of investment products. The group is active in accident and supplemental health insurance and general insurance. It has major operations in the United States, the Netherlands and the United Kingdom. It is an official sponsor of the Dutch football team AFC Ajax.

It has approximately 40 million customers. In 2010 it recorded a profit of €1.76 billion. AEGON acquired Transamerica in 1999, which represents a large part of the company, with more than 12,000 employees working in the United States. In 2011 AEGON rebranded its asset management activities in the United Kingdom as Kames Capital.

Invests in: Alliant Techsystems, Babcock International, BAE Systems, Boeing, Finmeccanica, Honeywell International, Rolls-Royce and Serco Group through its subsidiaries Transamerica and Kames Capital
Headquarters: The Hague
Website: www.aegon.com

ING

ING Group is a global financial institution involved in retail banking, direct banking, commercial banking, investment banking, asset management and insurance services. It has approximately 85 million individual and institutional clients in more than 45 countries.

It is the title sponsor of various marathons including the New York City Marathon, the Miami Marathon, the Georgia Marathon, the Hartford Marathon and the Philadelphia Distance Run. It is also a major sponsor of the Royal Dutch Football Association and the Asian Football Confederation. In 2010 it recorded a profit of €3.22 billion. It has approximately 107,000 employees.

Invests in: Boeing, EADS, Honeywell International, Safran
Headquarters: Amsterdam
Website: www.ing.com

Unilever Pensioenfonds Progress

The Unilever Pension Fund Uninvest Company is responsible for the pension scheme of employees of Netherlands-based Unilever operating companies. At the end of the 2009 book year, Uninvest Company had a total of 24,613 participants.

Invests in: Redhall Group
Headquarters: Rotterdam
Website: www.unileverpensioenfonds.nl

Norway

DnB

DnB is Norway's largest financial services group. Its two largest owners are the Norwegian Ministry of Trade and Industry and Sparebankstiftelsen DnB NOR. The group includes brands such as DNB, Vital, Nordlandsbanken, Cresco, Postbanken, DnB NORD and Carlson. In 2010 it recorded a profit of NOK 14.81 billion. It has approximately 13,430 employees.

Invests in: Honeywell International
Headquarters: Oslo
Website: www.dnb.no

Government Pension Fund Global

The Government Pension Fund Global is a fund into which the surplus wealth produced by Norwegian petroleum income is deposited. Norges Bank Investment Management, a part of the Norwegian Central Bank, manages the fund on behalf of the Ministry of Finance. In 2011 it was valued as the largest pension fund in the world. In 2010 its total value was recorded as US\$525 billion.

An advisory council on ethics was established in 2004 to oversee investment. The role of the council is to provide evaluation on whether or not investment in specified companies is inconsistent with the established ethical guidelines for the fund. The Ministry of Finance makes decisions on the exclusion of companies from the fund's investment universe based on the council's recommendations. The Ministry of Finance has excluded numerous companies involved in arms production and tobacco based on the council's recommendations.

Invests in: Babcock & Wilcox, Babcock International, Jacobs Engineering, Rolls-Royce, Thales
Headquarters: Oslo
Website: www.nbim.no

Russia

Vnesheconombank

Vnesheconombank is a Russian bank commonly called the Russian Development Bank. The Russian government uses it to support and develop the Russian economy. It also formerly managed the state's debts and pension funds. It receives funds directly from the state budget. From 2005 to 2006, both the assets and liabilities of the bank doubled from around \$6 billion to \$12 billion.

Invests in: EADS
Headquarters: Moscow
Website: www.veb.ru



Saudi Arabia

Riyad Bank

Riyad Bank is one of the largest financial institutions in the Middle East. It has a strong focus on corporate and retail banking. It is a financier and arranger of syndicated loans in the oil and petrochemicals industries and many of Saudi Arabia's infrastructure projects. It has 246 branches in Saudi Arabia and offices in London, Houston and Singapore.

Invests in: Bechtel, Boeing, General Dynamics, Lockheed Martin, Thales

Headquarters: Riyadh

Website: www.riyadbank.com



Singapore

DBS

DBS Bank is a major bank in Singapore and the largest bank in South-East Asia. It has market-dominant positions in consumer banking, treasury and markets, asset management, securities brokerage, equity and debt fund-raising in Singapore and Hong Kong. It has more than 100 branches in Singapore. In 2010 it recorded an income of SGD 7 billion. It has approximately 14,000 employees.

Invests in: Boeing, EADS, Honeywell International, Lockheed Martin, Rolls-Royce

Headquarters: Singapore

Website: www.dbs.com

United Overseas Bank

United Overseas Bank is involved in a range of financial services. The bank's subsidiaries include Far Eastern Bank, United Overseas Bank, PT Bank UOB Indonesia, PT Bank UOB Buana and United Overseas Bank. The bank has a network of approximately 500 offices in 18 countries and territories in Asia Pacific, Western Europe and North America. It has approximately 12,100 employees.

Invests in: Alliant Techsystems

Headquarters: Singapore

Website: www.uobgroup.com



Spain

Banco Santander

Santander Group is the largest bank in the Eurozone and one of the largest banks in the world in terms of market capitalization. It is involved in retail, corporate, investment and private banking, as well as insurance, asset management and private equity. It is a major sponsor of the Ferrari Formula One team. In 2010 it recorded a profit of €8.18 billion. It has approximately 179,000 employees.

Invests in: Boeing, EADS, Finmeccanica, General Dynamics, Honeywell International, Rolls-Royce, Safran, Thales

Headquarters: Santander

Website: www.santander.com

BBVA

BBVA is a multinational Spanish banking group. It is the second-largest bank in Spain and seventh-largest financial institution in the Western world. It operates in 40 countries. It has a strong presence in south European countries, especially Portugal and Italy, and has operations in the United States and Asia. In 2010 it recorded a profit of €4.61 billion. It has approximately 107,000 employees.

Invests in: Babcock & Wilcox, Bechtel, Boeing, EADS, Finmeccanica, General Dynamics, Honeywell International, Thales

Headquarters: Bilbao

Website: www.bbva.com

Grupo Entrecanales

Grupo Entrecanales is a private company controlled by José Entrecanales Ibarra. Its subsidiaries include Acciona and Bestinver. These are involved in civil engineering, construction and infrastructure, and banking and brokerage services.

Invests in: Finmeccanica, Thales

Headquarters: Madrid

Sweden

Nordea Bank

Nordea Bank is a financial services group operating in northern Europe. It has more than 1,400 branches and operates in 19 countries around the world. The international corporate banking division has branches in Frankfurt, London, Singapore, Shanghai and New York. Nordea International private banking has its headquarters in Luxembourg with branches in Brussels, Cannes, Luxembourg, Fuengirola and Zurich. It also has representative offices in São Paulo and Beijing. It has approximately 11 million private and 700,000 active corporate customers. In 2010 it recorded a revenue of €9.33 billion. It has approximately 34,000 employees.

Invests in: Rolls-Royce
Headquarters: Stockholm
Website: www.nordea.com

Skandinaviska Enskilda Banken

Skandinaviska Enskilda Banken is a Swedish financial group. Its activities comprise mainly banking services. It also carries out significant life insurance operations and owns Eurocard. The Wallenberg Family controls the bank through their investment company Investor AB. It has more than 400,000 corporate customers and institutions and more than five million customers in the Nordic and Baltic countries, Poland, Russia and Ukraine. It also operates in ten other countries. In 2010 it recorded a profit of SEK 6.75 billion. It has approximately 20,000 employees.

Invests in: BAE Systems, EADS
Headquarters: Stockholm
Website: www.sebgroup.com

Svenska Handelsbanken

Svenska Handelsbanken is a Swedish bank. It operates in other Nordic countries, as well as the United Kingdom, the Netherlands, Latvia, Estonia and Lithuania. It has 460 branches in Sweden. In 2010 it recorded a profit of SEK 11.03 billion. It has approximately 10,000 employees.

Invests in: General Dynamics
Headquarters: Stockholm
Website: www.handelsbanken.com

Swedbank

Swedbank is a Nordic–Baltic banking group. It has approximately 9.5 million retail customers and 534,000 corporate customers in Sweden, Estonia, Latvia and Lithuania. In Sweden, the group has 377 branches. In the Baltic countries, it has another 224 branches. The group is also present in Copenhagen, Helsinki, Kaliningrad, Kiev, Luxembourg, Moscow, Marbella, New York, Oslo, Shanghai, St Petersburg and Tokyo. In 2010 it recorded a profit of SEK 7.44 billion. It has approximately 17,220 employees.

Invests in: Jacobs Engineering, Redhall Group
Headquarters: Stockholm
Website: www.swedbank.com

Switzerland

Credit Suisse

The Credit Suisse Group is a Swiss multinational financial services company. It has more than 250 branches in Switzerland and operates in more than 50 countries. In 2010 it recorded a profit of CHF 5.1 billion. It has approximately 50,100 employees. Tennis player Roger Federer is a Credit Suisse ambassador.

Invests in: Babcock International, BAE Systems, Boeing, EADS, Finmeccanica, Larsen & Toubro, Northrop Grumman
Headquarters: Zurich
Website: www.credit-suisse.com

Jabre Capital Partners

Jabre Capital Partners is a small investment management company. It manages both alternative and traditional investment strategies. It has approximately 50 employees.

Invests in: Alliant Techsystems
Headquarters: Geneva
Website: www.jabcap.com

Julius Baer

Julius Baer Group is a Swiss banking firm. It is the parent company of Bank Julius Baer. The group manages substantial assets for private and institutional clients from all over the world. The firm's services consist mainly of asset management, wealth management and investment consultancy, and investment funds for private and institutional investors as well as securities and foreign exchange trading. Apart from offices in Switzerland, the bank has offices in London, Frankfurt, Milan, Dubai, Moscow, Grand Cayman, New York, Singapore and Hong Kong. In 2010 it recorded a profit of CHF 352 million. It has approximately 3,580 employees.

Invests in: Safran
Headquarters: Zurich
Website: www.juliusbaer.com

Pictet & Cie

Pictet & Cie is one of Switzerland's largest private banks and a major independent asset management specialist in Europe. It offers private wealth management, institutional asset management, investment funds and services to independent asset managers. The group has offices worldwide including in Barcelona, Dubai, Florence, Frankfurt, Hong Kong, London, Luxembourg, Madrid, Milan, Montreal, Osaka, Paris, Rome, Singapore, Taipei and Tokyo. In 2010 its recorded assets were US\$399 billion. It has approximately 3,000 employees.

Invests in: Rolls-Royce
Headquarters: Geneva
Website: www.pictet.com

Swiss Reinsurance Company

Swiss Reinsurance Company, generally known as Swiss Re, is a Swiss reinsurance company. It is the world's second-largest reinsurer. The company operates through offices in more than 25 countries. In 2010 it recorded a profit of US\$863 million. It has approximately 10,000 employees. In 2009 Warren Buffett invested \$2.6 billion in the company. Warren Buffett is also a major sponsor of the Nuclear Threat Initiative, having pledged \$50 million to the organization. He also is an adviser to the organization.

Invests in: General Dynamics, Honeywell International
Headquarters: Zurich
Website: www.swissre.com

Swisscanto

Swisscanto is an asset manager and fund provider. It is a joint venture of the 24 Swiss cantonal banks. It manages assets worth over CHF 50 billion and has approximately 390 employees, with offices in Switzerland, London, Frankfurt, Milan and Luxembourg.

Invests in: Rolls-Royce, Safran
Headquarters: Bern
Website: www.swisscanto.sh

UBS

UBS is a Swiss global financial services company. It provides investment banking, asset management and wealth management services to private, corporate and institutional clients worldwide, as well as retail clients in Switzerland. It operates in all of the major financial centres worldwide with offices in over 50 countries. It is considered the world's second-largest manager of private wealth assets. In 2010 it recorded a revenue of US\$47.53 billion. It has some 64,000 employees.

Invests in: BAE Systems, Boeing, EADS, Finmeccanica, GenCorp, General Dynamics, Honeywell International, Jacobs Engineering, Lockheed Martin, Northrop Grumman
Headquarters: Zurich and Basel
Website: www.ubs.com



Taiwan

Bank of Taiwan

The Bank of Taiwan is a bank administered and owned by the Executive Yuan of the Republic of China. It operates a total of 169 domestic branches, as well as branches in Tokyo, Singapore, Hong Kong and the People's Republic of China. Branches have also been established in New York, Los Angeles, London and South Africa. In 2007 it recorded a revenue of NT \$10.9 billion. It has approximately 6,500 employees.

Invests in: General Dynamics
Headquarters: Taipei
Website: www.bot.com.tw

Chang Hwa Commercial Bank

Chang Hwa Bank is a Taiwan-based financial institution that offers both retail and commercial banking services to private and corporate customers. It has seven overseas branches and representative offices, as well as 175 domestic branches, four sub-branches and five securities brokers. In 2007 it recorded revenue of NT \$8.48 billion.

Invests in: Alliant Techsystems
Headquarters: Taichung
Website: www.chb.com.tw

First Commercial Bank

First Commercial Bank is one of Taiwan's largest privately owned banks. It provides various financial services in Taiwan and internationally. It has 16 branches in the United States, as well as branches in Asia-Pacific including Australia and Japan. It has 4,887 employees in the United States alone. It has approximately US\$35.3 billion of assets under management. Synovus Financial Corporation is the name of its holding company.

Invests in: Alliant Techsystems
Headquarters: Taipei
Website: www.firstbank.com

Hua Nan Financial Holdings

Hua Nan Financial Holdings provides commercial banking, securities and investment banking, insurance and asset management services primarily in Taiwan. It has seven subsidiaries, including HNCB, Hua Nan Securities, South China Insurance, Hua Nan Investment Trust, Hua Nan Venture Capital, Hua Nan Management Consulting Company and Hua Nan Asset Management Company. As of the end of 2008, it had NT \$1,710 billion of assets under management.

Invests in: Alliant Techsystems
Headquarters: Taipei
Website: www.hnfhc.com.tw

United Arab Emirates

Abu Dhabi Commercial Bank

Abu Dhabi Commercial Bank, commonly called ADCB, is a bank in the United Arab Emirates. It is a public joint stock company that provides retail, commercial, investment, merchant, brokerage and fund management. It has 49 branches in the UAE and two branches in India. The government of Abu Dhabi through the Abu Dhabi Investment Authority holds 65 per cent of ADCB shares. The ADCB is one of the largest banks in the UAE in terms of shareholder funds and market capitalization.

Invests in: Bechtel
Headquarters: Abu Dhabi
Website: www.adcb.com

National Bank of Abu Dhabi

National Bank of Abu Dhabi is a bank operating in the United Arab Emirates. It was a major sponsor of the Abu Dhabi Grand Prix in 2010.

Invests in: Boeing, General Dynamics
Headquarters: Abu Dhabi
Website: www.nbad.com

United Kingdom

Aberdeen Asset Management

Aberdeen Asset Management is an international investment management group, managing assets for both institutions and private investors from offices around the world. The company operates mainly in the United Kingdom but has a growing presence worldwide, particularly in Asia, Oceania and the Americas. It has 40 offices in 24 countries. It has approximately 1,800 staff.

Invests in: Rolls-Royce
Headquarters: Aberdeen
Website: www.aberdeen-asset.com

Altium Capital

Altium is a European investment bank. It has seven offices across Europe. Since 2005 Altium has completed mergers and acquisitions transactions with a total value in excess of £14 billion.

Invests in: Redhall Group
Headquarters: London
Website: www.altiumcapital.com

Aviva

Aviva is a global insurance company. It is the sixth-largest insurance company in the world measured by net premium income. It is involved in general and life insurance as well as long-term savings and fund management. It operates in 28 countries. It has around £379 billion of assets under management. The group has 46,000 employees, serving 53 million customers worldwide. It is the main sponsor for Norwich City Football Club and rugby union's English Premiership. It also has naming rights to the Lansdowne Road Stadium in Ireland.

Invests in: Babcock International, BAE Systems, Boeing, GenCorp, Honeywell International, Lockheed Martin, Northrop Grumman
Headquarters: London
Website: www.aviva.com

BAE Systems Pension Funds Investment Management

The BAE Systems Pension Funds Investment Management manages the pension fund of BAE Systems' employees.

Invests in: Babcock International
Headquarters: London

Baillie Gifford & Co.

Baillie Gifford is an investment management firm, which is wholly owned by 36 partners, all of whom work full-time for the firm. As of 2011 assets under management exceeded £66 billion. It has approximately 700 employees.

Invests in: Rolls-Royce, Serco Group
Headquarters: Edinburgh
Website: www.bailliegifford.com

Barclays

Barclays is a global banking and financial services company. It has operations in over 50 countries across Africa, Asia, Europe, North America and South America. It has roughly 48 million customers. As of June 2010 it had total assets of €1.94 trillion. Barclays is a sponsor of the Premier League, the Churchill Cup and professional golf tournaments worldwide including the Scottish Open on the PGA European Tour and the Singapore Open. It also sponsors golfers Phil Mickelson and Darren Clarke.

Invests in: Babcock International, BAE Systems, Bechtel, Boeing, EADS, Finmeccanica, General Dynamics, Honeywell International, Larsen & Toubro, Lockheed Martin, Redhall Group, Rolls-Royce, Serco Group, Thales
Headquarters: London
Website: www.barclays.com

Charles Stanley Group

Charles Stanley Group is a British Investment Management firm. The group consists of four principal trading companies, which cover a wide range of financial services. As of 2010 it had approximately £13.5 billion of investments under management. It has approximately 900 employees.

Invests in: Redhall Group
Headquarters: London
Website: www.charlesstanleyplc.co.uk

Close Brothers Group

Close Brothers Group is a British specialist financial services group. The company makes loans, trades securities and provides advice and investment management solutions to a wide range of clients. Close Brothers' banking division provides specialist lending to small and medium-sized businesses and individuals across a diverse range of asset classes, and also offers deposit-taking services. The securities division provides trading services to retail brokers and institutions principally through Winterflood. The asset management division provides a range of advice, investment management and self-directed services to private, institutional and corporate clients and professional advisers. In 2011 it recorded revenue of £549 million. It has some 2,500 employees.

Invests in: Redhall Group
Headquarters: London
Website: www.closebrothers.co.uk

Co-operative Group

The Co-operative Group is a consumer cooperative with a diverse range of business interests. It is cooperatively run and owned by its members. It is the largest organization of this type in the world, with over six million members. All members have a say in how the business is run. The group comprises businesses in food, travel, financial services, health care, funeral care, legal services, motors and online electrical. In 2010 it had revenue of £11.9 billion. It has over 123,000 employees.

Invests in: Rolls-Royce, Serco Group

Headquarters: Manchester

Website: www.co-operative.coop

Collins Stewart Hawkpoint

Collins Stewart Hawkpoint is an independent financial advisory group. The group is organized around four operational divisions: advisory, corporate broking, securities and wealth management.

Invests in: Redhall Group

Headquarters: London

Website: www.collinsstewarthawkpoint.com

Egerton Capital

Egerton Capital is a privately owned hedge fund sponsor. The firm invests in the public equity markets of Europe.

Invests in: Babcock International

Headquarters: London

Website: www.egercap.co.uk

F&C Asset Management

F&C Asset Management is an asset management company. It is a stand-alone publicly listed asset manager. In 2010 its net income was £13.4 million.

Invests in: Babcock International, BAE Systems

Headquarters: London

Website: www.fandc.com

Hermes

Hermes Fund Managers is a pension fund manager and is the principal manager of the United Kingdom's largest pension scheme, BT Pension Scheme. It also manages portfolios for over 200 other clients, including many major pension schemes. In 2009 it had approximately US\$36.5 billion in assets under management. As part of its equity ownership services, Hermes also advises and speaks for over ten global pension funds and other long-term investors on sustainability issues affecting the long-term value of their portfolio companies, such as environmental, social and governance related matters.

Invests in: Babcock International

Headquarters: London

Website: www.hermes.co.uk

HSBC

HSBC is a global banking and financial services company. It is a universal bank and is organized within four business groups. These groups are commercial banking, global banking and markets, personal financial services and global private banking. In 2011 it was the world's second-largest banking and financial services group and second-largest public company. It has around 7,500 offices in 87 countries and territories across Africa, Asia, Europe, North America and South America. It has around 100 million customers. In 2010 it had total assets of \$2.42 trillion. It recorded a profit of US\$13.16 billion.

It is the major sponsor for various golf tournaments including the World Match Play Championship, the Women's World Match Play Championship and the Open Championship. In football HSBC sponsors French club AS Monaco and Mexican club C. F. Pachuca. In rugby league it sponsors the Telford Raiders. In Australia, HSBC sponsors the New South Wales Waratahs rugby team and the Hawthorn Football Club. It is also the official banking partner of the Wimbledon Tennis Championships.

Invests in: Babcock International, Bechtel, EADS, Finmeccanica, Honeywell International, Larsen & Toubro, Redhall Group, Rolls-Royce, Safran, Serco Group, Thales

Headquarters: London

Website: www.hsbc.com

Ignis Asset Management

Ignis Asset Management is an asset management company. It is involved in financial services, investment management, asset management and fund management. As of 2011 it had £78 billion of assets under its management.

Invests in: Babcock International, Rolls-Royce, Serco Group
Headquarters: London
Website: www.ignisasset.com

Invesco

Invesco is an independent investment management company that is incorporated in Bermuda, headquartered in Atlanta, Georgia, and has branch offices in 20 countries. Invesco operates under the Invesco, Trimark, Invesco Perpetual, Atlantic Trust, WL Ross and Powershares brand names. In 2007 it recorded revenue of US\$3.88 billion. It has approximately 6,189 employees.

Invests in: Alliant Techsystems, Babcock & Wilcox, Babcock International, BAE Systems, GenCorp, General Dynamics, Honeywell International, Rolls-Royce, Serco Group
Headquarters: Atlanta, Georgia
Website: www.invesco.com

Investec Asset Management

Investec Asset Management is a specialist provider of active investment products and services to institutional and individual investors. Investec Asset Management has over 1,500 clients including sovereign wealth funds, pension funds, government bodies, charities and insurance companies, as well as relationships with global distributors and financial advisers. It is an independently managed entity within the Investec Group.

Invests in: Rolls-Royce
Headquarters: London
Website: www.investecassetmanagement.com

Jupiter Asset Management

Jupiter Asset Management is a privately owned investment manager. It primarily provides its services to private and institutional investors. The firm launches and manages equity, fixed income and balanced mutual funds. It also manages hedge funds for its clients. Jupiter Asset Management operates as a subsidiary of GAM Holding AG.

Invests in: Babcock International, BAE Systems
Headquarters: London
Website: www.jupiteronline.co.uk

Lansdowne Partners

Lansdowne Partners is a privately owned investment management organization. Lansdowne Partners Limited Partnership operates as a subsidiary of Lansdowne Partners Limited.

Invests in: Serco Group
Headquarters: London
Website: www.lansdownepartners.com

Legal & General

Legal & General Group is a multinational financial services group. Its products include life insurance, general insurance, pensions and investments. It has operations in the United Kingdom, Egypt, France, Germany, the Gulf, India, the Netherlands and the United States. As of 2010 it had £354 billion under its management. In 2010 its revenue was £38.44 billion. It has approximately 9,324 employees.

Invests in: Babcock International, BAE Systems, Rolls-Royce, Serco Group
Headquarters: London
Website: www.legalandgeneralgroup.com

Lewis Trust Group

The Lewis Trust Group has worldwide interests in retailing, leisure, financial services and property. It has more than 10,000 employees.

Invests in: Redhall Group
Headquarters: London
Website: www.ltg-group.com

Liontrust Asset Management

Liontrust Asset Management is a publicly owned investment management company. It has approximately 46 employees.

Invests in: Redhall Group
Headquarters: London
Website: www.liontrust.co.uk

Lloyds Banking Group

Lloyds Banking Group is a major British financial institution. It operates in the United States, Europe, the Middle East and Asia. It is an official partner of the London Olympic Games 2012. In 2010 it recorded revenue of £43.47 billion. It has approximately 104,000 employees. In December 2008 the British anti-poverty charity War on Want released a report documenting the extent to which Lloyds and other British commercial banks invest in, provide banking services for and make loans to arms companies. The charity writes in its report that Lloyds holds shares in the British arms sector totalling £717.5 million, and serves as principal banker for BAE Systems, the United Kingdom's largest arms company. The report also details Lloyds' dealings with known producers of cluster munitions and depleted uranium munitions.

Invests in: Babcock International, BAE Systems, Bechtel, Boeing, EADS, Finmeccanica, General Dynamics, Lockheed Martin, Rolls-Royce, Serco Group
Headquarters: London
Website: www.lloydsbankinggroup.com

Longview Partners

Longview Partners is an asset management firm. It is wholly owned by its co-founders and eight additional employee partners. It has 34 employees in its offices in London and Guernsey. It manages assets on behalf of corporate and public pension funds, local authority pension funds, foundations, endowments and charities, as well as private clients. Longview Partners is a signatory to the UN Principles for Responsible Investment, a voluntary and aspirational framework for incorporating environmental, social and corporate governance issues into mainstream investment decision-making and ownership practices.

Invests in: Northrop Grumman
Headquarters: London
Website: www.longview-partners.com

Majedie Asset Management

Majedie Asset Management is involved in fund management, dealing, client service and administration. Assets under management total around £6 billion for over 100 institutional clients.

Invests in: Babcock International, BAE Systems, Serco Group
Headquarters: London
Website: www.majedie.com

Marathon Asset Management

Marathon Asset Management LLP is an independent investment management company based in the West End of London. Marathon manages equities for a globally diverse client base comprising a broad range of institutional investors.

Invests in: BAE Systems
Headquarters: London
Website: www.marathon.co.uk

Mondrian Investment Partners

Mondrian is a value-oriented money manager with offices in London and Philadelphia. It has institutional investors from around the world. They are involved in a range of products that cover equity, fixed income and balanced mandates.

Invests in: Serco Group
Headquarters: London
Website: www.mondrian.com

National Farmers Union Mutual Insurance Society

The National Farmers Union Mutual Insurance Society, or NFU Mutual, is a UK-registered mutual insurance composite. It underwrites more than £1 billion (2008) in annual premium in life and general insurance lines for rural communities within the United Kingdom. In contrast to insurance companies that are owned by their shareholders, the policyholders own NFU Mutual. It has over 300 offices and over 5,000 staff and agents spread across the country. It enjoys a close relationship with the National Farmers Union.

Invests in: Babcock International
Headquarters: Stratford upon Avon, Warwickshire
Website: www.nfumutual.co.uk

North Atlantic Value

North Atlantic Value is an independently owned investment group and part of the Harwood Capital Management Group. Its shareholders take an active interest in the running of the businesses in which they invest. In 2011 North Atlantic Value had £600 million of funds under its management.

Invests in: Redhall Group
Headquarters: London
Website: www.navalvalue.co.uk

Octopus Investments

Octopus Investments is involved in a range of products including venture capital trusts, enterprise investment schemes and inheritance tax investment solutions, as well as multi-manager and absolute return funds.

Invests in: Redhall Group
Headquarters: London
Website: www.octopusinvestments.com

Old Mutual

Old Mutual is an international long-term savings, investment and protecting group. It has more than 15 million customers, with operations in 33 countries.

Invests in: Alliant Techsystems, Babcock International, Honeywell International, Jacobs Engineering, Northrop Grumman
Headquarters: London
Website: www.oldmutual.com

Premier Asset Management

Premier Asset Management is a privately owned investment manager. The firm provides its services to private and institutional investors. It launches separate client-focused equity and balanced mutual funds. The firm invests in the public equity and fixed income markets across the globe. It has roughly 70 employees.

Invests in: Babcock International
Headquarters: Guildford
Website: www.premierassetmanagement.co.uk

Prudential

Prudential is a multinational life insurance and financial services company. Its largest division is Prudential Corporation Asia, which has over 15 million customers across 12 Asian markets and is a top-three provider of life insurance in China, Hong Kong, India, Indonesia, Malaysia, Singapore, the Philippines and Vietnam. Its British division has around seven million customers and provides life insurance and pensions. Prudential also owns Jackson National Life Insurance Company, which is one of the largest life insurance providers in the United States, and M&G Investments, a Europe-focused fund manager. In 2010 it had a net income of £1.43 billion. It has approximately 25,000 employees.

Invests in: Alliant Techsystems, Babcock International, BAE Systems, GenCorp, Redhall Group, Rolls-Royce
Headquarters: London
Website: www.prudential.co.uk

Royal Bank of Scotland

The Royal Bank of Scotland provides branch-banking facilities throughout the British Isles. It has around 700 branches, mainly in Scotland, though there are branches in many larger towns and cities throughout England and Wales. The British government owns approximately 84 per cent of the bank, which has approximately 141,000 employees.

Invests in: Alliant Techsystems, Babcock International, BAE Systems, Bechtel, Boeing, EADS, Finmeccanica, General Dynamics, Honeywell International, Lockheed Martin, Northrop Grumman, Redhall Group, Rolls-Royce, Safran, Serco Group, Thales
Headquarters: Edinburgh
Website: www.rbs.co.uk

Royal London Mutual Insurance Society

The Royal London Group is the United Kingdom's largest mutual insurance company. It has approximately 3.1 million customers. In 2010 it recorded £42.4 billion of funds under management.

Invests in: Babcock International
Headquarters: London
Website: www.royallondongroup.co.uk

Schroder Investment Management

Schroders is a multinational asset management company with approximately 3,000 employees worldwide. It operates from 32 offices in 25 countries around Europe, America, Asia and the Middle East. Its clients include corporations, insurance companies, local and public authorities, charities, pension funds, high-net-worth individuals and retail investors. In 2010 it recorded a net income of £311.2 million.

Invests in: Babcock International, Larsen & Toubro, Rolls-Royce
Headquarters: London
Website: www.schroders.com

Standard Chartered

Standard Chartered is a multinational financial services company. It is a universal bank and has operations in consumer, corporate and institutional banking and treasury services. It operates in more than 70 countries and has a network of over 1,700 branches and outlets, employing around 80,000 people. It is a sponsor of the Liverpool Football Club. In 2010 it recorded a net income of US\$4.23 billion.

Invests in: Boeing, Honeywell International, Larsen & Toubro
Headquarters: London
Website: www.standardchartered.com

Standard Life

Standard Life is a long-term savings and investment business. It has 1.5 million shareholders in more than 50 countries and over six million customers. The company operates in North America, Europe, India and China. In 2010 it recorded a net income of £336 million. It has approximately 10,500 employees.

Invests in: Babcock International, BAE Systems, General Dynamics, Rolls-Royce
Headquarters: Edinburgh
Website: www.standardlife.com

SVG Capital

SVG Capital is a British private equity and investment management business. In 2010 it recorded a net income of £28 million.

Invests in: Redhall Group
Headquarters: London
Website: www.svgcapital.com

TT International

TT International is a London-based private partnership. Its focus is international equities.

Invests in: Babcock International, Rolls-Royce
Headquarters: London
Website: www.ttint.com

Universities Superannuation Scheme

The Universities Superannuation Scheme is a pension scheme in the United Kingdom whose members include academic and academic-related staff (including senior administrative staff) in many British universities, mainly those that were universities prior to 1992. It is the second-largest pension scheme in the United Kingdom by fund size.

Invests in: Babcock International, Redhall Group
Headquarters: Liverpool
Website: www.uss.co.uk

United States

Abrams Bison Investments

Abrams Bison Investments is a financial investment advisory firm. This firm has an estimated US\$628.47 million of assets under management.

Invests in: General Dynamics
Headquarters: Bethesda, Maryland

Adage Capital Management

Adage Capital Management is a privately owned hedge fund sponsor. At the end of September 2010, it had US\$24 billion in securities. The firm focuses on managing assets predominantly for endowments and foundations such as Harvard University, Northwestern University, Dartmouth College, the American Red Cross and the Getty Foundation.

Invests in: General Dynamics
Headquarters: Boston, Massachusetts
Website: www.adagecapital.com

Affiliated Managers Group

Affiliated Managers Group is a US holding company that owns a number of financial-sector companies. In 2011 it managed US\$306 billion in assets.

Invests in: Alliant Techsystems, Babcock International
Headquarters: Beverly, Massachusetts
Website: www.amg.com

AIG

American International Group is a multinational insurance corporation. It operates in the United States and also has offices in London, Paris and Hong Kong. In 2010 it managed assets of US\$683.43 billion. It has approximately 96,000 employees.

Invests in: BAE Systems, Boeing, Finmeccanica, Honeywell International, Lockheed Martin, Northrop Grumman
Headquarters: New York, New York
Website: www.AIG.com

Algert Coldiron Investors

Algert Coldiron Investors is an asset management firm. It manages equity, active extension and market-neutral strategies for a variety of institutional clients. These include public and corporate pension plans, foundations and endowments, hedge funds of funds and family offices. It is wholly employee-owned.

Invests in: GenCorp
Headquarters: San Francisco, California
Website: www.acinvestors.net

Allstate Corporation

The Allstate Corporation is the second-largest personal lines insurer in the United States and the largest that is publicly held. The company also has personal lines insurance operations in Canada. It sponsors many sporting events, including the Allstate Sugar Bowl, the Allstate 400 at the Brickyard NASCAR race, and the US Olympic Committee. In 2009 Allstate's total revenue was US\$32 billion, of which US\$26.2 billion came from Property Liability. It has approximately 35,000 employees.

Invests in: Alliant Techsystems, Babcock International, Boeing, General Dynamics, Honeywell International, Lockheed Martin, Northrop Grumman
Headquarters: Northfield Township
Website: www.allstate.com

American Century Investments

American Century Investments is a privately controlled and independent investment management firm involved in mutual funds, institutional separate accounts, commingled trusts, and sub-advisory accounts. It has offices in New York, London, Hong Kong, Mountain View, California and Kansas City, Missouri. It has approximately 1,300 employees.

Invests in: Alliant Techsystems, General Dynamics
Headquarters: Kansas City, Missouri
Website: www.americancentury.com

American Express Company

American Express Company is an US multinational financial services corporation best known for its credit card, charge card and traveller's cheque businesses. In 2010 it had a net income of US\$4.06 billion. It has approximately 61,000 employees.

Invests in: Alliant Techsystems, Babcock & Wilcox, BAE Systems, GenCorp, General Dynamics, Honeywell International, Jacobs Engineering, Lockheed Martin, Northrop Grumman, Rolls-Royce
Headquarters: New York, New York
Website: www.americanexpress.com

American National Insurance Company

American National Insurance Company is a major American insurance corporation operating in all 50 US states, the District of Columbia, Puerto Rico, and American Samoa. The company is involved in insurance products and services including life insurance, annuities, health insurance, property and casualty insurance, credit insurance and pension plan services. In 2008 it managed assets of US\$20.1 billion. It has approximately 3,000 employees.

Invests in: General Dynamics, Northrop Grumman
Headquarters: Galveston
Website: www.anico.com

Anchor Capital Holdings

Anchor Capital is a value-oriented investment adviser specializing in active investment management for families, trusts and institutions, including foundations and endowments. As of December 2007, it had US\$7.2 billion of assets under management. Anchor Capital serves clients through its discretionary management accounts and separately managed accounts divisions.

Invests in: Babcock & Wilcox
Headquarters: Boston, Massachusetts
Invests in: www.anchorcapital.com

Angelo, Gordon & Co.

Angelo Gordon & Co. is an American private equity firm headquartered in New York with offices in Los Angeles, London, Hong Kong, Seoul, Tokyo and Oak Brook, Illinois. Within its hedge fund activities, it focuses on a number of alternative investment strategies. The firm also manages convertible arbitrage, credit arbitrage, leveraged loans, merger arbitrage, real estate, power and energy as well as multi-strategy portfolios for its clients.

Invests in: GenCorp
Headquarters: New York, New York
Website: www.angelogordon.com

AQR Capital Management

AQR Capital Management is a hedge fund founded in 1998 by former Goldman Sachs trader, Clifford S. Asness. The firm invests in public equity and hedges markets across the globe. In 2007 it had US\$35 billion in assets under management. It has 200 employees.

Invests in: GenCorp, Safran
Headquarters: Greenwich, Connecticut
Website: www.aqr.com

Argyll Research

Argyll Research is an investment advisory firm.

Invests in: Jacobs Engineering
Headquarters: Wilmington, North Carolina

Aronson Johnson Ortiz

Aronson Johnson Ortiz is an institutional investment manager. It manages tax-exempt and separate-account portfolios of value-oriented US equities.

Invests in: Alliant Techsystems, Northrop Grumman
Headquarters: Philadelphia
Website: www.ajopartners.com

Arrowstreet Capital

Arrowstreet Capital is an asset management firm that provides global equity investment strategies to institutional investors. Specific products include global equities, international equities, global small-cap equities, international small-cap equities, emerging market equities, and global long and short equities. It is structured as a limited partnership owned and controlled by its senior professionals.

Invests in: BAE Systems, GenCorp
Headquarters: Boston, Massachusetts
Website: www.arrowstreetcapital.com

Artisan Partners

Artisan Partners is an independent investment management firm focused on providing high value-added, active investment strategies to clients globally.

Invests in: Babcock International, Jacobs Engineering
Headquarters: Milwaukee, Wisconsin
Website: www.artisanpartners.com

Bank of America

Bank of America Corporation is a US multinational banking and financial services corporation serving clients in more than 150 countries worldwide. As of 2010, Bank of America is the fifth-largest company in the United States by total revenue. It serves approximately 57 million consumers and small businesses. In 2010 it managed assets of US\$2.26 trillion. It has approximately 5,900 banking centres and 288,000 employees. Its subsidiaries include Bank of America Home Loans, Bank of America Merrill Lynch, Merrill Lynch and the US Trust Corporation.

Invests in: Alliant Techsystems, Babcock & Wilcox, Babcock International, BAE Systems, Bechtel, Boeing, EADS, Finmeccanica, General Dynamics, Honeywell International, Jacobs Engineering, Lockheed Martin, Northrop Grumman, Rolls-Royce, Serco Group
Headquarters: Charlotte, North Carolina
Website: www.bankofamerica.com

BB&T Corporation

BB&T Corporation is a US bank involved in commercial and retail banking services and other financial services such as insurance, investments, retail brokerage, mortgage, corporate finance, consumer finance, payment services, international banking, leasing and trust. It operates in more than 1,850 financial centres in the United States. In 2011 it managed assets of US\$157 billion. It has approximately 31,600 employees.

Invests in: Alliant Techsystems, Babcock & Wilcox

Headquarters: Winston-Salem, North Carolina

Website: www.bbt.com

Beach Point Capital Management

Beach Point Capital Management is an investment manager specializing in credit-related investments. Its clients include public and corporate pension funds and endowments in the United States and Europe. It has offices in Los Angeles, New York and London.

Invests in: GenCorp

Headquarters: Los Angeles, California

Website: www.beachpointcapital.com

Bessemer Group

The Bessemer Group manages more than US\$65 billion in assets for wealthy individuals and families who have at least US\$10 million to invest. Its main subsidiary, Bessemer Trust, administers portfolios with holdings in domestic and international equities and bonds, as well as such alternative assets as hedge funds, real estate and private equity funds. The group also provides trust, custody, tax and estate planning, strategic philanthropy and financial advisory services. It has 15 US offices in addition to offices in London and the Cayman Islands.

Invests in: GenCorp, Honeywell International

Headquarters: Woodbridge, Virginia

BlackRock

BlackRock is an American multinational investment management corporation and the world's largest asset manager. It serves clients in 60 countries, maintaining a major presence in North America, Europe, Asia-Pacific and the Middle East. It has offices in San Francisco, Chicago, Los Angeles, Dallas, Princeton, Wilmington, London, Zurich, Paris, Frankfurt, São Paulo, Tokyo, Hong Kong, Taipei, Beijing, Sydney, Dubai and several other cities. It has approximately 10,200 employees, including more than 700 investment professionals worldwide. In 2010 it managed assets of US\$178.4 billion.

Invests in: Alliant Techsystems, Babcock & Wilcox, Babcock International, BAE Systems, Boeing, EADS, Finmeccanica, GenCorp, General Dynamics, Honeywell International, Jacobs Engineering, Larsen & Toubro, Lockheed Martin, Northrop Grumman, Rolls-Royce, Safran, Serco Group

Headquarters: New York, New York

Website: www.blackrock.com

Blaylock & Co.

Blaylock & Company is a full-service investment banking firm that provides underwriting, mergers and acquisitions, and research and trading services to national and international clients. It has approximately 50 employees. B&C has completed assignments for some of the world's most prominent corporations, governments and institutional investors, including GE, CIT, Prudential, AIG, UPS, and New York State.

Invests in: Boeing

Headquarters: New York, New York

BNY Mellon

The Bank of New York Mellon Corporation is a global financial services company employing more than 48,000 staff worldwide. It has over US\$1.2 trillion in assets under management and \$25.5 trillion in assets under custody and administration, thereby being the largest deposit bank in the world. It operates in six primary financial services sectors, including asset management, asset servicing, wealth management, broker-dealer and advisory services, issuance services, and treasury services.

Invests in: Alliant Techsystems, Babcock & Wilcox, BAE Systems, Bechtel, Boeing, GenCorp, General Dynamics, Honeywell International, Jacobs Engineering, Lockheed Martin, Northrop Grumman, Serco Group, Thales

Headquarters: New York, New York

Website: www.bnymellon.com

Brown Advisory Holdings

Brown Advisory is an independently owned investment firm. It has principal offices in Washington, DC, Wilmington, DE, Boston and London. It has more than 250 employees.

Invests in: GenCorp, Jacobs Engineering
Headquarters: Baltimore, Maryland
Website: www.brownadvisory.com

Calamos Asset Management

Calamos Asset Management is a global investment management firm. Clients include public and private pensions, foundations, endowments, corporations, financial advisors, families and individuals. It has more than US\$33.7 billion in assets under management and approximately 300 employees.

Invests in: Babcock & Wilcox
Headquarters: Naperville, Illinois
Website: www.calamos.com

CalPERS

The California Public Employees' Retirement System, or CalPERS, is an agency in the California executive branch that manages pension and health benefits for more than 1.6 million California public employees, retirees and their families. As of December 2008, CalPERS managed the largest public pension fund in the United States with US\$179.2 billion in assets. It has approximately 2,300 employees.

Invests in: GenCorp
Headquarters: Sacramento, California
Website: www.calpers.ca.gov

Cantillon Capital Management

Cantillon Capital Management is an employee-owned hedge fund sponsor. The firm provides its services to private investment funds, corporate pension plans, state or municipal pension plans, charitable institutions, foundations, endowments and other US and international institutions.

Invests in: Babcock International, Serco Group
Headquarters: New York, New York
Website: www.cantillon.com

Capital Group

The Capital Group Companies is one of the world's largest investment management organizations. It comprises a group of investment management companies, including Capital Research and Management, American Funds, Capital Bank and Trust, Capital Guardian and Capital International. It has approximately 7,000 employees.

Invests in: BAE Systems, Boeing, EADS, Finmeccanica, General Dynamics, Honeywell International, Jacobs Engineering, Lockheed Martin, Northrop Grumman, Serco
Headquarters: Los Angeles, California
Website: www.capgroup.com

Castle Creek Arbitrage

Castle Creek Arbitrage is a financial investment advisory firm. It has approximate annual revenue of US\$1.3 million. It has approximately 15 employees.

Invests in: Alliant Techsystems
Headquarters: Chicago, Illinois
Website: www.castle-creek.com

Causeway Capital Management

Causeway Capital Management is an independently owned investment management firm specializing in managing global, international and emerging markets equities. Its clients include corporate, public and Taft-Hartley pension plans, mutual funds, endowments, foundations, corporations and other institutions. Causeway manages approximately US\$11 billion in assets and has 49 employees.

Invests in: Rolls-Royce
Headquarters: Los Angeles, California
Website: www.causewayfunds.com

Chieftain Capital Management

Chieftain Capital Management is a financial investment advisory firm that manages approximately 170 accounts and has an estimated US\$1.41 billion of assets under its management.

Invests in: Lockheed Martin
Headquarters: New York, New York
Website: www.chieftaincapital.com

Citadel Investment Group

Citadel Investment Group is a global financial institution. It is involved in equity and options market-making. Citadel has offices in New York, Hong Kong, San Francisco, Boston and London. It employs over 1,400 individuals globally.

Invests in: Alliant Techsystems, GenCorp

Headquarters: Chicago, Illinois

Website: www.citadelgroup.com

Citi

Citi is an American multinational financial services corporation that operates in 140 countries with approximately 16,000 offices. It employs more than 260,000 staff and has over 200 million customers. Citigroup is one of the “big four” banks in the United States, along with Bank of America, JP Morgan Chase and Wells Fargo. In 2010 it had assets under management of US\$1.91 trillion. Its subsidiaries include Banamex, Citibank, Citigold, Citi Private Bank, Egg Banking, Metalmark Capital, Morgan Stanley Smith Barney, Nikko Citigroup, Railmark Holdings, Salomon BIG and Sedna Finance.

Invests in: BAE Systems, Bechtel, Boeing, EADS, Finmeccanica, GenCorp, Honeywell International, Larsen & Toubro, Lockheed Martin, Northrop Grumman, Rolls-Royce, Safran, Thales

Headquarters: New York, New York

Website: www.citigroup.com

CNH Partners

CNH Partners is a privately owned investment manager.

Invests in: GenCorp

Headquarters: Greenwich, Connecticut

CNO Financial Group

CNO Financial Group engages in the development, marketing and administration of health insurance, annuity, individual life insurance and other insurance products for middle-income markets in the United States. It has more than four million customers.

Invests in: Lockheed Martin, Northrop Grumman

Headquarters: Carmel, Indiana

Website: www.cnoinc.com

Comerica

Comerica is an American financial services company. The company’s operating units include business banking, retail banking and wealth management. It has retail-banking operations in Arizona, California, Florida, Michigan and Texas, and select business operations in several other US states, as well as in Canada and Mexico. In 2011 it had US\$54.1 billion in total assets. It has approximately 9,100 employees.

Invests in: Babcock & Wilcox, Boeing

Headquarters: Detroit, Michigan

Website: www.comerica.com

Cowen & Company

Cowen & Company is the broker-dealer business of Cowen Group. It offers a range of investment banking services, including equity and convertible debt financing, private placements of equity and debt, and mergers and acquisitions advisory services, including strategic alliances, joint ventures and restricted security sales. Cowen & Company also provides clients with access to proprietary research and institutional sales and trading services, primarily in the health care, technology, media and telecommunications, aerospace and defence, financial technology, and alternative energy sectors. In 2010 it recorded revenue of US\$233.8 billion.

Invests in: General Dynamics

Headquarters: New York, New York

Website: www.cowen.com

D.F. Dent & Company

D. F. Dent & Company is an employee-owned investment manager. The firm primarily provides its services to high-net-worth individuals. It also manages accounts for investment companies, pension and profit-sharing plans, charitable organizations, corporations, and state or municipal government entities. In 2011 it recorded US\$3.24 billion in equities and fixed-income securities.

Invests in: Jacobs Engineering

Headquarters: Baltimore, Maryland

Website: www.dfdent.com

Davis Selected Advisers

Davis Selected Advisers is an independent investment firm. The company operates several types of funds, from large cap blend to multi-cap international.

Invests in: Lockheed Martin
Headquarters: Tucson, Arizona
Website: www.davisadvisers.com

Dimensional Fund Advisors

Dimensional Fund Advisors is an investment firm based in the United States, with regional offices in Amsterdam, Berlin, London, Santa Monica, Sydney, and Vancouver. It has approximately 500 employees.

Invests in: Babcock International, GenCorp, Northrop Grumman
Headquarters: Austin, Texas
Website: www.dimensional.com

Dreman Value Management

Dreman Value Management is an investment firm. The firm has six value-based equity mutual funds for individual investors that include both domestically focused and internationally focused strategies.

Invests in: Alliant Techsystems
Headquarters: Jersey City, New Jersey
Website: www.dreman.com

Eaton Vance

Eaton Vance is one of the oldest investment management firms in the United States. It provides investment products to individuals, institutions and financial professionals, including wealth management solutions. It has approximately 1,024 employees.

Invests in: Boeing, General Dynamics, Jacobs Engineering, Lockheed Martin
Headquarters: Boston, Massachusetts
Website: www.eatonvance.com

Eidelman Virant Capital

Eidelman Virant Capital is a private investment company.

Invests in: GenCorp
Headquarters: St Louis, Missouri
Website: www.eidelmanvirant.com

Evercore Partners

Evercore Partners is an independent investment banking advisory firm. It has offices in New York, Boston, Chicago, Houston, Los Angeles, Minneapolis, San Francisco, Washington DC, London, Aberdeen, Mexico City, Monterrey, Hong Kong, Rio de Janeiro, and São Paulo. In 2010 it recorded revenue of US\$376 million. It has approximately 610 employees.

Invests in: Boeing, Honeywell International
Headquarters: New York, New York
Website: www.evercore.com

Farmers Insurance Group

Farmers Insurance Group is a personal lines property and casualty insurance group. It is the third-largest insurance group in the United States, servicing over 10 million households in 41 states. Although headquartered in California, it is wholly owned by Zurich Financial Services in Switzerland. In 2007 it recorded net income of US\$2.15 billion. It has approximately 25,935 employees.

Invests in: Northrop Grumman
Headquarters: Los Angeles, California
Website: www.farmers.com

Fidelity

Fidelity Investments is a US multinational financial services corporation. It is one of the largest mutual fund and financial services groups in the world. In 2010 it had approximately US\$207.9 billion in assets under management. It has about 38,000 employees.

Invests in: Alliant Techsystems, Babcock International, BAE Systems, Boeing, GenCorp, Honeywell International, Jacobs Engineering, Lockheed Martin, Redhall Group, Rolls-Royce, Safran, Serco Group
Headquarters: Boston, Massachusetts
Website: www.fidelity.com

Fiduciary Management

Fiduciary Management is an employee-owned independent money management firm. It manages over US\$12.5 billion in assets for domestic and international institutions, individual investors and registered investment advisers.

Invests in: Alliant Techsystems
Headquarters: Milwaukee, Wisconsin
Website: www.fiduciarymgt.com

Fifth Third Bancorp

Fifth Third Bancorp is a diversified financial services company. The company engages in five main lending and banking practices, including branch banking, consumer lending, commercial banking and processing solutions. It also operates a title insurance division. It is among the largest money managers in the Midwest and, as of 2007, had US\$223 billion in assets under care, of which it managed US\$33 billion for individuals, corporations and non-profit organizations. It has approximately 21,600 employees.

Invests in: Babcock & Wilcox
Headquarters: Cincinnati, Ohio
Website: www.53.com

First Eagle Investment Management

First Eagle Investment Management manages five mutual funds: First Eagle Global Fund, First Eagle Overseas Fund, First Eagle US Value Fund, First Eagle Gold Fund and First Eagle Fund of America.

Invests in: Alliant Techsystems, Lockheed Martin, Northrop Grumman
Headquarters: New York, New York
Website: www.firsteaglefunds.com

First Trust Advisors

First Trust Advisors is a privately owned investment adviser. It has over US\$32 billion in assets under management.

Invests in: Alliant Techsystems, BAE Systems
Headquarters: Wheaton, Illinois
Website: www.ftportfolios.com

Fisher Investments

Fisher Investments is a boutique money management firm serving institutional investors and wealthy individuals with at least US\$500,000 to invest. The firm is active in the United States and United Kingdom. In Germany, Fisher does business through its joint-venture affiliate, Grüner Fisher Investments. At the helm of Fisher Investments is founder Ken Fisher, who has authored several books on investing and has written the "Portfolio Strategy" column for *Forbes* magazine for more than 25 years. The company has some US\$40 billion of assets under management.

Invests in: Boeing, Honeywell International
Headquarters: Woodside, California
Website: www.fisherinvestments.com

Franklin Templeton

Franklin Templeton Investments is an investment firm. It has over 100 different open-ended mutual funds and seven closed-end funds in the fund family. These include 36 state and federal tax-free income funds. Prominent funds in the fund family include the world's largest equity fund, Templeton Growth Fund, the Mutual Shares Fund, the Mutual Discovery Fund and the Templeton Growth Fund A. In 2011 it recorded revenue of US\$7.14 billion. It has approximately 8,453 employees.

Invests in: Babcock International, BAE Systems, GenCorp, General Dynamics, Redhall Group, Rolls-Royce
Headquarters: New York, New York
Website: www.franklintempleton.com

Gabelli Group

Gabelli Group is a privately held investment firm.

Invests in: GenCorp, Honeywell International, Rolls-Royce
Headquarters: Greenwich, Massachusetts
Website: www.gabelli.com

GenCorp Inc Retirement Savings Plan

GenCorp Inc Retirement Savings Plan has over 4,000 active participants and US\$347.9 million in assets.

Invests in: GenCorp
Headquarters: Sacramento, California

General Electric

General Electric is an American multinational conglomerate corporation. The company operates through four segments: energy, technology infrastructure, capital finance, and consumer and industrial. In 2011, *Fortune* ranked it the sixth-largest firm in the United States, as well as the 14th most profitable. In 2011 it recorded revenue of US\$150.211 billion. It has approximately 287,000 employees.

Invests in: Alliant Techsystems, Honeywell International
Headquarters: New York, New York
Website: www.ge.com

Genworth Financial

Genworth Financial is a global financial security company that specializes in life and long-term care insurance, wealth management, mortgage insurance, lifestyle protection insurance and annuities. The Genworth Financial family of companies operates through three segments: retirement and protection, US mortgage insurance, and international. It has more than 15 million customers and 6,500 employees.

Invests in: BAE Systems, Boeing, Honeywell International, Lockheed Martin, Northrop Grumman
Headquarters: Richmond, Virginia
Website: www.genworth.com

Geode Capital Management

Geode Capital Management is an institutional asset manager providing global investment solutions across multiple asset classes. It has roughly US\$97.4 billion worth of assets under management.

Invests in: Boeing, General Dynamics, Honeywell International, Jacobs Engineering, Lockheed Martin, Northrop Grumman
Headquarters: Boston, Massachusetts
Website: www.geodecapital.com

Glazer Capital

Glazer Capital is a New York-based merger arbitrage strategy hedge fund worth US\$230 million. It is run by Paul Glazer.

Invests in: Safran
Headquarters: New York, New York
Website: www.glazercapital.com

GlenRock

The GlenRock Group is a private equity and venture capital firm specializing in special situation transactions. The firm invests in undervalued, middle-market companies, and provides growth capital to early-stage enterprises.

Invests in: GenCorp
Headquarters: New York, New York
Website: www.thegrp.com

Glenview Capital Management

Glenview Capital Management is a privately owned hedge fund sponsor. The firm invests in the public equity markets of the United States. It employs multi-strategy approaches to make its investments.

Invests in: Babcock & Wilcox
Headquarters: New York, New York

Goldman Sachs

Goldman Sachs is a US-based multinational bulge bracket investment banking and securities firm. It engages in global investment banking, securities, investment management and other financial services primarily with institutional clients. It provides mergers and acquisitions advice, underwriting services, asset management and prime brokerage to its clients. The firm also engages in proprietary trading and private equity deals. In 2010 it had approximately US\$911.3 billion worth of assets under management. It has approximately 35,700 employees.

Invests in: BAE Systems, Bechtel, Boeing, EADS, Finmeccanica, General Dynamics, Honeywell International, Lockheed Martin, Northrop Grumman, Rolls-Royce, Serco
Headquarters: New York, New York
Website: www.goldmansachs.com

Guardian Life Insurance Company

The Guardian Life Insurance Company is a mutual life insurance company in the United States. The company and its subsidiaries sell life insurance and long-term care insurance, disability income, and group medical and dental insurance. It has more than 5,400 employees and a network of over 3,000 financial representatives in 80 agencies nationwide.

Invests in: Alliant Techsystems
Headquarters: New York, New York
Website: www.guardianlife.com

Hancock Holding

Hancock Holding Company is a financial holding company that provides banking and financial services in Mississippi, Louisiana, Alabama, and Florida. It operates 182 banking and financial services offices and has approximately 4,742 employees. Hancock Holding Company's sole subsidiary is Hancock Bank.

Invests in: Babcock & Wilcox
Headquarters: Gulfport, Mississippi
Website: www.hancockbank.com

Hartford Financial Services Group

The Hartford Financial Services Group, usually referred to as The Hartford, is one of the United States' largest investment and insurance companies. It is a leading provider of life insurance, group and employee benefits, automobile and homeowners' insurance, and business insurance, as well as investment products, annuities, mutual funds and college savings plans. In 2010 it recorded revenue of US\$22.4 billion. It has roughly 25,000 employees.

Invests in: BAE Systems, Boeing, Finmeccanica, General Dynamics, Lockheed Martin, Northrop Grumman

Headquarters: Hartford, Connecticut

Website: www.thehartford.com

Herndon Capital Management

Herndon Capital Management is an institutional investment management firm specializing in large and mid capitalization equity strategies. Serving a variety of institutional clients, it has a primary focus on large cap funds. The firm is an affiliate of Atlanta Life Financial Group (ALFG).

Invests in: Babcock & Wilcox

Headquarters: Atlanta, Georgia

Website: www.herndoncapital.com

Hotchkis and Wiley Capital Management

Hotchkis and Wiley Capital Management is a boutique asset-management firm specializing in long-only value investing. It is privately held, with the majority of employees owning an equity stake in the firm. Its clients include public plans, corporations, foundations, endowments, unions, sovereign wealth funds, sub-advisory relationships, financial intermediaries and individuals. In 2011 it had approximately US\$16.2 billion of assets under management. It has approximately 55 employees.

Invests in: Alliant Techsystems, Lockheed Martin, Northrop Grumman

Headquarters: Los Angeles, California

Website: www.hwcm.com

Imperial Capital Group

Imperial Capital is a full-service investment banking firm. It has offices in Los Angeles, New York, San Francisco, Minneapolis, Boston, Chicago and Houston. It offers sales and trading services to institutional investors and a wide range of investment banking advisory, capital markets and restructuring services to middle market corporate clients. It also provides proprietary research across an issuer's capital structure, including bank debt, debt securities, hybrid securities, preferred and common equity and special situations claims. It has more than 170 employees.

Invests in: GenCorp

Headquarters: Los Angeles, California

Website: www.imperialcapital.com

International Value Advisers

International Value Advisers provides investment management services to institutions, qualified high-net-worth individuals and financial intermediaries worldwide. It has approximately 36 employees.

Invests in: Thales

Headquarters: New York, New York

Website: www.ivafunds.com

Iridian Asset Management

Iridian Asset Management is an independently owned investment management firm. It is focused exclusively on managing active investment strategies for institutional investors.

Invests in: General Dynamics

Headquarters: Westport, Connecticut

Website: www.iridian.com

Jackson National Life Insurance

Jackson National Life Insurance is a US life insurance and annuities company. It is a subsidiary of the British insurer Prudential Plc. It markets its products in 49 states and the District of Columbia through independent and regional broker-dealers, financial institutions and independent insurance agents. In 2009 it had US\$87 billion of assets under management. It has approximately 2,900 employees.

Invests in: BAE Systems, Boeing, Lockheed Martin, Northrop Grumman

Headquarters: Lansing, Michigan

Website: www.jackson.com

Jacobs Levy Equity Management

Jacobs Levy Equity Management is an independent quantitative equity manager focused exclusively on US equity portfolios. The firm manages assets of corporate pension plans, public retirement systems, and endowments. It has approximately 60 employees.

Invests in: Alliant Techsystems
Headquarters: Florham Park, New Jersey
Website: www.jacobslevy.com

Janus Capital

Janus Capital Group is a publicly owned investment firm. It provides growth and risk-managed investment strategies and manages equity, fixed income, money market and balanced mutual funds. Outside the United States, it has offices in London, Milan, Tokyo, Hong Kong, Melbourne and Singapore. In 2011 it had approximately US\$141 billion in assets under management. It also had more than four million shareholders, clients and institutions around the globe. It has approximately 1,100 employees.

Invests in: Babcock & Wilcox, Jacobs Engineering
Headquarters: Denver, Colorado
Website: www.janus.com

Jefferies Group

Jefferies Group is a global securities and investment banking group. It operates in 30 cities around the world. It is involved in investment banking, sales and trading, research and asset management. Jefferies & Company is the primary subsidiary of Jefferies Group. In 2010 Jefferies Group recorded revenue of US\$2.85 billion. It has approximately 3,800 employees. In 2010 it had approximately US\$2.29 trillion of assets under management. It has approximately 250,000 employees.

Invests in: Lockheed Martin
Headquarters: New York, New York
Website: www.jefferies.com

JP Morgan Chase

JP Morgan Chase is a US multinational banking corporation of securities, investments and retail. It is one of the “big four” banks of the United States with Bank of America, Citigroup and Wells Fargo.

Invests in: Alliant Techsystems, Babcock & Wilcox, Babcock International, BAE Systems, Boeing, EADS, Finmeccanica, GenCorp, General Dynamics, Honeywell International, Lockheed Martin, Northrop Grumman, Rolls-Royce
Headquarters: New York, New York
Website: www.jpmorganchase.com

Keeley Asset Management

Keeley Asset Management is a privately owned investment manager. The firm primarily provides its services to high-net-worth individuals. It also caters to individuals, banking or thrift institutions, investment companies, pension and profit-sharing plans, pooled investment vehicles, charitable organizations, corporations, and state or municipal government entities. It manages separate client-focused equity and balanced portfolios. It also launches and manages equity mutual funds for its clients.

Invests in: Babcock & Wilcox
Headquarters: Chicago, Illinois
Website: www.keeleyasset.com

Kennedy Capital Management

Kennedy Capital Management utilizes investment approaches to provide customized investment management services to corporate and public pension funds, endowments, foundations and multi-employer plans as well as high-net-worth individuals. It is wholly owned by its employees and directors. In 2011 it managed approximately \$3.1 billion in assets.

Invests in: GenCorp
Headquarters: St Louis, Missouri
Website: www.kennedycapital.com

KeyCorp

KeyCorp operates as a holding company for KeyBank National Association, which provides various banking services in the United States. The company's community bank segment offers regional banking services. It operates more than 1,000 retail banking branches in 14 states, a telephone banking call centre and 1,531 automated teller machines in 15 states. It has approximately 15,381 employees. The company owns the naming rights to KeyArena in Seattle.

Invests in: Alliant Techsystems, Boeing
Headquarters: Cleveland, Ohio
Website: www.key.com

Knights of Columbus

The Knights of Columbus is the world's largest Roman Catholic fraternal service organization. There are more than 1.8 million members in 15,000 councils, with nearly 200 councils on college campuses. Membership is limited to "practical" Catholic men aged 18 or older. Councils have been chartered in the United States, Canada, Mexico, the Caribbean, Guatemala, Panama, the Dominican Republic, the Philippines, Guam, Spain, Japan, Cuba and most recently Poland. In 2010 the Order gave over US\$154 million directly to charity and performed over 70 million hours of voluntary service. Its insurance programme has more than US\$80 billion of life insurance policies in force, backed up by US\$15.5 billion in assets. The Knights was formed to render financial aid to members and their families. Social and intellectual fellowship is promoted among members through educational, charitable, religious, social welfare, war relief and public relief works.

Invests in: Honeywell International
Headquarters: New Haven, Connecticut
Website: www.kofc.org

Lawson Kroeker Investment Management

Lawson Kroeker Investment Management is a financial investment advisory firm. It manages around 244 accounts. It has approximately US\$406.15 million of assets under management.

Invests in: GenCorp
Headquarters: Omaha, Nebraska
Website: www.lawsonkroeker.com

Lazard

Lazard is a global, independent investment bank. It provides services to corporations, governments and individuals in mergers and acquisitions advice, restructuring, capital raising, and asset management. It operates in 42 cities across 27 countries throughout Europe, North America, Asia, Australia and Latin America. In 2010 it recorded revenue of US\$1.91 billion. It has approximately 2,300 employees.

Invests in: GenCorp, General Dynamics, Honeywell
Headquarters: New York, New York
Website: www.lazard.com

Legg Mason

Legg Mason is a global investment management firm with a focus on asset management. It offers products in equities and fixed income, as well as domestic and international liquidity management and alternative investments. It has clients spread across 190 countries. In 2011 it had assets under management of US\$629 billion. It has approximately 3,200 employees.

Invests in: Babcock & Wilcox, GenCorp, Honeywell International, Jacobs Engineering, Northrop Grumman
Headquarters: Baltimore, Maryland
Website: www.leggmason.com

Lehman Brothers*

Lehman Brothers was the fourth-largest investment bank in the United States. It was involved in investment banking, equity and fixed-income sales and trading, research, investment management, private equity and private banking. In 2008 the firm filed for bankruptcy protection after mass exodus of most of its clients, drastic losses in its stock and devaluation of its assets by credit-rating agencies. Following this, Barclays purchased Lehman's North American investment banking and trading divisions along with its New York headquarters building. Nomura Holdings acquired Lehman's franchise in the Asia-Pacific region, including Japan, Hong Kong and Australia, as well as its investment banking and equities businesses in Europe and the Middle East.

* Now bankrupt
Invests in: Finmeccanica
Headquarters: New York, New York
Website: www.lehman.com

Liberty Mutual Holding Company

Liberty Mutual Holding Company provides insurance products and services in the United States and internationally. The company offers property and casualty insurance coverage primarily for automobiles, homes, valuable possessions and personal liability. It also provides life and annuity products. It has approximately 45,000 employees.

Invests in: BAE Systems, Lockheed Martin
Headquarters: Boston, Massachusetts
Website: www.libertymutual.com

Lincoln National Corporation

Lincoln National Corporation is a US holding company that operates multiple insurance and investment management businesses through subsidiary companies. Lincoln Financial Group is the marketing name for Lincoln National Corporation and its subsidiary companies. In 2009 it had US\$141 billion of assets under management. It owns the naming rights for Lincoln Financial Field in Philadelphia, home field of the Philadelphia Eagles of the National Football League.

Invests in: BAE Systems, General Dynamics, Honeywell International, Lockheed Martin, Northrop Grumman
Headquarters: Radnor, Indiana
Website: www.lincolnfinancial.com

Loews Corporation

Loews Corporation is a holding company run by the Tisch family. Its subsidiaries are engaged in property and casualty insurance, the production and sale of cigarettes, the operation of hotels, the operation of offshore oil and gas drilling rigs, the operation of an interstate natural gas transmission pipeline system, and the exploration, production and marketing of natural gas. In 2010 it recorded revenue of \$14.12 billion and earned a profit of \$564 million. It has approximately 18,400 employees. Its subsidiaries include CNA Financial Corporation, Boardwalk Pipeline Partners and Loews Hotels.

Invests in: BAE Systems, Northrop Grumman
Headquarters: New York, New York
Website: www.loews.com

Longview Asset Management

Longview Asset Management is an employee-owned investment manager. The firm manages equity portfolios for its clients. It invests in public equity markets of the United States.

Invests in: General Dynamics, Serco Group
Headquarters: Chicago, Illinois

Loop Capital Markets

Loop Capital Markets is a boutique investment banking and brokerage firm. The firm offers corporate and public finance, financial advisory, municipal finance, equity research, and securities sales and trading services.

Invests in: Boeing
Headquarters: Chicago, Illinois
Website: www.loopcap.com

Lord, Abbett & Co.

Lord, Abbett & Co. is an independent, privately held US investment management firm that offers a broad array of equity and fixed-income strategies to individual and institutional investors. It is involved in mutual funds, institutional portfolio management and separately managed accounts. It has 775 employees.

Invests in: Alliant Techsystems, Jacobs Engineering
Headquarters: Jersey City, New Jersey
Website: www.lordabbett.com

LA Capital Management & Equity Research

Los Angeles Capital Management and Equity Research is a financial investment advisory firm. It manages some 51 accounts and has an estimated US\$6.66 billion of assets under management.

Invests in: Alliant Techsystems
Headquarters: Los Angeles, California
Website: www.lacapm.com

LSV Asset Management

LSV Asset Management specializes in value equity management for institutional investors around the world. In 2011 it had approximately US\$53.2 billion of assets under management and about 400 clients.

Invests in: Lockheed Martin, Northrop Grumman
Headquarters: Chicago, Illinois
Website: www.lsvasset.com

M.R. Beal & Co.

M.R. Beal & Co. is involved in investment banking, financial advisory and securities brokerage services. Its clients include municipalities, state governments and corporations. The company offers sales, trading and underwriting of municipal bonds, public and private placement of equity and debt, equity research and institutional equity execution services. The company has offices in Chicago, New Orleans, Dallas, Hoboken, Sacramento and Washington.

Invests in: Boeing

Headquarters: New York, New York

Website: www.mrbeal.com

Madison Investment Advisors

Madison Investment Advisors is an employee-owned investment manager. The firm primarily provides its services to wrap accounts. It also serves pension and profit-sharing plans, individuals, banking or thrift institutions, investment companies, charitable organizations, corporations, and state or municipal government entities. The firm manages separate client-focused equity, fixed-income, and balanced portfolios. There are approximately 100 employees in the greater Madison organization.

Invests in: Jacobs Engineering

Headquarters: Madison, Wisconsin

Website: www.madisonadv.com

Managed Account Advisors

Managed Account Advisors is a financial investment advisory firm. It manages approximately 225,000 accounts and has an estimated US\$95.42 billion of assets under management.

Invests in: Alliant Techsystems, Babcock & Wilcox, Lockheed Martin, Northrop Grumman

Headquarters: Jersey City, New Jersey

Manning & Napier Advisors

Manning & Napier Advisors is an employee-owned investment manager. It has offices in Fairport; Dublin, Ohio; and St Petersburg, Florida. The firm primarily provides its services to individuals, typically high-net-worth individuals. It also manages accounts for banking or thrift institutions, investment companies, pension and profit-sharing plans, charitable organizations, endowments, corporations, state or municipal government entities, foundations, and Taft-Hartley and corporate benefit plans.

Invests in: Boeing

Headquarters: Fairport, New York

Website: www.manning-napier.com

Marsico Capital Management

Marsico Capital Management is an employee-owned investment manager. The firm primarily provides its services to individuals. It launches and manages equity mutual funds for its clients. It also manages separate client-focused equity portfolios. The firm invests in the public equity markets across the globe.

Invests in: General Dynamics

Headquarters: Denver, Colorado

Website: www.marsicocapital.com

Mason Capital Management

Mason Capital Management is a privately owned hedge fund sponsor. It primarily provides services to pension and profit-sharing plans, pooled investment vehicles and living trusts. It invests in the public equity and hedging markets of the United States.

Invests in: Babcock & Wilcox

Headquarters: New York, New York

Website: www.masoncap.com

MassMutual

Massachusetts Mutual Life Insurance Company (MassMutual) provides life insurance, disability income insurance, long-term care insurance, retirement plan services and annuities. It has 1,800 offices and 13 million clients worldwide. In 2010 the company recorded revenue of about US\$25 billion.

Invests in: Alliant Techsystems, BAE Systems, Lockheed Martin, Northrop Grumman, Redhall group

Headquarters: Springfield, Illinois

Website: www.massmutual.com

Matthews International Capital

Matthews International Capital is an independent, privately owned financial management firm. It manages assets for individuals and institutions. In 2011 it had approximately US\$15.3 billion in assets under management.

Invests in: Larsen & Toubro
Headquarters: San Francisco, California
Website: www.micm-llc.com

Medical Liability Mutual Insurance Co.

Medical Liability Mutual Insurance Company is a medical malpractice insurance company. It offers professional liability insurance to physicians, dentists, hospitals and other healthcare professionals. The company also provides risk management and claims management services. It has offices in Long Island, Latham and Syracuse, New York.

Invests in: Northrop Grumman
Headquarters: New York, New York
Website: www.mlmic.com

MetLife

MetLife is the holding corporation for the Metropolitan Life Insurance Company and its affiliates. It is among the largest global providers of insurance, annuities and employee benefit programs, with 90 million customers in over 60 countries. It operates in the United States, Japan, Latin America, the Asia-Pacific region, Europe and the Middle East. In 2010 it recorded revenue of US\$52.72 billion. It has approximately 66,000 employees.

Invests in: Alliant Techsystems, BAE Systems, Boeing, Finmeccanica, Honeywell International, Lockheed Martin, Northrop Grumman
Headquarters: New York, New York
Website: www.MetLife.com

MFP Investors

MFP Investors is an employee-owned hedge fund sponsor. The firm invests in the public equity markets of the United States.

Invests in: GenCorp
Headquarters: Short Hills, New Jersey

Michigan Department of Treasury

The State Treasurer of Michigan functions as the chief financial officer for the US state of Michigan. The State Treasurer oversees the collection, investment and disbursement of all state moneys, and also administers major tax laws, safeguards the credit of the state, and distributes revenue sharing moneys to local units of government. It is an unelected office within the executive branch of government.

Invests in: Jacobs Engineering, Lockheed Martin
Headquarters: Lansing, Michigan
Website: www.michigan.gov/treasury

Moody Aldrich Partners

Moody Aldrich Partners is an employee-owned investment manager. The firm primarily provides services to institutional investors and state or municipal government entities. It has offices in Marblehead and Boston.

Invests in: Babcock & Wilcox
Headquarters: Marblehead, Massachusetts
Website: www.moodyaldrich.com

Morgan Stanley

Morgan Stanley is a global financial services firm. Its main areas of business are global wealth management, institutional securities, and investment management. Its clients include corporations, governments, financial institutions and individuals. It operates in 42 countries and has more than 1,300 offices. In 2010 it recorded revenue of US\$31.6 billion. It has approximately 60,000 employees.

Invests in: Alliant Techsystems, BAE Systems, Boeing, EADS, Finmeccanica, GenCorp, Honeywell International, Lockheed Martin, Northrop Grumman, Safran
Headquarters: New York, New York
Website: www.morganstanley.com

Nationwide

Nationwide Mutual Insurance Company & Affiliated Companies is a group of large US insurance and financial services companies based in Columbus. The company also operates regional headquarters in Des Moines, Iowa; San Antonio, Texas; Gainesville, Florida; and Lynchburg, Virginia.

Invests in: Honeywell International
Headquarters: Columbus, Ohio
Website: www.nationwide.com

Neuberger Berman

Neuberger Berman is an investment management firm that provides financial services for high-net-worth individuals and institutional investors. It is among the largest private employee-controlled asset management firms in the world. The company's three primary businesses include wealth management, mutual funds and institutional asset management. It has approximately 1,700 employees.

Invests in: Alliant Techsystems, Boeing
Headquarters: New York, New York
Website: www.nb.com

New Jersey Division of Investment

New Jersey Division of Investment is the investment arm of New Jersey Department of the Treasury. It primarily manages the pension assets of state employees. It invests in the public equity and fixed income markets across the globe. It has approximately US\$79.4 billion in assets under management.

Invests in: Jacobs Engineering
Headquarters: Trenton, New Jersey
Website: www.nj.gov/treasury/doinvest

New York Life

The New York Life Insurance Company is one of the largest mutual life insurance companies in the United States, and one of the largest life insurers in the world. It has an estimated US\$287 billion in total assets under management and 12,600 employees.

Invests in: Alliant Techsystems, BAE Systems, Boeing, GenCorp, General Dynamics, Honeywell International, Lockheed Martin, Northrop Grumman
Headquarters: New York, New York
Website: www.newyorklife.com

Northeast Investors

Northeast Investors Trust is a no-load mutual fund that focuses on marketable securities of established companies. This includes bonds, preferred stocks, dividend-paying common stocks, securities convertible into common stocks, and securities with warrants attached. The fund mainly invests in higher-yielding and unrated or lower-rated debt securities to produce income for the shareholders.

Invests in: Alliant Techsystems
Headquarters: Boston, Massachusetts

Northern Cross

Northern Cross is an independent investment management firm focused exclusively on international equity investing.

Invests in: Rolls-Royce
Headquarters: Boston, Massachusetts
Website: www.northerncrossllc.com

Northern Trust

Northern Trust Corporation is an international financial services company involved in investment management, asset and fund administration, fiduciary and banking services. It has 85 offices in 18 US states and 12 international offices in North America, Europe and the Asia-Pacific region. In 2011 it had US\$97 billion in banking assets, US\$4.2 trillion in assets under custody and US\$644.2 billion in assets under management.

Invests in: Alliant Techsystems, Babcock & Wilcox, BAE Systems, Bechtel, Boeing, GenCorp, General Dynamics, Honeywell International, Jacobs Engineering, Lockheed Martin, Northrop Grumman
Headquarters: Chicago, Illinois
Website: www.northerntrust.com

Northwestern Mutual

Northwestern Mutual is a mutual company involved in financial services, including life insurance, long-term care insurance, disability insurance, annuities, mutual funds and employee benefit services. It also provides consultation on asset and income protection, personal needs, investments, financial planning, estate planning, trusts, business needs, retirement and employee benefits. In 2008 it recorded revenue of US\$23 billion. It has approximately 5,000 employees.

Invests in: BAE Systems, Boeing, Finmeccanica, General Dynamics, Honeywell International, Lockheed Martin, Northrop Grumman
Headquarters: Milwaukee, Wisconsin
Website: www.northwesternmutual.com

Nuveen Investments

Nuveen Investments is a Chicago-based private company in the asset management industry. It started in the municipal bond underwriting business and remains active in the municipal bond market. It sells separately managed accounts, retail mutual funds and close-end funds. In 2008 it had approximately US\$152 billion in assets under management.

Invests in: Alliant Techsystems, Finmeccanica, GenCorp, Lockheed Martin, Safran, Thales
Headquarters: Chicago, Illinois
Website: www.nuveen.com

Oaktree

Oaktree Capital Group specializes in credit and contrarian value-oriented investments such as distressed debt, corporate debt, convertible securities, real estate, private equity, power infrastructure and listed equities in emerging markets. It has more than US\$80 billion of assets under management from investors such as corporations, public funds, foundations, endowments, mutual funds, insurance firms and private clients. The firm has more than a dozen offices in the United States, Asia and Europe. It has approximately 607 employees.

Invests in: Alliant Techsystems, GenCorp
Headquarters: Los Angeles, California
Website: www.oaktreecapital.com

OppenheimerFunds

OppenheimerFunds is a mutual fund manager majority-owned by Massachusetts Mutual Life Insurance, better known as MassMutual. The firm manages more than 65 funds invested in domestic and international equity, municipal bonds, money markets, and alternative investments such as commodities, real estate, and hedge funds. It has more than US\$150 billion in assets under management in some six million shareholder accounts. It has approximately 60 employees.

Invests in: Alliant Techsystems, BAE Systems, Lockheed Martin, Northrop Grumman
Headquarters: New York, New York
Website: www.oppenheimerfunds.com

Osterweis Capital Management

Osterweis Capital Management provides investment management services through various products, including separately managed accounts and three mutual funds. It manages portfolios of high-net-worth individuals, foundations and endowments. It has roughly US\$5 billion in assets under management.

Invests in: General Dynamics, Safran
Headquarters: San Francisco, California
Website: www.osterweis.com

Pacific Heights Asset Management

Pacific Heights Asset Management is a financial investment advisory firm with roughly US\$10 billion of assets under management.

Invests in: General Dynamics
Headquarters: San Francisco, California

Pacific Mutual Holding Company

Pacific Mutual Holding Company's lines of business include a variety of life insurance products for individuals and businesses; annuities and mutual funds geared to individuals and small businesses; management of stable value funds, fixed income investments, and other investments for institutional clients and pension plans; and real estate investing. Its Aviation Capital Group subsidiary provides commercial jet aircraft leasing. It has approximately 4,000 employees.

Invests in: BAE Systems, Northrop Grumman
Headquarters: Newport Beach, California
Website: www.pacificmutual.com

Palisade Capital Management

Palisade Capital Management is an investment advisory company. In 2011 it had approximately US\$3.3 billion of assets under management.

Invests in: Glencorp
Headquarters: Fort Lee, Virginia
Website: www.palisadecapital.com

Penn Mutual Life Insurance Company

Penn Mutual Life Insurance provides life insurance, annuities, and investment products and services. The company sells its products through several channels, using both independent and captive agents, as well as brokers. Its subsidiaries include Hornor, Townsend & Kent and Janney Montgomery Scott.

Invests in: Honeywell International
Headquarters: Horsham, Pennsylvania
Website: www.pennmutual.com

Pennant Capital Management

Pennant Capital Management is a hedge fund management firm founded by Alan P. Fournier. The firm manages the Pennant series of hedge funds. It has offices in Chatham and New York.

Invests in: Babcock & Wilcox
Headquarters: Chatham, Massachusetts

People's United Financial

People's United Financial is the holding company for People's United Bank. The bank has more than 330 locations, including traditional branches, supermarket branches, commercial banking offices, investment and brokerage offices, and equipment leasing offices. In addition to retail and commercial banking services, the bank offers trust, wealth management, brokerage, and insurance services. It has some 5,200 employees.

Invests in: Alliant Techsystems
Headquarters: Bridgeport, Connecticut
Website: www.peoples.com

PNC Bancorp

PNC Bancorp operates as a bank holding company for nationally and state-chartered commercial banks and a state-chartered non-depository trust company. It offers retail banking and wholesale banking services. The company operates as a subsidiary of PNC Financial Services Group.

Invests in: Babcock & Wilcox, Alliant Techsystems, Boeing, General Dynamics
Headquarters: Wilmington, Delaware
Website: www.pnc.com

Primecap Management Company

Primecap Management Company is an independent investment management company.

Invests in: Babcock International, Boeing, EADS, Honeywell International
Headquarters: Pasadena, California
Website: www.primecap.com

Principal Financial Group

Principal Financial Group is a global financial services provider with more than 18 million customers worldwide. In 2009 it had an estimated US\$280 billion of assets under management. It has been ranked as one of the world's most ethical companies. It has approximately 13,600 employees.

Invests in: Alliant Techsystems, BAE Systems, Boeing, GenCorp, Honeywell International, Lockheed Martin
Headquarters: Des Moines, Iowa
Website: www.principal.com

Progressive Corporation

The Progressive Corporation, known as the Progressive Casualty Insurance Company through its subsidiaries, provides personal automobile insurance and other specialty property-casualty insurance and related services in the United States. In 2010 it recorded revenue of US\$15 billion. It has approximately 27,250 employees.

Invests in: Northrop Grumman
Headquarters: Mayfield Village, Ohio
Website: www.progressive.com

Prospector Partners

Prospector Partners is an employee-owned hedge fund sponsor. It also provides advisory services to its clients and manages accounts for pension and profit-sharing plans and individuals, including high-net-worth individuals. The firm invests in the public equity markets of the United States.

Invests in: Alliant Techsystems
Headquarters: Guilford, Connecticut

Protective Life Corporation

Protective Life Corporation is a holding company whose subsidiaries provide financial services through the production, distribution, and administration of insurance and investment products. As of 2009, Protective Life had insurance in force of approximately US\$445 billion. It has roughly 2,300 employees. Protective Life is also the parent company of United Investors Life Insurance Company and a brokerage subsidiary, West Coast Life.

Invests in: Northrop Grumman
Headquarters: Birmingham, Alabama
Website: www.protective.com

Prudential Financial

The Prudential Insurance Company of America provides insurance, investment management, and other financial products and services to both retail and institutional customers. It operates throughout the United States and in over 30 other countries worldwide. Principal products and services provided include life insurance, annuities, mutual funds, pension and retirement-related investments, administration and asset management, securities brokerage services, and commercial and residential real estate. Prudential is composed of hundreds of subsidiaries and holds more than US\$2 trillion of life insurance. It has approximately 39,400 employees.

Invests in: Alliant Techsystems, Babcock International, BAE systems, GenCorp, Redhall Group, Rolls-Royce
Headquarters: Newark, New Jersey
Website: www.prudential.com

Pzena Investment Management

Pzena Investment Management is a US investment management firm that serves corporate, institutional, and high-net-worth individual clients in the US and abroad. It has approximately US\$16 billion in assets under management. Through more than ten funds, it makes long-term investments in domestic and international companies. It also acts as a sub-investment adviser for about two dozen mutual funds and offshore funds. It has roughly 70 employees.

Invests in: BAE Systems, Northrop Grumman
Headquarters: New York, New York
Website: www.pzena.com

QS Investors

QS Investors is an independent investment firm. It provides asset management and advisory services to various institutional clients. It has more than 40 employees and is one of the largest majority woman-owned asset management firms.

Invests in: Northrop Grumman
Headquarters: New York, New York
Website: www.qsinvestors.com

Radcliffe Capital Management

Radcliffe Capital Management is a financial investment advisory firm that manages 13 accounts totalling an estimated US\$831 million.

Invests in: GenCorp, Safran
Headquarters: Bala Cynwyd, Pennsylvania
Website: www.radcliffefunds.com

Regions Financial Corporation

Regions Financial Corporation is a publicly held holding company for Regions Bank. It provides retail and commercial banking, trust, securities brokerage, mortgage and insurance products and services. In 2010 it had approximately US\$137 billion in assets under management. Its banking subsidiary, Regions Bank, operates some 2,000 branches across 16 states in the South, Midwest and Texas. Its securities brokerage and asset management subsidiary, Morgan Keegan & Company, has 450 offices across 16 states. It has roughly 27,800 employees.

Invests in: Babcock & Wilcox
Headquarters: Birmingham, Alabama
Website: www.regions.com

Relational Investors

Relational Investors is an activist investment fund. The fund has approximately US\$6 billion in assets under management.

Invests in: Babcock & Wilcox
Headquarters: San Diego, California
Website: www.rillc.com

Renaissance Technologies

Renaissance Technologies is a quantitative hedge fund firm that has more than US\$15 billion in assets under management. It has approximately 280 employees.

Invests in: Alliant Techsystems
Headquarters: New York, New York
Website: www.rentec.com

Ruane, Cunniff & Goldfarb

Ruane, Cunniff & Goldfarb is an investment firm. It manages its trademark Sequoia Fund. In total, it has over US\$14 billion in assets.

Invests in: Rolls-Royce
Headquarters: New York, New York
Website: www.sequoiafund.com

Rydex

Rydex Investments and Security Global Investors is an asset management that manages more than US\$22 billion in assets. It has over 140 mutual funds and exchange-traded products.

Invests in: Babcock & Wilcox
Headquarters: New York, New York
Website: www.rydex-sgi.com

Samuel A. Ramirez & Co.

Samuel A. Ramirez and Co. is involved in security brokerage services to individuals, business owners, institutional investors and government agencies. It offers services in wealth management, underwriting, banking, institutional brokerage, research and asset management. It also provides retail and institutional trading services in tax-free municipal bonds, equities, government bonds, corporate bonds and alternative investments. It has offices in Oakland, Los Angeles, Chicago, Hato Rey, Houston, San Antoni and Miami.

Invests in: Boeing
Headquarters: New York, New York
Website: www.ramirezco.com

Shapiro Capital Management

Shapiro Capital Management is an investment management company that specializes in small-cap, mid-cap, and multi-cap value equity strategies. The firm manages approximately 638 accounts totalling an estimated US\$2.7 billion of assets under management.

Invests in: Babcock & Wilcox
Headquarters: Atlanta, Georgia
Website: www.shapirocapital.com

Siebert Financial Corporation

Siebert Financial Corporation, through its subsidiary Muriel Siebert & Co., engages in retail discount brokerage and investment banking operations in the United States. The company provides Internet and traditional discount brokerage and related services to retail investors, independent retail execution services and retail customer services. It maintains seven retail discount brokerage offices in New York, Jersey City, Boca Raton, Surfside, West Palm Beach, Naples and Beverly Hills. It has approximately 70 employees.

Invests in: Boeing
Headquarters: New York, New York
Website: www.siebertnet.com

Silchester International Investors

Silchester International Investors is a financial investment advisory firm. It specializes in international equity management. It manages 12 accounts totalling an estimated US\$26 billion.

Invests in: BAE International
Headquarters: New York, New York
Website: www.silchester.com

State Farm

State Farm Insurance is a group of insurance and financial services companies in the United States. It also has operations in Canada. The group's main business is State Farm Mutual Automobile Insurance Company. In 2007 it recorded revenue of US\$61.61 billion. It has approximately 68,000 employees.

Invests in: General Dynamics, Honeywell International, Lockheed Martin, Northrop Grumman
Headquarters: Bloomington, Indiana
Website: www.statefarm.com

State Street

State Street is a financial services holding company. It has more than US\$21 trillion of assets under custody and administration, in addition to some US\$2 trillion under management. It reported revenues of US\$8.94 billion in 2010. State Street also has an Asian presence selling a complete range of financial services. It has approximately 28,670 employees in eight cities throughout the Asia-Pacific region and headquarters located in Hong Kong.

Invests in: Alliant TechSystems, Boeing, Babcock & Wilcox, Babcock International, GenCorp, Honeywell International, Jacobs Engineering, Lockheed Martin, Northrop Grumman, Rolls-Royce, Serco Group
Headquarters: Boston, Massachusetts
Website: www.statestreet.com

State Teachers Retirement System of Ohio

The State Teachers Retirement System of Ohio manages retirement, disability and survivor benefits, as well as healthcare coverage for current and former public educators and employees of public schools, colleges, universities and other educational institutions in Ohio. The system pays more than US\$4 billion per year in benefits. It has US\$70 billion in invested assets.

Invests in: Jacobs Engineering
Headquarters: Columbus, Ohio
Website: www.strsoh.org

Steel Partners

Steel Partners Holdings is a global diversified holding company that owns and operates businesses in manufacturing, industrial products, defence, banking, insurance, restaurants and services companies. Among its holdings is Utah-based WebBanks. It has approximately US\$4 billion in assets under management. Steel Partners also owns portions of Unisys, GenCorp, Selectica, SL Industries, and Nathan's Famous. Activist investor Warren Lichtenstein heads the firm.

Invests in: GenCorp
Headquarters: New York, New York
Website: www.steelpartners.com

SunTrust

SunTrust Bank is a subsidiary of Sunbelt. It operates nearly 1,700 branches in the south-eastern states of the United States. It has over 29,000 employees. In 2009 it reported revenues in excess of US\$10 billion. The company participated in the underwriting of the initial public offering of Coca-Cola and was one of its largest shareholders for many years. It is also the official bank of Grand American Road Racing.

Invests in: Alliant Techsystems, Genera Dynamics, Northrop Grumman
Headquarters: Atlanta, Georgia
Website: www.suntrust.com

Symetra Financial

Symetra Financial is a holding company whose subsidiaries offer life insurance, annuities, retirement plans, health insurance and employee benefit plans to some three million customers throughout the United States. The company has nearly US\$20 billion in assets and employs approximately 1,000 people. It is majority owned by an investor group led by White Mountains Insurance Group and Berkshire Hathaway.

Invests in: BAE Systems, Boeing, Honeywell International, Lockheed Martin, Rolls-Royce, Northrop Grumman
Headquarters: Bellevue, Washington
Website: www.symetra.com

T. Rowe Price Group

T. Rowe Price Group administers about 100 mutual funds. Other services include asset management advisory services, corporate retirement plan management, separately managed accounts, variable annuity life insurance plans, discount brokerage, and transfer agency and shareholder services. It employs over 5,000 people and has more than US\$480 billion of assets under management.

Invests in: Babcock & Wilcox, Boeing, Honeywell International, Lockheed Martin, Rolls-Royce, Serco Group
Headquarters: Baltimore, Maryland
Website: www.corporate.troweprice.com

Teton Advisors

Teton Advisors is the registered investment adviser to six open-end mutual funds under the GAMCO Westwood brand. It has roughly 440 employees and a market value of US\$487 million.

Invests in: GenCorp
Headquarters: Rye, New York
Website: www.tetonadv.com

Thrivent Financial for Lutherans

Thrivent Financial is a financial services organization that offers financial products and services to nearly three million members. It sponsors national outreach programmes, notably its alliance with Habitat for Humanity. It seeks to increase Habitat's capacity to build more homes and promote donations, volunteerism, neighborhood development as well as worldwide homebuilding trips by Thrivent Financial for Lutherans' members.

Invests in: Larsen & Toubro, Northrop Grumman

Headquarters: Minneapolis, Minnesota; Appleton, Wisconsin

Website: www.thrivent.com

TIAA-CREF

Teachers Insurance and Annuity Association – College Retirement Equities Fund (TIAA–CREF) is a financial services organization that is the leading retirement provider for people who work in the academic, research, medical and cultural fields. It has US\$453 billion in combined assets under management, reported revenue of US\$32.22 billion in 2010 and employs 7,200 people. It has major offices in Denver, Charlotte and Dallas as well as 70 local offices throughout the United States.

Invests in: Alliant Tech Systems, Babcock & Wilcox, BAE Systems, Boeing, General Dynamics, Finmeccanica, GenCorp, Honeywell International, Jacobs Engineering, Lockheed Martin, Northrop Grumman

Headquarters: New York, New York

Website: www.tiaa-cref.org

Toussaint Capital Partners

Toussaint Capital Partners is an investment-banking boutique firm with a concentration in debt and equity origination and secondary debt and equity distribution. It currently clears trades via Pershing.

Invests in: Boeing

Headquarters: New York, New York

Website: www.toussaintcapital.com

Travelers Companies

Travelers Companies is the largest US insurance company by market value. It is also the second-largest writer of US commercial property casualty and the third-largest writer of US personal insurance through independent agents. The company has field offices in every US state, as well as operations in the United Kingdom, Ireland, Singapore, China, Canada and Brazil. In 2010 the company had approximately 32,000 employees and reported revenues of US\$25.1 billion with total assets of US\$105.2 billion.

Invests in: Alliant Techsystems

Headquarters: Hartford, Connecticut

Website: www.travelers.com

United Services Automobile Association

United Services Automobile Association is a Texas Department of Insurance regulated unincorporated reciprocal inter-insurance exchange and financial services company offering banking, investing and insurance to people and families that serve or served in the US military. As of 2011 it had roughly 24,000 employees and reported revenue of US\$17.95 billion.

Invests in: Northrop Grumman

Headquarters: San Antonio, Texas

Website: www.usaa.com

Unum Group

Unum is currently the largest disability insurance company worldwide. Unum provides employee benefits including disability insurance, critical illness insurance, long-term care insurance and life insurance. Its revenue in 2010 was US\$10.19 billion. It has approximately 10,000 employees.

Invests in: Alliant Tech Systems, BAE Systems, Boeing, Lockheed Martin, Northrop Grumman

Headquarters: Chattanooga, Tennessee

Website: www.unum.com

US Bancorp

US Bancorp is a diversified financial services holding company that employs over 63,000 people. It is the parent company of US Bank, the fifth-largest commercial bank in the United States with US\$330 billion in assets. US Bancorp reported US\$18.1 billion in revenue in 2010.

Invests in: Alliant Techsystems, Babcock & Wilcox, Bechtel, Boeing, General Dynamics, Honeywell International, Lockheed Martin

Headquarters: Minneapolis, Minnesota

Website: www.usbank.com

Utendahl Group

The Utendahl Group is the parent company of Utendahl Capital Partners and Utendahl Capital Management. Utendahl Capital Partners is an investment bank and broker–dealer that specializes in fixed-income, equity and convertible underwritings, as well as mergers and acquisitions. Utendahl Capital Partners also has a private equity investment arm.

Invests in: Boeing

Headquarters: New York, New York

Van Eck Associates Corporation

Van Eck Associates Corporation and Van Eck Securities Corporation are together referred to as Van Eck Global. Van Eck Associates employs over 100 people and has approximately US\$34.5 billion in assets under management.

Invests in: Jacobs Engineering

Headquarters: New York, New York

Website: www.vaneck.com

Vanguard Group

The Vanguard Group is a US investment management company. It offers mutual funds and other financial products and services to individual and institutional investors in the United States and abroad. It has approximately US\$1.6 trillion in assets and more than 12,000 employees.

Invests in: Alliant Tech Systems, Babcock & Wilcox, BAE Systems, Boeing, GenCorp, General Dynamics, Honeywell International, Jacobs Engineering, Larsen & Toubro, Lockheed Martin, Northrop Grumman

Headquarters: Malvern, Pennsylvania

Website: www.vanguard.com

Waddell & Reed Financial

Waddell and Reed Financial is a US asset management and financial planning company founded in 1937.

It operates asset management and distribution subsidiaries, including Ivy Investment Management Company and Waddell & Reed Investment Management Company.

Invests in: Boeing

Headquarters: Overland Park, Kansas

Website: www.waddell.com

Weiss Asset Management

Weiss Asset Management is a privately owned hedge fund founded by the economist Andrew Weiss. He is widely known for his academic contributions in domains of corporate finance, monetary theory and macroeconomics. The firm invests in the public equity and hedging markets across the globe.

Invests in: GenCorp

Headquarters: Boston, Massachusetts

Website: www.weissasset.com

Wellington Management

Wellington Management Company is one of the largest private, independent investment management companies in the world. The firm has client assets under management totalling over US\$634 billion and serves as investment adviser for over 1,900 institutional clients in 50 countries. It has offices in Boston, Atlanta, Marlborough, San Francisco, Chicago and Radnor. It also operates in Beijing, Hong Kong, London, Singapore, Sydney and Tokyo.

Invests in: Boeing

Headquarters: Boston, Massachusetts

Website: www.wellington.com

Wells Fargo

Wells Fargo is a US multinational diversified financial services company with operations around the world. It is the fourth-largest bank in the United States by assets and the largest bank by market capitalization. In 2011 Wells Fargo was the 23rd-largest company in the United States. In 2010 it recorded a profit of US\$12.36 billion and employed 270,000 people.

Invests in: Alliant Techsystems

Headquarters: San Francisco, California

Website: www.wellsfargo.com

Western & Southern Financial Group

Western & Southern Financial Group, also commonly referred to as Western & Southern, is a diversified family of financial services companies with assets under its management of US\$52 billion. It is one of the eight highest-rated life insurance groups in the world based on Standard & Poor's rating.

Invests in: Alliant Techsystems
Headquarters: Cincinnati, Ohio
Website: www.westernsouthern.com

William Blair & Company

William Blair & Company is a privately held employee-owned financial services company. The firm has approximately 920 employees and is based in Chicago with offices in London, San Francisco, Tokyo, Liechtenstein and Zurich.

Invests in: Babcock International and Jacobs Engineering
Headquarters: Chicago, Illinois
Website: www.williamblair.com

Williams Capital Group

Williams Capital Group is an investment bank that provides institutional investors and corporate, governmental and municipal clients with products and services in equities, fixed income, corporate finance, investment management and private equity. It has offices in Chicago, Shreveport and Dallas.

Invests in: Boeing, General Dynamics
Headquarters: New York, New York
Website: www.willcap.com

Wolverine

Wolverine is a financial institution specializing in proprietary trading, asset management, order execution services and technology solutions. The firm places great emphasis on technology and infrastructure, and invests heavily in these areas to trade derivative securities across a number of global exchanges. Wolverine is headquartered in Chicago, with branch offices in New York, San Francisco and London. It has more than 300 employees.

Invests in: GenCorp
Headquarters: Chicago, Illinois
Website: www.wolve.com

Woodmen of the World Life Insurance

Woodmen of the World Life Insurance Society is a not-for-profit fraternal organization with approximately 5,000 employees. It provides financial solutions to around 800,000 members in the United States. Woodmen of the World is involved in a number of social and community initiatives such as disaster relief work and youth camps.

Invests in: General Dynamics, Honeywell International
Headquarters: Omaha, Nebraska
Website: www.woodmen.org

Zazove Associates

Zazove Associates is an investment management company. It provides services to insurance companies, pension plans, public funds, endowments, investment partnerships, trusts, state or municipal government entities, and high-net-worth individuals. The firm employs 30 people. In 2010 it had approximately US\$5.9 billion in assets under management.

Invests in: Alliant Techsystems
Headquarters: Incline Village, Nevada
Website: www.zazove.com

Venezuela

Casa de Bolsa del Caribe

Casa de Bolsa del Caribe is a financial institution in Venezuela.

Invests in: Finmeccanica
Headquarters: Caracas

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Appendix III: Frequently Asked Questions

Q: WHAT IS DIVESTMENT?

A: Divestment is the act of selling assets, such as shares, for ethical or financial reasons. It is the opposite of investment, and can be used as a tactic to put pressure on companies or governments to change their policies and practices.

Q: HOW IS DIVESTMENT DIFFERENT FROM BOYCOTTING?

A: A boycott calls on consumers to stop purchasing the products of an unethical company, whereas a divestment campaign calls on individuals, organizations and financial institutions to stop investing in an unethical company.

Q: WHY SHOULD FINANCIAL INSTITUTIONS DIVEST FROM NUCLEAR WEAPONS COMPANIES?

A: There are many reasons, the most important of which is that nuclear weapons cause catastrophic humanitarian and environmental harm. Divesting from nuclear weapons companies supports disarmament and non-proliferation efforts.

Q: ARE NUCLEAR WEAPONS ILLEGAL?

A: Nuclear weapons are not yet subject to a universal treaty-based ban. Nonetheless, under international humanitarian law, it is illegal to use and threaten to use them, and all nations must pursue and conclude negotiations for nuclear disarmament. Modernizing nuclear weapons is against international law.

Q: WHY ARE COMPANIES INVOLVED IN THE MANUFACTURE OF NUCLEAR WEAPONS?

A: Governments provide contracts to companies to carry out work on nuclear weapons largely for economic reasons. They consider the use of private contractors to be the most efficient way to modernize and build up their nuclear forces.

Q: HOW MUCH MONEY DO GOVERNMENTS SPEND EACH YEAR ON THEIR NUCLEAR FORCES?

A: It is estimated that the nine nuclear-armed nations spent a total of US\$105 billion on their nuclear arsenals in 2011. More than half that amount (US\$61 billion) was spent by the United States. Expenditure is expected to increase as weapons modernization programmes are ramped up.

Q: IS THE LIST OF NUCLEAR WEAPONS COMPANIES INCLUDED IN THIS REPORT EXHAUSTIVE?

A: No. It is very difficult to come up with a complete list of nuclear weapons companies, as many different companies are involved in nuclear weapons work to varying degrees. The list in this report only includes those companies that are most heavily involved in the nuclear weapons industry.

Q: EXACTLY WHAT WORK DO THESE COMPANIES DO?

A: The companies examined in this report play different roles in nuclear weapons production. Some are involved in designing and manufacturing nuclear warheads, while others work solely on the production of ballistic missiles, submarines and bomber aircraft to deliver the nuclear warheads.

Q: WHERE ARE THE COMPANIES BASED?

A: Ten of the 20 nuclear weapons companies examined in this report are based in the United States. The rest are based in the United Kingdom, France, the Netherlands, Italy and India. In some nuclear-armed nations, work on nuclear weapons is carried out exclusively by government agencies.

Q: ARE ALL INVESTMENTS IN NUCLEAR WEAPONS COMPANIES INCLUDED IN THIS REPORT?

A: No. The report identifies only those financial institutions that have provided loans or participated in bond or share issues since 2008, along with institutions that own more than 0.5 per cent of outstanding bonds or shares in the companies.

Q: WHICH FINANCIAL INSTITUTIONS INVEST MOST HEAVILY IN NUCLEAR WEAPONS COMPANIES?

A: The financial institutions most heavily involved in financing nuclear weapons producers include Bank of America, BlackRock and JP Morgan Chase in the United States; BNP Paribas in France; Deutsche Bank in Germany; and Mitsubishi UFJ Financial in Japan.

Q: WHAT ARE BONDS AND SHARES?

A: A bond is a certificate issued by a company promising to repay borrowed money at a fixed rate of interest at a specified time, whereas a share is one of the equal parts into which a company's capital is divided, entitling the holder to a proportion of the profit.

Q: ARE THERE LAWS PROHIBITING INVESTMENTS IN NUCLEAR WEAPONS COMPANIES?

A: In some countries, it is an offence to assist the manufacture of nuclear weapons. However, it is not clear whether "assisting" includes investing. We are unaware of any domestic laws that prohibit nuclear weapons investments explicitly.

Q: DO ANY FINANCIAL INSTITUTIONS CURRENTLY EXCLUDE NUCLEAR WEAPONS COMPANIES?

A: Yes. In addition to ethical funds, many mainstream financial institutions have adopted policies excluding nuclear weapons companies from their investment portfolios. However, in some cases these policies allow room for investments below a certain threshold.

Q: HAVE ANY GOVERNMENTS DIVESTED PUBLIC FUNDS FROM NUCLEAR WEAPONS COMPANIES?

A: Yes. In 2004 the Norwegian Ministry of Finance divested funds from a number of nuclear weapons companies on ethical grounds. Two government funds in New Zealand – the Accident Compensation Fund and the Government Pension Fund – have also divested from some nuclear weapons stocks.

Q: WHAT ARE THE AIMS OF DIVESTMENT?

A: An effective global divestment campaign has the potential to help put a halt to nuclear weapons modernization programmes, strengthen the international norm against nuclear weapons, and build momentum towards negotiations on a universal nuclear weapons ban.

Q: HAS DIVESTMENT WORKED FOR OTHER WEAPONS?

A: Yes. In some countries, disarmament campaigners have forced financial institutions to stop investing in companies that manufacture cluster munitions and anti-personnel landmines. This has helped with the implementation of the treaties banning those two categories of inhumane weapons.

Q: SHOULD NUCLEAR ARMS MAKERS BE BOYCOTTED?

A: Consumer boycotts against nuclear weapons companies are only likely to be effective if the companies are involved in the production of consumer goods. Most nuclear weapons companies are not. One exception is Honeywell International, which sells fans, heaters and thermostats in addition to working on nuclear weapons.

Q: SHOULD FINANCIAL INSTITUTIONS BE BOYCOTTED?

A: If financial institutions refuse to divest from nuclear weapons companies, then it is likely that some customers will choose to put their money elsewhere. They are free to encourage their friends, family members and colleagues to do the same in order to pressure the financial institutions to divest.

DON'T BANK ON THE BOMB

A Global Report on the Financing of Nuclear Weapons Producers

“Anyone with a bank account or pension fund has the power to choose to invest his or her money ethically – in a way that does not contribute to this earth-endangering enterprise.” – Setsuko Thurlow *Hiroshima survivor*

“No one should be profiting from this terrible industry of death, which threatens us all.” – Desmond Tutu *Nobel Peace Prize laureate*