

Canada

18 Financial Institutions
made an estimated USD\$ 19,234 million (CAD 25,864 million^a)
available to 27 nuclear weapon producing companies since January 2013.

Introduction

This document contains country specific information from the 2016 Don't Bank on the Bomb update. Hall of Fame and Runners-up include financial institutions with headquarters in the country that have published policies banning or limiting investment in nuclear weapons producers. Hall of Shame are the financial institutions that have significant financing relationships with one or more of the nuclear weapons producers identified in the report. There is also a brief summary of the nuclear weapons related work of each of the identified producers. For more detail, see the full report or go to the www.DontBankOnTheBomb.com website.

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^a Exchange rate: 1 USD = 1.34470 CAD, 29 November 2016.

The financial institutions identified include banks, pension funds, sovereign wealth funds, insurance companies and asset managers. They have provided various types of financial services to nuclear weapon companies including loans, investment banking and asset management.

All sources of financing provided since 1 January 2013 to the companies listed were analysed from annual reports, financial databases and other sources. The financial institutions which are most significantly involved in the financing of one or more nuclear weapon companies are shown here. See the full report for both a summary and full description of all financial institutions which are found to have the most significant financing relationships with one or more of the selected nuclear weapon companies, by means of participating in bank loans, by underwriting share or bond issues and/or by share- or bondholdings (above a threshold of 0.5% of all outstanding shares or bonds).

Figures presented are rounded up/down to the nearest dollar at the filing date. Commas (,) indicate thousands separators while periods (.) used as decimal points.

For more information on loans, investment banking, and asset management, please refer to the website.

Hall of Fame and Runners-up

To identify financial institutions with a policy on nuclear weapons, we research a variety of sources: NGO reports, screening-agency information, financial institutions' reports and websites, information from campaigners and other public sources. For practical reasons, the scope of this report is limited to those financial institutions that have an investment policy or a summary of that policy in English. The list of institutions in the Hall of Fame is therefore not exhaustive. We welcome additions from those able to provide them.

The financial institutions for which a nuclear weapons policy was actually found, were grouped in two categories. Financial institutions with a clear and comprehensive nuclear weapons exclusion policy are included in the "Hall of Fame", while financial institutions whose nuclear weapons policy is less strict or clear are included in the "Runners-up" category. This is not a comprehensive list, and others may exist in the country. To be included in the Hall of Fame, the nuclear weapons policy of the financial institution must meet the following criteria:

- The financial institution has published its policy and/or a summary of it;
- The policy excludes investments in nuclear weapon companies (withdrawing past investments and avoiding future investments)
- The policy has an 'all-in' comprehensive scope:
 - no exceptions for any types of nuclear weapon companies
 - no exceptions for any types of activities by nuclear weapon companies
 - no exceptions for any type of financing or investment by the financial institution

Financial institutions whose nuclear weapon policy does not meet all of the above criteria are included in the "Runners-up" category. [For more on the report methodology, see the website.](#)

Runners-up

The Don't Bank on the Bomb project seeks to recognise all financial institutions with investment policies that explicitly mention nuclear weapons, even if some of these policies are not very effective. By naming investment in nuclear weapon producing companies as an issue of concern, even ineffective policies recognise the stigma associated with these weapons of mass destruction, however, because of loopholes in some policies, some financial institutions may appear in both the Runners-up and Hall of Shame categories.

Royal Bank of Canada (RBC) (Canada)

The Royal Bank of Canada (RBC) is a Canadian bank that provides personal and commercial banking, wealth management, insurance, investor services and capital markets products and services around the globe. The bank serves more than 16 million personal, business, public sector and institutional clients in 38 countries. As of the third quarter, 2016, RBC held CAD \$570 billion (€391 billion) assets under management.^b

RBC does not provide financial services to companies manufacturing or trading in equipment or material for nuclear weapons.^c Companies involved in maintenance and modernisation are not excluded.^d

The policy applies to corporate credit granting and project finance.^e RBC also terminates existing loan contracts with nuclear weapon producers on a case-by-case basis.

RBC is currently reviewing its weapons policy and considering expanding the scope to its investment banking and asset management activities. RBC will also consider extending its policy to exclude companies involved in the maintenance of weapons of mass destruction.^f

RBC does not make use of an exclusion list.^g

RBC was also found to have several investments in nuclear weapon producing companies identified by this report, more information can be found in the Hall of Shame.

We commend RBC for adopting a public policy on nuclear weapons. We recommend RBC apply its policy to all financial products including investment banking and asset management activities. Moreover, RBC should apply the policy to all nuclear weapons producing companies, including those involved in modernisation. We look forward to assessing RBC's update of its nuclear weapons policy and to engaging with RBC, so a strong and comprehensively applied policy may be listed in the Hall of Fame in a future update of this report.

Website:
www.rbc.com/

Twitter:
@RBC

Facebook:
<https://www.facebook.com/rbc>

^b Royal Bank of Canada, "RBC at a Glance – Q3/2016", website Royal Bank of Canada (<http://www.rbc.com/investorrelations/pdf/rbcglance.pdf>), viewed 30 October 2016.

^c Royal Bank of Canada, "Royal Bank Of Canada 2012 Corporate Responsibility Report And Public Accountability Statement", 2012, Page 59, website Royal Bank of Canada (http://www.rbc.com/community-sustainability/_assets-custom/pdf/RBC-CRR-Report-e-2012.pdf), viewed 30 October 2016.

^d Royal Bank of Canada, written response to PAX dated 27 May 2015.

^e Royal Bank of Canada, "2012 Corporate Social Responsibility Report and Public Accountability Statement", 2012, p.59, available at http://www.rbc.com/community-sustainability/_assets-custom/pdf/RBC-CRR-Report-e-2012.pdf, viewed 30 October 2016; Royal Bank of Canada, written response to Profundo dated 27 May 2014.

^f Royal Bank of Canada, written response to Profundo dated 27 May 2014.

^g Royal Bank of Canada, written response to PAX dated 27 May 2015.

Hall of Shame

This section contains the results of our research into which financial institutions are financially involved with the nuclear weapon producing companies identified in the report. [For the full methodology, see the website.](#) Each section provides the following information for each financial institution:

- The types of financial relations which the financial institution has with one or more nuclear weapon companies (loans, investment banking and asset management).

<i>Financial institution</i>	<i>Amount in USD millions</i>	<i>Amount in CAD millions^h</i>
BMO Financial Group	511	688
Burgundy Asset Management	127	170
Caisse de dépôt et placement du Québec	505	679
Cardinal Capital Management	70	95
CI Financial	95	128
CIBC	70	94
CPP Investment Board	28	37
Export Development Canada	41	55
Letko Brosseau & Associates	52	69
Mackie Research Financial	3	3
Manulife Financial	583	784
Power Financial Corporation	2,607	3,505
Royal Bank of Canada	3,057	4,110
Scotiabank	2,439	3,280
Sprucegrove Investment Management	36	49
Sun Life Financial	6,295	8,465
Toronto-Dominion Bank	2,652	3,566
Westwood Holdings Group	63	85

BMO Financial Group (Canada)

BMO Financial Group (Canada) has made an estimated US\$ 511 million available to the nuclear weapons companies selected for this research project since January 2013.

BMO Financial Group (Canada) provided loans for an estimated amount of US\$ 327 million to the nuclear weapon companies (see table below). The table shows all loans closed since January 2013 or maturing after August 2016.

Table 1 Loans provided by BMO Financial Group

Company	Total value (US\$ mln)	Est. participation of this bank (US\$ mln)	Closing date	Maturity date
Aecom	700	35	14-10-2011	19-10-2016
Aecom	1,000	50	14-10-2011	19-10-2016
Aecom	1,050	39	29-1-2014	29-1-2019
Aecom	500	20	11-8-2014	17-10-2019

^h Exchange rate: 1 USD = 1.34470 CAD, 29 November 2016. Some totals may not match due to rounding.

Company	Total value (US\$ mln)	Est. participation of this bank (US\$ mln)	Closing date	Maturity date
Aecom	1,050	47	11-8-2014	17-10-2019
Aecom	1,188	59	11-8-2014	17-10-2021
Aecom	1,925	77	11-8-2014	17-10-2019

Source: Thomson Reuters Eikon, "Loans", viewed in July/August 2016; Bloomberg, "Loans", viewed in July/August 2016.

BMO Financial Group (Canada) owns or manages shares of the nuclear weapon companies for an amount of US\$ 184 million (see table below). Only holdings of 0.50% or more of the outstanding shares at the most recent available filing date are included.

Table 2 Shareholdings managed by BMO Financial Group

Company	Country	Total value (US\$ mln)	% Outstanding	Filing date
Huntington Ingalls Industries	United States	99	1.54	31-3-2016
Jacobs Engineering	United States	84	1.58	31-3-2016

Source: Thomson Reuters Eikon, "Share ownership: most recent filings", viewed in July 2016.

Burgundy Asset Management (Canada)

Burgundy Asset Management (Canada) has made an estimated US\$ 127 million available to the nuclear weapons companies selected for this research project since January 2013.

Burgundy Asset Management (Canada) owns or manages shares of the nuclear weapon companies for an amount of US\$ 127 million (see table below). Only holdings of 0.50% or more of the outstanding shares at the most recent available filing date are included.

Table 3 Shareholdings managed by Burgundy Asset Management

Company	Country	Total value (US\$ mln)	% Outstanding	Filing date
BWX Technologies	United States	127	3.63	31-3-2016

Source: Thomson Reuters Eikon, "Share ownership: most recent filings", viewed in July 2016.

Caisse de dépôt et placement du Québec (Canada)

Caisse de dépôt et placement du Québec (Canada) has made an estimated US\$ 505 million available to the nuclear weapons companies selected for this research project since January 2013.

Caisse de dépôt et placement du Québec (Canada) owns or manages shares of the nuclear weapon companies for an amount of US\$ 505 million (see table below). Only holdings of 0.50% or more of the outstanding shares at the most recent available filing date are included.

Table 4 Shareholdings managed by Caisse de dépôt et placement du Québec

Company	Country	Total value (US\$ mln)	% Outstanding	Filing date
Lockheed Martin	United States	505	0.75	31-3-2016

Source: Thomson Reuters Eikon, "Share ownership: most recent filings", viewed in July 2016.

Cardinal Capital Management (Canada)

Cardinal Capital Management (Canada) has made an estimated US\$ 70 million available to the nuclear weapons companies selected for this research project since January 2013.

Cardinal Capital Management (Canada) owns or manages shares of the nuclear weapon companies for an amount of US\$ 70 million (see table below). Only holdings of 0.50% or more of the outstanding shares at the most recent available filing date are included.

Table 5 Shareholdings managed by Cardinal Capital Management

Company	Country	Total value (US\$ mln)	% Outstanding	Filing date
BWX Technologies	United States	70	2.02	31-3-2016

Source: Thomson Reuters Eikon, "Share ownership: most recent filings", viewed in July 2016.

CI Financial (Canada)

CI Financial (Canada) has made an estimated US\$ 95 million available to the nuclear weapons companies selected for this research project since January 2013.

CI Financial (Canada) owns or manages shares of the nuclear weapon companies for an amount of US\$ 81 million (see table below). Only holdings of 0.50% or more of the outstanding shares at the most recent available filing date are included.

Table 6 Shareholdings managed by CI Financial

Company	Country	Total value (US\$ mln)	% Outstanding	Filing date
Fluor	United States	81	1.08	31-3-2016

Source: Thomson Reuters Eikon, "Share ownership: most recent filings", viewed in July 2016.

CI Financial (Canada) owns or manages bonds of the nuclear weapon companies for an amount of US\$ 14 million (see table below). Only holdings of 0.50% or more of the outstanding bonds at the most recent available filing date are included.

Table 7 Bondholdings managed by CI Financial

Company	Country	Total value (US\$ mln)	% Outstanding	Filing date
Huntington Ingalls Industries	United States	14	1.20	31-3-2016

Source: Thomson Reuters Eikon, "Bond ownership: most recent filings", viewed in August 2016.

CIBC (Canada)

CIBC (Canada) has made an estimated US\$ 70 million available to the nuclear weapons companies selected for this research project since January 2013.

CIBC (Canada) provided loans for an estimated amount of US\$ 70 million to the nuclear weapon companies (see table below). The table shows all loans closed since January 2013 or maturing after August 2016.

Table 8 Loans provided by CIBC

Company	Total value (US\$ mln)	Est. participation of this bank (US\$ mln)	Closing date	Maturity date
Bechtel	1,000	28	7-6-2016	7-6-2021
Bechtel	1,500	42	7-6-2016	7-6-2021

Source: Thomson Reuters Eikon, "Loans", viewed in July/August 2016; Bloomberg, "Loans", viewed in July/August 2016.

CPP Investment Board (Canada)

CPP Investment Board (Canada) has made an estimated US\$ 28 million available to the nuclear weapons companies selected for this research project since January 2013.

CPP Investment Board (Canada) owns or manages shares of the nuclear weapon companies for an amount of US\$ 28 million (see table below). Only holdings of 0.50% or more of the outstanding shares at the most recent available filing date are included.

Table 9 Shareholdings managed by CPP Investment Board

Company	Country	Total value (US\$ mln)	% Outstanding	Filing date
BWX Technologies	United States	28	0.80	31-3-2016

Source: Thomson Reuters Eikon, "Share ownership: most recent filings", viewed in July 2016.

Export Development Canada (Canada)

Export Development Canada (Canada) has made an estimated US\$ 41 million available to the nuclear weapons companies selected for this research project since January 2013.

Export Development Canada (Canada) provided loans for an estimated amount of US\$ 41 million to the nuclear weapon companies (see table below). The table shows all loans closed since January 2013 or maturing after August 2016.

Table 10 Loans provided by Export Development Canada

Company	Total value (US\$ mln)	Est. participation of this bank (US\$ mln)	Closing date	Maturity date
Larsen & Toubro	47	5	27-8-2013	1-6-2018
Larsen & Toubro	59	7	27-8-2013	1-8-2017
Larsen & Toubro	64	7	27-8-2013	1-6-2018
Larsen & Toubro	100	11	27-8-2013	1-6-2018
Larsen & Toubro	100	11	27-8-2013	1-6-2018

Source: Thomson Reuters Eikon, "Loans", viewed in July/August 2016; Bloomberg, "Loans", viewed in July/August 2016.

Letko Brosseau & Associates (Canada)

Letko Brosseau & Associates (Canada) has made an estimated US\$ 52 million available to the nuclear weapons companies selected for this research project since January 2013.

Letko Brosseau & Associates (Canada) owns or manages shares of the nuclear weapon companies for an amount of US\$ 52 million (see table below). Only holdings of 0.50% or more of the outstanding shares at the most recent available filing date are included.

Table 11 Shareholdings managed by Letko Brosseau & Associates

Company	Country	Total value (US\$ mln)	% Outstanding	Filing date
Fluor	United States	52	0.69	31-3-2016

Source: Thomson Reuters Eikon, "Share ownership: most recent filings", viewed in July 2016.

Mackie Research Financial (Canada)

Mackie Research Financial (Canada) has made an estimated US\$ 3 million available to the nuclear weapons companies selected for this research project since January 2013.

Mackie Research Financial (Canada) underwrote bond issuances for an estimated amount of US\$ 3 million to the nuclear weapon companies since January 2013 (see table below).

Table 12 Underwriting of bond issuances by Mackie Research Financial

Company	Total value (US\$ mln)	Est. participation of this bank (US\$ mln)	Issue date	Maturity date
Boeing	250	3	18-2-2015	1-3-2035

Source: Thomson Reuters Eikon, "Bond and share issue underwritings", viewed in July/August 2016; Bloomberg, "Bond and share issue underwritings", viewed in August 2016.

Manulife Financial (Canada)

Manulife Financial (Canada) has made an estimated US\$ 583 million available to the nuclear weapons companies selected for this research project since January 2013.

Manulife Financial (Canada) owns or manages bonds of the nuclear weapon companies for an amount of US\$ 583 million (see table below). Only holdings of 0.50% or more of the outstanding bonds at the most recent available filing date are included.

Table 13 Bondholdings managed by Manulife Financial

Company	Country	Total value (US\$ mln)	% Outstanding	Filing date
Airbus Group	The Netherlands	53	0.61	31-3-2016
BAE Systems	United Kingdom	39	0.63	31-3-2016
Boeing	United States	82	0.77	31-3-2016
General Dynamics	United States	22	0.76	31-3-2016
Huntington Ingalls Industries	United States	60	4.99	30-4-2016
Lockheed Martin	United States	155	0.99	30-4-2016
Northrop Grumman	United States	40	0.62	31-3-2016
Raytheon	United States	56	1.05	31-3-2016
Textron	United States	77	2.64	31-5-2016

Source: Thomson Reuters Eikon, "Bond ownership: most recent filings", viewed in August 2016.

Power Financial Corporation (Canada)

Power Financial Corporation (Canada) has made an estimated US\$ 2,607 million available to the nuclear weapons companies selected for this research project since January 2013.

Power Financial Corporation (Canada) owns or manages shares of the nuclear weapon companies for an amount of US\$ 2,508 million (see table below). Only holdings of 0.50% or more of the outstanding shares at the most recent available filing date are included.

Table 14 Shareholdings managed by Power Financial Corporation

Company	Country	Total value (US\$ mln)	% Outstanding	Filing date
Aecom	United States	39	0.82	31-3-2016
Boeing	United States	519	0.65	31-3-2016
General Dynamics	United States	436	1.08	31-3-2016
Honeywell International	United States	510	0.59	31-3-2016
Huntington Ingalls Industries	United States	34	0.53	31-3-2016
Northrop Grumman	United States	970	2.71	31-3-2016

Source: Thomson Reuters Eikon, "Share ownership: most recent filings", viewed in July 2016.

Power Financial Corporation (Canada) owns or manages bonds of the nuclear weapon companies for an amount of US\$ 99 million (see table below). Only holdings of 0.50% or more of the outstanding bonds at the most recent available filing date are included.

Table 15 Bondholdings managed by Power Financial Corporation

Company	Country	Total value (US\$ mln)	% Outstanding	Filing date
Charles Stark Draper Laboratory	United States	26	53.55	31-3-2016
Moog	United States	16	5.31	31-3-2016
Northrop Grumman	United States	37	0.58	31-3-2016
Safran	France	20	0.94	31-3-2016

Source: Thomson Reuters Eikon, "Bond ownership: most recent filings", viewed in August 2016.

Royal Bank of Canada (Canada)

Royal Bank of Canada (Canada) has made an estimated US\$ 3,057 million available to the nuclear weapons companies selected for this research project since January 2013.

Royal Bank of Canada (Canada) provided loans for an estimated amount of US\$ 1,513 million to the nuclear weapon companies (see table below). The table shows all loans closed since January 2013 or maturing after August 2016.

Table 16 Loans provided by Royal Bank of Canada

Company	Total value (US\$ mln)	Est. participation of this bank (US\$ mln)	Closing date	Maturity date
Aerojet Rocketdyne	400	15	17-6-2016	17-6-2021
Airbus Group	3,797	66	14-10-2014	14-10-2019

Company	Total value (US\$ mln)	Est. participation of this bank (US\$ mln)	Closing date	Maturity date
BAE Systems	3,269	131	12-12-2013	12-12-2018
Boeing	2,300	42	5-11-2011	10-11-2016
Boeing	2,473	75	23-9-2014	15-10-2015
Boeing	2,473	75	23-9-2014	16-10-2019
Boeing	2,465	90	4-11-2015	3-11-2016
Boeing	2,365	90	4-11-2015	3-11-2020
Engility	50	10	23-4-2014	9-5-2019
Engility	250	50	23-4-2014	9-5-2021
Engility	393	79	23-4-2014	9-5-2020
Honeywell International	3,000	129	30-3-2012	2-4-2017
Honeywell International	4,000	73	18-11-2013	10-12-2018
Honeywell International	4,000	120	10-7-2015	10-7-2020
Honeywell International	1,500	45	29-4-2016	28-4-2017
Lockheed Martin	1,500	50	14-8-2014	14-8-2019
Lockheed Martin	2,500	75	9-10-2015	9-10-2020
Lockheed Martin	7,000	110	9-10-2015	7-10-2016
Moog	900	30	28-3-2013	28-3-2018
Orbital ATK	200	13	3-9-2012	3-9-2017
Orbital ATK	250	25	8-10-2013	1-11-2020
Orbital ATK	700	47	8-10-2013	1-11-2018
Orbital ATK	1,010	67	8-10-2013	1-11-2018
Orbital ATK	150	7	24-6-2014	24-12-2018

Source: Thomson Reuters Eikon, "Loans", viewed in July/August 2016; Bloomberg, "Loans", viewed in July/August 2016.

Royal Bank of Canada (Canada) underwrote bond issuances for an estimated amount of US\$ 528 million to the nuclear weapon companies since January 2013 (see table below).

Table 17 Underwriting of bond issuances by Royal Bank of Canada

Company	Total value (US\$ mln)	Est. participation of this bank (US\$ mln)	Issue date	Maturity date
BAE Systems	250	21	3-12-2015	7-10-2044
BAE Systems	500	42	3-12-2015	15-12-2020
BAE Systems	750	63	3-12-2015	15-12-2025
Boeing	350	10	30-4-2013	15-11-2018
Boeing	300	9	28-10-2014	30-10-2021
Boeing	300	9	28-10-2014	30-10-2024
Boeing	250	6	18-2-2015	1-3-2025
Boeing	250	8	18-2-2015	1-3-2045

Company	Total value (US\$ mln)	Est. participation of this bank (US\$ mln)	Issue date	Maturity date
Boeing	250	13	18-2-2015	1-3-2035
Boeing	250	8	27-10-2015	30-10-2022
Boeing	300	9	27-10-2015	30-10-2025
Boeing	350	16	27-10-2015	30-10-2020
Boeing	400	10	16-5-2016	15-6-2023
Boeing	400	16	16-5-2016	15-6-2046
Boeing	400	18	16-5-2016	15-6-2026
Honeywell International	300	10	18-11-2013	1-12-2023
Honeywell International	700	23	18-11-2013	17-11-2015
Honeywell International	837	4	15-2-2016	22-2-2028
Honeywell International	1,116	6	15-2-2016	22-2-2018
Honeywell International	1,116	6	15-2-2016	21-2-2020
Honeywell International	1,395	7	15-2-2016	22-2-2023
Lockheed Martin	500	9	12-2-2015	1-3-2035
Lockheed Martin	750	14	12-2-2015	1-3-2025
Lockheed Martin	1,000	18	12-2-2015	1-3-2045
Lockheed Martin	500	8	16-11-2015	15-1-2023
Lockheed Martin	500	8	16-11-2015	15-5-2036
Lockheed Martin	750	11	16-11-2015	23-11-2018
Lockheed Martin	1,250	19	16-11-2015	23-11-2020
Lockheed Martin	2,000	30	16-11-2015	15-1-2026
Lockheed Martin	2,000	30	16-11-2015	15-5-2046
Moog	300	23	18-11-2014	1-12-2022
Orbital ATK	300	50	22-10-2013	1-10-2021

Source: Thomson Reuters Eikon, "Bond and share issue underwritings", viewed in July/August 2016; Bloomberg, "Bond and share issue underwritings", viewed in August 2016.

Royal Bank of Canada (Canada) owns or manages shares of the nuclear weapon companies for an amount of US\$ 1,016 million (see table below). Only holdings of 0.50% or more of the outstanding shares at the most recent available filing date are included.

Table 18 Shareholdings managed by Royal Bank of Canada

Company	Country	Total value (US\$ mln)	% Outstanding	Filing date
Fluor	United States	63	0.84	31-3-2016
Honeywell International	United States	464	0.53	31-3-2016
Jacobs Engineering	United States	47	0.87	31-3-2016
Lockheed Martin	United States	379	0.57	31-3-2016
Textron	United States	63	0.64	31-3-2016

Source: Thomson Reuters Eikon, "Share ownership: most recent filings", viewed in July 2016.

Scotiabank (Canada)

Scotiabank (Canada) has made an estimated US\$ 2,439 million available to the nuclear weapons companies selected for this research project since January 2013.

Scotiabank (Canada) provided loans for an estimated amount of US\$ 1,889 million to the nuclear weapon companies (see table below). The table shows all loans closed since January 2013 or maturing after August 2016.

Table 19 **Loans provided by Scotiabank**

Company	Total value (US\$ mln)	Est. participation of this bank (US\$ mln)	Closing date	Maturity date
Aecom	750	20	7-6-2013	7-6-2018
Aecom	1,050	39	29-1-2014	29-1-2019
Aecom	500	40	11-8-2014	17-10-2019
Aecom	1,188	95	11-8-2014	17-10-2021
Aecom	1,050	105	11-8-2014	17-10-2019
Aecom	1,925	154	11-8-2014	17-10-2019
Bechtel	1,000	28	7-6-2016	7-6-2021
Bechtel	1,500	42	7-6-2016	7-6-2021
BWX Technologies	700	32	22-5-2012	8-6-2017
BWX Technologies	400	27	11-5-2015	11-5-2020
BWX Technologies	500	33	11-5-2015	11-5-2020
BWX Technologies	600	36	11-5-2015	11-5-2020
Fluor	1,700	85	25-2-2016	25-2-2021
Fluor	1,800	100	25-2-2016	25-2-2021
General Dynamics	1,000	125	21-6-2013	21-6-2018
General Dynamics	1,000	46	10-11-2015	10-11-2020
Honeywell International	4,000	73	18-11-2013	10-12-2018
Honeywell International	4,000	60	10-7-2015	10-7-2020
Honeywell International	1,500	25	29-4-2016	28-4-2017
Huntington Ingalls Industries	489	27	23-9-2013	6-11-2018
Huntington Ingalls Industries	650	35	23-9-2013	6-11-2018
Huntington Ingalls Industries	1,250	125	13-7-2015	13-7-2020
Jacobs Engineering	1,160	139	23-3-2012	23-3-2017
Jacobs Engineering	1,140	62	7-2-2014	7-2-2019
Northrop Grumman	575	22	31-3-2011	24-1-2017
Northrop Grumman	1,500	129	8-9-2011	8-9-2016
Northrop Grumman	1,600	64	8-7-2015	8-7-2020
Raytheon	1,400	76	13-12-2011	13-12-2016
Raytheon	1,250	44	13-11-2015	13-11-2020

Source: *Thomson Reuters Eikon*, "Loans", viewed in July/August 2016; *Bloomberg*, "Loans", viewed in July/August 2016.

Scotiabank (Canada) underwrote bond issuances for an estimated amount of US\$ 550 million to the nuclear weapon companies since January 2013 (see table below).

Table 20 Underwriting of bond issuances by Scotiabank

Company	Total value (US\$ mln)	Est. participation of this bank (US\$ mln)	Issue date	Maturity date
Aecom	800	80	17-9-2014	15-10-2022
Aecom	800	80	17-9-2014	15-10-2024
Aecom	800	80	30-10-2015	15-10-2022
Aecom	800	80	30-10-2015	15-10-2024
Fluor	500	18	18-11-2014	15-12-2024
Fluor	555	9	14-3-2016	21-3-2023
Huntington Ingalls Industries	600	34	17-11-2014	15-12-2021
Huntington Ingalls Industries	600	75	2-11-2015	15-11-2025
Northrop Grumman	850	26	28-5-2013	1-6-2018
Northrop Grumman	950	29	28-5-2013	1-6-2043
Northrop Grumman	1,050	32	28-5-2013	1-8-2023
Raytheon	300	5	24-11-2014	15-12-2024
Raytheon	300	5	24-11-2014	15-12-2044

Source: Thomson Reuters Eikon, "Bond and share issue underwritings", viewed in July/August 2016; Bloomberg, "Bond and share issue underwritings", viewed in August 2016.

Sprucegrove Investment Management (Canada)

Sprucegrove Investment Management (Canada) has made an estimated US\$ 36 million available to the nuclear weapons companies selected for this research project since January 2013.

Sprucegrove Investment Management (Canada) owns or manages shares of the nuclear weapon companies for an amount of US\$ 36 million (see table below). Only holdings of 0.50% or more of the outstanding shares at the most recent available filing date are included.

Table 21 Shareholdings managed by Sprucegrove Investment Management

Company	Country	Total value (US\$ mln)	% Outstanding	Filing date
Jacobs Engineering	United States	36	0.69	31-3-2016

Source: Thomson Reuters Eikon, "Share ownership: most recent filings", viewed in July 2016.

Sun Life Financial (Canada)

Sun Life Financial (Canada) has made an estimated US\$ 6,295 million available to the nuclear weapons companies selected for this research project since January 2013.

Sun Life Financial (Canada) owns or manages shares of the nuclear weapon companies for an amount of US\$ 6,112 million (see table below). Only holdings of 0.50% or more of the outstanding shares at the most recent available filing date are included.

Table 22 Shareholdings managed by Sun Life Financial

Company	Country	Total value (US\$ mln)	% Outstanding	Filing date
Fluor	United States	87	1.17	31-3-2016
Honeywell International	United States	3,966	4.64	31-3-2016
Lockheed Martin	United States	946	1.40	31-3-2016
Northrop Grumman	United States	946	2.65	31-3-2016
Orbital ATK	United States	65	1.28	31-3-2016
Serco	United Kingdom	16	0.96	26-5-2016
Textron	United States	86	0.88	31-3-2016

Source: Thomson Reuters Eikon, "Share ownership: most recent filings", viewed in July 2016.

Sun Life Financial (Canada) owns or manages bonds of the nuclear weapon companies for an amount of US\$ 183 million (see table below). Only holdings of 0.50% or more of the outstanding bonds at the most recent available filing date are included.

Table 23 Bondholdings managed by Sun Life Financial

Company	Country	Total value (US\$ mln)	% Outstanding	Filing date
Aerojet Rocketdyne	United States	15	4.29	31-5-2016
BAE Systems	United Kingdom	78	1.27	31-3-2016
Raytheon	United States	27	0.51	31-3-2016
Safran	France	35	1.65	31-3-2016
Textron	United States	28	0.96	31-3-2016

Source: Thomson Reuters Eikon, "Bond ownership: most recent filings", viewed in August 2016.

Toronto-Dominion Bank (Canada)

Toronto-Dominion Bank (Canada) has made an estimated US\$ 2,652 million available to the nuclear weapons companies selected for this research project since January 2013.

Toronto-Dominion Bank (Canada) provided loans for an estimated amount of US\$ 1,734 million to the nuclear weapon companies (see table below). The table shows all loans closed since January 2013 or maturing after August 2016.

Table 24 Loans provided by Toronto-Dominion Bank

Company	Total value (US\$ mln)	Est. participation of this bank (US\$ mln)	Closing date	Maturity date
Aecom	500	20	11-8-2014	17-10-2019
Aecom	1,050	47	11-8-2014	17-10-2019
Aecom	1,188	59	11-8-2014	17-10-2021
Aecom	1,925	77	11-8-2014	17-10-2019
Airbus Group	3,797	66	14-10-2014	14-10-2019
BAE Systems	3,269	131	12-12-2013	12-12-2018
BWX Technologies	700	32	22-5-2012	8-6-2017

Company	Total value (US\$ mln)	Est. participation of this bank (US\$ mln)	Closing date	Maturity date
BWX Technologies	400	27	11-5-2015	11-5-2020
BWX Technologies	500	33	11-5-2015	11-5-2020
BWX Technologies	600	36	11-5-2015	11-5-2020
General Dynamics	1,000	125	21-6-2013	21-6-2018
General Dynamics	1,000	46	10-11-2015	10-11-2020
Honeywell International	3,000	129	30-3-2012	2-4-2017
Honeywell International	4,000	73	18-11-2013	10-12-2018
Honeywell International	4,000	120	10-7-2015	10-7-2020
Honeywell International	1,500	45	29-4-2016	28-4-2017
Huntington Ingalls Industries	489	27	23-9-2013	6-11-2018
Huntington Ingalls Industries	650	35	23-9-2013	6-11-2018
Huntington Ingalls Industries	1,250	71	13-7-2015	13-7-2020
Jacobs Engineering	460	39	7-2-2014	7-2-2019
Jacobs Engineering	1,140	62	7-2-2014	7-2-2019
Jacobs Engineering	460	55	5-3-2015	5-3-2020
Jacobs Engineering	1,140	137	5-3-2015	5-3-2020
Lockheed Martin	1,500	35	14-8-2014	14-8-2019
Lockheed Martin	2,500	75	9-10-2015	9-10-2020
Lockheed Martin	7,000	110	9-10-2015	7-10-2016
Northrop Grumman	575	22	31-3-2011	24-1-2017

Source: *Thomson Reuters Eikon*, "Loans", viewed in July/August 2016; *Bloomberg*, "Loans", viewed in July/August 2016.

Toronto-Dominion Bank (Canada) underwrote bond issuances for an estimated amount of US\$ 220 million to the nuclear weapon companies since January 2013 (see table below).

Table 25 Underwriting of bond issuances by Toronto-Dominion Bank

Company	Total value (US\$ mln)	Est. participation of this bank (US\$ mln)	Issue date	Maturity date
Honeywell International	300	10	18-11-2013	1-12-2023
Honeywell International	700	23	18-11-2013	17-11-2015
Honeywell International	837	4	15-2-2016	22-2-2028
Honeywell International	1,116	6	15-2-2016	22-2-2018
Honeywell International	1,116	6	15-2-2016	21-2-2020
Honeywell International	1,395	7	15-2-2016	22-2-2023
Huntington Ingalls Industries	600	34	17-11-2014	15-12-2021
Huntington Ingalls Industries	600	25	2-11-2015	15-11-2025
Lockheed Martin	500	8	16-11-2015	15-1-2023
Lockheed Martin	500	8	16-11-2015	15-5-2036

Company	Total value (US\$ mln)	Est. participation of this bank (US\$ mln)	Issue date	Maturity date
Lockheed Martin	750	11	16-11-2015	23-11-2018
Lockheed Martin	1,250	19	16-11-2015	23-11-2020
Lockheed Martin	2,000	30	16-11-2015	15-1-2026
Lockheed Martin	2,000	30	16-11-2015	15-5-2046

Source: Thomson Reuters Eikon, "Bond and share issue underwritings", viewed in July/August 2016; Bloomberg, "Bond and share issue underwritings", viewed in August 2016.

Toronto-Dominion Bank (Canada) owns or manages shares of the nuclear weapon companies for an amount of US\$ 698 million (see table below). Only holdings of 0.50% or more of the outstanding shares at the most recent available filing date are included.

Table 26 Shareholdings managed by Toronto-Dominion Bank

Company	Country	Total value (US\$ mln)	% Outstanding	Filing date
BAE Systems	United Kingdom	204	0.93	25-4-2016
Boeing	United States	457	0.56	31-3-2016
Jacobs Engineering	United States	37	0.70	31-3-2016

Source: Thomson Reuters Eikon, "Share ownership: most recent filings", viewed in July 2016.

Westwood Holdings Group (Canada)

Westwood Holdings Group (Canada) has made an estimated US\$ 63 million available to the nuclear weapons companies selected for this research project since January 2013.

Westwood Holdings Group (Canada) owns or manages shares of the nuclear weapon companies for an amount of US\$ 63 million (see table below). Only holdings of 0.50% or more of the outstanding shares at the most recent available filing date are included.

Table 27 Shareholdings managed by Westwood Holdings Group

Company	Country	Total value (US\$ mln)	% Outstanding	Filing date
Huntington Ingalls Industries	United States	63	0.98	31-3-2016

Source: Thomson Reuters Eikon, "Share ownership: most recent filings", viewed in July 2016.

Nuclear weapon producing Companies

This report identifies 27 companies operating in France, India, Italy, the Netherlands, the United Kingdom and the United States that are significantly involved in maintaining and modernising the nuclear arsenals of France, India, the United Kingdom and the United States. **This is not an exhaustive list.** These companies are providing necessary components and infrastructure to develop, test, maintain and modernise nuclear weapons. The contracts these companies have with nuclear armed countries are for materials and services to keep nuclear weapons in their arsenals. In other nuclear-armed countries –Russia, China, Pakistan and North Korea – the maintenance and modernization of nuclear forces is carried out primarily or exclusively by government agencies.

Aecom (USA)

Aecom provides professional technical and management support services and is part of joint ventures that manages the Nevada National Security Site (NNSS), previously known as the Nevada Test Site, as well as Lawrence Livermore (LLNL) and Los Alamos National Laboratories (LANL), key fixtures in the US nuclear weapons infrastructure.

Aerojet Rocketdyne (USA)

Aerojet Rocketdyne, formerly known as 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.

Airbus Group (The Netherlands)

Airbus is a Dutch company that produces and maintains the M51.2 submarine-launched nuclear missiles for the French navy, it is also developing the M51.3. Through joint venture MBDA-Systems, Airbus is also providing medium-range air-to-surface missiles to the French air force.

BAE Systems (United Kingdom)

BAE Systems is involved in the US and UK Trident II (D5) strategic weapons system programmes. It is also the prime contractor for the US Minuteman III Intercontinental Ballistic Missile (ICBM) system. BAE Systems is also part of the joint venture providing medium-range air-to-surface missiles for France.

Bechtel (USA)

Bechtel manages the Los Alamos and Lawrence Livermore national laboratories in the US, which play an important role in the research, design, development and production of nuclear weapons. It also leads the joint venture for management and operation of the Y-12 National Security Complex in Tennessee and the Pantex Plant in Texas.

Boeing (USA)

Boeing is involved in the Minuteman III nuclear intercontinental ballistic missiles in the US arsenal. It also provides the US and UK Trident II (D5) with maintenance, repair, and rebuilding and technical services.

BWX Technologies (USA)

BWX Technologies ("BWXT") formerly known as Babcock & Wilcox Company Babcock & Wilcox manages and through joint ventures operates several US nuclear weapons facilities including the Lawrence Livermore National Laboratory, Los Alamos National Laboratory, and Nevada National Security Site (NNSS), previously known as the Nevada Test Site, each of which are engaged in various aspects of nuclear warhead modernisation.

Charles Stark Draper Laboratory (USA)

Charles Stark Draper Laboratory ("Draper") is the prime contractor for the Trident Life Extension (LE) boost guidance and is manufacturing the guidance system for the Trident missile system in use by the UK and the US.

CH2M Hill (USA)

CH2M Hill is one of the joint venture partners in National Security Technologies (NSTec) that manages the Nevada National Security Site (NNSS), previously known as the Nevada Test Site, a key fixture in the US nuclear weapons infrastructure.

Engility Holdings (USA)

In February 2015, Engility acquired US-based TASC. It is involved in the research and development for the Solid Rocket Motor Modernization Study of the Minuteman III system for the US arsenal.

Fluor (USA)

Fluor is the lead partner responsible for the management and operation of the US Department of Energy's Savannah River Site and Savannah River National Laboratory, the only source of new tritium for the US nuclear arsenal.

General Dynamics (USA)

General Dynamics provides a range of engineering, development, and production activities to support to US and UK Trident II Strategic Weapons Systems. It is also involved in the guidance systems of the Trident II (D5) nuclear missiles of the US Navy.

Honeywell International (USA)

Honeywell International manages and operates the National Security Campus where an estimated 85% of the non-nuclear components for US nuclear weapons are produced. It produced components for integrated circuits for the Trident II (D5) nuclear missiles which comprise part of the UK and US arsenals.

Huntington Ingalls Industries (USA)

Huntington Ingalls Industries is involved in management of the US nuclear arsenal, and tritium production at the Savannah River Site, the only source of new tritium for the US nuclear arsenal.

Jacobs Engineering (USA)

Jacobs Engineering Group is involved in the joint venture AWE-ML, which manages the UK Atomic Weapons Establishment, that designs, manufactures and maintains nuclear warheads for the UK.

Larsen & Toubro (India)

Larsen & Toubro is also responsible for developing the launcher system for the nuclear-capable short-range surface-to-air Akash missile system for the Indian nuclear arsenal.

Leonardo - Finmeccanica (Italy)

Leonardo - Finmeccanica (previously "Finmeccanica") is involved in the design, development and delivery of two Transporter Erector Replacement Vehicles to support the US Intercontinental Ballistic Missile (ICBM) Minuteman III-fleet. It is also involved in the joint venture that supplies medium-range air-to-surface missiles for the French arsenal.

Lockheed Martin (USA)

Lockheed Martin is responsible for the construction of the Trident II (D5) nuclear missiles for the US and UK. It is also involved in the production and maintenance of the Minuteman III nuclear intercontinental ballistic missiles for the US. It is part of the joint venture AWE-ML, which manages the UK Atomic Weapons Establishment, that designs, manufactures and maintains nuclear warheads for the UK.

MOOG (USA)

Moog develops launch vehicle and strategic missile controls for the Minuteman III and Trident (D5) missiles for the US nuclear arsenal.

Northrop Grumman (USA)

Northrop Grumman is involved with production and maintenance of the Minuteman III nuclear Intercontinental Ballistic Missiles (ICBM) for the US nuclear arsenal. It also provides support for the Trident II (D5) system for the US and the UK. It is also part of the joint venture that manages the Nevada National Security Site (NNSS), previously known as the Nevada Test Site, a key fixture in the US nuclear weapons infrastructure.

Orbital ATK (USA)

Orbital ATK (formerly known as ATK or Alliant Techsystems) produces rocket propulsion systems for Trident II submarine launched ballistic missiles. Orbital ATK is also responsible for refurbishing all three solid propellant stages of the Minuteman III Intercontinental Ballistic Missile (ICBM) for the US. It is also involved in the joint venture for management and operation of the Y-12 National Security Complex in Tennessee and the Pantex Plant in Texas.

Raytheon (USA)

Raytheon is involved in a project to stretch the lifecycle of the guidance systems of the Trident II (D5) nuclear missiles of the US Navy. It is also involved in studies in support of the new W80-4 Long-Range Standoff missile for the US arsenal.

Safran (France)

Safran is part of a joint venture to build 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 (United Kingdom)

Serco owns a one-third share in the joint venture AWE-ML, which runs the UK Atomic Weapons Establishment. It is responsible for manufacturing and maintaining the nuclear warheads for UK arsenal.

Textron (USA)

Textron designs and builds re-entry vehicles for the US Minuteman III inter-continental ballistic missile (ICBM).

Thales (France)

Thales is part of a joint venture to build the M51 submarine-launched nuclear missiles for the French navy

Walchandnagar Industries (India)

Walchandnagar Industries Limited supplies infrastructure and facilities for the production of the surface-to-air short-range Akash missile and the launching systems for Agni and Akash missiles for the Indian arsenal. It also manufactures the main thrust motor casing segment for the intercontinental ballistic Agni-V missile.