

Germany

10 Financial Institutions
made an estimated USD\$ 9,765 million (EUR 9,240 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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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

^a Exchange rate: 1 USD = 0.946211 EUR, 24 November 2016.

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

No Germany financial institutions were found to qualify for the Hall of Fame.

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.

Commerzbank (Germany)

Commerzbank is an international commercial bank with branches in more than 50 countries. Its core markets are Germany and Poland. Commerzbank offers banking and capital market services to nearly

16 million private customers and 1 million business and corporate clients.^b As of 30 June 2016, Commerzbank held €532.6 billion in total assets.^c

According to Commerzbank's policy on the armaments sector, the bank "*does not in any circumstances involve itself in transactions related to controversial weapons.*"^d For a definition of controversial weapons, Commerzbank refers to the German War Weapons Control Act^e, which provides an elaborate definition of nuclear weapons based on the revised Brussels Treaty of 1954.^f

In principle, this means that Commerzbank excludes all companies that are involved in controversial weapons. However, if the involvement constitutes only a small part of the company's businesses, Commerzbank allows investment as long as the bilateral contract specifically states that funds will not be used for any activity that is related to controversial weapons.^g

The exclusion policy applies to the bank's commercial banking and investment banking activities, as well as to the investments made on its own account and its actively managed funds. However, the policy is not applied to passively managed funds and in addition, clients can request the execution of a buying-order of a specific investment that may contain a nuclear weapon producer. The same applies to orders of such investments through Online-Banking.^h

Commerzbank does not publish its exclusion list, which is based on the findings of data provider Sustainalytics.ⁱ

Commerzbank 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 Commerzbank for adopting a public policy on nuclear weapons. We recommend Commerzbank apply its policy to all nuclear weapon producers, including companies whose involvement in controversial weapons constitutes only a small part of their activities. Furthermore, Commerzbank's should apply its exclusion policy to all financial products it offers, including assets managed, and requests from clients that explicitly ask for or choose funds that contain controversial weapons producers should be refused. We look forward to engaging with Commerzbank, so a strong and comprehensively applied policy may be listed in the Hall of Fame in a future update of this report.

Website:

<https://www.commerzbank.de>

Twitter:

[@commerzbank](https://twitter.com/commerzbank)

Facebook:

<https://www.facebook.com/commerzbank>

^b Commerzbank, "Commerzbank at a glance", *Commerzbank website* (www.commerzbank.de/en/hauptnavigation/konzern/commerzbank_im_berblick/commerzbank_ueberblick.html), viewed 1 October 2016.

^c Commerzbank, "Interim Report as at 30 June 2016", page 2, available at: https://www.commerzbank.de/media/en/aktionaere/service/archive/konzern/2016/q2_2016/zwischenbericht_q2_2016.pdf, viewed 1 October.

^d Commerzbank, "Positions and Directives", *website Commerzbank* (https://www.commerzbank.de/en/nachhaltigkeit/nachhaltigkeitsstandards/positionen_und_richtlinien/positionen_und_richtlinien.html), viewed 1 October 2016.

^e Commerzbank, "Positions and Directives", *website Commerzbank* (https://www.commerzbank.de/en/nachhaltigkeit/nachhaltigkeitsstandards/positionen_und_richtlinien/positionen_und_richtlinien.html), viewed 1 October 2016.

^f IUSCOMP, "War Weapons Control Act (Kriegswaffenkontrollgesetz, KrWaffKontrG)", *website IUSCOMP* (<http://www.iuscomp.org/gla/statutes/KrWaffKontrG.htm>), viewed 1 October 2016.

^g Commerzbank, written response to Profundo dated 3 June 2014.

^h Commerzbank, written response to Profundo dated 9 October 2013; Commerzbank, written response to Profundo dated 3 June 2014.

ⁱ Commerzbank, written response to Profundo dated 3 June 2014.

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 EUR millions^j</i> |
|--|-------------------------------|---|
| Allianz | \$1,748 | € 1,654 |
| BayernLB | \$402 | € 381 |
| Commerzbank | \$1,630 | € 1,542 |
| Deka Group | \$287 | € 271 |
| Deutsche Bank | \$5,154 | € 4,877 |
| DZ Bank | \$66 | € 62 |
| Helaba | \$183 | € 173 |
| KfW | \$66 | € 62 |
| Landesbank Baden-Württemberg (LBBW) | \$66 | € 62 |
| Siemens Financial Services | \$163 | € 154 |

Allianz (Germany)

Allianz (Germany) has made an estimated US\$ 1,748 million available to the nuclear weapons companies selected for this research project since January 2013.

Allianz (Germany) owns or manages shares of the nuclear weapon companies for an amount of US\$ 185 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 1 Shareholdings managed by Allianz

| Company | Country | Total value (US\$ mln) | % Outstanding | Filing date |
|-------------------------------|----------------|-------------------------------|----------------------|--------------------|
| Fluor | United States | 88 | 1.18 | 31-3-2016 |
| Huntington Ingalls Industries | United States | 33 | 0.51 | 31-3-2016 |
| Orbital ATK | United States | 65 | 1.28 | 31-3-2016 |

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

Allianz (Germany) owns or manages bonds of the nuclear weapon companies for an amount of US\$ 1,562 million (see table below). Only holdings of 0.50% or more of the outstanding bonds at the most recent available filing date are included.

^j Exchange rate: 1 USD = 0.946211 EUR, 24 November 2016.

Table 2 Bondholdings managed by Allianz

| Company | Country | Total value (US\$ mln) | % Outstanding | Filing date |
|-------------------------------|----------------|------------------------|---------------|-------------|
| Aecom | United States | 40 | 1.95 | 30-9-2015 |
| BAE Systems | United Kingdom | 161 | 2.63 | 31-3-2016 |
| Boeing | United States | 259 | 2.43 | 31-3-2016 |
| Fluor | United States | 13 | 0.84 | 31-3-2016 |
| Honeywell International | United States | 345 | 2.60 | 31-3-2016 |
| Huntington Ingalls Industries | United States | 45 | 3.78 | 30-9-2015 |
| Leonardo-Finmeccanica | Italy | 129 | 2.66 | 31-3-2016 |
| Moog | United States | 21 | 7.15 | 31-3-2016 |
| Northrop Grumman | United States | 191 | 2.99 | 31-3-2016 |
| Raytheon | United States | 191 | 3.55 | 31-3-2016 |
| Safran | France | 153 | 7.19 | 31-3-2016 |
| Textron | United States | 15 | 0.52 | 31-3-2016 |

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

BayernLB (Germany)

BayernLB (Germany) has made an estimated US\$ 402 million available to the nuclear weapons companies selected for this research project since January 2013.

BayernLB (Germany) provided loans for an estimated amount of US\$ 393 million to the nuclear weapon companies (see table below). The table shows all loans closed since January 2013 or maturing after August 2016.

Table 3 Loans provided by BayernLB

| Company | Total value (US\$ mln) | Est. participation of this bank (US\$ mln) | Closing date | Maturity date |
|-------------------------|------------------------|--|--------------|---------------|
| Airbus Group | 3,797 | 66 | 14-10-2014 | 14-10-2019 |
| Boeing | 2,300 | 42 | 5-11-2011 | 10-11-2016 |
| Boeing | 2,473 | 50 | 23-9-2014 | 15-10-2015 |
| Boeing | 2,473 | 50 | 23-9-2014 | 16-10-2019 |
| Boeing | 2,465 | 50 | 4-11-2015 | 3-11-2016 |
| Boeing | 2,365 | 50 | 4-11-2015 | 3-11-2020 |
| Honeywell International | 4,000 | 60 | 10-7-2015 | 10-7-2020 |
| Honeywell International | 1,500 | 25 | 29-4-2016 | 28-4-2017 |

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

BayernLB (Germany) underwrote bond issuances for an estimated amount of US\$ 10 million to the nuclear weapon companies since January 2013 (see table below).

Table 4 Underwriting of bond issuances by BayernLB

| Company | Total value (US\$ mln) | Est. participation of this bank (US\$ mln) | Issue date | Maturity date |
|----------------|-------------------------------|---|-------------------|----------------------|
| Boeing | 350 | 10 | 30-4-2013 | 15-11-2018 |

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

Commerzbank (Germany)

Commerzbank (Germany) has made an estimated US\$ 1,630 million available to the nuclear weapons companies selected for this research project since January 2013.

Commerzbank (Germany) provided loans for an estimated amount of US\$ 1,341 million to the nuclear weapon companies (see table below). The table shows all loans closed since January 2013 or maturing after August 2016.

Table 5 Loans provided by Commerzbank

| 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 | 134 | 14-10-2014 | 14-10-2019 |
| BAE Systems | 3,269 | 131 | 12-12-2013 | 12-12-2018 |
| Boeing | 2,300 | 42 | 5-11-2011 | 10-11-2016 |
| Boeing | 2,473 | 30 | 23-9-2014 | 15-10-2015 |
| Boeing | 2,473 | 30 | 23-9-2014 | 16-10-2019 |
| Boeing | 2,465 | 30 | 4-11-2015 | 3-11-2016 |
| Boeing | 2,365 | 30 | 4-11-2015 | 3-11-2020 |
| Leonardo-Finmeccanica | 3,001 | 150 | 9-7-2014 | 9-7-2019 |
| Leonardo-Finmeccanica | 2,212 | 139 | 6-7-2015 | 6-7-2020 |
| Safran | 2,744 | 183 | 4-12-2015 | 4-12-2020 |
| Serco | 1,159 | 72 | 21-2-2012 | 28-3-2017 |
| Serco | 714 | 45 | 12-3-2015 | 12-3-2019 |
| Thales | 1,835 | 122 | 19-12-2014 | 19-12-2019 |

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

Commerzbank (Germany) underwrote bond issuances for an estimated amount of US\$ 289 million to the nuclear weapon companies since January 2013 (see table below).

Table 6 Underwriting of bond issuances by Commerzbank

| Company | Total value (US\$ mln) | Est. participation of this bank (US\$ mln) | Issue date | Maturity date |
|-----------------------|------------------------|--|------------|---------------|
| Airbus Group | 640 | 64 | 20-10-2014 | 29-10-2029 |
| Boeing | 350 | 10 | 30-4-2013 | 15-11-2018 |
| Boeing | 300 | 4 | 28-10-2014 | 30-10-2021 |
| Boeing | 300 | 4 | 28-10-2014 | 30-10-2024 |
| Boeing | 250 | 3 | 18-2-2015 | 1-3-2025 |
| Boeing | 250 | 3 | 18-2-2015 | 1-3-2035 |
| Boeing | 250 | 3 | 18-2-2015 | 1-3-2045 |
| Boeing | 250 | 4 | 27-10-2015 | 30-10-2022 |
| Boeing | 300 | 5 | 27-10-2015 | 30-10-2025 |
| Boeing | 350 | 5 | 27-10-2015 | 30-10-2020 |
| Boeing | 400 | 5 | 16-5-2016 | 15-6-2046 |
| Boeing | 400 | 8 | 16-5-2016 | 15-6-2026 |
| Boeing | 400 | 9 | 16-5-2016 | 15-6-2023 |
| Leonardo-Finmeccanica | 950 | 59 | 26-11-2013 | 19-1-2021 |
| Leonardo-Finmeccanica | 339 | 20 | 17-1-2014 | 19-1-2021 |
| Thales | 668 | 83 | 31-5-2016 | 7-6-2023 |

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

Deka Group (Germany)

Deka Group (Germany) has made an estimated US\$ 287 million available to the nuclear weapons companies selected for this research project since January 2013.

Deka Group (Germany) owns or manages shares of the nuclear weapon companies for an amount of US\$ 256 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 7 Shareholdings managed by Deka Group

| Company | Country | Total value (US\$ mln) | % Outstanding | Filing date |
|--------------|-----------------|------------------------|---------------|-------------|
| Airbus Group | The Netherlands | 256 | 0.53 | 31-5-2016 |

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

Deka Group (Germany) owns or manages bonds of the nuclear weapon companies for an amount of US\$ 31 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 8 Bondholdings managed by Deka Group

| Company | Country | Total value (US\$ mln) | % Outstanding | Filing date |
|-----------------------|---------|------------------------|---------------|-------------|
| Leonardo-Finmeccanica | Italy | 31 | 0.63 | 30-6-2015 |

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

Deutsche Bank (Germany)

Deutsche Bank (Germany) has made an estimated US\$ 5,154 million available to the nuclear weapons companies selected for this research project since January 2013.

Deutsche Bank (Germany) provided loans for an estimated amount of US\$ 1,946 million to the nuclear weapon companies (see table below). The table shows all loans closed since January 2013 or maturing after August 2016.

Table 9 Loans provided by Deutsche Bank

| Company | Total value (US\$ mln) | Est. participation of this bank (US\$ mln) | Closing date | Maturity date |
|-------------------------|------------------------|--|--------------|---------------|
| Airbus Group | 3,797 | 134 | 14-10-2014 | 14-10-2019 |
| BAE Systems | 3,269 | 131 | 12-12-2013 | 12-12-2018 |
| Bechtel | 1,000 | 20 | 7-6-2016 | 7-6-2021 |
| Bechtel | 1,500 | 30 | 7-6-2016 | 7-6-2021 |
| Boeing | 2,300 | 42 | 5-11-2011 | 10-11-2016 |
| Boeing | 2,473 | 90 | 23-9-2014 | 15-10-2015 |
| Boeing | 2,473 | 90 | 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 | 190 | 10-7-2015 | 10-7-2020 |
| Honeywell International | 1,500 | 65 | 29-4-2016 | 28-4-2017 |
| Honeywell International | 4,000 | 343 | 29-4-2016 | 29-4-2021 |
| Northrop Grumman | 1,600 | 64 | 8-7-2015 | 8-7-2020 |
| Raytheon | 1,250 | 44 | 13-11-2015 | 13-11-2020 |
| Safran | 2,744 | 183 | 4-12-2015 | 4-12-2020 |

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

Deutsche Bank (Germany) underwrote bond issuances for an estimated amount of US\$ 1,681 million to the nuclear weapon companies since January 2013 (see table below).

Table 10 Underwriting of bond issuances by Deutsche Bank

| Company | Total value (US\$ mln) | Est. participation of this bank (US\$ mln) | Issue date | Maturity date |
|-------------------------|-------------------------------|---|-------------------|----------------------|
| Airbus Group | 679 | 75 | 13-5-2016 | 13-5-2026 |
| Airbus Group | 1,018 | 113 | 13-5-2016 | 13-5-2031 |
| Airbus Group | 1,209 | 242 | 14-6-2016 | 14-6-2021 |
| BAE Systems | 300 | 100 | 30-9-2014 | 7-10-2044 |
| BAE Systems | 800 | 267 | 30-9-2014 | 7-10-2024 |
| Boeing | 150 | 50 | 30-4-2013 | 3-11-2014 |
| Boeing | 250 | 9 | 28-10-2014 | 30-10-2017 |
| Boeing | 300 | 9 | 28-10-2014 | 30-10-2021 |
| Boeing | 300 | 25 | 28-10-2014 | 30-10-2024 |
| Boeing | 250 | 8 | 18-2-2015 | 1-3-2035 |
| Boeing | 250 | 8 | 18-2-2015 | 1-3-2045 |
| Boeing | 250 | 28 | 18-2-2015 | 1-3-2025 |
| Boeing | 300 | 9 | 27-10-2015 | 30-10-2025 |
| Boeing | 350 | 11 | 27-10-2015 | 30-10-2020 |
| Boeing | 250 | 21 | 27-10-2015 | 30-10-2022 |
| 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 | 30 | 18-11-2013 | 1-12-2023 |
| Honeywell International | 700 | 70 | 18-11-2013 | 17-11-2015 |
| Larsen & Toubro | 36 | 5 | 13-6-2014 | 13-5-2016 |
| Leonardo-Finmeccanica | 950 | 59 | 26-11-2013 | 19-1-2021 |
| Leonardo-Finmeccanica | 339 | 20 | 17-1-2014 | 19-1-2021 |
| Northrop Grumman | 850 | 57 | 28-5-2013 | 1-6-2018 |
| Northrop Grumman | 950 | 63 | 28-5-2013 | 1-6-2043 |
| Northrop Grumman | 1,050 | 70 | 28-5-2013 | 1-8-2023 |
| Northrop Grumman | 600 | 126 | 3-2-2015 | 15-4-2045 |
| Raytheon | 300 | 8 | 24-11-2014 | 15-12-2024 |
| Raytheon | 300 | 8 | 24-11-2014 | 15-12-2044 |
| Thales | 389 | 56 | 13-3-2013 | 19-3-2021 |
| Thales | 648 | 93 | 13-3-2013 | 20-3-2018 |

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

Deutsche Bank (Germany) owns or manages shares of the nuclear weapon companies for an amount of US\$ 1,380 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 Deutsche Bank

| Company | Country | Total value (US\$ mln) | % Outstanding | Filing date |
|------------------|-----------------|------------------------|---------------|-------------|
| Airbus Group | The Netherlands | 271 | 0.56 | 31-5-2016 |
| BAE Systems | United Kingdom | 399 | 1.79 | 1-6-2016 |
| BWX Technologies | United States | 24 | 0.69 | 31-3-2016 |
| Fluor | United States | 102 | 1.48 | 29-2-2016 |
| Moog | United States | 8 | 0.50 | 31-3-2016 |
| Raytheon | United States | 577 | 1.58 | 31-3-2016 |

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

Deutsche Bank (Germany) owns or manages bonds of the nuclear weapon companies for an amount of US\$ 148 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 12 Bondholdings managed by Deutsche Bank

| Company | Country | Total value (US\$ mln) | % Outstanding | Filing date |
|--------------------|---------------|------------------------|---------------|-------------|
| Aerojet Rocketdyne | United States | 11 | 3.24 | 30-4-2016 |
| General Dynamics | United States | 45 | 1.56 | 31-3-2016 |
| Moog | United States | 4 | 1.27 | 30-4-2016 |
| Northrop Grumman | United States | 43 | 0.67 | 31-3-2016 |
| Raytheon | United States | 45 | 0.83 | 31-3-2016 |

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

DZ Bank (Germany)

DZ Bank (Germany) has made an estimated US\$ 66 million available to the nuclear weapons companies selected for this research project since January 2013.

DZ Bank (Germany) provided loans for an estimated amount of US\$ 66 million to the nuclear weapon companies (see table below). The table shows all loans closed since January 2013 or maturing after August 2016.

Table 13 Loans provided by DZ Bank

| Company | Total value (US\$ mln) | Est. participation of this bank (US\$ mln) | Closing date | Maturity date |
|--------------|------------------------|--|--------------|---------------|
| Airbus Group | 3,797 | 66 | 14-10-2014 | 14-10-2019 |

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

Helaba (Germany)

Helaba (Germany) has made an estimated US\$ 183 million available to the nuclear weapons companies selected for this research project since January 2013.

Helaba (Germany) provided loans for an estimated amount of US\$ 183 million to the nuclear weapon companies (see table below). The table shows all loans closed since January 2013 or maturing after August 2016.

Table 14 Loans provided by Helaba

| Company | Total value (US\$ mln) | Est. participation of this bank (US\$ mln) | Closing date | Maturity date |
|----------------|-------------------------------|---|---------------------|----------------------|
| Airbus Group | 3,797 | 66 | 14-10-2014 | 14-10-2019 |
| Serco | 1,159 | 72 | 21-2-2012 | 28-3-2017 |
| Serco | 714 | 45 | 12-3-2015 | 12-3-2019 |

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

KfW (Germany)

KfW (Germany) has made an estimated US\$ 66 million available to the nuclear weapons companies selected for this research project since January 2013.

KfW (Germany) provided loans for an estimated amount of US\$ 66 million to the nuclear weapon companies (see table below). The table shows all loans closed since January 2013 or maturing after August 2016.

Table 15 Loans provided by KfW

| Company | Total value (US\$ mln) | Est. participation of this bank (US\$ mln) | Closing date | Maturity date |
|----------------|-------------------------------|---|---------------------|----------------------|
| Airbus Group | 3,797 | 66 | 14-10-2014 | 14-10-2019 |

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

Landesbank Baden-Württemberg (LBBW) (Germany)

Landesbank Baden-Württemberg (LBBW) (Germany) has made an estimated US\$ 66 million available to the nuclear weapons companies selected for this research project since January 2013.

Landesbank Baden-Württemberg (LBBW) (Germany) provided loans for an estimated amount of US\$ 66 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 Landesbank Baden-Württemberg (LBBW)

| Company | Total value (US\$ mln) | Est. participation of this bank (US\$ mln) | Closing date | Maturity date |
|----------------|-------------------------------|---|---------------------|----------------------|
| Airbus Group | 3,797 | 66 | 14-10-2014 | 14-10-2019 |

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

Siemens Financial Services (Germany)

Siemens Financial Services (Germany) has made an estimated US\$ 163 million available to the nuclear weapons companies selected for this research project since January 2013.

Siemens Financial Services (Germany) provided loans for an estimated amount of US\$ 163 million to the nuclear weapon companies (see table below). The table shows all loans closed since January 2013 or maturing after August 2016.

Table 17 Loans provided by Siemens Financial Services

| Company | Total value (US\$ mln) | Est. participation of this bank (US\$ mln) | Closing date | Maturity date |
|-------------------------------|-----------------------------------|---|-------------------------|--------------------------|
| 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 |
| Orbital ATK | 700 | 12 | 8-10-2013 | 1-11-2018 |
| Orbital ATK | 1,010 | 17 | 8-10-2013 | 1-11-2018 |

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