

## **Appendices**

**Appendix 1. The Largest Global SWFs [Their Assets under Management (AuM), Origins and Transparency (L-M index)] as of August 14, 2015**

| Country           | Sovereign Wealth Fund Name                        | AuM (USD in billion) | Est. | Origin        | L-M* Index |
|-------------------|---|----------------------|------|---------------|------------|
| Norway            | Government Pension Fund – Global                  | 882.0                | 1990 | Oil           | 10         |
| UAE – Abu Dhabi   | Abu Dhabi Investment Authority                    | 773.0                | 1976 | Oil           | 6          |
| China             | China Investment Corporation                      | 746.7                | 2007 | Non-Commodity | 8          |
| Saudi Arabia      | SAMA Foreign Holdings                             | 671.8                | n/a  | Oil           | 4          |
| Kuwait            | Kuwait Investment Authority                       | 592.0                | 1953 | Oil           | 6          |
| China             | SAFE Investment Company                           | 547.0                | 1997 | Non-Commodity | 4          |
| China – Hong Kong | Hong Kong Monetary Authority Investment Portfolio | 400.2                | 1993 | Non-Commodity | 8          |
| Singapore         | Government of Singapore Investment Corporation    | 344.0                | 1981 | Non-Commodity | 6          |
| Qatar             | Qatar Investment Authority                        | 256.0                | 2005 | Oil & Gas     | 5          |
| China             | National Social Security Fund                     | 236.0                | 2000 | Non-Commodity | 5          |
| Singapore         | Temasek Holdings                                  | 193.6                | 1974 | Non-Commodity | 10         |
| UAE – Dubai       | Investment Corporation of Dubai                   | 183.0                | 2006 | Non-Commodity | 5          |
| UAE – Abu Dhabi   | Abu Dhabi Investment Council                      | 110.0                | 2007 | Oil           | n/a        |
| Australia         | Australian Future Fund                            | 95.0                 | 2006 | Non-Commodity | 10         |
| Russia            | Reserve Fund                                      | 88.9                 | 2008 | Oil           | 5          |
| South Korea       | Korea Investment Corporation                      | 84.7                 | 2005 | Non-Commodity | 9          |
| Russia            | National Welfare Fund                             | 79.9                 | 2008 | Oil           | 5          |
| Kazakhstan        | Samruk-Kazyna JSC                                 | 77.5                 | 2008 | Non-Commodity | n/a        |

|                 |  |      |      |               |     |
|-----------------|--|------|------|---------------|-----|
| Kazakhstan      | Kazakhstan National Fund                   | 77.0 | 2000 | Oil           | 2   |
| UAE – Abu Dhabi | International Petroleum Investment Company | 66.3 | 1984 | Oil           | 9   |
| UAE – Abu Dhabi | Mubadala Development Company               | 66.3 | 2002 | Oil           | 10  |
| Libya           | Libyan Investment Authority                | 66.0 | 2006 | Oil           | 1   |
| Iran            | National Development Fund of Iran          | 62.0 | 2011 | Oil & Gas     | 5   |
| US – Alaska     | Alaska Permanent Fund                      | 53.9 | 1976 | Oil           | 10  |
| Algeria         | Revenue Regulation Fund                    | 50.0 | 2000 | Oil & Gas     | 1   |
| Malaysia        | Khazanah Nasional                          | 41.6 | 1993 | Non-Commodity | 9   |
| Brunei          | Brunei Investment Agency                   | 40.0 | 1983 | Oil           | 1   |
| US – Texas      | Texas Permanent School Fund                | 37.7 | 1854 | Oil & Other   | 9   |
| Azerbaijan      | State Oil Fund                             | 37.3 | 1999 | Oil           | 10  |
| Ireland         | National Pensions Reserve Fund             | 27.4 | 2001 | Non-Commodity | 10  |
| France          | Strategic Investment Fund                  | 25.5 | 2008 | Non-Commodity | 9   |
| New Zealand     | New Zealand Superannuation Fund            | 21.8 | 2003 | Non-Commodity | 10  |
| US – New Mexico | New Mexico State Investment Council        | 19.8 | 1958 | Oil & Gas     | 9   |
| Iraq            | Development Fund for Iraq                  | 18.0 | 2003 | Oil           | n/a |
| Canada          | Alberta's Heritage Fund                    | 17.5 | 1976 | Oil           | 9   |
| US – Texas      | Permanent University Fund                  | 17.2 | 1876 | Oil & Gas     | n/a |
| East Timor      | Timor-Leste Petroleum Fund                 | 16.6 | 2005 | Oil & Gas     | 8   |
| Chile           | Social and Economic Stabilization Fund     | 15.2 | 2007 | Copper        | 10  |
| UAE – Federal   | Emirates Investment Authority              | 15.0 | 2007 | Oil           | 3   |
| Russia          | Russian Direct Investment Fund             | 13.0 | 2011 | Non-Commodity | n/a |
| Oman            | State General Reserve Fund                 | 13.0 | 1980 | Oil & Gas     | 4   |
| Bahrain         | Mumtalakat Holding Company                 | 10.5 | 2006 | Non-Commodity | 10  |

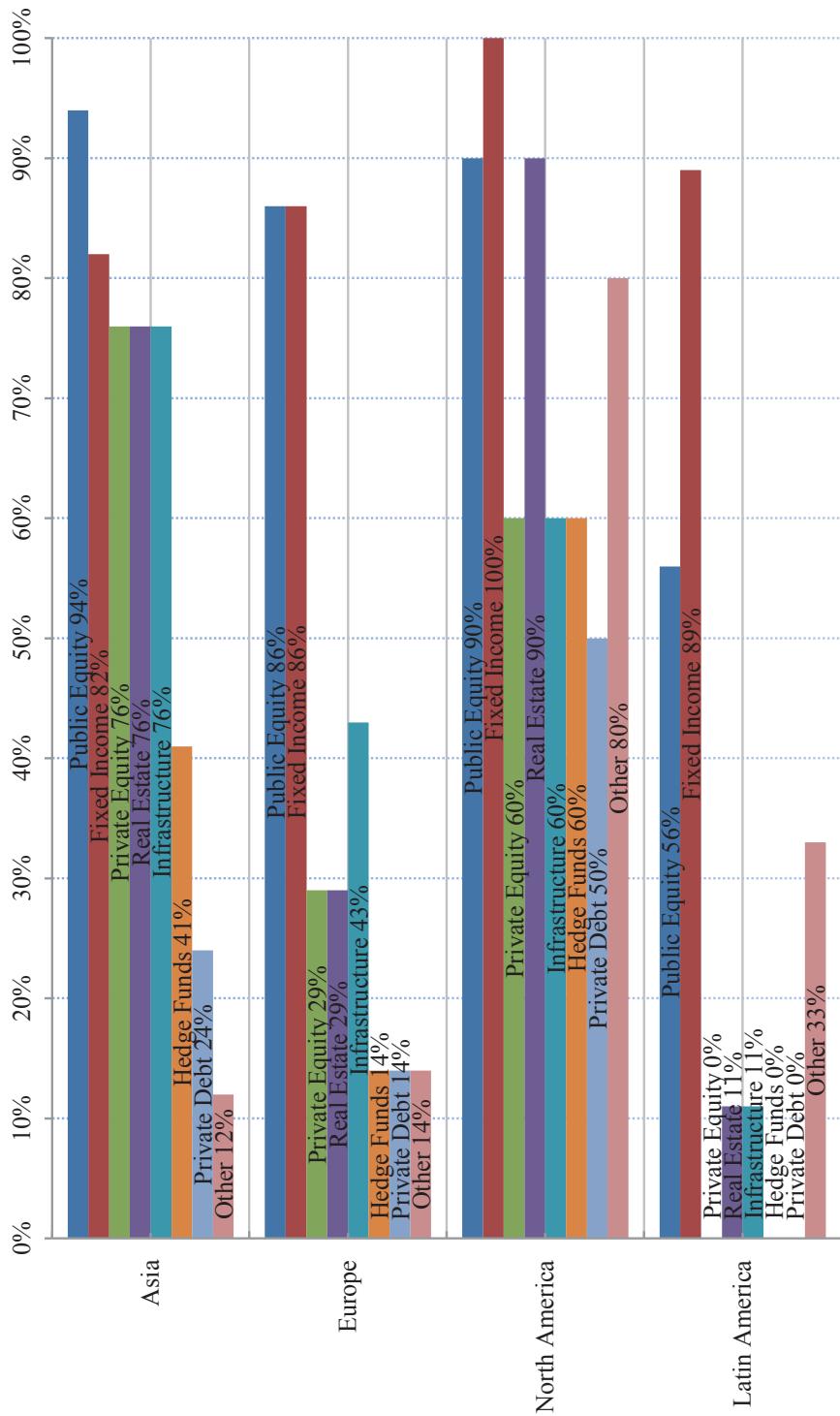
Appendices

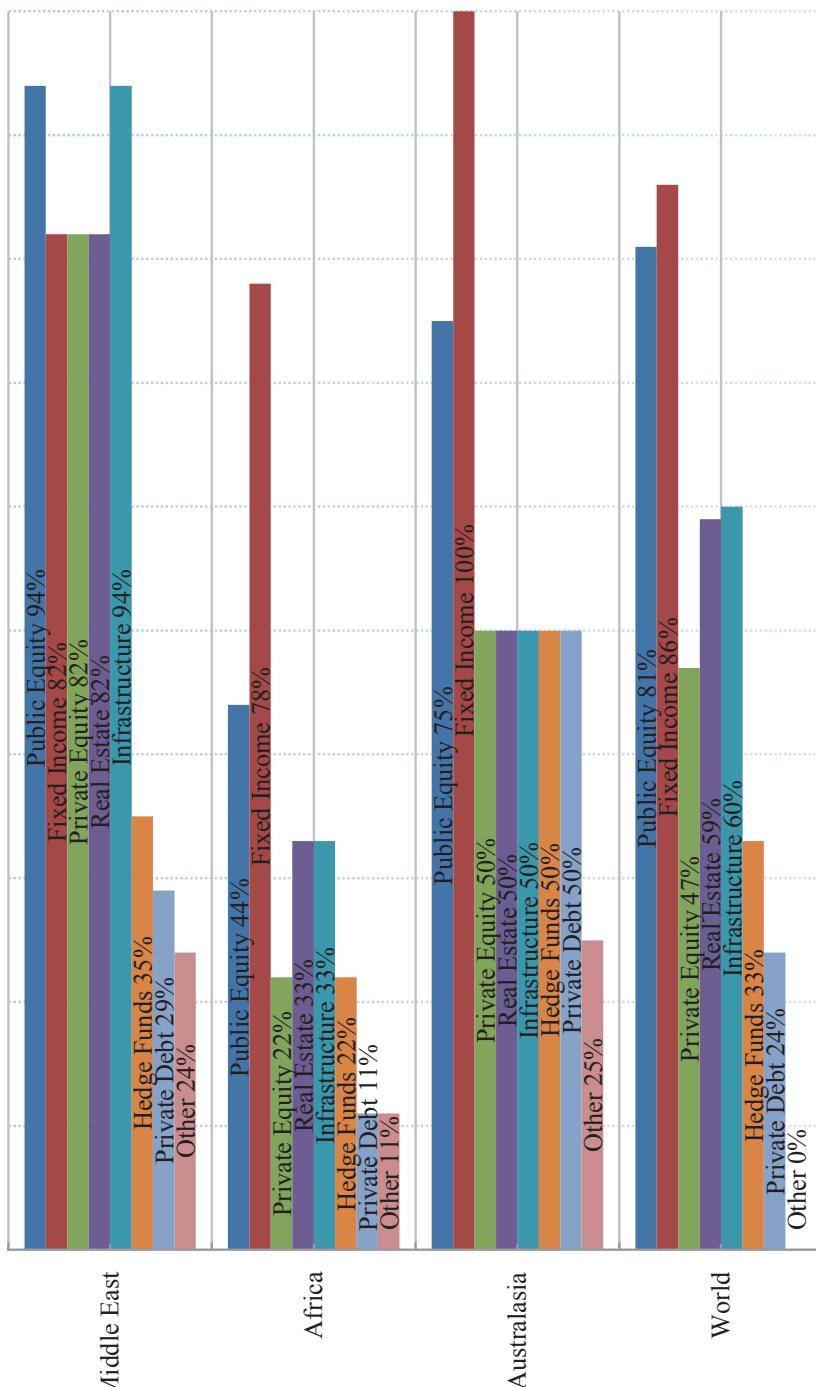
| <b>Country</b>       | <b>Sovereign Wealth Fund Name</b>              | <b>AuM<br/>(USD in billion)</b> | <b>Est.</b> | <b>Origin</b>       | <b>L-M* Index</b> |
|----------------------|--|---------------------------------|-------------|---------------------|-------------------|
| Peru                 | Fiscal Stabilization Fund                      | 9.2                             | 1999        | Non-Commodity       | n/a               |
| Chile                | Pension Reserve Fund                           | 7.9                             | 2006        | Copper              | 10                |
| Mexico               | Oil Revenues Stabilization Fund of Mexico      | 6.0                             | 2000        | Oil                 | 4                 |
| Oman                 | Oman Investment Fund                           | 6.0                             | 2006        | Oil                 | 4                 |
| Italy                | Italian Strategic Fund                         | 6.0                             | 2011        | Non-Commodity       | n/a               |
| Botswana             | Pula Fund                                      | 5.7                             | 1994        | Diamonds & Minerals | 6                 |
| US – Wyoming         | Permanent Wyoming Mineral Trust Fund           | 5.6                             | 1974        | Minerals            | 9                 |
| Trinidad & Tobago    | Heritage and Stabilization Fund                | 5.5                             | 2000        | Oil                 | 8                 |
| Brazil               | Sovereign Fund of Brazil                       | 5.3                             | 2008        | Non-Commodity       | 9                 |
| Saudi Arabia         | Public Investment Fund                         | 5.3                             | 2008        | Oil                 | 4                 |
| China                | China-Africa Development Fund                  | 5.0                             | 2007        | Non-Commodity       | 5                 |
| Angola               | Fundo Soberano de Angola                       | 5.0                             | 2012        | Oil                 | 8                 |
| US – North Dakota    | North Dakota Legacy Fund                       | 3.2                             | 2011        | Oil & Gas           | n/a               |
| US – Alabama         | Alabama Trust Fund                             | 2.5                             | 1985        | Oil & Gas           | 9                 |
| Kazakhstan           | National Investment Corporation                | 2.0                             | 2012        | Oil                 | n/a               |
| Nigeria – Bayelsa    | Bayelsa Development and Investment Corporation | 1.5                             | 2012        | Non-Commodity       | N/A               |
| Nigeria              | Nigerian Sovereign Investment Authority        | 1.4                             | 2012        | Oil                 | 9                 |
| US – Louisiana       | Louisiana Education Quality Trust Fund         | 1.3                             | 1986        | Oil & Gas           | n/a               |
| Panama               | Fondo de Ahorro de Panamá                      | 1.2                             | 2012        | Non-Commodity       | n/a               |
| UAE – Ras Al Khaimah | RAK Investment Authority                       | 1.2                             | 2005        | Oil                 | 3                 |
| Bolivia              | FINPRO   | 1.2                             | 2012        | Non-Commodity       | n/a               |

|                    |  |                |      |               |     |
|--------------------|--|----------------|------|---------------|-----|
| Senegal            | Senegal FONSIS                         | 1.0            | 2012 | Non-Commodity | n/a |
| Palestine          | Palestine Investment Fund              | 0.8            | 2003 | Non-Commodity | n/a |
| Venezuela          | FEM                                    | 0.8            | 1998 | Oil           | 1   |
| Kiribati           | Revenue Equalization Reserve Fund      | 0.6            | 1956 | Phosphates    | 1   |
| Vietnam            | State Capital Investment Corporation   | 0.5            | 2006 | Non-Commodity | 4   |
| Gabon              | Gabon Sovereign Wealth Fund            | 0.4            | 1998 | Oil           | n/a |
| Ghana              | Ghana Petroleum Funds                  | 0.5            | 2011 | Oil           | n/a |
| Indonesia          | Government Investment Unit             | 0.3            | 2006 | Non-Commodity | n/a |
| Mauritania         | National Fund for Hydrocarbon Reserves | 0.3            | 2006 | Oil & Gas     | 1   |
| Australia          | Western Australian Future Fund         | 0.3            | 2012 | Minerals      | n/a |
| Mongolia           | Fiscal Stability Fund                  | 0.3            | 2011 | Minerals      | n/a |
| Equatorial Guinea  | Fund for Future Generations            | 0.1            | 2002 | Oil           | n/a |
| Papua New Guinea   | Papua New Guinea Sovereign Wealth Fund | n/a            | 2011 | Gas           | n/a |
| Turkmenistan       | Turkmenistan Stabilization Fund        | n/a            | 2008 | Oil & Gas     | n/a |
| US - West Virginia | West Virginia Future Fund              | n/a            | 2014 | Oil & Gas     | n/a |
| Mexico             | Fondo Mexicano del Petroleo            | n/a            | 2014 | Oil & Gas     | n/a |
|                    | <b>Total Oil &amp; Gas Related</b>     | <b>4,168.6</b> |      |               |     |
|                    | <b>Total Other</b>                     | <b>3,115.1</b> |      |               |     |
|                    | <b>TOTAL</b>                           | <b>7,283.7</b> |      |               |     |

Source: SWF Institute Fund Rankings: <http://www.swfinstiute.org/fund-rankings/> [accessed: 14.08.2015]. Note the Limburg-Maduell (L-M) SWF transparency index methodology is summed up on the Sovereign Wealth Fund Institute website: <http://www.swfinstiute.org/statistics-research/limburg-maduell-transparency-index/> [accessed: 15.09.2015].

## Appendix 2. Proportions of Global and Regionally Based Sovereign Wealth Funds Investing in Each Asset Class as of the end of 2014





**Source:** 2015 Preqin Sovereign Wealth Fund Review: Exclusive Extract available at: <https://www.preqin.com/docs/reports/2015-Preqin-Sovereign-Wealth-Fund-Review-Exclusive-Extract-June-2015.pdf> [accessed: 12.08.2015].

### Appendix 3. Bucharest Stock Exchange

**Profile:** Although the origins of the Bucharest Stock Exchange date back to 1882, the market was re-established in April 1997 and the first trading session took place later that year. Ownership of the Bucharest Stock Exchange is dispersed among domestic and international financial institutions and the bourse has aspirations to become a regionally competitive and diversified emerging market. The exchange's strategy is designed to complete the privatization process, enhance market breadth and depth, improve visibility and elevate the bourse to emerging market status.

Source: Bucharest Stock Exchange website available at: <http://www.bvb.ro/AboutUs/Overview> [accessed: 31.08.2015].

Table A3.1. Equity trading figures as of 2014

| Category               | Shares  |         | Sec. Derivatives |         | ETFs    |       | UCITS   |       |
|------------------------|---------|---------|------------------|---------|---------|-------|---------|-------|
|                        | EOB     | Off EOB | Reporting Trades | EOB     | Off EOB | EOB   | Off EOB | EOB   |
| Turnover<br>(EUR m)    | 1,334   | 857     | –                |         |         |       |         |       |
| Trades                 | 763,115 | 1,350   | –                | 197,174 | –       | 1,624 | –       | 1,946 |
| Market Cap.<br>(EUR m) |         | 18,385  |                  | –       |         | –     |         | 10    |
| Listings               |         | 83      |                  | 113     |         | 1     |         | 3     |

Source: D. Somers, *European Exchange Report*, Federation of European Securities Exchanges (FESE) Economics and Statistics Committee (ESC), Brussels, Belgium, August 2015, p. 1–27. Abbreviations used: UCITS = Undertakings for Collective Investment in Transferable Securities, ETFs = Exchange Traded Funds, EOB = Electronic Order Book.

Table A3.2. Bonds trading figures as of 2014

| <b>Category</b>  | <b>EOB</b> | <b>Off EOB</b> |
|------------------|------------|----------------|
| Turnover (EUR m) | 14         | 21             |
| Trades           | 305        | 20             |
| Listings         | 71         |                |

Source: D. Somers, *European Exchange Report*, Federation of European Securities Exchanges (FESE) Economics and Statistics Committee (ESC), Brussels, Belgium, August 2015, p. 1-27.

Table A3.3. Derivatives trading figures as of 2014

| <b>Category</b>           | <b>Stock/Index Options and Futures</b> | <b>Bond Options and Futures</b> | <b>Commodities</b> |
|---------------------------|--|---------------------------------|--------------------|
| Notional turnover (EUR m) | -                                      | -                               | -                  |
| Contracts Traded          | -                                      | -                               | -                  |

Source: D. Somers, *European Exchange Report*, Federation of European Securities Exchanges (FESE) Economics and Statistics Committee (ESC), Brussels, Belgium, August 2015, p. 1-27.

## Appendix 4. Bulgarian Stock Exchange – Sofia

**Profile:** Bulgarian Stock Exchange – Sofia was officially licensed by the State Securities and Exchange Commission to operate as a stock exchange on October 9, 1997 and is currently the only active stock exchange in Bulgaria. The scope of its activity comprises: organizing trading in securities and other financial instruments, operation and maintenance of information systems for securities trading, establishment and maintenance of a clearing system guaranteeing the settlement of obligations assumed under securities transactions executed on the Exchange. The Exchange is 50,05% owned by the State (via a stake held by the Bulgarian Ministry of Finance), other shareholders include local and foreign companies and private individuals.

Source: Bulgarian Stock Exchange-Sofia website available at: <http://www.bse-sofia.bg/?page=Profile> [accessed: 31.08.2015].

Table A4.1. Equity trading figures as of 2014

| <b>Category</b>        | <b>Shares</b> |                |                         | <b>Sec. Derivatives</b> |                |            | <b>ETFs</b>    |            |             | <b>UCITS</b>   |            |   |
|------------------------|---------------|----------------|-------------------------|-------------------------|----------------|------------|----------------|------------|-------------|----------------|------------|---|
|                        | <b>EOB</b>    | <b>Off EOB</b> | <b>Reporting Trades</b> | <b>EOB</b>              | <b>Off EOB</b> | <b>EOB</b> | <b>Off EOB</b> | <b>EOB</b> | <b>ETFs</b> | <b>Off EOB</b> | <b>EOB</b> |   |
| Turnover<br>(EUR m)    | 299           | –              | 309                     | 0                       | 0              | –          | –              | –          | 0           | 0              | 0          | 0 |
| Trades                 | 107,428       | –              | 1,814                   | 46                      | 2              | –          | –              | –          | 2           | 2              | 1          | 1 |
| Market Cap.<br>(EUR m) | 4,988         | –              | –                       | –                       | –              | –          | –              | –          | 2           | 2              | 2          | 2 |
| Listings               | 372           | 3              | 3                       | –                       | –              | –          | –              | –          | 2           | 2              | 2          | 2 |

Source: D. Somers, *European Exchange Report*, Federation of European Securities Exchanges (FESE) Economics and Statistics Committee (ESC), Brussels, Belgium, August 2015, p. 1–27. Abbreviations used: UCITS = Undertakings for Collective Investment in Transferable Securities, ETFs = Exchange Traded Funds, EOB = Electronic Order Book.

Table A4.2. Bonds trading figures as of 2014

| <b>Category</b>  | <b>EOB</b> | <b>Off EOB</b> |
|------------------|------------|----------------|
| Turnover (EUR m) | 75         | 18             |
| Trades           | 411        | 22             |
| Listings         | 59         |                |

Source: D. Somers, *European Exchange Report*, Federation of European Securities Exchanges (FESE) Economics and Statistics Committee (ESC), Brussels, Belgium, August 2015, p. 1-27.

Table A4.3. Derivatives trading figures as of 2014

| <b>Category</b>           | <b>Stock/Index Options and Futures</b> | <b>Bond Options and Futures</b> | <b>Commodities</b> |
|---------------------------|--|---------------------------------|--------------------|
| Notional turnover (EUR m) | –                                      | –                               | –                  |
| Contracts Traded          | –                                      | –                               | –                  |

Source: D. Somers, *European Exchange Report*, Federation of European Securities Exchanges (FESE) Economics and Statistics Committee (ESC), Brussels, Belgium, August 2015, p. 1-27.

## Appendix 5. CEESEG – Budapest Stock Exchange

**Profile:** The predecessor of today's Budapest Stock Exchange (BSE) commenced its operation on January 18, 1864 in Pest (the eastern part of what today's Budapest). The exchange is trying to develop a transparent and liquid market for its listed securities issued either in Hungary or abroad. It is also striving to offer a comprehensive array of financing and investment opportunities. A majority stake (50.45%) of BSE's equity is held by CEESEG AG.

Source: CEESEG – Budapest Stock Exchange website available at: <https://www.bse.hu/> [access: 31.08.2015].

Table A5.1. Equity trading figures as of 2014

| Category               | Shares    |         |                  | Sec. Derivatives |         |     | ETFs    |        | UCITS   |       |
|------------------------|-----------|---------|------------------|------------------|---------|-----|---------|--------|---------|-------|
|                        | EOB       | Off EOB | Reporting Trades | EOB              | Off EOB | EOB | Off EOB | EOB    | Off EOB | UCITS |
| Turnover<br>(EUR m)    | 5,997     | 69      | 11               | 175              | –       | 1   | 0       | 26     | 0       |       |
| Trades                 | 1,187,216 | 110     | 221              | 169,806          | –       | 180 | 0       | 13,254 | 0       |       |
| Market Cap.<br>(EUR m) |           | 12,012  |                  | 437              |         | 7   |         | 2,672  |         |       |
| Listings               |           | 48      |                  | –                |         | 1   |         | 133    |         |       |

Source: D. Somers, *European Exchange Report*, Federation of European Securities Exchanges (FESE) Economics and Statistics Committee (ESC), Brussels, Belgium, August 2015, p. 1–27. Abbreviations used: UCITS = Undertakings for Collective Investment in Transferable Securities, ETFs = Exchange Traded Funds, EOB = Electronic Order Book.

Table A5.2. Bonds trading figures as of 2014

| <b>Category</b>  | <b>EOB</b> | <b>Off EOB</b> |
|------------------|------------|----------------|
| Turnover (EUR m) | 6          | –              |
| Trades           | 180        | –              |
| Listings         | 77         |                |

Source: D. Somers, *European Exchange Report*, Federation of European Securities Exchanges (FESE) Economics and Statistics Committee (ESC), Brussels, Belgium, August 2015, p. 1–27.

Table A5.3. Derivatives trading figures as of 2014

| <b>Category</b>           | <b>Stock/Index Options and Futures</b> | <b>Bond Options and Futures</b> | <b>Commodities</b> |
|---------------------------|--|---------------------------------|--------------------|
| Notional turnover (EUR m) | 1,716                                  | –                               | 70                 |
| Contracts Traded          | 908,483                                | –                               | 3,930              |

Source: D. Somers, *European Exchange Report*, Federation of European Securities Exchanges (FESE) Economics and Statistics Committee (ESC), Brussels, Belgium, August 2015, p. 1–27.

## Appendix 6. CEESEG – Ljubljana Stock Exchange

**Profile:** The principal business of the Ljubljana Stock Exchange (LJSE) is to ensure proper conditions for the matching of supply and demand in the trading in securities and other financial instruments, and for organized, transparent, liquid, and effective trading in securities, in accordance with the law and other regulations. CEESEG AG is the LJSE's sole shareholder. Besides operating the stock market, the LJSE provides quotation dissemination, market research and analysis and auxiliary services.

Source: CEESEG – Ljubljana Stock Exchange website available at: <http://www.lse.si/cgi-bin/lve.cgi?doc=1468> [accessed: 31.08.2015].

Table A6.1. Equity trading figures as of 2014

| Category               | Shares |         |                  | Sec. Derivatives |         |     | ETFs    |     |     | UCITS   |     |         |
|------------------------|--------|---------|------------------|------------------|---------|-----|---------|-----|-----|---------|-----|---------|
|                        | EOB    | Off EOB | Reporting Trades | EOB              | Off EOB | EOB | Off EOB | EOB | EOB | Off EOB | EOB | Off EOB |
| Turnover<br>(EUR m)    | 608    | –       | 161              | –                | –       | –   | –       | –   | –   | –       | –   | –       |
| Trades                 | 73,630 | –       | 31               | –                | –       | –   | –       | –   | –   | –       | –   | –       |
| Market Cap.<br>(EUR m) | 6,214  |         | –                |                  |         | –   |         | –   |     | –       | –   | –       |
| Listings               | 51     |         | –                |                  |         | –   |         | –   |     | –       | –   | –       |

Source: D. Somers, *European Exchange Report*, Federation of European Securities Exchanges (FESE) Economics and Statistics Committee (ESC), Brussels, Belgium, August 2015, p. 1–27. Abbreviations used: UCITS = Undertakings for Collective Investment in Transferable Securities, ETFs = Exchange Traded Funds, EOB = Electronic Order Book.

Table A6.2. Bonds trading figures as of 2014

| <b>Category</b>  | <b>EOB</b> | <b>Off EOB</b> |
|------------------|------------|----------------|
| Turnover (EUR m) | 69         | –              |
| Trades           | 1,099      | –              |
| Listings         | 45         | –              |

Source: D. Somers, *European Exchange Report*, Federation of European Securities Exchanges (FESE) Economics and Statistics Committee (ESC), Brussels, Belgium, August 2015, p. 1–27.

Table A6.3. Derivatives trading figures as of 2014

| <b>Category</b>           | <b>Stock/Index Options and Futures</b> | <b>Bond Options and Futures</b> | <b>Commodities</b> |
|---------------------------|--|---------------------------------|--------------------|
| Notional turnover (EUR m) | –                                      | –                               | –                  |
| Contracts Traded          | –                                      | –                               | –                  |

Source: D. Somers, *European Exchange Report*, Federation of European Securities Exchanges (FESE) Economics and Statistics Committee (ESC), Brussels, Belgium, August 2015, p. 1–27.

## Appendix 7. CEESEG – Prague Stock Exchange

Profile: Prague Stock Exchange (PSE), dating back to a commodity marketplace founded in 1871, is the largest and oldest organizer of securities trading in the Czech Republic (re-established in 1993 following a fifty-year break caused by World War II and communism). Trading on PSE is conducted via licensed securities traders which are PSE members (primarily major banks and brokerages). The PSE's stock is ultimately controlled by CEESEG, whereas the bourse and its subsidiaries form part of PX Group (also comprising a power exchange and a securities depository).

Source: CEESEG – Prague Stock Exchange website available at: <https://www.pse.cz/> [accessed: 31.08.2015].

Table A7.1. Equity trading figures as of 2014

| Category            | Shares  |         |                  | Sec. Derivatives |         |     | ETFs    |     |         | UCITS |         |
|---------------------|---------|---------|------------------|------------------|---------|-----|---------|-----|---------|-------|---------|
|                     | EOB     | Off EOB | Reporting Trades | EOB              | Off EOB | EOB | Off EOB | EOB | Off EOB | EOB   | Off EOB |
| Turnover (EUR m)    | 5,572   | –       | –                | 21               | –       | –   | –       | –   | –       | –     | –       |
| Trades              | 629,507 | –       | –                | 3,813            | –       | –   | –       | –   | –       | –     | –       |
| Market Cap. (EUR m) | 22,644  |         | –                |                  | –       |     | –       |     | –       | –     | –       |
| Listings            |         | 23      |                  |                  | 68      |     | –       |     | –       | –     | –       |

Source: D. Somers, *European Exchange Report*, Federation of European Securities Exchanges (FESE) Economics and Statistics Committee (ESC), Brussels, Belgium, August 2015, p. 1–27. Abbreviations used: UCITS = Undertakings for Collective Investment in Transferable Securities, ETFs = Exchange Traded Funds, EOB = Electronic Order Book.

Table A7.2. Bonds trading figures as of 2014

| <b>Category</b>  | <b>EOB</b> | <b>Off EOB</b> |
|------------------|------------|----------------|
| Turnover (EUR m) | 296        | –              |
| Trades           | 1,857      | –              |
| Listings         | 116        | –              |

Source: D. Somers, *European Exchange Report*, Federation of European Securities Exchanges (FESE) Economics and Statistics Committee (ESC), Brussels, Belgium, August 2015, p. 1–27.

Table A7.3. Derivatives trading figures as of 2014

| <b>Category</b>           | <b>Stock/Index Options and Futures</b> | <b>Bond Options and Futures</b> | <b>Commodities</b> |
|---------------------------|--|---------------------------------|--------------------|
| Notional turnover (EUR m) | –                                      | –                               | –                  |
| Contracts Traded          | –                                      | –                               | –                  |

Source: D. Somers, *European Exchange Report*, Federation of European Securities Exchanges (FESE) Economics and Statistics Committee (ESC), Brussels, Belgium, August 2015, p. 1–27.

## Appendix 8. Warsaw Stock Exchange

**Profile:** The Warsaw Stock Exchange (WSE), originally set up as a mercantile exchange in 1817, was remodeled in 1989 following the overthrow of Poland's former communist regime. The bourse is incorporated as a joint-stock company and aspires to leadership among CEE securities exchanges. Besides equity trading, the securities market provides trading activity in derivatives and structured products, as well as information dissemination services. Close to 25 years of experience, high reliability of trading, operational security and a broad range of products make the WSE a hallmark of Poland's financial transition since 1989. The WSE is majority owned (51.76% of votes) by the Polish State Treasury.

Source: Warsaw Stock Exchange website available at: [http://gpw.pl/root\\_en](http://gpw.pl/root_en) [accessed: 31.08.2015].

Table A8.1. Equity trading figures as of 2014

| <b>Category</b>        | <b>Shares</b> |                |                         | <b>Sec. Derivatives</b> |                |            | <b>ETFs</b>    |            |                | <b>UCITS</b> |                |  |
|------------------------|---------------|----------------|-------------------------|-------------------------|----------------|------------|----------------|------------|----------------|--------------|----------------|--|
|                        | <b>EOB</b>    | <b>Off EOB</b> | <b>Reporting Trades</b> | <b>EOB</b>              | <b>Off EOB</b> | <b>EOB</b> | <b>Off EOB</b> | <b>EOB</b> | <b>Off EOB</b> | <b>EOB</b>   | <b>Off EOB</b> |  |
| Turnover<br>(EUR m)    | 49,349        | 8,148          | –                       | 134                     | 0              | 25         | 0              | 17         | 1              | 17           | 1              |  |
| Trades                 | 14,688,869    | 11,377         | –                       | 58,718                  | 0              | 10,322     | 1              | 9,092      | 6              | 616          | 6              |  |
| Market Cap.<br>(EUR m) | 139,069       | –              | –                       | –                       | –              | –          | –              | –          | –              | –            | –              |  |
| Listings               | 902           | –              | 824                     | –                       | 68             | –          | 31             | –          | –              | –            | –              |  |

Source: D. Somers, *European Exchange Report*, Federation of European Securities Exchanges (FESE) Economics and Statistics Committee (ESC), Brussels, Belgium, August 2015, p. 1–27. Abbreviations used: UCITS = Undertakings for Collective Investment in Transferable Securities, ETFs = Exchange Traded Funds, EOB = Electronic Order Book.

Table A8.2. Bonds trading figures as of 2014

| <b>Category</b>  | <b>EOB</b> | <b>Off EOB</b> |
|------------------|------------|----------------|
| Turnover (EUR m) | 563        | 188            |
| Trades           | 64,411     | 269            |
| Listings         |            | 517            |

Source: D. Somers, *European Exchange Report*, Federation of European Securities Exchanges (FESE) Economics and Statistics Committee (ESC), Brussels, Belgium, August 2015, p. 1–27.

Table A8.3. Derivatives trading figures as of 2014

| <b>Category</b>           | <b>Stock/Index Options and Futures</b> | <b>Bond Options and Futures</b> | <b>Commodities</b> |
|---------------------------|--|---------------------------------|--------------------|
| Notional turnover (EUR m) | 55,591                                 | 71                              | –                  |
| Contracts Traded          | 7,222,687                              | 3,025                           | –                  |

Source: D. Somers, *European Exchange Report*, Federation of European Securities Exchanges (FESE) Economics and Statistics Committee (ESC), Brussels, Belgium, August 2015, pp. 1–27.

## **Annex 9. Sovereign Wealth Fund investments in Central and Eastern Europe**

| <b>Country of the Target Entity</b> | <b>Acquirer Entity (country)</b>                      | <b>Transaction Date</b> | <b>Investment Type</b> | <b>Transaction Amount (in USD million)</b> | <b>% stake acquired</b> | <b>Target Industry</b>     |
|-------------------------------------|---|-------------------------|------------------------|--|-------------------------|----------------------------|
| Czech Republic                      | Government Pension Fund – Global (Norway)             | n/a                     | bonds                  | 23   | –                       | Infrastructure             |
| Czech Republic                      | Government Pension Fund – Global (Norway)             | n/a                     | bonds                  | 69   | –                       | Energy                     |
| Czech Republic                      | Government Pension Fund – Global (Norway)             | n/a                     | listed equity          | 71   | 0.49%                   | Energy                     |
| Czech Republic                      | Government Pension Fund – Global (Norway)             | n/a                     | T-bonds                | 1004                                       | –                       | –                          |
| Czech Republic                      | Government Pension Fund – Global (Norway)             | n/a                     | listed equity          | 36   | 0.42%                   | Financials                 |
| Czech Republic                      | Government Pension Fund – Global (Norway)             | 31.12.2013              | listed equity          | 2  | 0.54%                   | Telecommunication Services |
| Czech Republic                      | Abu Dhabi Investment Authority (United Arab Emirates) | n/a                     | real estate            | 120  | 50.00%                  | Real Estate                |
| Estonia                             | Government Pension Fund – Global (Norway)             | n/a                     | bonds                  | 16   | –                       | Energy                     |
| Hungary                             | State General Reserve Fund                            | 11.21.2011              | real estate            | 108  | 100%                    | Real Estate                |
| Hungary                             | Abu Dhabi Investment Authority (United Arab Emirates) | n/a                     | n/a                    | 100  | n/a                     | n/a                        |

|           |   |            |                 |        |        |                            |
|-----------|---|------------|-----------------|--------|--------|----------------------------|
| Hungary   | Government of Singapore Investment Corporation<br>(Singapore) | 07.06.2007 | unlisted equity | 330.22 | 17.38% | Infrastructure             |
| Hungary   | Government Pension Fund – Global (Norway)                     | n/a        | T-bonds         | 323    | –      | –                          |
| Hungary   | Government Pension Fund – Global (Norway)                     | n/a        | bonds           | 49     | –      | Financials                 |
| Hungary   | Government Pension Fund – Global (Norway)                     | 31.12.2013 | listed equity   | 1      | 2.59%  | Industrials                |
| Hungary   | Government Pension Fund – Global (Norway)                     | 31.12.2013 | listed equity   | 19     | 1.94%  | Telecommunication Services |
| Hungary   | Government Pension Fund – Global (Norway)                     | 31.12.2013 | listed equity   | 27     | 0.72%  | Healthcare                 |
| Hungary   | Government Pension Fund – Global (Norway)                     | n/a        | listed equity   | 0.7    | 0.94%  | Financials                 |
| Hungary   | Government Pension Fund – Global (Norway)                     | n/a        | listed equity   | 0.1    | 0.18%  | Information Technology     |
| Hungary   | Government Pension Fund – Global (Norway)                     | n/a        | listed equity   | 71     | 0.97%  | Energy                     |
| Hungary   | Government Pension Fund – Global (Norway)                     | n/a        | listed equity   | 68     | 1.24%  | Financials                 |
| Hungary   | Government Pension Fund – Global (Norway)                     | n/a        | listed equity   | 0.2    | 0.29%  | Consumer Discretionary     |
| Lithuania | Government Pension Fund – Global (Norway)                     | n/a        | listed equity   | 3      | 2.77%  | Aerospace                  |

Appendices

| <b>Country of the Target Entity</b> | <b>Acquirer Entity (country)</b>                           | <b>Transaction Date</b> | <b>Investment Type</b> | <b>Transaction Amount (in USD million)</b> | <b>% stake acquired</b> | <b>Target Industry</b> |
|-------------------------------------|--|-------------------------|------------------------|--|-------------------------|------------------------|
| Lithuania                           | Government Pension Fund – Global (Norway)                  | n/a                     | T-bonds                | 91   | –                       | –                      |
| Poland                              | Abu Dhabi Investment Authority (United Arab Emirates)      | n/a                     | listed equity          | n/a  | n/a                     | n/a                    |
| Poland                              | Kuwait Investment Authority (Kuwait)                       | n/a                     | listed real estate     | 400  | n/a                     | n/a. Real Estate       |
| Poland                              | Government of Singapore Investment Corporation (Singapore) | n/a                     | n/a                    | n/a  | n/a                     | Financials             |
| Poland                              | Abu Dhabi Investment Authority (United Arab Emirates)      | 5.22.2013               | credit granting        | 35   | –                       | Real Estate            |
| Poland                              | Government Pension Fund – Global (Norway)                  | n/a                     | T-bonds                | 2826                                       | –                       | –                      |
| Poland                              | Qatar Investment Authority (Qatar)                         | November 2013           | real estate            | n/a  | n/a                     | Real Estate            |
| Poland                              | State Administration of Foreign Exchange (China)           | September 2013          | real estate            | n/a  | n/a                     | Real Estate            |
| Poland                              | Kuwait Investment Authority (Kuwait)                       | 10.18.2007              | real estate            | 21   | n/a                     | Real Estate            |

|        |   |     |               |      |     |  |
|--------|---|-----|---------------|------|-----|--|
| Poland | China Investment Corporation (China)      | n/a | listed equity | 1000 | n/a | Healthcare, Satellite Communications and T-bonds |
| Poland | Government Pension Fund – Global (Norway) | –   | listed equity | 476  | –   | Financials                                       |
| Poland | Government Pension Fund – Global (Norway) | –   | listed equity | 127  | –   | Consumer Discretionary                           |
| Poland | Government Pension Fund – Global (Norway) | –   | listed equity | 20   | –   | Consumer Staples                                 |
| Poland | Government Pension Fund – Global (Norway) | –   | listed equity | 223  | –   | Energy   |
| Poland | Government Pension Fund – Global (Norway) | –   | listed equity | 7    | –   | Healthcare                                       |
| Poland | Government Pension Fund – Global (Norway) | –   | listed equity | 152  | –   | Industrials                                      |
| Poland | Government Pension Fund – Global (Norway) | –   | listed equity | 38   | –   | Information Technology                           |
| Poland | Government Pension Fund – Global (Norway) | –   | listed equity | 50   | –   | Materials  |
| Poland | Government Pension Fund – Global (Norway) | –   | listed equity | 21   | –   | Telecommunication Services                       |
| Poland | Government Pension Fund – Global (Norway) | –   | real estate   | 44   | –   | Real Estate                                      |
| Poland | Government Pension Fund – Global (Norway) | –   | listed equity | 15   | –   | Utilities  |

## Appendices

| <b>Country of the Target Entity</b> | <b>Acquirer Entity (country)</b>                      | <b>Transaction Date</b> | <b>Investment Type</b> | <b>Transaction Amount (in USD million)</b> | <b>% stake acquired</b> | <b>Target Industry</b> |
|-------------------------------------|---|-------------------------|------------------------|--|-------------------------|------------------------|
| Slovakia                            | Government Pension Fund – Global (Norway)             | n/a                     | T-bonds                | 287  | –                       | –                      |
| Slovakia                            | Abu Dhabi Investment Authority (United Arab Emirates) | 9.28.2006               | real estate            | 0.7  | –                       | Real Estate            |
| Slovakia                            | Abu Dhabi Investment Authority (United Arab Emirates) | 8.17.2009               | real estate            | 0.03                                       | –                       | Real Estate            |
|                                     |   |                         | Total                  | 8,274.95                                   |                         |                        |

Source: Sovereign Wealth Fund Institute Database, government and media reports.