

A NEW CASE STUDY APPROACH FOR INTERNATIONAL FINANCE: THE ANALYSIS OF SOVEREIGN WEALTH FUNDS

**Millet-Reyes, Benedicte
Monmouth University**

**Bailey, Barrie A.
Monmouth University**

ABSTRACT

The largest sovereign wealth funds (SWFs) have been created in the past twenty years as a response to growing commodity revenue and portfolio diversification concerns from emerging countries. The analysis of a country's sovereign wealth fund provides an updated pedagogical tool for International Finance students, especially at the MBA level. The concepts of country risk, balance of payments, currency regime, portfolio diversification and international corporate governance are all combined into a case study focused on SWFs. This project will require students to perform comprehensive research and statistical analysis. Contrary to other finance topics where the internet may provide easy sources of information, this project requires a thorough search of advanced sources making it a good "capstone" tool for International Finance. In this case study, we concentrate on Russia which started its National Welfare Fund in 2008.

THE ROLE OF SOVEREIGN WEALTH FUNDS

Sovereign wealth funds are state-owned investment agencies managed separately from a country's official reserves. Many emerging countries have created SWFs to increase the investment return on their fast growing accumulation of foreign reserves. Beck and Fidora (2008) point out that SWFs also serve the purpose of stabilizing government and export revenues in resource-rich countries. Sovereign wealth funds also include developed countries in search of better or diversified returns for their reserves. Their strategy usually relies on switching accumulated reserves from government bonds to equity investments while at the same time decreasing the impact of the US dollar on their portfolios.

Current textbooks in International Finance have not placed any significant emphasis on SWFs. Eun and Resnick (2009) cover the topic in one paragraph in the chapter on the Balance of Payments. Madura (2010) does not mention SWFs in his textbook. The second edition of Bekaert and Hodrick's book (2012) includes a paragraph under the topic of institutional investors. The

study of SWFs provides fertile ground for emphasizing and reinforcing class concepts covered in International Finance courses at both the undergraduate and graduate levels. The remainder of this paper will provide a description of a case study project on SWFs that can be assigned to students.

SWF SELECTION FOR STUDENT CASE STUDY

Students should start their project by picking a Sovereign Wealth Fund from one of the four categories described as follows:

1: Emerging countries with commodity-based SWFs:

UAE (Abu Dhabi, Dubai), Saudi Arabia, Kuwait, Russia, Qatar, Lybia, Algeria, Kazakhstan, Azerbaijan, Brunei, Iran, Chile, Oman, Botswana, East Timor, Mexico, Saudi Arabia, Trinidad & Tobago, Nigeria, Venezuela, Kiribati, Mauritania.

2: Developed countries with commodity-based SWFs:

Norway, US (Alaska, Texas, Wyoming), Canada.

3: Emerging countries with non-commodity based SWFs:

China, Hong-Kong, Singapore, South Korea, Malaysia, Brazil, Bahrain, Vietnam, Indonesia.

4: Developed countries with non-commodity based SWFs:

Australia, Ireland, France, New Zealand, US (New Mexico), Italy.

The list of countries with reported SWFs was taken from the SWF Institute website. Some countries like China have more than one sovereign wealth fund. After choosing a fund for analysis, students should discuss the goals and characteristics of the SWF. Russia and its National Welfare Fund will be used for illustrative purposes throughout the remainder of this paper. The following provides an outline that can be used by students when conducting their research and writing a case analysis.

CHARACTERISTICS OF THE SELECTED FUND: THE CASE STUDY OF RUSSIA

Students should begin their analysis by providing the mission and descriptive statistics of their individual funds. Continuing with our example, the Russian Federation's SWF (the Oil Stabilization Fund) belongs to the category of emerging countries funded by oil revenue. In 2008, the Oil Stabilization fund was split into two funds. The first one, renamed "Reserve Fund," is used to manage foreign reserves generated from oil and gas revenue and is restricted to investments preserving capital in the long-run (mostly government bonds). Its goal is to stabilize economic development by reducing inflationary pressure and earnings volatility in the export of natural resources.

The second one, renamed "National Welfare Fund," is also managed by the Ministry of Finance of the Russian Federation. Its mission and accumulation rules can be found on the website of the Ministry of Finance. Oil and gas revenues are first used to finance government expenditures (up to 3.7% of forecasted GDP) then placed in a Reserve Fund (up to 10% of forecasted GDP). The revenue above 10% of forecasted GDP is allocated to the National Welfare Fund. Its mission is to co-finance voluntary pension savings of Russian citizens and help balance the budget of the Russian Pension fund.

After introducing their individual funds, students should provide descriptive statistics and comparisons between non-commodity and commodity based SWFs. For example, table 1 shows that the National Welfare Fund, which was started in 2008, is one of the smaller and more recent

funds. However, table 2 demonstrates that it has grown faster than the entire SFW market, representing 0.95% of market size in 2008 versus 1.95% in 2011.

Table 1: Statistics for the Largest SWF in Each Category (compared to National Welfare Fund)

	Russia National Welfare Fund (Category 1)	Abu Dhabi Investment Authority (Category 1)	Norway Government Pension Fund (Category 2)	China SAFE Investment (Category 3)	Australia Future Fund (Category 4)
Inception *	2008	1976	1990	1997	2004
Transparency Index *	5	3	10	2	10
Assets* (\$ billions)	88.7	627	571.5	567.9	72.9

*Data obtained from the SWF Institute (October 2011)

Table 2: Trends in Fund Size: 2008 to 2011 (in billions of US \$)

	Sep 2008	Sep 2009	Sep 2010	Sep 2011	% change 2008-2011
National Welfare Fund*	32.2	90.7	87.1	92.6	+ 188%
SWF market size**	3377	3864	4104	4761	+ 41%

*Obtained from the Russian Ministry of Finance

**Obtained from the SWF Institute

SOURCES OF SWF FUNDING: ANALYSIS OF BALANCE OF PAYMENTS AND OFFICIAL RESERVES

This section will allow students to apply concepts learned in class on the balance of payments and currency regimes. Students should be directed to retrieve recent numbers on the country’s current and capital accounts. Current analysis of the balance of payments for the selected country will provide information on why official reserves have been accumulated. The analysis of the country’s currency regimes (float or peg) will be addressed in the next section.

Returning to the example of the National Welfare Fund, the Central Bank of Russia provides information on the balance of trade, especially oil and gas revenue (see table 3). Other sources that can be consulted include the World Bank, IMF and research websites. The correlation between oil revenue and accumulation of reserves in the National Welfare Fund should be clearly examined.

After studying the balance of payments, students should examine the exchange rate regimes of the country from which their SWF originates. By studying exchange rate mechanisms, students will gain a better understanding of the economic and political ramifications of establishing SWFs. As noted in section III, the Russian Federation split its Oil Stabilization fund in 2008 in order to establish two separate SWFs. The Reserve fund is used to manage foreign reserves. Students should start with a brief description of the exchange rate regimes that Russia has implemented over time.

Table 3: Balance of Payments for Russian Federation (*)

In billions of US \$	January to June 2010	January to June 2011	% change
Current Account	52.1	56.3	+7.46%
Exports of Goods	189.9	249.4	+59.5%
Incl. oil	65.5	88.5	+35.1%
Incl. oil products	34.9	44.0	+26.1%
Incl. natural gas	23.4	32.4	+38.5%
Imports of Goods	-103.9	-147.2	+41.7%
Capital & Financial Account	-2.5	-26.4	+956.0%
Change in Reserve Assets	42.7	23.0	-46.1%

(*) Numbers were taken from the website of the Central Bank of Russia (updated Oct 2011)

HISTORICAL AND CURRENT ANALYSIS OF EXCHANGE RATE MECHANISMS

Students should have a clear understanding of the consequences of successive financial crises on the ruble. After its creation, the Russian Federation successfully renegotiated debt repayments inherited from the former Soviet Union. As a consequence, both Russian corporations and banks borrowed heavily from foreign investors. Following the Asian currency crisis, the ruble came under speculative attack in November 1997 and June 1998 in anticipation that the ruble would devalue. The Central Bank of Russia defended the ruble losing \$6 billion dollars in the process. As a commodity based economy with almost two-thirds of hard currency earnings coming from oil and nonferrous metal sales at the time, the economic outlook diminished with a drop in prices (Chiodo and Owyang 2002). Investors’ perceptions of the Russian economy significantly eroded. As a result of devaluation fears, the Russian stock, bond, and currency markets collapsed on August 13, 1998. After attempting to maintain the exchange rate peg rather than allowing the ruble to float, the government had no choice but to devalue the ruble (Chiodo and Owyang 2002).

After the financial crisis of 1998, the Russian Federation experienced a considerable period of expansion. Per capita income grew by over 5% each year between 1998 and 2008 while gross domestic product (GDP) increased at an average annual rate of 7% from 1999 to 2008 (Connolly 2011). Unfortunately, from 2000 through 2007, Russia also experienced rapid inflation as reflected in the 13.7 percent average annual increase in the consumer price index. The increase in inflation was due in part to the increase in money supply resulting from the massive interventions in the foreign exchange markets by the Central Bank of Russia. Again, Russian policy makers had to make a choice between limiting the appreciation of the ruble and controlling inflation (Tabata 2011). Even with a strong attempt to defend the ruble, the Bank of Russia was unable to maintain its peg and the Bank gradually devalued the ruble.

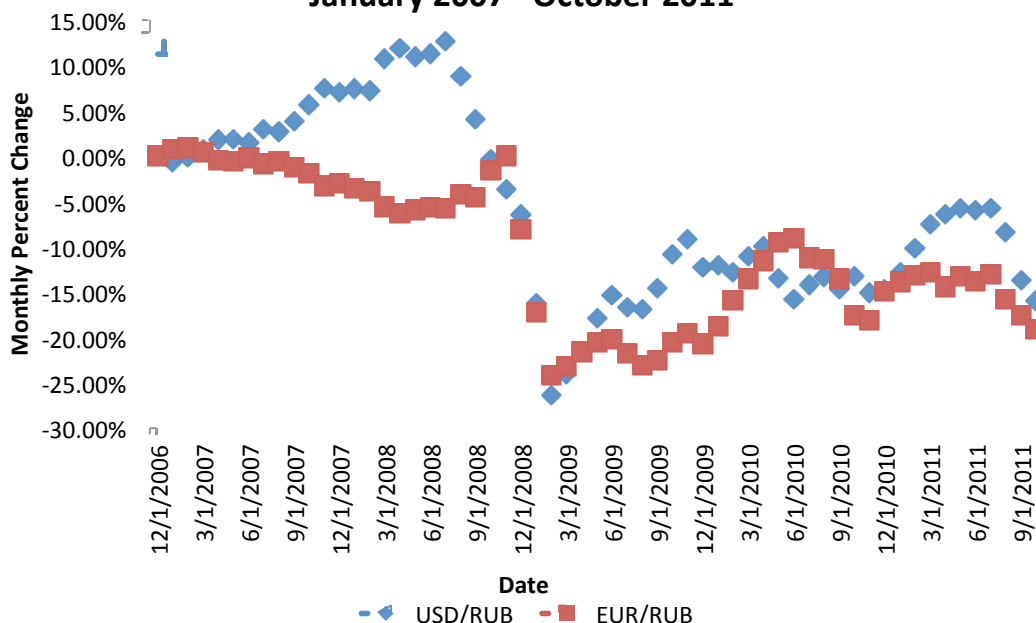
Currently, the exchange rate of the ruble is managed by the Central Bank of Russia. With the dissolution of the former Soviet Union, the State Bank of the USSR was disbanded on December 20, 1991 with all assets, liabilities and functions transferred to the Central Bank of the Russian Soviet Federative Socialist Republic (RSFSR). During 1991-1992, an “extensive network” of

commercial banks was established and the Bank of Russia began to buy and sell foreign exchange at official published exchange rates (Bank of Russia). Since the Russian financial crisis of 1998, the Central Bank of Russia has continued the use of a managed exchange rate policy that currently pegs the ruble to a bi-currency basket consisting of the euro (45%) and the dollar (55%).

Students should analyze current currency trends. Figure 1 provides an illustration of the \$/Ruble and € /Ruble exchange rates from 2007 – 2011. This graph can be used as a focal point to explain current economic and financial trends in the US, Eurozone and Russia. Also, the mechanisms of central bank intervention will have to be clearly analyzed. Students will retrieve news articles mentioning the intervention of the Russian Central Bank on currency markets and will explain which strategy was used (sterilized versus non sterilized intervention).

□

**Figure1: Ruble Verses the Dollar and Euro
January 2007 - October 2011**



Source: Oanda.com

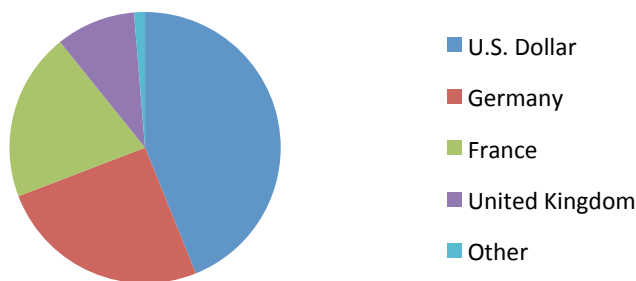
ACCUMULATION OF RESERVES AND EXCHANGE RATE MANAGEMENT

In this section, students should analyze how the country of origin for their SWF uses accumulated reserves for exchange rate management. Russia’s reserve accumulation can be directly tied to increasing oil exports and prices during the 2000s (Tabata 2011). The Bank of Russia manages reserves with the objective of ensuring “an optimal trade-off between safety, liquidity and return” (Bank of Russia Annual Report 2010). During 2010, Russian Federation foreign exchange assets grew by \$28.4 billion. Figure 2 illustrates that as of January 1, 2011, the U.S. accounted for 40.3% of distributed foreign reserve assets, Germany 23.2%, France 18.4%, the United Kingdom 8.7%, and other countries 9.4% (Bank of Russia Annual Report 2010).

In order to maintain a pegged currency, Russia has used its Reserve Fund to intervene in currency markets. Maintaining a pegged currency comes with a cost to a country’s domestic economy. Keeping a currency from appreciating usually requires large amounts of foreign reserves for intervention. Unfortunately, a massive intervention leads to an increase in domestic money supply and inflation. Russia’s sterilization attempts through use of its SWF have apparently not been totally successful. Russia has brought the rate of inflation under 10 percent just a few times in the last twenty years.

□

**Figure 2:
Bank of Russia Foreign Exchange
Reserve Assets By Country
As of January 1, 2011**



Source: Bank of Russia 2010 Annual Report

At this point, students might be asked to graph and discuss Russia’s historical battle with inflation and tie that into the increase in current account surpluses and foreign reserves. Depending on class level (undergraduate or graduate) and complexity desired by the instructor, students can be directed to focus solely on descriptive statistics or propose statistical analyses to explain correlations between economic variables (i.e. oil prices, exchange rates and currency reserves).

As a result of the need to lower inflation and diversify the economy, the Bank of Russia has indicated its need to focus on cushioning sharp fluctuations of the ruble against major world currencies. Stated in the Bank’s monetary policy guidelines for 2010-2012, “(t)he bank of Russia will seek in this period to create conditions for the implementation of the monetary policy model based on inflation targeting by gradually scaling down its interventions in the rate-setting process.”

IMPACT ON THE GLOBAL ECONOMY: COUNTRY RISK AND SWF STRATEGIES

In this section, students should try to evaluate the positive and/or negative impact of the National Welfare Fund on international financial markets and the economies of other countries. On one hand, as large institutional investors with long-term goals, SWFs could provide stability in financial markets. On the other hand, political motivations can lead to investments in sensitive industries or sudden sell-outs of financial assets. As the Russian economy recovers from the global financial crisis, foreign exchange reserves continue to grow. Because of the large scale

activity of SWFs, questions regarding the political motivations of such funds have arisen. Urban (2011) disputes claims that SWFs are established to further political agendas. He argues there are specific economic benefits from managing excessive foreign exchange reserves with the use of sovereign wealth funds. Along with earning a higher rate of return on invested reserves, SWFs provide security from economic shocks by providing funds to affected market sectors – primarily manufacturing and exports.

Students should analyze political, economic and currency risks for the country they have chosen. In this section, we compare the Russian Federation to the other BRIC countries (Brazil, China and India) in order to explain their impact on the global economy.

Table 4: Indicators of Country Risk

	Russia	Brazil	China	India
Country Rating*	B	A3	A3	A3
Population (millions as of Nov 2011)	142.4	194.9	1248.1	1206.9
GDP (billions of \$)	1884.9	2517.9	6988.4	1843.4
Corruption Perceptions Index**	2.4	3.8	3.6	3.1
Economic growth (%)				
2008 (actual)	5.6	5.2	9.6	6.8
2011 (forecast)	4.5	4.0	9.0	7.8
Current Account (% GDP)				
2008	6.2	-1.7	9.1	-2.5
2011	5.6	-2.9	4.1	-2.7
Foreign Debt (% GDP)				
2008	28.9	18.7	8.3	18.5
2011	28.3	20.6	9.6	16.6
Foreign Reserves (months of imports)				
2008	10.3	8.5	17.8	8.0
2011	12.8	11.2	19.4	6.5

*Information in table was taken from Coface.com

** Source: Transparency.org

Students have to find reliable sources for country ratings and corruption indices. These statistics are a good measure of country risk and they can be used for comparisons among countries. The Russian Federation has the lowest country rating and the highest corruption index among the four “BRIC” countries. The main source of risk comes from the high level of foreign debt, a weak banking structure and heavy reliance on commodities for export (see coface.com). With recent high energy prices, Russia has been able to generate a positive current account and accumulate more foreign reserves than Brazil, China and India. As previously mentioned, these reserves are first placed in the “Reserve fund” of the Russian Federation but the surplus goes into the “National Welfare Fund.”

The case study should also include an overview of current investment strategies in the SWF market. Data collection is not systematic since many SWFs do not disclose the allocation of their investments. However, newly created research databases and recent empirical studies provide sufficient sources for this case study. Chhaochharia and Laeven (2009) analyzed 40,000 foreign investments by SWFs over the period 1997-2007 and found that SWFs tend to invest in countries that share the same religion but pick industries that are not present at home. Acquisitions by SWFs are usually valued positively by markets, which is consistent with the results found for

other institutional investors. Bortolotti et al. (2010) used 1216 individual investments made by 35 SWFs between 1986 and 2005. They show that most ownership stakes are taken in unlisted firms, mostly in the financial sector.

To conclude their analyses, students should look at the investment behavior and individual impact of their SWF on the global economy and financial markets. As mentioned previously, transparency and accountability is an issue with state-backed funds. Finding publically available information can become problematic. However, the accountability of SWFs has greatly improved since 2008 with the adoption of IMF developed norms called the Santiago Principles (SP). While not a mechanism of transparency per se, these principles were created to increase the understanding of SWFs and their operations. In July 2001, the International Forum of Sovereign Wealth Funds (IFSWF), a voluntary group of SWFs including Russia, published a report on the experiences of members in applying the SP (IFSWF 2011). According to the IFSWF, key findings of the report include:

- “Members’ investment activities are based only on commercially-related considerations and they should be perceived and treated accordingly;
- The overwhelming majority of Members’ practices are fully or partially consistent with the Santiago Principles, while Members acknowledge that some further progress can and will continue to be made; and
- Members see the value of transparency and have a strong level of commitment to it, via the Santiago Principles.”

<http://www.ifswf.org/pr/pr8.htm>

While finding the report credible and admirable, Bagnall and Truman (2011) point out that the “compliance with the Santiago Principles is somewhat exaggerated.” They do acknowledge that the report provides an initial step towards a better understanding of the IFSWF and the SP.

INVESTMENT CHOICES OF THE NATIONAL WELFARE FUND (NWF)

In the case of Russia, the government has significantly reduced the amount of information it releases concerning its oil and gas industries. By a federal law dated September 30, 2010, the Ministry of Finance no longer publishes financial information on oil and gas revenues or information regarding the assets, revenues, and expenditures of Russia’s SWFs. According to the Ministry of Finance on their web page devoted to reporting on NWF assets and operations, “since 1 January 2010 till 1 January 2014 the Government doesn’t provide report on inflow and outflow of oil and gas revenues of the federal budget and on accumulation of National Wealth Fund Assets” (2011). According to the Revenue Watch Institute (2010), the change in policy may be the result of economics and politics. The government may be reluctant to disclose the amount of oil and gas funds used to finance budget deficits caused by the global economic crises or funds needed to maintain the current pace of government spending before upcoming elections.

Students can attempt to find information by searching the mainstream press regarding the direct and indirect investments made by the Russian government. Also, limited information on authorized (not actual) ownership stakes by the National Welfare Fund (NWF) can be found on the Ministry of Finance website. Eligible financial assets enacted by the Budget Code of the Russian Federation include:

- Debt securities of foreign states, foreign state agencies and central banks of the following countries: Austria, Belgium, Canada, Denmark, Finland, France, Germany, Luxembourg, Netherlands, Spain, Sweden, U.K., U.S. A minimum credit rating of AA- or Aa3 is required.

- NWF assets can be invested in the following supranationals: Asian Development Bank, Council of Europe Development Bank, European Bank for Reconstruction and Development, European Investment Bank, Inter-American Development Bank, International Bank for Reconstruction, International Finance Corporation, or Nordic Investment Bank
- Equity investments must be in publicly traded firms which are included in the following stock indices: MSCI World Index or FTSE World Index for foreign equities, Micex Index or RTS index for Russian equity.
- Funds may be allocated to the Vnesherconombank (VEB), the Russian “development bank”; the deposits can be in Russian Ruble, US dollar, Euro, or British Pound.

Students should be encouraged to give an overview of existing debt instruments at the international level (sovereign, government agencies, supranationals, etc.). They should also provide information on existing international stock indices.

CONCLUDING REMARKS

The analysis of existing Sovereign Wealth Funds (SWFs) provides comprehensive opportunities for case studies in International Finance. Students should be asked to concentrate on the SWF of one specific country to allow for an in depth analysis of global financial concepts including the balance of payments, currency regimes, country risk, and investment allocations at the international level. The project requires extensive data research, a deep understanding of financial tools taught in other courses, and a specific focus on global trends in financial markets. In this paper, we chose to concentrate on the Russian Federation because of its role as an emerging market, its relatively opaque political and economic environment, and the growing size of its SWFs. We provide the basic structure for a semester project customizable to the individual needs of students and instructors.

REFERENCES

- Bagnall, Sarah and Edwin M. Truman (2011). “IFSWF Report on Compliance with the Santiago Principles: Admirable but Flawed.” *Peterson Institute for International Economics Policy Brief*, Number PB11-14 (August), 1-5.
- Beck, Roland and Michael Fidora (2008). “The Impact of Sovereign Wealth Funds on Global Financial Markets.” *Intereconomics* (Nov/Dec), 349-358.
- Bekaert, Geert and Robert J. Hodrick (2012). *International Financial Management*, Second edition, Pearson.
- Bortolutti, Bernardo, Veljko Fotak, William Megginson and William Miracky (2010). “Sovereign Wealth Fund Patterns and Performance.” SSRN Working Paper Series.
- Central Bank of Russia: www.cbr.ru/eng/statistics
- Central Bank of Russia: Guidelines for the Single State Monetary Policy in 2010 and for 2011 and 2012: www.cbr.ru/eng/
- Chhaochharia, Vidhi and Luc Laeven (2009). “Sovereign Wealth Funds: Their Investment Strategies and Performance.” SSRN Working Paper Series.

Chiodo, Abbigail J. and Michael T. Owyang (2002). "A Case Study of a Currency Crisis: The Russian Default of 1998." *The Federal Reserve Bank of St. Louis Review* (November/December), 7-18.

Coface: www.coface.com

Corruption Perception Index: www.transparency.org

Eun, Cheols and Bruce G. Resnick (2009). *International Financial Management*, Fifth edition, McGraw-Hill.

Exchange Rates: www.oanda.com

International Forum of Sovereign Wealth Funds (2011). "IFSWF Members' Experiences in the Application of the Santiago Principles." www.ifswf.org

International Monetary Fund (2011). "Russian Federation: Financial System Stability Assessment," Country Report No. 11/291 (September), 1-76.

Madura, Jeff (2010). *International Financial Management*, Tenth edition, South-Western.

Ministry of Economic Development of the Russian Federation:
<http://invest.gov.ru/en/why/reasons/economic/>

Ministry of Finance of the Russian Federation: <http://www1.minfin.ru/en/nationalwealthfund>

Revenue Watch Institute (2010). "Russia Suspends Most Oil and Gas Disclosures." www.revenuewatch.org/print/3069

SWF Institute: www.swfinstitute.org/fund-rankings

Tabata, Shinichiro (2011). "Growth in the International Reserves of Russia, China, and India: A Comparison of Underlying Mechanisms." *Eurasian Geography and Economics*, Volume 52, Issue 3 (May/June), 409-427.

Transparency Index: www.swfinstitute.org

World Bank: www.worldbank.org/russia

Appendix A: Statistics Used for Case Study

Suggested data collection from students	Source
Statistics on SWFs	www.swfinstitute.org
Transparency Index	www.swfinstitute.org
Data on Russian SWFs	www1.minfin.ru
Balance of payments data	www.cbr.ru/eng/statistics
Exchange rates	www.oanda.com
Bank of Russia statistics	www.cbr.ru/eng/statistics
Inflation data	www.worldbank.org/russia
Country ratings	www.coface.com
Corruption Perception Index	www.transparency.org