Exploring the Visegrád-Russia Connection: Understanding the Political and Economic Ramifications of Sanction Policies Four Years Later (Essay 3: Financial Services & Governance)

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Essay 3: Financial Services & Governance

2018
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Introduction

As the world has grown in commercial and political interconnectedness over the last 60 years, Western capital markets have moved into the heart of the global economy. Never before has there been such rapid increases in wealth and prosperity. In combination with technological innovation, much of this growth is the result of the liquidity and funding provided by Western capital markets. Without access to debt, equity, and other financial products, global economies grind to a halt, in ways analogous to a car without gasoline. Due to the importance of access to debt financing and liquidity, when Russia annexed/invaded the Crimean Peninsula and provided support for the violence in the Donbass region, the United States and EU made sure to include capital market restrictions within their 2014 sanction packages. Coming up on four years later now, how have these restrictions affected the Russian economy? Due to Czechia, Hungary, Poland, and Slovakia’s historical inclusion in the Russian sphere of influence, and current inclusion in the EU, how have V4 nations navigated potential financial difficulties with a historic partner? In this third essay, the V4-Russian financial relationship will be explored. First, an overview of sanctions related to the capital markets and financial services industries will be reviewed. Next, an exploration of the Russian banking sector and V4 banking sectors will be undertaken. Third, a variety of metrics will be analyzed in order to provide a quantifiable picture of the changing V4-Russian financial dynamic. Finally, this essay will conclude with a discussion of various governance topics that require additional consideration. Each of these sections will be framed within the context of the 2014 EU sanctions to provide a nuanced perspective of the financial relationship and health between the V4 nations and Russia.
Review of Capital Markets-Related Sanctions

1. Overview of Western Sanction Policy and Significant Actors Targeted

Resulting from the Ukrainian Crisis of 2014, the EU collaborated within its member states to craft an appropriate set of economic sanctions that would express displeasure with Russian action in the region. In addition to the aforementioned sanctions targeting the energy industry (covered in Essay 2: Energy), EU economic sanctions were designed to harm the financial health of the Russian economic system. One of the simplest ways to accomplish this task is to target the institutions critical to financial health – the Russian banking industry. Outlined in Table 1, the resulting July 2014 EU Council decision targeted five Russian banks and their subsidiaries.

Table 1. Significant Russian Entities Targeted by Western Sanction Policy

<table>
<thead>
<tr>
<th>Name</th>
<th>Sector</th>
<th>Sanctioning Government(s)</th>
<th>Important Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank Rossiya</td>
<td>Banking</td>
<td>EU, US</td>
<td></td>
</tr>
<tr>
<td>Gazprombank</td>
<td>Banking</td>
<td>EU, US</td>
<td>Financial services arm of Gazprom.</td>
</tr>
<tr>
<td>Sberbank</td>
<td>Banking</td>
<td>EU, US</td>
<td>Second largest company in Russia.</td>
</tr>
<tr>
<td>Vnesheconombank</td>
<td>Banking</td>
<td>EU, US</td>
<td>Ex-Im Bank.</td>
</tr>
<tr>
<td>VTB Bank</td>
<td>Banking</td>
<td>EU, US</td>
<td></td>
</tr>
<tr>
<td>SMP Bank</td>
<td>Banking</td>
<td>US</td>
<td></td>
</tr>
</tbody>
</table>

Bold indicates an entity sanctioned by the EU.


US sanction policy targets the same group of five, in addition to a number of smaller banks that do not appear in Table 1. Furthermore, several individuals associated with the Russian banking system are targeted by EU sanction policy as well.
Table 2. Significant Russian Individuals Targeted by Western Sanction Policy

<table>
<thead>
<tr>
<th>Individual</th>
<th>Employer</th>
<th>Role</th>
<th>Sector</th>
<th>Sanctioning Government(s)</th>
<th>Reason Targeted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yuri Kovalchuk</td>
<td>Bank Rossiya</td>
<td>Investor</td>
<td>Banking</td>
<td>EU, US</td>
<td>Personal Banker for Senior Kremlin officials. (38% owner of Bank Rossiya)</td>
</tr>
<tr>
<td>Nikolai Shamalov</td>
<td>Bank Rossiya</td>
<td>Investor</td>
<td>Banking</td>
<td>EU, US</td>
<td>Personal Banker for Senior Kremlin officials. (10% owner of Bank Rossiya)</td>
</tr>
<tr>
<td>Boris Rotenburg</td>
<td>SMP Bank</td>
<td>Owner</td>
<td>Banking</td>
<td>US</td>
<td>Funded Putin-related projects. Funds Gazprom, and helped with Russian Olympic bid.</td>
</tr>
</tbody>
</table>

Bold indicates an entity sanctioned by the EU.


As illustrated, Western sanction policy targets a range of influential entities and individuals associated with the Russian financial system. An additional reminder, individuals named by Western sanctions were chosen due to their close ties to the Kremlin and Russian President Vladimir Putin. There does not seem to be any strategic differences between EU and U.S. sanction policies.

2. Significant EU Sanction Policy Details

Regarding the entities and individuals listed above, sanctions drastically affect the financial flexibility of those named. As of September 12th, 2014, sanctioned individuals and entities are barred from access to long term debt (defined as instruments exceeding 30 days in maturity) (1), (2). Important to note though is that EU entities and individuals can continue the financing of long term debt for the sanctioned as long as said agreements were finalized before September 12th, 2014, with the exception of export-restricted

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products (3). A list of restricted products can be found in Essay 1: Econometric Analyses. Furthermore, EU entities and individuals cannot extend loans to sanctioned entities and individuals which were agreed to before September 12th, 2014, nor cancel these loans in order to allow the sanctioned to retain loaned capital (4).

The Russian Banking Sector

1. Introduction to Banking in Russia

Even before the introduction of Western sanctions, the Russian banking industry faced severe structural challenges. With a worsening recession, deepened by a falling Ruble and oil price, the sector has experienced a high level of consolidation over the last few years (5). This has led to an over-concentrated industry, with a small number of major players and many smaller, less significant banks facing acquisition. This consolidation, along with a significant rise in overdue domestic loans since December 2014, has drawn the eye of the European Banking Federation (EBF). The EBF, an entity which analyzes stress tests, found the Russian banking industry fared particularly poorly against a single-factor stress test. This test measures the effects of bankruptcy for the five largest lenders in a market. Such a result speaks to high systemic risks from loan concentration patterns for the Russian banking sector (6).

2. Market Structure

Of the five banks and their subsidiaries named by EU sanction policy, Bank Rossiya, Gazprombank, Sberbank, and VTB Bank make up 53% of the total market share. Vnesheconombank does not possess an easily comparable market share due to its nature as a governmental export-import bank. A breakdown of the Russian banking market share can be seen in Figure 1.

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5 Angel, Gustavo, et al.: Russia Industry Research – Banks  
6 Angel, Gustavo, et al.: Russia Industry Research – Banks
Sberbank is not only the largest bank in Russia by market share, but also is the fourth largest company in Russia as measured by annual revenue (7). Outside of governmental bank Vnesheconombank, Sberbank is the only EU-sanctioned bank where the Russian government owns a majority share. The Bank of Russia, the nation’s central bank, possesses a 50% + 1 share majority stake in Sberbank (8). Sberbank, due to its size and backing, is the sole Russian bank to maintain significant operations in Central Eastern Europe (CEE). Owning subsidiaries in V4 nations Czechia, Hungary, and Slovakia, Sberbank is geographically present far away from its Moscow headquarters (9).

While not directly government controlled like Sberbank, various Russian oligarchs own controlling stakes in Bank Rossiya, Gazprombank, and VTB Bank. Due to this, and the nature of relationships

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8 Sberbank: www.sberbank.com/investor-relations/share-profile/shareholder-structure
9 Sberbank: www.sberbank.ru/en/about/global_business/subsidiary_banks/ce_en/se_ag_en
between the Russian oligarch class and the Kremlin, a high enough level of federal influence exists to justify sanctions.

3. Avoidance Efforts

   a. Motivations for Avoidance

   For the sanctioned entities and their associated oligarchs, there is a tremendous incentive to avoid the impacts of Western sanctions. In 2014, after being placed on the U.S.’s Office of Foreign Assets Control (OFAC) sanction list, over $640 million worth of assets for Bank Rossiya and SMP Bank were seized. Of the $640 million frozen, $572 million belonged to Bank Rossiya, whose largest shareholders are the black-listed Yuri Kovalchuck and Nikolai Shamalov (10). Bank Rossiya has been frozen out of US$ dollar transactions (11). The remaining balance seized, around $65 million, belonged to SMP Bank (U.S. sanctioned only). While SMP Bank is not officially named by EU sanctions, its owner, Arkady Rotenburg, is named. In sorting through the small discrepancies between U.S. and EU sanctions, many firms have simply cut off transaction processing for Russian customers, e.g. Visa and MasterCard, or moved away from the sector entirely (12). While service was restored shortly thereafter for SMP Bank customers, many others were not so lucky. To this day, even PayPal accounts have been frozen for the Russian-backed separatist militias in eastern Ukraine (13).

   Economically, the EU-Russia relationship is highly asymmetrical, with the Russians far more reliant on the EU market than the EU on the Russian market. Between the interaction of EU sanctions and a faltering Russian banking sector, many western firms are reluctant to provide financing for even non-sanctioned banks. While the Russian central bank has attempted to fill these gaps, such a solution only aggravates existing structural problems (14). Between the European hesitation to provide long-term debt to

10 Shishkin, Philip: U.S. Sanctions Over Ukraine Hit Two Russian Banks Hardest
13 Shishkin, Philip: U.S. Sanctions Over Ukraine Hit Two Russian Banks Hardest
14 Bond, Ian, et al.: Frozen: The Politics and Economics of Sanctions against Russia
non-sanctioned entities, the imbalanced EU-Russia trade relationship, and the actual effects of sanctions, an additional layer of de facto sanctions has materialized. This has only magnified costs for those targeted and increased the incentive to get around them.

b. Bank Rossiya

Yuri Kovalchuck and Bank Rossiya provide an example of the lengths that sanctioned entities and individuals have gone to avoid the pain of EU sanctions. Finding a loophole in Western sanctions, Bank Rossiya, who had owned 51% of Sogaz, an insurance company, moved 2.5% of its shares to a newly formed subsidiary. This move shifted Bank Rossiya ownership of Sogaz under the 50% mark, making them exempt from sanctions. Yet before this loophole could be closed, on August 11th, 2014, Bank Rossiya moved their existing shares of Sogaz to Gazprom (15). As Gazprom is not a target of EU sanctions, due to the European reliance on Gazprom’s natural gas, Bank Rossiya successfully managed to avoid capital restrictions for Sogaz.

c. Gennady Timchenko

The actions of Gennady Timchenko, owner of the sanctioned Novatek and Volga Group and influential investor in physical commodity trading firm Gunvor, showcase another example of Russian avoidance efforts. The same day he was named to the U.S. sanction list, Timchenko sold his shares in Gunvor and in parts of the Volga Group’s portfolio (16). These actions were sold using the same strategy of Bank Rossiya – moving ownership of businesses that would be sanctioned to non-sanctioned entities and thereby avoiding asset freezes and capital restrictions. Despite these maneuvers, there is no guarantee that such transfers hold any real significance, other than superficial legal ones. While impossible to prove, many are skeptical that sanctioned individuals have actually relinquished control of these companies. In

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15 Johnston, Cameron: Sanctions against Russia: Evasion, Compensation and Overcompliance
16 Johnston, Cameron: Sanctions against Russia: Evasion, Compensation and Overcompliance
reality, it remains very possible that Timchenko and Rotenburg still manage these offloaded firms, just in an unofficial sense (17).

4. Conclusions

Within the over-concentrated Russian banking sector, EU sanctions directly affect Bank Rossiya, Gazprombank, Sberbank, and VTB Bank, who in total control a 53% market share. Vnesheconombank, a governmental export-import bank, also faces severe capital restrictions. Unable to access Western debt products exceeding 30 days in maturity, sanctions only increase stress on an already structurally problematic Russian banking sector. The role of Sberbank, the only sanctioned Russian bank maintaining a significant presence in V4 countries, will be further analyzed in the following section. Despite the words of sanctioned Russian individuals, asset freezes on their personal assets and capital restrictions on firms have provided enough motivation to spur creative avoidance actions. Through the provided examples of Bank Rossiya and Gennady Timchenko, one can see that those sanctioned are exerting great effort to avoid the full economic weight of American and European law.

The V4 Banking Sector

1. Introduction to Banking in the V4

Turning to the other side of sanctions now, V4 banking markets display much healthier characteristics than their Russian counterparts. As a part of the EU banking system, there is a certain level of institutional control and governance that stands in stark contrast to the murky waters of the Russian banking sector. Even so, financial markets are global markets, and contain Russian players, namely Sberbank. Of the five Russian banks named, how many possess significant shares in the Czech, Hungarian, Polish, and Slovakian banking markets? Also, what level of exposure to sanctions-related Russian risk do these countries possess?

17 Johnston, Cameron: Sanctions against Russia: Evasion, Compensation and Overcompliance
2. Market Structure

Looking first to V4 banking market, do Bank Rossiya, Gazprombank, Sberbank, and VTB Bank own a significant share of the market? Figures 2, 3, 4, and 5 illustrate the respective market shares of leading banks within each V4 nation.

*Figure 2. Czech Banking Market Share by Company (2017)*

Source: Statista, UniCredit, EBF, AJTK Calculations
Figure 3. Hungarian Banking Market Share by Company (2015)

Source: BankRáció, AJTK Calculations

Figure 4. Polish Banking Market Share by Company (2017)

Source: Statista, PRNewswire, AJTK Calculations
As can be seen, no V4 market records any EU sanctioned Russian bank as a leader in market share. While, Sberbank, the largest Russian bank, owns subsidiaries in Czechia, Hungary, and Slovakia, they do not register as a significant player in any of these three countries. At most, they rank as the 14th largest bank in Hungary with a 1.386% market share, based upon 2015 numbers (18). Despite the capital restrictions legislated against them, Sberbank clarified in 2014 that they had no intentions of leaving Hungary (19). They have continued to operate in Czechia and Slovakia as well, despite facing increasing difficulties despite their struggles in obtaining Western long-term debt (20). While sanctioned Russian banks may not possess significant market shares in V4 nations, another concern still exists in evaluating the risk posed by lending to Russian entities for European financial health.

18 BankRáció: www.bankracio.hu/bankok/bankok
19 Fedorova, Maria: Sberbank Not Leaving Hungary
3. The Russian Risk

Despite not possessing significant market shares nor having access to Western capital markets, outstanding European loans to Russian companies agreed to prior to the 2014 sanctions still exist. How large are these loans, i.e. how sizable is EU and V4 financial exposure to the Russian economy? Depending on the bank and the source of information, it seems this exposure is not insignificant. Measured in 2014, of the $209 billion worth of foreign loans to Russia, $154.6 billion worth of loans are attributed to European banks (21).

Table 3. Significantly Exposed Banks to Russia (Billions)

<table>
<thead>
<tr>
<th>Name</th>
<th>Country</th>
<th>Exposure</th>
<th>Percentage of European Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Societe Generale</td>
<td>France</td>
<td>€ 22.4</td>
<td>14.5%</td>
</tr>
<tr>
<td>Raiffeisen</td>
<td>Austria</td>
<td>€ 20.5</td>
<td>13.3%</td>
</tr>
<tr>
<td>UniCredit</td>
<td>Italy</td>
<td>€ 18.6</td>
<td>12.0%</td>
</tr>
<tr>
<td>OTP</td>
<td>Hungary</td>
<td>€ 4.4</td>
<td>2.8%</td>
</tr>
<tr>
<td>Bank of Cyprus</td>
<td>Cyprus</td>
<td>€ 1.6</td>
<td>1.0%</td>
</tr>
</tbody>
</table>

Source: Reuters, AJTK Calculations

Table 4. Top 5 Countries Most Exposed to Russia (Billions)

<table>
<thead>
<tr>
<th>Country</th>
<th>Total National Exposure</th>
<th>Percentage of European Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>€ 47.0</td>
<td>30.4%</td>
</tr>
<tr>
<td>Italy</td>
<td>€ 25.7</td>
<td>16.6%</td>
</tr>
<tr>
<td>Austria</td>
<td>?</td>
<td>≥13.3%</td>
</tr>
<tr>
<td>Germany</td>
<td>€ 17.4</td>
<td>11.3%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>€ 15.9</td>
<td>10.3%</td>
</tr>
</tbody>
</table>

Source: Reuters, AJTK Calculations

As displayed in Table 3, Hungarian bank OTP showcases a significant quantity of loans to the Russian market. While in terms of national exposure to Russia, no V4 country ranks within the top 5, yet even still, the size of OTP’s position cannot be ignored. However, OTP has an indirect level of backing from the Hungarian government via the government’s 25% stake in oil group MOL, which in turn owns a 8.5% stake in OTP (22). This provides a hedge to any default risk of the Russian lendees of OTP’s €4.4

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21 Reuters Staff: European Banks' Exposure to Russia
22 Szakacs, Gergely, and Marton Dunai: Hungary Raises $265 Mln from Sale of OTP Bank Stake
billion worth of loans. In such a situation, OTP could simply write off these loans. Due to their systematic importance in the Hungarian banking sector and their ownership structure, OTP could rely on some level of government funding to maintain their liquidity if necessary.

Now, despite no V4 country holding a position within Table 4, and with the exception of Table 3’s OTP, it would seem that V4 countries do not seem to be too exposed to the Russian market. However, this is not accurate in reality. Societe Generale, Raiffeisen, and UniCredit are French, Austrian, and Italian banks, respectively. By reexamining Figures 1, 2, 3, and 5, UniCredit, the largest foreign bank in Russia in 2015, and the third most exposed bank to the Russian market at the time of sanction legislation, actually ranks as a top 5 bank in the Czech, Hungarian, and Slovakian markets. Similarly, highly exposed bank Raiffeisen ranks within the top 5 largest banks in Hungary too. Therefore, UniCredit and Raiffeisen, via their loans to Russia and large market shares in Czechia, Hungary, and Slovakia, connect the V4 to Russian credit risk, although in a less direct way than seen with OTP.

Following the introduction of 2014 EU sanctions, UniCredit reported that sanctions could result in lost revenue opportunities in the €10-€15 million range. Furthermore, UniCredit, via their Central Eastern European (CEE) subsidiary Bank Austria, reported a €29 million loss before taxes due to their efforts to sell their Ukrainian branches (23). Despite these alarming figures, UniCredit reaffirmed their commitment to maintain a presence in Hungary and V4 markets, and their ability to stabilize profit levels despite sanctions due to the bank’s access to Western capital markets (24),(25). Because of the interconnectedness of the European banking sector, analysis from German investment bank Berenberg concluded that “the direct impact of Russian sanctions would be limited, but the indirect fallout could include weaker demand for debt, funding restrictions and deteriorating asset quality.” (26)

23 Shields, Michael, and Angelika Gruber: Bank Austria Says Can Prosper in Russia despite Sanctions
24 Shields, Michael, and Angelika Gruber: Bank Austria Says Can Prosper in Russia despite Sanctions
25 Szakacs, Gergely: Only Five Major Banks May Survive in Hungary: Bankers
26 Shields, Michael, and Angelika Gruber: Bank Austria Says Can Prosper in Russia despite Sanctions
4. Conclusions

V4 banking markets demonstrate much healthier fundamentals than their Russian equivalent. In general, there is a far greater degree of diversity and a far lesser degree of government influence. Sberbank, the only sanctioned Russian bank present in V4 countries, does not own a particularly high market share in either Czechia, Hungary, or Slovakia. Still, at the time of the implementation of EU sanctions, a number of European banks had lent considerable sums of money to Russian firms. The most exposed of these banks included leading Hungarian bank OTP, and Raiffeisen and UniCredit, who maintain significant market shares in Czechia, Hungary, and Slovakia. While OTP enjoys a small level of government ownership, which could translate to favorable treatment in case of liquidity issues, Raiffeisen and UniCredit enjoy no such advantage. Still, Raiffeisen and UniCredit maintain strong access to borrowing channels, and the ability to weather significant defaults on loans issued to Russia. To date, there is no evidence that these banks should fear defaults from all their loans to Russian entities. However, due to the geopolitical climate of Russia, and combined with a faltering economy, Western sanctions, and a volatile ruble, should give exposed banks pause when performing risk assessments of their outstanding loans. When looked at in total, while I do not believe that these Russian-linked credit risks are systematically dangerous to Western capital markets, such loans do deserve closer examination and consideration by countries and European banks alike. At worse, the effect of sanctions on Russia could result in negative long-term indirect effects for both European economies and V4 banking markets (27).

Comparable Metrics

1. Introduction

Having now explored both the Russian banking sector, V4 banking markets, and the interaction between the two in the context of sanction policy, we turn to more direct measures of comparison

(27) Ficenec, John: Banks Most Exposed to Russia Sanctions
between Russia and V4 countries. Using two popular methods to compare the financial health of Russia to Czechia, Hungary, Poland, and Slovakia, a forecast of currency rates and a comparison of changes in sovereign credit ratings will be undertaken. By utilizing these two methods, I aim to paint a fuller picture of the interactions between V4 economies and Russia and how they both fare in the global economy.

2. Currency Forecasts
   a. Understanding Forecasting

   Foreign exchange rates are one of the simplest ways to measure the financial and economic relationship between two nations. Each V4 nations possesses a different currency that can be historically tracked. Do the exchange rates between V4 currencies and the Russian ruble change at the same time as EU sanctions are implemented? Such a question can be statistically resolved via a forecast. By comparing the forecasted rate to the actual rate, a degree of insight can be gained regarding the relationship between economic sanctions, currency fluctuations, and national financial relationships.

   To forecast exchange rates, I collected daily exchange rate data for each respective V4 currency to the Russian ruble from January 1st, 2008 through December 6th, 2017. In total, almost 10 years of foreign exchange rate data has been collected. Data is present for each day, with the exception of public holidays (and weekends in the case of Hungary only). To forecast exchange rates, I used an autoregressive integrated moving average (ARIMA) model, which does not rely on theory, but on the momentum of a dataset itself. A further advantage of using an ARIMA model is how it combines both autoregressive and moving average forecasts techniques, while allowing for differencing, all into one clean model. Due to this, ARIMA models have emerged as a popular method for forecasting within the field of econometrics. To properly fit an ARIMA forecast, three parameters must be correctly specified: the quantity of lags for the auto-regressive model, the quantity of differencing, and the order of the moving average model. Typically listed with a forecast, each of these parameters respectively corresponds to the three variables in a (x, y, z) format to describe the type of forecast produced. To determine the correct variables, one must find the variable combination that minimizes a forecast’s
Bayesian information criterion (BIC) or Akaike information criterion (AIC), both of which are measures of statistical fit and error variance. Reiterated, of all possible variable combinations, the best forecast will result in the combination of variables \((x, y, z)\) with the lowest BIC or AIC term. Using R’s \texttt{auto.arima} functionality, I can easily identify the ideal combination of variables with the lowest BIC or AIC terms. For our Czech koruna/Russian ruble forecast, the ideal combination was \((1, 1, 1)\), or one lag for the auto-regressive model, one difference, and one order for the moving average model. For the Hungarian forint/Russian ruble forecast, the ideal combination was \((0, 1, 0)\). For the Polish zloty/Russian ruble forecast, the ideal combination was \((0, 1, 1)\). Finally, for the euro/Russian ruble forecast, the ideal combination was also \((0, 1, 1)\).

b. ARIMA Foreign Exchange Forecasts

\textit{Figure 6. Czech koruna/Russian ruble Rate Forecast (ARIMA [1, 1, 1])}

\begin{center}
\includegraphics[width=\textwidth]{figure6.png}
\end{center}

Source: Investing.com, AJTK Calculations
Figure 7. Hungarian forint/Russian ruble Rate Forecast (ARIMA [0, 1, 0])

Source: Magyar Nemzeti Bank, AJTK Calculations

Figure 8. Polish zloty/Russian ruble Rate Forecast (ARIMA [0, 1, 1])

Source: Investing.com, AJTK Calculations
Figure 9. Euro/Russian ruble Rate Forecast (ARIMA [0, 1, 1])

Source: Investing.com, AJTK Calculations

Shown graphically in Figure 6, 7, 8, and 9, a noticeable shock occurs at the same time EU sanctions were introduced. The forecasted rate, denoted by the orange line, stands in stark contrast to the actual rate, assigned to the existing color scheme for each V4 country. More so, the actual exchange rate for each forecast usually falls outside the 95% confidence intervals, set to gray, for each ARIMA forecast, after sanctions are implemented. From these results, could we intuit that V4 currencies appreciate in relation to the Russian ruble due to the implementation of sanctions?

c. Correlation ≠ Causation

While the findings of our ARIMA forecasted exchange rates are informative, they should not be weighed too heavily. As taught in every introductory statistics class, correlation does not equal causation. Despite the initial appearance that the introduction of Western sanction policy negatively affected the Russian ruble’s value, in reality, many other factors contributed to the depreciation of the ruble. The ruble, along with a number of currencies, are often referred to as petrocurrencies, due to their high
correlation with the price of oil (\(^{28}\)). This link primarily exists due to an overconcentration in oil & gas production as a portion of gross domestic production. Saudi Arabia’s riyal exemplifies another currency often referred to as a petrocurrency. A 2015 analysis by the German Institute of Economic Research found that “A one-percent increase in oil prices is followed, in equilibrium, by a revaluation of the ruble by more than one percent. This underscores the critical impact that the oil price has on Russian currency. By contrast, the influence of other variables seems to be significantly smaller; the sanctions, in particular, are only marginally significant…the recent devaluation of the ruble is due in large part to the declining oil prices. The sanctions are only playing a rather subordinate role.” (\(^{29}\)).

Recently though, the strong correlation between petrocurrencies and the price of oil has weakened, from around 80% in June 2016 to 30% in November 2017. Much of this is due to an increase in American shale production and a U.S. dollar denomination of the Brent crude oil price (\(^{30}\)). Despite this, the influence of a dropping oil price, which corresponds simultaneously with sanction implementation, cannot be overlooked in explaining the strong devaluation of the ruble post-sanctions.

In summary, while EU sanctions (and U.S. sanctions) may not have been the primary driver of an appreciating koruna/ruble, forint/ruble, zloty/ruble, and euro/ruble rate after sanctions, it would be naïve to think that sanctions had no effect, however small. Still, the ARIMA forecasts performed are valuable and insightful in understanding the financial relationship between V4 nations and Russia. However, any theories which attribute a large impact to sanction policy on V4/Russia exchange rates are not supported by contemporary research. Therefore, these forecasts should be interpreted with extreme care for only a baseline understanding of a changing V4-Russia financial relationship.

\(^{28}\) Doff, Natasha: The Dollar Is Now More Correlated With Oil Than Some Petrocurrencies

\(^{29}\) Dreger, Christian, and Konstantin Kholodilin: The Ruble between the Hammer and the Anvil: The Impact of Oil Prices and Economic Sanctions

\(^{30}\) Doff, Natasha: The Dollar Is Now More Correlated With Oil Than Some Petrocurrencies
3. Credit Rating Changes

A second comparable metric of national economic health is a country’s sovereign credit rating. Sovereign credit ratings are determined by Standard and Poor’s (S&P), Moody’s, and Fitch, the three largest credit rating agencies. Sovereign debt, or debt issued by a government, is evaluated by the three credit rating agencies to provide investors with information about the level of risk associated with purchasing a nation’s governmental bonds (31). Table 5 illustrates S&P’s evaluations of V4 and Russian sovereign debt before, during, and after EU sanctions were introduced.

Table 5. V4 & Russian S&P Sovereign Credit Ratings (2011-2017)

<table>
<thead>
<tr>
<th></th>
<th>Czechia</th>
<th>Hungary</th>
<th>Poland</th>
<th>Slovakia</th>
<th>Russia</th>
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<tr>
<td>2011</td>
<td>AA-</td>
<td>BB+</td>
<td>A-</td>
<td>A+</td>
<td>BBB</td>
</tr>
<tr>
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<td>AA-</td>
<td>BB</td>
<td>A-</td>
<td>A</td>
<td>BBB</td>
</tr>
<tr>
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<td>AA-</td>
<td>BB</td>
<td>A-</td>
<td>A</td>
<td>BBB</td>
</tr>
<tr>
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<td>BB</td>
<td>A-</td>
<td>A</td>
<td>BBB-</td>
</tr>
<tr>
<td>2015</td>
<td>AA-</td>
<td>BB+</td>
<td>A-</td>
<td>A+</td>
<td>BB+</td>
</tr>
<tr>
<td>2016</td>
<td>AA-</td>
<td>BBB-</td>
<td>BBB+</td>
<td>A</td>
<td>BB+</td>
</tr>
<tr>
<td>2017</td>
<td>AA-</td>
<td>BBB-</td>
<td>BBB+</td>
<td>A+</td>
<td>BB+</td>
</tr>
</tbody>
</table>

Source: Trading Economics

Interestingly, Russia’s sovereign debt rating decreased in 2014, the year sanctions were introduced, but rebounded to BB+ the following year. Czechia and Slovakia’s ratings have either remained constant or increased throughout the time frame. Hungary and Poland’s ratings have worsened from 2016 on, due mainly to increased political risk in each country. Overall, it seems that with the exception of Russia’s 2014 BBB- rating, no easily identifiable changes are present that correspond with the implementation of sanctions. As discussed in the previous section, Russia’s 2014 rating could be attributed to the falling price of oil from simply analyzing changes in credit ratings. However, there is no way to ascertain this connection completely.

31 Investopedia: www.investopedia.com/terms/s/sovereign-credit-rating.asp
4. Conclusions

From the preceding forecasts of V4/Russian currency rates and analysis of sovereign credit rating changes, a disjointed picture comes into focus of a changing V4/Russia financial dynamic. Using an ARIMA forecast to compare expected exchange rates with actual rates, it seems that rising exchange rates, in favor of V4 currencies, correspond with the introduction of EU sanctions. Expected rates diverge strongly from estimates, so much so to even be outside of 95% confidence intervals. Despite this, it is theoretically incorrect to assume this visual correlation is causally related to sanction policy. The Russian ruble, a petrocurrency, is strongly associated with the price of crude oil. Crude oil, which also simultaneously dropped in value in 2014, fell for a variety of non-Russian related supply and demand dynamics. The drop in oil price explains the majority of the depreciation of the Russian ruble against European currencies. Even still, the forecasts performed provide a valuable way to directly compare V4 economies to the Russian economy, albeit a comparison with limited causal value. The second comparative test undertaken was an analysis of changes in sovereign credit ratings for V4 nations and Russia. Few sanctions-related changes were seen, with the possible exception of Russia’s 2014 rating. The two comparable metrics investigated yielded little information on any negative exchange rate or sovereign credit rating effects caused by sanction policy. This could be considered a success for V4 nations regarding their own economies, but not for the Russian economy, if the telos of sanctions was to negatively affect Russian economic health. However, EU sanction policy (i.e. capital restrictions and asset freezes) is aimed at Kremlin-associated entities and individuals in order to accomplish an EU-designed political goal. Despite this, more analysis is needed to determine the financial implications of EU sanctions on Russia for V4 economies and the Russian economy, at least regarding exchange rates and sovereign debt ratings.
Governance Considerations

1. Significant Russian Governance – A Political Worry

The final section of this essay aims to fill any remaining gaps in the V4-Russian financial narrative. Thus far, the question of foreign governance and ownership has yet to be addressed. While differing slightly from the role of Russian financial institutions in V4 markets, the topic of Russian investment and governance in Czechia, Hungary, Poland, and Slovakia is worthy of discussion too. What type of corporate governance role does Russia occupy in Czechia, Hungary, Poland, and Slovakia? After providing an overview of this topic, a case study of Russian governance and economic influence in Hungary will be undertaken to better illustrate developments in this field.

2. Foreign Direct Investment Trends

What does Russian foreign direct investment (FDI) look like in the V4 nations? A high level of Russian FDI, and therefore ownership, in V4 economies would provide Russia with significant degree of power and influence in the region. FDI is divided into two categories – inflows and outflows. Defined by the World Bank, inflows are “the value of inward direct investment made by non-resident investors in the reporting economy”, while outflows are “the value of outward direct investment made by the residents of the reporting economy to external economies.” (32). Negative values for either inflows or outflows are possible as well and represent disinvestment. To answer this question, Figure 10 and 11 provide a visual representation of historical V4 and Russian FDI net inflows and outflows.

32 World Bank Data Help Desk: datahelpdesk.worldbank.org/knowledgebase/articles/114954-what-is-the-difference-between-foreign-direct-inve
Russian FDI inflows and outflows, understandably larger than respective V4 inflow and outflow values, displays an interesting trend. In absolute terms from 2014 to 2016, Russian annual net outflows decreased substantially. As developing economies typically rely heavily on FDI, decreases in Russian
inflows and outflows represent a notable observation. Such decreases in 2014 and 2015 are logical due to the financial stress of low oil prices, sanctions, and a weak ruble over this time period. While net FDI inflows and outflows have remained fairly constant for Czechia, Slovakia, and Poland over the visualized time period, Hungary does seem to represent an outlier. Varying much more than its V4 counterparts, Hungarian FDI possesses noticeably different trends. Hungary in 2015 recorded negative net inflow and outflow numbers. While these figures look at FDI net inflows and outflows in total, who are the largest contributors to these flows for V4 economies? Is Russia a major investor?

3. The Russian Place in V4 FDI

If Russia does represent a significant foreign direct investor in V4 economies, then Russia would actually maintain a greater degree of economic influence in the V4 than previously discussed. While the Russian banking presence in V4 banking sectors is limited, substantial Russian investment in V4 economies would represent a greater degree of financial interconnectedness than observed in the preceding essay sections. Using the latest easily accessible data available for bilateral FDI inflows to V4 nations, Russia did not rank as a top 10 FDI source for any V4 country. For Czechia, as of 2015, Russia did not rank as a top 10 source of FDI inflows. No information was found as to their exact rank though. For Hungary, as of 2016, Russia ranked as the 19th largest source of FDI inflows. For Poland, as of 2016, Russia ranked as the 25th largest source of FDI inflows. For Slovakia, as of 2012, Russia ranked as the 13th largest source of FDI inflows. Also considered was Cyprus, a country popularly used by Russian companies and nationals to mask the true source of financing. Cyprus ranked outside of the top 10 largest sources of FDI for all V4 countries except for Slovakia, where it placed 3rd.

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While this may be concerning, it is difficult to ascertain what portion of FDI inflows from Cyprus is truly Cypriot, and not truly originating from another source, such as Russia. From these results, it seems that Russian influence via FDI inflows (i.e. Russian governance influence) is limited. However, this a tentative conclusion, especially for Slovakia. Therefore, the source of FDI inflows is something that should be monitored continually by V4 governments. While Russian FDI and Russian governance is not intrinsically bad, such things should be closely watched due to the existing geopolitical climate.

4. Governance in Hungary – A Brief Case Study

a. Historical Russian Activity

Of all V4 nations, Hungary demonstrates the warmest political relationship with Russia. Economically similar, there has been notable collaboration between Russian and Hungarian businesses within the last 10 years. However, due to the stated concerns of increasing foreign influence via FDI inflows, the Hungarian government has intervened to ensure that Russian ownership of strategically vital firms is not excessive. The following paragraphs provide brief descriptions of the involvement of significant Russian firms in the Hungarian market.

i. Surgutneftegaz

The most notable case of a Russian attempt to obtain a significant presence within the Hungarian market involves the 2009 purchase of the Hungarian energy company MOL by Surgutneftegaz (41). A reminder, Surgutneftegaz was named by U.S. sanction policy. Surgutneftegaz acquired a 21.2% stake in MOL for €1.4 billion. This made it the largest stakeholder in MOL at that time. Over the following years,

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41 Csaba Weiner: Tracking Russian FDI in Hungary
MOL attempted to keep Surgutneftegaz from exercising its ownership rights and was promptly targeted by five different lawsuits. In 2011, just two years later, Surgutneftegaz sold their stake to the Hungarian government for €1.88 billion (42). Following the sale, Prime Minister Viktor Orban stated, “We have taken an important step on the path to a strong Hungary, as a country cannot be strong if it is entirely vulnerable in terms of energy supply.” (43).

ii. Gazprom

Natural gas supply security is of paramount importance for Hungary, who is highly reliant on natural gas imports. For a greater overview of this dependency, please see Essay 2: Energy. Of the natural gas traders operating in Hungary, Gazprom possesses an ownership in two. These two traders are Centrex Hungary and WIEE Hungary Kft. A third natural gas trader, MET Hungary Zrt., is also Russian-owned, although the identity of the Russian owners is difficult to identify (44). Gazprom previously collaborated with Hungarian energy companies on the now-abandoned South Stream pipeline project (45). Gazprom is targeted by U.S. sanction policy, but not by EU sanction policy.

iii. Lukoil

Lukoil, the largest private oil company in Russia, entered the Hungarian market at the end of 2003. Lukoil, which is targeted by U.S. sanctions, maintained a retail presence in Hungary until 2014. At this time, Lukoil sold its stores to Norm Benzikut Kft., registered as a Hungarian company, but which maintains considerable Russian ties (46).

42 Csaba Weiner: Tracking Russian FDI in Hungary
44 Csaba Weiner: Tracking Russian FDI in Hungary
45 Csaba Weiner: Tracking Russian FDI in Hungary
46 Csaba Weiner: Tracking Russian FDI in Hungary
iv. Sberbank

Sberbank, sanctioned by both the EU and U.S., first acquired a presence in Hungary in 2012. It acquired its presence through the purchase of Austrian Volksbanken International AG (47). In 2008, a few years prior, rumors existed that Sberbank had considered OTP, the largest bank in Hungary, as a potential acquisition target. However, Sberbank denied these rumors (48). Sberbank has maintained their presence in Hungary since 2012 (49).

b. Present Day Russian Activity: Paks II Nuclear Power Plant

In 2014, three agreements were signed between the Hungarian and Russian governments to construct the Paks II nuclear power plant. Paks II represents a construction of another nuclear power plant next to the original Paks power plant, which was built in 1982 and is set to complete its effective life in 2032. The original Paks power plant supplies 45.9% and 37.3% of the gross electrical produced and consumed in Hungary, respectively. With a price tag estimated at 7-10% of Hungarian GDP, the construction of a second nuclear power plant in Paks represents a massive undertaking by the two involved governments. Russian nuclear energy company Rosatom was selected as the chosen contractor to construct the new power plant. While designed to minimize Hungarian risk due to the turnkey style of the intergovernmental agreement, serious governance and corruption issues exist for the construction of the Paks II power plant. First, to encourage the Hungarian selection of Rosatom over other contractors, the Russian government offered a loan which would account for 80% of expected costs. Furthermore, during the negotiation period, the Hungarian and Russian governments collaborated entirely in a closed-door fashion. To this day there is little transparency with the three signed construction agreements being completely classified for 30 years (50). Due to the intergovernmental nature of the Paks nuclear power

47 ABUDAPEST.com: www.abudapest.com/popularnews/sberbank_enters_into_hungary/
49 Fedorova, Maria: Sberbank Not Leaving Hungary
plant agreement, this is not technically considered an FDI project, although it is of significant importance (51).

Assuming Paks II will possess the same output capacities as the original Paks power plant, the actual governance concerns and energy security issues are a national security worry. Such an agreement avoids the issue of EU sanctions as well. Due especially to the non-transparent way the Paks II agreements were accomplished, such collaboration seems particularly unwise while tensions exist between the West and Russia. Despite the smaller successes of some Russian companies to enter the Hungarian market (Gazprom and Sberbank), and the failure of others to remain (Surgutneftegaz and Lukoil), Paks II represents an entirely different realm of potential Russian economic influence and governance in a V4 economy. Paks II is an ongoing project and will continue to be monitored going forward.

51 Csaba Weiner: Tracking Russian FDI in Hungary
Conclusion

As sanction policy approaches the four year mark, understanding the V4-Russian financial relationship has never been more important. Differing slightly from U.S. sanction policy in detail but not in spirit, EU sanctions target five of the largest financial institutions in Russia – Bank Rossiya, Gazprombank, Sberbank, Vnesheconombank, and VTB Bank. Western sanctions severely limit these banks, which in total possess a 53% share of the Russian banking market, from access to capital in Western markets. Combined with asset freezes for individuals associated with these banks, EU sanction policy severely limits the financial flexibility of these banks and their leaders. Therefore, sanctioned entities and individuals have gone to great lengths to avoid the full impact of these restrictions. Only Sberbank, of sanctioned Russian banks, maintains a substantial presence in V4 markets. Still, after scrutinizing financial market structures for Czechia, Hungary, Poland, and Slovakia, I found that no Russian bank possesses a significant market share in any country, therefore limiting the direct risk of self-inflicted sanctions-related harm. However, at the time of sanctions, a number of banks possess sizable outstanding loans to Russian-based companies. Hungarian market leader OTP was one of these banks. UniCredit, who also possesses sizable shares in multiple V4 banking markets, also held significant exposure to Russian companies too. Despite this, due to the additional capital markets access these firms enjoy, and their systematic importance, I have concluded that any such risks to the health of the V4 financial system are not overtly worrisome.

After exploring the Russian and V4 banking sectors, I reviewed more comparable measures of economic health between two industries. First, I forecasted V4/Russian foreign exchange rates using an ARIMA model. Our results demonstrated significant deviation from the expected foreign exchange rate after EU sanctions were implemented. These results should be carefully interpreted though, due to the high correlation between the Russian ruble and the price of oil. Next, an analysis of sovereign credit rating changes was performed. Outside of Russia’s 2014 BBB- credit rating, which could also be
potentially attributed to a falling oil price and ruble value, it was difficult to isolate the effect that EU sanctions may have played in Russia’s sovereign credit rating.

Finally, Russian governance and investment were inspected within the context of the V4. Russia fell outside of the top 10 contributors of FDI inflows for all V4 countries. A case study of Russian investment in Hungary was reviewed for Hungary. After surveying the attempts of Surgutneftegaz, Gazprom, Lukoil, and Sberbank to penetrate the Hungarian market (with varying success) and the ongoing Paks II project, notable trends were unearthed. It appears that Russian entities, especially with governmental connections, desire to possess strategic positions in V4 markets. This is something that should be carefully monitored by V4 governments in order to limit Russian economic power (and therefore political influence) in Central Europe.

In summary, during an age of EU-Russian tension, V4 governments should continue to investigate the effects of sanctions on Russia for domestic economic health. While it appears that current sanctions-related risks are not too high, at least for financial markets, V4 countries would be wise to be considerate of the interplay between their own banking market structures and the Russian financial system. In a globalized age, what affects one player can reverberate through the whole system and have unintended consequences. What affects the Russian financial institutions (i.e. EU sanctions) can impact V4 economies. Considering the preceding nuanced explanations of the V4-Russian financial relationship within the context of sanction policy, it seems that V4 banking and capital market industries are sufficiently safe-guarded from Russian-originating risks. However, the example of the Paks II power plant agreements should give pause to V4 policymakers. If given access to strategic positions within V4 economies, Russian economic power will grow in the V4. In order to maintain economic sovereignty, V4 should continue to monitor Russian market power, exposure, and FDI levels in their domestic markets. In doing so, V4 policymakers can avoid compromising the structural strengths of EU sanctions and maintain the high costs of Western sanction policy.


United States, Executive Order. No. 13662, 2014. OFAC sanction list.


Table 6. ARIMA Forecast Expanded Output

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