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IMPACT OF THE EU'S SANCTIONS ON RUSSIA AND RUSSIAN COUNTER SANCTIONS ON THE FINNISH STOCK MARKET

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ABSTRACT

The purpose of the study is to investigate the impact of EU's Russia sanctions as well as Russian counter sanctions announced during the Ukrainian crisis on Finnish stock market. Due to dubious actions in Ukraine, the EU has imposed several restrictive measures against Russia starting in 2014. As a response to sanctions imposed by the EU, Russian counter decided to execute restrictions of its own. The sanctions included limitations against different individuals, organizations and specific sectors.

The study focuses on four different sanctions announcements and examines if these events generate abnormal returns on the Finnish stock market. As a methodology, event study is applied. The daily stock returns are calculated from OMX Helsinki 25 stock index.

The results suggest that the Finnish stock market is affected by various sanctions announcements. The impact of the sanctions can be both positive and negative. Only one announcement did not have any impact on stock returns: Russian counter sanctions. On the other hand, the most significant results came from restrictions imposed by the EU against Russian financial institutions as well as some specific industries such as oil sector. This study shows that Finnish and Russian businesses are integrated and the activities against Russia can also affect the Finnish stock market.

KEYWORDS: sanctions, market efficiency, stock markets, event study

1. INTRODUCTION

This chapter begins with introducing the background of the study concentrating especially on the actions in the Crimea that led to the use of restrictive measures. The chapter continues with representing the purpose and the research problem of the study. Additionally, hypotheses are constructed together with showing the structure of the thesis.

1.1. Background and Motivation

The crisis in Ukraine has had significant attention lately. There is a lot of discussion about the actions in Crimea since the relations of Ukraine and Russia became even more complicated than in the past. The tensions between Ukraine and Russia began in 2013 due to violation of the territorial integrity of Ukraine and the annexation of Crimea by pro-Russian separatist forces (Veebel 2015). Due to these actions in Crimea and destabilization of Russia, the European Union has imposed several sanctions against the Russian Federation (European Union 2015). The restrictive measures used included sector-specific targeted sanctions, in other words smart sanctions (Vebeel 2015).

The European Union is focusing on calming the crisis in Ukraine and supports its economic and political reforms. The EU believes that a solution to the crisis should be found through negotiations between the Governments of Ukraine and Russian Federation. In order to achieve a peaceful environment in Ukraine, EU has imposed several restrictions such as travel bans and asset freezes together with prohibition on EU companies providing financial services to Russian banks. The restrictions are for individuals whose actions threaten the territorial integrity of the Ukraine. (European Sanctions 2015.)

Previous studies have investigated whether or not the usage of sanctions have the effect wanted. There are several divergent opinions about sanctions and their effectiveness. (Hovi, Huseby and Sprinz 2005; Farmer 2000; Dreger, Fidrmuc,

Kholodilin & Ulbricht 2015; Jing, Kaempfer and Lowenberg 2003; Driscoll, Halcoussis and Lowenberg 2011.) Since the events in Crimea have raised a lot of concerns in multiple countries, it is interesting to know if the sanctions imposed during the Ukrainian crisis have any influence on Finland.

The relationship of Finland and Russia has always been special. Even though the cultures, size, population as well as the political and economic systems differ from each other, Russia and Finland are bound by historical conflict, trade, association and a long border (Dickinson 2003). This thesis investigates whether the Finnish stock markets are so linked to the political situations in Russia that the market reacts significantly on the sanction announcements.

1.1.1 Crisis in Ukraine

The current crisis in Crimea is the most significant crisis since Ukraine gained its independence from the Soviet Union in 1991. After becoming independent, Ukraine has been trying to build strong political institution, make economic reforms, and reduce corruption. Ukraine is still highly divided into eastern and western halves that have different languages, religions and ethnical heritage. In addition, Ukraine has weak governance, oligarch dominated economy and high dependence on Russia. (Council on Foreign Relations 2014.)

Russia has strong ties with Ukraine. Ukraine was part of Russia for centuries and the relationship continued through the Soviet Union. In addition, Ukraine is an important economic partner of Russia. Its pipelines transfer 80% of the natural gas Russia sends to Europe. Moreover, Ukraine is a one of the main markets for Russian gas. (Council on Foreign Relations 2014.) According to Smith and Harari (2014), the strategic value of Ukraine, especially Crimea, is essential for Russia. Russian Black Sea fleet is based at Sevastopol in the Crimea. Additionally, Ukrainian border is very close to Moscow. Therefore, Ukraine gives Russia a good access to the Black Sea as well as protection against other countries that might be a threat to Russia. (Smith & Harari 2014.) Since there is a lot of ethnic Russians living in Ukraine and especially in Crimea, Russia considers protections of these people important. (Council on Foreign Relations 2014; Smith & Harari 2014.)

Everything began when Ukraine tried to have closer relationship with the European Union. The EU's Eastern Partnership Program attempts to build stronger ties with former Eastern bloc countries such as Ukraine. Russia considers that as a threat because it can be seen as en effort of getting closer to organizations like NATO, which brings military alliance closer to Moscow. (Council on Foreign Relations 2014; Smith & Harari 2014.) Due to high dependence on Russia especially when it comes to energy imports, Ukraine has stayed out from the EU enlargement process. However, in 2008 the EU offered Stabilization and Association agreement to Ukraine. (Dreger, Fidrmuc, Kholodilin & Ulbricht 2015.) In November 2013 the Ukrainian government refused to sign Association Agreement and Deep and Comprehensive Free Trade agreement with the EU. Instead, Ukraine decided to develop tighter cooperation with Russia. (Smith & Harari 2014; Dreger, etc. 2015.)

These actions led to violent demonstrations in Spring 2014 where many protesters and security personnel were killed. Russia refused to give financial support to Ukraine and the Crimean peninsula was surrounded by the Russian Federation. Also the airports in the Crimea were filled with military personnel. Everything escalated into an armed conflict where the fighting parties were forces supported by Russia and Western Ukrainian government. (Smith & Harari 2014; Dreger etc. 2015.)

After unsuccessful attempts of political settlement, the Crimea was willing to join the Russian Federation. (Smith & Harari 2014.) Before, the Crimea was an autonomous republic with its own parliament and laws and Russian language. Now Crimea was about to build a union with Russia, which meant Russian legislation and integration of economic, financial and credit systems as well as military service. (Council on Foreign Relations 2014.)

The United States and the European Union want Ukraine to become a democracy with tighter economic and political connections to the EU. Therefore, there is a strong conflict between Russia and Western countries. Western leaders accused Russia of violation of Ukrainian sovereignty and threatening international order. As a response of the developments in the Crimea, the EU and the US have

executed several actions, including sanctions, against these activities. The sanctions started during the annexation of Crimea and as the conflict got worse, the sanctions got harder. Finally, the sanctions included for example travel bans and asset freezing. Russia responded with the sanctions of its own containing a ban of food imports from the US, the EU, Canada and Australia as well as restrictions for certain citizens. (Council on Foreign Relations 2014; Smith & Harari 2014; Dreger etc. 2015.) The imposed sanctions are described in more details in the next chapter.

1.1.2. EU Sanctions on Russia and Russian Counter Sanctions

The European Union used multiple restrictive measures against Russia as a result of Ukrainian crisis. The sanctions were used in April, May, July and September in 2014 and even extended few times in 2015 (Veebel 2015). The EU imposed asset freezes and travel bans for different people and organizations. In addition, the access of state-owned financial banks of Russia on financial markets was limited and EU citizens were banned from investing in financial instruments of these institutions. Moreover, restrictions against specific sectors were imposed. For example import and export of military equipment as well as dual-use goods for military end-use were banned. Therefore, all the products going to Russian army were prohibited. The sanctions included also some specific products used in Arctic, deep water and shale oil projects. European Union limited also technical assistance and brokering services. (Ministry of Finance 2014.)

However, the sanctions were only able to harm specific areas such as oil, gas and raw materials production, but not the core elements of the Russian economy. Additionally, the travel bans included only top politicians but the President Vladimir Putin or Prime Minister Dmitry Medvedev. (Veebel 2015.)

As a response to imposed sanctions against Russia, it decided to execute counter sanctions. Russia imposed a ban on the import of meat and meat products, milk and dairy products, root crops, vegetables, nuts and fruits, vegetable fat-based food products, fish and shellfish. The sanctions were imposed against the EU, the USA, Canada, Australia and Norway. The ban does not include imports by private individuals or products for children. Later, Russia informed that the sanctions do

not involve lactose-free dairy products or seed potatoes. (Ministry of Finance 2014.)

1.2. Purpose and Research Problem

The purpose of the study is to investigate the impact of EU's Russia sanctions as well as Russian counter sanctions announced during the Ukrainian crisis on Finnish stock market. The study focuses on different kind of sanctions in order to compare their significance and importance to the Finnish market. The impact of sanctions especially on the stock markets has been poorly examined in the previous studies. Therefore, this study brings up something new to the field of academic literature.

This thesis is focusing on four different kinds of sanctions announcement concerning Ukrainian crisis. First list of sanctions focuses on asset freezes and travel bans of individuals whereas the second list of sanctions is related to the limitations of Russian financial institutions on EU capital markets as well as goods for military end users and oil sector. The third list of sanctions includes the sanctions imposed by Russia. In the fourth list of sanctions the previous restrictions executed by the EU are strengthened. (European Council 2015B.) The purpose of this thesis is to answer the question: How do the announced sanctions affect Finnish stock market?

1.3. Hypothesis Development

In this study six different hypotheses are developed. The hypotheses are based on the study of Schneider and Troeger (2006). Schneider and Troeger (2006) examine the relationship between political events and the world economy. They state that stock market reactions to international crises were mostly negative. They hypothesized that financial markets react to a conflict negatively if they expect the conflict to be costly for the economy. On the other hand, if the investors believe that the event will have an increasing effect on the future wealth of the economy

the markets will react positively. This study focuses on four different sanctions announcements and the hypotheses are based on different features of them. These announcements are introduced in chapter 5 and they include non-economic, economic sanctions as well as Russian counter sanctions. Therefore, the hypotheses are divided to three different pairs. Hypotheses are shown below.

H0.1: *Non-economic sanctions affect positively to Finnish stock market.*

H1.1: *Non-economic sanctions affect negatively to Finnish stock market.*

H0.2: *Economic sanctions affect positively to Finnish stock market.*

H1.2: *Economic sanctions affect negatively to Finnish stock market.*

H0.3: *Russian counter sanctions affect positively to Finnish stock market.*

H1.3: *Russian counter sanctions affect negatively to Finnish stock market.*

1.4. Structure of the Study

This thesis is constructed as follows. First, the theoretical background and the theories behind the study are introduced. Theories are concentrating on explaining how the value of a common stock or commodity is constructed as well as describing market efficiency and its different forms.

Secondly, this study presents previous literature on sanctions. This chapter introduces potential users of sanctions, different types of sanctions and their possible impacts. Additionally, the chapter includes history of imposing sanctions and presents three examples from the past focusing on describing the reasons behind as well as the outcome of using sanctions. In the end of the chapter the Western sanctions and Russian counter sanctions are briefly introduced.

In the fourth chapter this thesis focuses on the relationship between Finland and

Russia. Due to a significant integration of these two countries it is possible that the sanctions imposed by the EU and Russian counter sanctions have significant effects on the Finnish economy. The chapter signifies potential impacts of sanctions on the Finnish corporations as well as their overall effects on the Finnish economy. In addition, the chapter goes more deep into the case of Valio and represents the impact of Russian counter sanctions on Valio's operations.

The fifth part of the thesis consists of introducing the data and methodology used in order to examine the impact of sanctions on the Finnish stock market. The study continues with representing the results. Empirical findings are divided into four different parts in order to represent the significance of each announcement separately. Afterwards, the conclusions are made and the references as well as appendices are shown.

2. STOCK VALUATION AND MARKET EFFICIENCY

Theoretical background of this study consists of stock valuation and market efficiency theories. The purpose of stock valuation chapter is to show how the value of a stock is constructed in order to understand the factors affecting the prices. Moreover, market efficiency theory is introduced. Market efficiency theory shows that new available information is reflected in the prices of stocks and commodities (Bodie, Kane and Marcus 2014: 350-351). Therefore, market efficiency theory can explain the impact of stock markets to the sanctions announcements.

2.1. Stock Valuation

According to Brealey, Myers and Allen (2011:78), the value of a common stock can be described as follows:

(1) $PV(stock) = PV(expected\ future\ dividends)$, where

$PV = Present\ value$

The payoff to investors of a stock includes two different parts: cash dividend and capital gains or losses. Therefore, the expected return of a stock is:

(2) $E(r) = \frac{DIV_1 + P_1 - P_0}{P_0}$, where

$E(r) = Expected\ return$
$DIV = Dividend\ per\ share$
$P_1 = Price\ at\ the\ end\ of\ a\ year$
$P_2 = Current\ price\ of\ a\ share$
$P_1 - P_2 = Price\ appreciation\ per\ share$

Alternatively, price of a stock can be also predicted if a forecast of dividend, price and the expected return offered by other equally risky stocks are given. In that case

the predicted today's price is:

(3) $Price = P_0 = \frac{DIV_1 + P_1}{1+r}$, where

$r = Discount\ rate$

According to Brealey, Myers and Allen (2011:78-79), discount rate can be described as opportunity cost of capital, market capitalization rate or cost of equity capital. They define the expected return on other securities with the same amount of risk. All securities in a same risk class are priced to offer the same expected return.

If we try to forecast price of a common stock to infinity, we can forget the terminal price, because it approaches to zero. Therefore, today's price is a stream of cash dividends. (Brealey, Myers and Allen 2011:79.)

(4) $P_0 = \sum_{t=1}^{\infty} \frac{DIV_t}{(1+r)^t}$, where

$\infty = Infinity$

$DIV_t = Dividend\ stream$

Sometimes there is a constant growth rate for a company's dividends, which means that the dividends are expected to grow at a constant rate. In that case, in order to find a present value of a share to infinity, we need to take into consideration the discount rate as well as the growth rate. (Brealey, Myers and Allen 2011:81.)

(5) $P_0 = \frac{DIV_1}{r-g}$, where

$g = growth\ rate$

2.2. Market Efficiency

According to Fama (1970), allocation of ownership is a major role of capital

markets. It means that the goal is to have markets where prices provide signals for resource allocation. Therefore, it should be possible for investors to choose between commodities based on security prices that "fully reflect" all available information. A market in which prices reflect perfectly all available information is called efficient market.

According to Fama (1970) and Brealey, Myers and Allen (2011:314-315), efficient market theory suggests that prices of stocks and commodities should follow a random walk. It means that price changes should be independent and the probability of winning and losing should be the same. In addition, Bodie, Kane and Marcus (2014: 9) state that there should be no "free lunches" available for the investors. In other words, there should be few, if any, under-priced securities available that would represent bargains. That is because any information that could be used in order to find out stock's performance should be already reflected in the price of a stock. In case there is any stock that might be under-priced and lead to profit opportunity, investors start buying the stock and the price returns to its ordinary level, which is the level that takes its risk into consideration. (Bodie, Kane and Marcus 2014: 350-351.)

Efficient market hypothesis suggests that all available information is reflected in the prices of stocks and commodities (Bodie, Kane and Marcus 2014: 350-351). However, if all available information is already reflected in the prices of stocks, the only affecting information must be new (Bodie, Kane and Marcus 2014: 350). Therefore, new announcement about sanctions should be reflected in the stock prices in case the information is unpredictable. Consequently, the stock prices are expected to change when the information about the Russia sanctions is announced.

There are three different forms of efficient markets: weak, semistrong and strong. They differ from each other by the degree of information reflected in security prices. Weak market efficiency means, that prices include the information from the past. It reflects the history of past prices, trading volume and short interest. (Fama 1970; Bodie, Kane and Marcus 2014: 352; Brealey, Myers and Allen 2011: 317-318.)

The semistrong-form includes all the publicly available information. Therefore, the

prices reflect the information from the past as well as fundamental data on firm's product line, quality of management, balance sheet information, earning forecasts, accounting practices and mergers. All of this information is possible to get from public resources. (Fama 1970; Bodie, Kane and Marcus 2014: 352; Brealey, Myers and Allen 2011: 317-318.)

Strong market efficiency determines that the prices reflect all the information relevant to the firm, such as company insiders' information in addition to information from the past as well as publicly available information (Fama 1970; Bodie, Kane and Marcus 2014: 352; Brealey, Myers and Allen 2011: 317-318). Strong form of market efficiency is quite extreme. Some could argue that officers of corporations are able to get inside information before it gets public and therefore can gain profits. Actually, all the trading by companies' officers, directors and owners are monitored by Securities an Exchange Commission. The SEC records all the trades made by these insiders and therefore, any use of this information, their relatives or any associates on trading are considered as violation of the law. (Bodie, Kane and Marcus 2014: 354.)

3. PREVIOUS LITERATURE ON SANCTIONS

Sanctions are important tools in foreign policy (Hufbauer, Schott and Elliot 1990: 1) According to Farmer (2000), sanctions can be described as activities that a country (the sender) does in order to restrict the import and export of goods, services and capital between itself and another country (the target). The purpose is to affect the foreign policies and national security of the target. By using sanctions, the sender tries to raise the costs to the target countries or change the behaviour of their citizens. On the other hand, imposing sanctions can also lead to costs for the sender and its businesses as well as consumers.

Sanctions have become more attractive due to revolutions in foreign policy. World's political climate has changed together with the growing volume of trade. Nuclear production and international terrorism have increased and raised a lot of concerns about the future. Foreign policy is focusing more and more on human rights, drug blocking as well as environmental issues. These factors are hard to control with diplomatic or military forces only, which is why sanctions are nowadays commonly used. (Farmer 2000.) However, there is a lot of discussion about the usefulness of sanctions and whether they cause more costs than benefits for the sender.

3.1. Users of Sanctions

Sanctions are part of international diplomacy. Countries using sanctions are commonly large nations that have an active foreign policy. Due to the fact that they are big, they can influence events more effectively globally. By applying these measures, the user can send a signal to the target country saying that their actions are not acceptable. In addition, they give the allies a sign that their words become actions. Lastly, the user gives their domestic audiences a feeling of safety. (Hufbauer, Schott and Elliot 1990: 11.)

There are also international organizations that can be the key player of applying

sanctions. United Nations Security Council has the main responsibility for maintaining the international peace and security. It determines the existence of threat to the peace and act of aggression. Its mission is to find a settlement between arguing parties and recommend methods in order to achieve a peaceful environment. By imposing sanctions the Security Council can achieve its main goals. (United Nations Security Council 2015.)

United Nations has four main purposes. The first one is to maintain peace and security. Secondly, it develops friendly relations among nations together. It also cooperates in solving international problems and promotes respect in human rights. Lastly, United Nations aims to be the centre for harmonizing the actions of nations. All members of United Nations agree to accept the decisions of the Security Council. (United Nations Security Council 2015.)

According to UN Security Council Sanctions Committees (2015), sanctions are measures to maintain or restore international peace and security. Sanctions can be economic or other sanctions not involving the use of armed force. Compulsory sanctions are used to put pressure on a state or entity and enforce Security Council's decisions. They are enforcement tools when peace is threatened and diplomatic attempts have failed. (UN Security Council Sanctions Committees 2015.)

The EU Members are part of a Common Foreign Security Policy for the European Union. It aims to strengthen the EU's civilian and military capabilities in preventing conflicts as well as crisis management. (European Union External Action 2015a.) According to European Union External Action (2015b), sanctions can be restrictive measures against third countries, individuals or entities. They are used as a tool of EU's foreign policy together with the principles of Common Foreign and Security Policy. Certain EU measures are adopted from UN Security Council but it can also apply autonomous measures. (European Union External Action 2015b.)

According to European Union External Action (2015b), sanctions should be used as a part of integrated process involving political dialogue, complementary efforts

and other instruments. The measures should target the policies and actions that have encouraged the EU to impose sanctions. The purpose is to identify the ones responsible for the harmful behaviour. Targeted measures used should minimize the consequences for those not responsible for the unwanted policies or actions. They should especially protect the local civilian populations together with the legitimate activities in or with the country concerned. Sanctions cannot have consequences for those not responsible (European Union External Action 2015b.)

The EU uses its restrictive measures in order to cause a change in a policy or activity of the target country, part of a country, government, entities or individuals. By using sanctions as preventive tools, EU should be able to respond quickly to political challenges and developments. Sanctions are preventive instruments that do not cause a punishment. It helps the EU to respond to different political challenges and developments. The EU autonomous sanctions or EU additions to UN sanctions are regularly reviewed in order to verify that the restrictive measures are used as needed. They need to be in line with the determined objectives stated commonly. (European Union External Action 2015b.)

3.2. Types of Sanctions

There is a wide range of sanctions that can be executed. All of the previous studies have their own classifications for all different sanctions. Dregers, Fidrmuc, Kholodilin and Ulbricht (2015) have different stages of sanctions that are ranked according to their power. UN Security Council Sanctions Committees (2015) divides sanctions to economic, trade and more targeted sanction. Jing, Kaempfer and Lowenberg (2003) argue that choosing between different policy instruments is directly related to the outcome of sanctions. On they other hand, Jing, Kaempfer and Lowenberg (2003) add that effectiveness of the sanctions depends on the nature of the target. Therefore, the same sanctions cannot have the same effect in every country.

According to UN Security Council Sanctions Committees (2015), multiple different kinds of sanctions can be found: financial and trade sanctions or more targeted

sanctions such as travel bans, financial and diplomatic restrictions or arms embargoes. Targeted sanctions can include for example freezing of assets or blocking the financial transactions. (UN Security Council Sanctions Committees 2015.) Trade sanctions and financial sanctions are often referred as economic sanctions (Hufbauer, Elliot, Cyrus & Winston 1997).

According to Dreger, Fidrmuc, Kholodilin and Ulbricht (2015), several stages of sanctions can be found. The weakest form of sanctions includes diplomatic sanctions, such as withdrawal of ambassadors or suspension of international negotiations. The next level contains tools for targeting individual citizens and companies. These tools ban be travel bans, asset freezes, discontinuing development aid or inhibition of getting credit from international sources. The strongest form of sanctions includes restrictions against specific industrial sector such as trade limits or embargoes.

Jing, Kaempfer and Lowenberg (2003) state that choosing between different sanctions depends on the conditions of the target. Therefore, it is essential to choose carefully, which kind of sanction is appropriate to use. For example military force is not commonly used against economically healthy and politically stable targets. In addition, financial sanctions are more attractive when the target country receives financial support from a third-country. On the other hand, if the target country is economically healthy, financial sanctions are not considered as an effective instrument.

3.2.1. Political Sanctions

Political sanctions are often referred as diplomatic sanctions. According to Maller (2010), they can be seen as low-cost tools of isolating and legitimizing regimes. The possible costs of these sanctions contain loss of information and intelligence on the target and also decrease in communication capacity. Political sanctions are imposed when policymakers are willing to encourage diplomatic engagement and create better diplomatic ties. For example, the United States executed political sanctions during the World War II and cut diplomatic ties with different states including Japan and Germany. More recently, diplomatic tools have been used

against events connected to terrorism and proliferation. (Maller 2010.)

3.2.2. Financial Sanctions

Financial sanctions can be used in order to damage the target country's commercial and official finance. Financial sanctions can include requiring higher interest rates by the creditors. More powerful outcome of using financial sanctions can lead to freezing the target country's foreign assets like bank accounts. These sanctions can stop the money flow together with preventing the trade. United States has used financial sanctions against Iranian assets in 1979. Additionally, The UK froze Argentine assets in 1982. In the 1990, United States froze Kuwait's assets in order to avoid Saddam Hussein stealing from them. (Hufbauer, Schott and Elliot 1990: 37-38.)

3.2.3. Trade Sanctions

Trade sanctions can cause costs to the target country including decreasing export market and restrictions in critical imports. They can also involve lower prices for embargoes exports together with paying higher prices for imports. Export bans have been earlier used for oil (Arab oil embargo of 1973-1974) as well as grain. Import controls have been used less often due to the fact that usually the target countries can find alternative markets that they can take advantage of. In addition, some countries can have a limited legal authority to execute import limits. (Hufbauer, Schott and Elliot 1990: 36.)

3.3. Impacts of Sanctions

Previous studies concerning the different effects of sanctions on the economy have concentrated on South-Africa, Iraq and Iran (Manby 1992; Schott 2012; Lopez & Cortright 2004; Von Sponeck 2000). They are mostly focusing on the political and economic outcomes of different types of sanctions. Moreover, the previous studies have concentrated on the welfare consequences of sanctions. It seems that sanctions bring up mostly negative effects. Most of the studies are concentrating on

the damaging part of sanctions and not the positive side of them.

Van Bergeijk (1995) measures the impact of economic sanctions in the 1990s. He finds that only 35% of the sanctions used were successful during the time period from 1951–1989. This means that only 35% of the sanctions helped to change the target's behaviour to the wanted direction. Therefore it is interesting to know why the sanctions are so widely used.

According to Jing, Kaempfer and Lowenberg (2003), the choice of policy instrument such as trade sanctions or financial sanctions, is directly related to the outcome of the sanctions. In order to use the sanctions, the sender needs to investigate whether the benefits of imposing the sanctions are bigger than the costs (Farmer 2000). Morgan and Schwebach (1997) state that sanctions can be useful in restrictive conditions and may even improve the impact of other policies. However, there is a risk that the sender will pay big amounts for little return. In some cases the outcome of using sanctions might be the same as without imposing them.

According to Dreger, Fidrmuc, Kholodilin & Ulbricht (2015), the evidence on the efficiency of sanctions varies. For example, trade sanctions can harm both the sender and the target country. Additionally, it seems that countries with tight economic relationships suffer the most of the sanctions. Farmer (2000) points out, that sometimes the result of using sanctions is not what is expected. For example, putting a limit to foreign aid or trade may only affect to particular countries and does not have any effect on the total spending. In addition, most of the laws that authorize sanctions can allow the President to abandon the enforcement. This happens especially when the sanctions affect the national security.

According to Farmer (2000), three different situations can influence the functionality of sanctions. First of all, whether other countries participate in the trade restrictions. Secondly, whether the target country is a developing or industrialized economy and lastly, whether the target is able to impose sanctions by itself.

It is essential that the other countries participate in the intention of reducing the flow of goods and capital to the target country. Otherwise the usage of sanctions might be ineffective. Moreover, the costs of sanctions for the sender are potentially smaller for the developing countries. The sanctions usually work better when they are used against an individual developing country, not whole regions due to the fact that they sell relatively few goods. This means that the consumers of the sender country can find substitutes from somewhere else. On the other hand, the wealthiest economies sell goods and services that are unique and highly differentiated. Therefore it is difficult for the consumer to find similar products from other regions. In some cases, if the target country responses with its own sanctions, the costs of the sender may increase significantly. If the target country does not impose sanctions of its own, the sender can simply adjust its trade by seeking alternative markets. (Farmer 2000.)

In the case of sanctions against Russia, it is hard to predict whether the markets will react positively or negatively because the impact of sanctions is not well examined in previous literature. In addition, sanctions can have numerous effects that might include both positive and negative outcomes (Schneider & Troeger 2006).

3.3.1. Costs of sanctions

According to Hufbauer, Schott and Elliot (1990: 36), there are three different opportunities for the sender of sanctions trying to affect the costs of its target. The sender can reduce exports, put limits on imports and restrict financial services. Additionally, the sanctions can combine all of these different types.

According to Farmer (2000), sanctions can cause losses in economic efficiency. They can harm especially the incomes of production for exports that requires capital and skilled labour. In addition, the savings and consumer satisfaction can be in danger. Sanctions may cause indirect damage to the trade due to the decreased reliability by affecting to reliable work force, open legal system, financial infrastructure as well as stable economic policies. Farmer (2000) also states that sanctions can reduce future economic growth by damaging the activities of high-

income and high-growth domestic products.

According to Farmer (2000), sanctions can cause damage to monopoly rents. Losing such rents harms the most the industries where future profits depend on certain high-technology products that include "learning by doing" in order to achieve dominant positions. This may include for example oil producers. Additionally, adjusting country's trade to new patterns can lead to additional costs. These costs may contain temporary unemployment and reduced output. Other difficulties are inflexible wages and government regulation.

Hufbauer, Elliot, Cyrus and Winston (1997) investigate the impact of US economic sanctions for its economy. They find that the US exports suffered significantly due to the sanctions it imposed. Reduced exports mean that domestic firms may not be able to supply replacement parts or related technologies. The reduction of exports can continue as long as the same intensity of sanctions takes place. Actually, the negative impact of sanctions might even grow over time. Moreover, lower exports can cause a drop in employment due to the fact that fewer workers are employed in the export sector. This can also lead to lower wages. Therefore, not only the firms suffer but the workers too. (Hufbauer et al.1997.)

3.3.2. Do Sanctions Work?

According to Hovi, Huseby and Sprinz (2005), when examining the effectiveness of sanctions, two different opportunities need to be distinguished. Firstly, whether the sanctions have actually been imposed and secondly, whether there has been only a threat of using sanctions. Normally, the change in target's behaviour can be found in threat stage. On the other hand, there are cases that the threat fails and sanctions are executed. According to Hovi et al. (2005), imposing sanctions does not have as good effectiveness as in the threat stage.

If both sender and the target have behaved rationally, Hovi et al. (2005) state that there are three possibilities why the sanctions might fail. First, a threat of sanctions might not work because the target country may not consider the sanctions credible. Second, the target might think that it is more regrettable to accept the sender's

demands than receive the consequences of sanctions. Thirdly, the sanctions might fail because the target thinks that the sanctions do not lead to yielding. Moreover, the sanctions might be unsuccessful due to the fact that the target might consider that the change in its actions might not prevent the sanctions from happening. (Hovi et al. 2005.)

Hovi et al (20045) assume that if the threat of sanctions fails, the sanctions will not be imposed because the threat is empty or sanctions will be imposed but the target will not yield. This might be because the consequences are not potential. They also state that if the target does not yield to the threat of sanctions, it will not yield after imposing the sanctions. Imposed sanctions can only work if the target does not have a perfect knowledge of the actions. This means that the target must miscalculate the sender's willingness to impose sanctions, underestimate the consequences or wrongly believe that the sanctions will be imposed even if the target yields.

Jing, Kaempfer and Lowenberg (2003) state that sanctions success is positively correlated with a close the relationship between the sender and the target. On the other hand, economic health and political stability are negatively correlated with the success of the sanctions used. Moreover, there is no evidence of a third-country existence reduces the efficiency of sanctions or that the cost of sanctions to either the target or the sender affects the outcome of imposing sanctions. Verdier and Woo (2011) add that sanctions are more effective when they are used against democracies than non-democracies.

Driscoll, Halcoussis and Lowenberg (2011) argue that the linkages between nations are an important element determining the successfulness of using sanctions. They state that countries with similar cultures are less likely to impose sanctions against each other than countries with weak cultural ties. On the other hand, it seems that if the countries are culturally similar, the sanctions are most likely to be efficient.

But can the present EU-Russia sanctions actually work? According to Veebel (2015), the answer depends on whether the sanctions put pressure on Russia's economy, such as in gross domestic product rates, foreign direct investments, and

exchange rates or in central bank reserves.

According to Veebel (2015), the negative effects of sanctions in the GDP rates of Russian economy were seen in the second quarter of 2015 when it declined 4.6% (Eurozone -0.4%). However, the GDP of Ukraine declined by 17.2%. Moreover, the national currency of Russia suffered and lost one-third of its value during one year. On the contrary, Ukraine's currency lost approximately 60% of its value. Also the inflation increased significantly during the years from 2014 to 2015. However, foreign direct investments did not suffer remarkably.

3.4. History of Sanctions

Sanctions have been used multiple times in history. According to Hufbauer, Schott and Elliot (1990: 4), economic sanctions have been used long before World War I, starting in ancient Greece. The politicians have realized that sanctions can be used as weapons of statecraft. They are economic penalties that are alternatives to the use of military force. (Manby 1992.) However, the most efficiently investigated usage of sanctions starts from World War I. (Hufbauer, Schott and Elliot 1990: 1.)

3.4.1. The South African case

According to Manby (1992), the case of South Africa is unique. Different institutes were using multiple combinations of measures: international organizations, governments as well as nongovernmental organizations. Moreover, the instruments were not used for typical reasons like maintaining peace and security. They were used in order to protect international standards of morality and especially against protests of business interests and conservative governments. More specifically, the penalties were imposed against peoples' actions such as apartheid and discrimination.

In 1946, the Indian government executed a trade embargo and broke all the relations to protest racial discrimination against the Indian residents in South Africa. The Sharpeville massacre of 1960, the state of emergency and the call of the

African National Congress for sanctions against South Africa brought the first actions including international restrictions. In 1962 the United Nations General Assembly announced to its members to stop the trade and transports that are linked with South Africa. Afterwards, an oil embargo took place. (Manby 1992.)

Also the Security Council called the states to stop all the shipment of arms to South Africa together with banning shipment of equipment and materials for arms manufacture. In the end of 1963, 46 states announced tat they had stopped all the relations with South Africa and 21 more were about to do so. During the 1970s, the number of consumer boycotts of South African products as well as investor boycotts of companies doing business with South Africa grew. South Africa started to suffer in the financial markets and it was difficult for it to get loans. Further measures of United Nations were calling for a voluntary ban on new investments, loan guarantees, new nuclear contracts and sales of computer equipment. In 1985, also European Community imposed sanctions against South Africa including embargo of arms and oil. Afterwards, the imports of iron and steel from South Africa were banned. In addition, individual states, like the US and Japan, decided to execute sanctions. (Manby 1992.)

Later on, nongovernmental parties imposed a campaign of disinvestment. Therefore, multiple countries decided to withdraw their business in South Africa. The uncertain political and economic climate in made South Africa look like unattractive investment locations. Therefore, foreign investments decreased from 60% in 1970 to 34% in 1985. The loans became short-term debt and liquidity crisis begun and led to closing the stock exchange and foreign exchange markets. (Manby 1992.)

Even though the sanctions used against South Africa were not as effective as hoped that does not mean that they failed. The aim of the sanctions was to create a new kind of South Africa with democratic and non-racial system that respects the justice and security of its citizens. The restrictions used have not guaranteed that the black people in South Africa are not disadvantaged, but they have unbanned harmful organizations, released political prisoners and eliminated the major apartheid legislation. (Manby 1992.) According to Manby (1992), without the use of

sanctions, these changes in South Africa would have come much later with much more harm.

3.4.2. The Iran Case

The United States has imposed sanctions against Iran for a long time. Everything started in 1984, when the USA used sanctions due to Iran's bombing of the Marine Corps barracks in Beirut. Afterwards the USA has restricted trading with Iran focusing especially on the oil industry. These factors led to reduction the export earnings as well the Iran's capacity to support terrorism. Later the sanctions have been imposed against nuclear program and development of nuclear weapons of Iran. (Schott 2012.)

The Iran and Libya Sanctions Act (ILSA) in 1996 imposed sanctions against Iran's oil and gas sector and extended them in both 2001 and 2006. Due to these sanctions, the growth of Iranian oil production suffered. Later on, ILSA grew into the Comprehensive Iran Sanctions Accountability and Divestment Act (CISADA) and imposed new sanctions against bank and financial institutions that had activities with Iran. In addition, the punishments for violating sanctions tightened. Even though the sanctions against Iran have been restricted multiple times, they have not caused any changes in Iranian policy. On the other hand, they have made it harder for Iran to pursue terrorism and produce nuclear weapons. (Schott 2012.)

Lately, in 2011 the US imposed sanctions for non-U.S. financial institutions that had any transactions with the Central Bank of Iran or other Iranian banks. In addition, they restricted Iran's oil customers and limited their businesses with Iran's oil sector. They demanded that these firms must reduce their activities with Iran. Us threatened the violators by blocking the US financial markets and trading from them. In 2012, the EU imposed sanctions and prohibited all new contracts for purchasing, importing, or transporting Iranian crude oil, petroleum products and petrochemical products. These led to decrease in Iran's revenues and ruined relationships with its customers. Different countries have reduced their purchases of Iranian oil and are concerned about increasing oil prices and a reduced economic growth. (Schott 2012.)

3.4.3. The Iraq Case

The United Nations imposed sanctions against Saddam Hussein's weapons of mass destruction (WMD) programs in 1990. The sanctions policy continued as long as 2003. There are different opinions about whether the sanctions were effective or a failure. However, several positive aspects of the sanctions determination can be found. They reduced the capabilities of Iraq military, made Iraq to accept inspections and monitoring and multiple political issues such as the border disagreement with Kuwait. In addition, the revenue directed to Saddam reduced. This prevented Iraq from rebuilding defences after the Persian Gulf War and banned the import of essential technologies and materials for producing weapons. (Lopez & Cortright 2004.)

The story of UN sanctions against Iraq is the longest and the most comprehensive process in the history. The sanctions expelled Iraq from the world trade and cut off its oil exports together with harming its economy and society. By destroying Iraq's oil wealth and imports, sanctions prevented Iraq from rearmament. For the first six years of sanctions usage, Iraq sold no oil except a small amount to Jordan. In addition, foreign trade was destroyed. (Lopez & Cortright 2004.)

Even though the sanctions were effective and had the consequences wanted they also led to smuggling and explosion of black markets. Statistics show that illegal revenues of Iraq in 1997-2002 amounted to over 10 billion dollars. (Lopez & Cortright 2004.)

In 2001, the Bush administration imposed new restrictive measures called "smart" sanctions. The purpose of this was to block weapons and military supplies without blocking civilian trade. The goal was to rehabilitate Iraq's economy without accepting rearmament or development of military actions. The "smart" sanctions led to Iraq's acceptance of renewed inspections and Security Council approval of stronger monitoring. In 2002, these new sanctions had achieved the core elements of an effective long-term containment system. (Lopez & Cortright 2004.)

According to von Sponeck (2000), sanctions against Iraq have failed in multiple

ways and have had alarming effects on the Iraq's economy. Von Sponeck (2000) states that the sanctions have not changed Iraq's leadership or weakened the ruling elite. On the other hand, sanctions have helped to create well-controlled state and prevented Iraq's internal opposition to emerge together with weakening nuclear, ballistic and chemical weapons production.

Von Sponeck (2000) investigates the impact of Iraq's sanctions after ten years. He states that most of the civilian industrial enterprises are operating at a significantly reduced level. In addition, the estimated level of unemployment rate has increased from 60 to 75 per cent. On the other hand, the oil-for-food programme starting in 1996 had several positive impacts. First of all, the malnutrition rates stabilised and the deterioration of water supply and sanitation reduced. In addition, the distribution of humanitarian supplies to end-users increased since the interest in nutrition, child mortality and mental health increased. (Von Sponeck 2000.)

3.5. Western Sanctions Against Russia and Russian Counter Sanctions

Western governments implemented multiple different sanctions against Russia during the Ukrainian crisis. Everything started from the annexation of the Crimea. As a diplomatic measure Western governments excluded Russia from the G8 meeting together with suspending cooperation agreements and visa regulations. In addition, Western countries have executed measures against Russian and Ukrainian individuals and legal communities. The strongest form of sanctions that included restrictions against specific industries has been used against banking, energy and defence sectors. For example, the USA have banned commercial relations between US citizens or firms and sanctioned Russian companies. Moreover, The USA has restricted the export of technology goods that are related to military actions. (Dreger, Fidrmuc, Kholodilin & Ulbricht 2015.)

4. BUSINESS INTEGRATION OF FINLAND AND RUSSIA

Finland and Russia have always had a special relationship. Despite the fact that these two countries have widely different cultures, size and population as well as dissimilar political situation and economic systems, these countries are located side by side in northern Europe. They share the same history including conflicts, trading and a long border. (Dickinson 2003.)

Finland became independent from Russia in 1917 and has had two wars after that with its neighbour. Finland and Russia have had a tight trading and business relationship, which has been essential for the Finnish economy. When it comes to marketing Finland's own products and abilities, Finnish people have been better than any other country in European Union in understanding Russian business. (Dickinson 2003.)

Also Etzold and Haukkala (2013) state that Finland's relationship with Russia is very important even though they have had many ups and downs in their history together. They argue that Finland might have the most essential relations with Russia than any of the European Union members. Before the financial crisis of 2008-2009, Russia was the largest trading partner to Finland. Even after the crisis the trading turnover was eleven billion euros. In addition, Finnish companies have invested over six billion euros in the Russian market. Additionally, Finland and Russia share 1300 kilometres of land border. Moreover, Finland has active political relations with Russia. (Atzold & Haukkala 2013.)

According to Eklund and Karhunen (2009), Finnish companies in Russia are mostly located in St. Petersburg, Leningrad region, Karelia and Moscow. It seems that there are a lot of Finnish companies from all different industries in Russia. Even though the economies of Russia and Finland have had a colourful history together, the Finnish companies have maintained their interest in doing business with Russian companies. On the other hand, Finnish companies have invested in Russian markets with caution since Russian markets are considered relatively uncertain

(Simola 2009).

Huge potential of Russian markets as well as wide range of raw materials have attracted Finnish companies to expand their activities to Russian markets. However, corruption, heavy bureaucracy as well as unstable legislation have limited the interest of Finnish companies to do business in Russia. (Simola 2009.)

4.1. Impact of Russia Sanctions on Finnish Economy

Ministry of Finance (2014) has investigated the impact of the Russia sanctions on the Finnish economy. They state that in 2013, Finland's food exports to Russia were over 430 million euros. One of the major producers was Valio, accounted for 350 million euros. Therefore, the impact of the sanctions might be damaging to Finland. According to Ministry of Finance (2014), it is possible that prices and profitability of producers, especially in the dairy sector, falls due to Russian counter sanctions. It is alarming because milk production is one of the most important productions sectors in Finland.

Due to sanctions imposed by the EU together with weak economic development of Russia, financial situation in Russia has tightened. According to Ministry of Finance (2014), these factors may have an impact on the sales of Finnish technology industry. Actually, Finland's exports of goods had already fallen by 14% during the first months of the year 2014. Moreover, the uncertainty the crisis has caused significantly reduced the direct investments in Russia. Ministry of Finance (2014) does not think that the change in consumption by Russians in Finland would have a significant effect on the Finnish economy.

According to Ministry of Finance (2014), the indirect effects are more significant than direct effects mentioned before. The indirect costs for Finland might appear due to weakening rouble, which affects by fuel inflation and slowing growth of consumption. This happens because people move capital out of the country due to uncertainty. However, the major risks are a decrease of Russia's import volume, weakening of economic activity, reduction of purchasing power due to currency

devaluations and reduced exports of Russian oil. All of these factors affects to Finnish economy. (Ministry of Finance 2014.)

Even though it is still unknown how the sanctions affected the Finnish economy, the statistics of foreign trade with Russia show that the overall interaction between Finland and Russia has reduced. According to Suomalais-Venäläinen Kauppakamari (2015), Russia was the third biggest export partner and the biggest import country of Finland in 2014. However, the exports decreased 14 per cent from 2013 to 2014 whereas the imports decreased 18 % from 2013 to 2014. Additionally, in the first quarter of 2015, the exports to Russia decreased 25 per cent comparing to 2014 (Suomen Tulli 2015).

4.2. Impact of Russia Sanctions on Finnish Companies

Finland Chamber of Commerce (2015) investigated the impact of Russia sanctions during the Ukrainian crisis on Finnish companies. The data were collected from 1700 companies all over Finland containing firms of different sizes and from different industries. Most of the companies included were small (74%, 1-49 workers).

The companies were asked how the sanctions against Russia affect to their business. 43% of the companies think that they have an indirect negative impact on their businesses and 28% of the respondents say that there is a direct impact on their businesses. 30% of the companies state that no significant effect of Russia sanctions or economic crisis can be found on their businesses. Only 1% thinks that the crisis might have a positive impact on their activities. (Finland Chamber of Commerce 2015.)

According to the study of Finland Chamber of Commerce (2015), several negative impacts of Russia sanctions and economic collapse can be found on the actions of Finnish companies. These unfortunate events had led to difficulties in selling products and services to the Finnish clients that have customers in Russia. In addition, exports to Russia have become more challenging together with

weakening cooperation with Russian companies. Also the solvency of Russian consumers has become worse and has lead to decreased purchasing power. In addition, the ongoing projects have slowed down due to difficulties in selling new projects to Russia. In fact, some companies have decided to cut all of their investments. The weakening of rouble and increased interest rates have made it difficult for the Russian companies to operate and that affects to the collaboration of Finnish and Russian companies.

Moreover, Finland Chamber of Commerce (2015) investigated how the Finnish companies are planning to react to the situation. Only 1% answered that their companies are going to withdraw from the Russian markets whereas 3% said that they give up their plans of expanding to Russia. The majority of the respondents (71%) replied that they take no reaction to the situation. Those who reacted to the situation in Russia were planning to allocate their marketing to domestic markets or focus on the Russian industries that are not subjects of restrictions. Some companies have tried to find consumers from other countries and reduced their overall costs and operations.

4.2.1. Case of Valio

One of the Finnish enterprises that have suffered the due to Russia sanctions is a company from dairy industry, Valio. The export of milk products to Russia was forbidden due to sanctions imposed by Russian counter (Helsingin Sanomat 2014). Therefore, Valio was not able to export anything to Russian markets. According to Yle (2015), 20 per cent (400 million euros) of Valio's turnover comes from Russia, which is why the imposing sanctions against the dairy industry can be highly damaging to Valio.

According to Valio (2015), Russia was the most important partner until August 2014. However, the Russian counter sanctions have forced Valio to look for new opportunities. Therefore, currently the most important markets are in Sweden, USA, China and Central Europe. In addition, the sanctions forced Valio to start employee co-operation negotiations (Kauppalehti 2014.)

5. DATA & METHODOLOGY

This study is focusing on four different announcements including different kinds of sanctions. All of the packages of sanctions were announced in 2014 and the purpose is to examine whether the announcements generated abnormal returns in Finnish stock market. The announcements and expected results are listed below.

The first sanctions package includes non-economic sanctions. The EU introduced its first set of restrictive measures against 21 Russian and Ukrainian officials in 17th of March in 2014. The EU determined travel bans and asset freezes for persons and entities associated with threatening the territorial integrity, sovereignty and independence of Ukraine. (European Council 2015A.) According to Dreger, Fidrmuc, Kholodilin and Ulbricht (2015), these kinds of sanctions are considered as the second strongest form of sanctions. This thesis expects the first list of non-economic sanctions to have a positive impact on the stock markets because they are used in order to increase the overall wealth of the economy. Therefore, H0.1 is applied.

H0.1: *Non-economic sanctions affect positively to Finnish stock market.*

From 29th to 31th of July in 2014 the EU adopted additional restrictive measures against Russia that included economic sanctions. These decisions limit the access of Russian state-owned financial institutions to EU capital markets. In addition, they impose an embargo on trade in arms and establish an export ban for dual use goods for military end users. Moreover, these restrictions reduced Russia's access to sensitive technologies especially in oil sector. (European Council 2015A.) These sanctions are the strongest and can have powerful effects on the economy (Dreger, Fidrmuc, Kholodilin & Ulbricht 2015). This thesis expects that the second list of sanctions will have a negative impact on the markets because they restrict the operations of financial services together with restriction in oil sector. In this case, H1.2 is applied.

H1.2: *Economic sanctions affect negatively to Finnish stock market.*

Russia responded with sanctions of its own in 7.8.2014. Russia imposed an import ban against EU, USA, Canada, Australia and Norway. The sanctions included for example an import of meat, meat products, milk and milk products, root crops, vegetables, fruits and nuts, fish and shellfish. (Valtiovarainministeriö 2014.) The third list of sanctions is expected to have a negative effect on the stocks market due to restrictive measures of Russian counter that affect Finnish companies that have tight connections to Russia. Therefore, H1.3 is applied.

H1.3: *Russian counter sanctions affect negatively to Finnish stock market.*

In 12.9.2014, the EU tightened its economic and non-economic sanctions against Russia. Restrictions on Russia's access to EU capital markets were strengthened together with a prohibition of the supply of certain services necessary for deep water oil exploration and production, arctic oil exploration or production and shale oil projects in Russia. Additionally, the ban on exporting dual use goods and technology for military use in Russia was extended. Moreover, 24 persons were added to the list of those subject to travel ban and asset freeze. (European Council 2015A.) 4) The fourth list of sanctions is also expected to affect negatively due to the fact that the sanctions against capital markets and oil industry were tightened. This package of sanctions included both economic and non-economic sanction. Therefore, two hypotheses are applied.

H1.1: *Non-economic sanctions affect negatively to Finnish stock market.*

H1.2: *Economic sanctions affect negatively to Finnish stock market.*

5.1. Data

This thesis uses OMX Helsinki 25 (OMXH25) stock index as a database for calculating the daily stock returns over the estimation period. OMX Nordic 120 (NOMXN120) stock index is used as market return. Figure 1. represents general movements of OMX Helsinki 25 around the four sanctions announcement

investigated in this thesis. The time period is from 7.3.2014 to 22.9.2014.

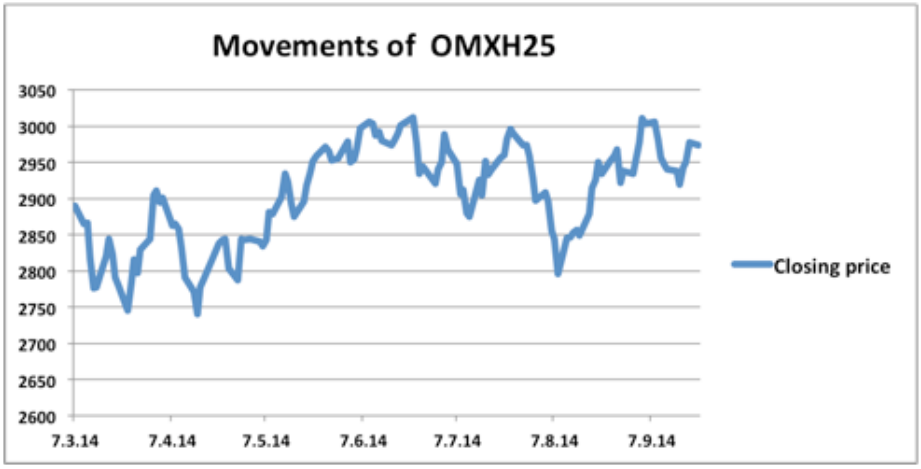

Figure 1. General movements of OMX Helsinki from 7.3.2014 to 22.9.2014.

5.2. Methodology

In this thesis event study methodology is used in order to analyse the effect of the sanction announcement on Finnish stock markets. Event studies are often used in order to have evidence against market efficiency (Benninga 2008). According to Benninga (2008), the purpose of an event study is to examine whether some particular event affects stock market performance. The basic idea of this study is to find the abnormal returns caused by the sanction announcement. The abnormal returns can be estimated by calculating the difference between the actual return and expected return of a stock (Benninga 2008:371). An example of an impact of a news announcement is shown in Figure 1.

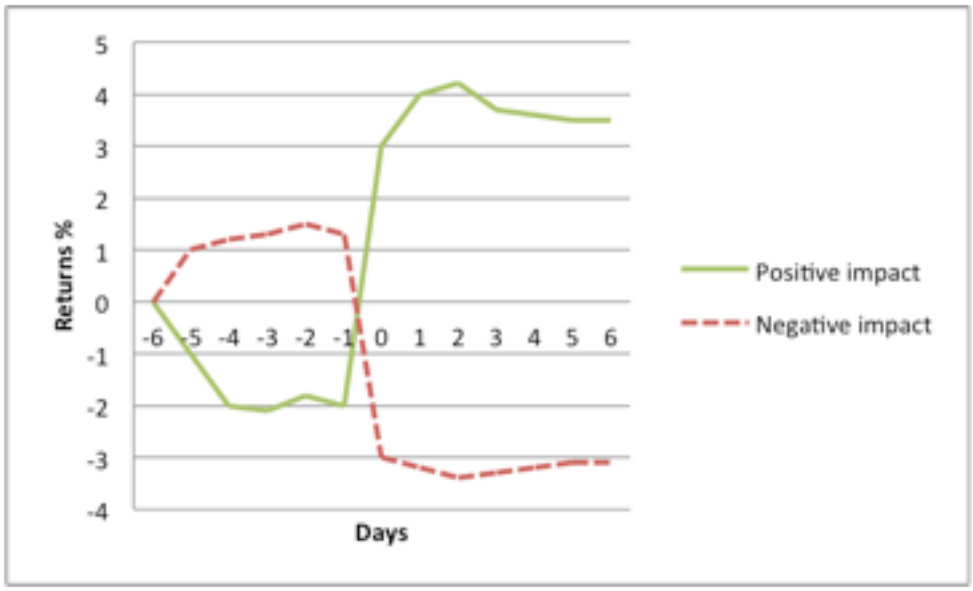

Figure 2. Impact of news announcement.

When implementing an event study, different time frames can be constructed: the estimation window, the event window and the postevent window. The estimation window defines the normal behaviour of stocks. (Benninga 2008: 372-373.) According to Benninga (2008: 372-373), the normal behaviour of stocks can be described as follows:

(6) $R_{it} = \alpha_i + \beta_i R_{mt}$, where

$R_{it} = Stock\ return\ on\ day\ t$
$R_{mt} = Market\ return\ on\ day\ t$
$\alpha_i, \beta_i = Coefficients$

Figure 3. Different time frames of an event study.

The estimation window examines the normal behaviour of stock's return and the sample is collected before the event day, when the event has not had any impact on the stocks yet. The event window is placed around the actual announcement day whereas the postevent window monitors the performance of s stock after the event. It measures the long-term effect. (Benninga 2008: 372-373.) According to Benninga (2008: 374), the abnormal return can be constructed from the equation below.

(7) $AR_{it} = r_{it} - (\alpha_i + \beta_i r_{Mt})$, where

$AR_{it} = Abnormal\ return$
$r_{it} = Actual\ stock\ return\ in\ event\ window\ day\ t$
$\alpha_i + \beta_i r_{Mt} = Return\ predicted$

Cumulative abnormal return measures the total sum of abnormal returns during the event window (Benninga 2008).

(8) $CAR_t = \sum_{j=1}^{t} AR_{T1+j}$, where

$CAR_t = Cumulative\ abnormal\ return$
$AR_{it} = Abnormal\ return\ from\ the\ beginning\ of\ the\ event\ T_1\ to\ day\ t$

The measure of the event's economic impact in this study is constructed using daily prices of OMX Helsinki 25 (OMXH25) stock index. First, the normal stock returns are estimated based on the estimation window before the event. The

planned length of estimation window is five days. The event window consists of day before and after the event. It is used in order to calculate the abnormal returns the event causes. Additionally, the longer-term performance is estimated by using the postevent window. All of the different time frames include only trading days.

I used adjusted closing prices and calculated daily returns using natural logarithm. I applied the equations 6, 7 and 8 in order to find out the abnormal returns (AR) of the stock index OMX Helsinki 25 as well as the cumulative abnormal returns (CAR). Afterwards I examined the significance of the results by t-test using 5 per cent significance level.

6. EMPIRICAL FINDINGS

This chapter represents the empirical findings of the study. All of the results of different sanctions announcements are shown in their own chapters. The goal is to answer the question: How do the sanctions impact the Finnish stock market?

6.1. The First Announcement

The first announcement includes non-economic restrictions against Russian and Ukrainian officials. The sanctions contained travel bans and asset freezes. Figure 2. shows different time frames of the first announcement. The event day is 17.3.2014 but the event window includes trading days before and after the event. Therefore, the event window consists of days from 14.3.2014 to 18.3.2014. The estimation window includes five trading days before the actual event whereas the postevent window consists of five trading days after the event.

Figure 4. Time frames of the first announcement.

Table 1. represents the expected returns, abnormal returns, cumulative abnormal returns as well as the results of t-test for individual abnormal returns. The values of t-test show, that only one day has statistically significant results (t-value 4,72). This means that the first list of sanctions has significant positive effect on the Finnish stock markets in the first day of the event. Therefore, H0.1 is accepted.

H0.1: *Non-economic sanctions affect positively to Finnish stock market.*

Table 1. Effect of the first list of sanctions on OMX Helsinki 25.

Date	Expected return	Abnormal return (AR)	Cumulative AR (CAR)	t-test (AR)	AR significant?
14.3.14	-1,54 %	1,56 %	1,56 %	**4,72**	**yes**
17.3.14	1,29 %	0,25 %	1,80 %	0,75	no
18.3.14	0,54 %	0,32 %	2,12 %	0,96	no
19.3.14	-0,81 %	0,05 %	2,17 %	0,15	no
20.3.14	-0,95 %	-0,17 %	2,00 %	-0,51	no
21.3.14	-0,83 %	0,36 %	2,36 %	1,10	no
24.3.14	-1,45 %	0,26 %	2,62 %	0,79	no
25.3.14	0,70 %	0,63 %	3,25 %	1,92	no

These results show that the Finnish stock markets expect the first list of sanctions to have a positive impact on the economy. This could mean that these non-economic sanctions including travel bans and asset freezes against Russian and Ukrainian officials are considered as valuable tools for maintaining wealth and prosperity of the economy and especially the welfare of Ukraine. The results are in line with the expected results of the study.

6.2. The Second Announcement

The second list of sanctions limited the access of Russian state-owned financial institutions to EU capital markets. Additionally, they harmed the trade of arms and dual use goods as well as sensitive technologies. According to Hufbauer, Elliot, Cyrus and Winston (1997), these sanctions can be referred as economic sanctions. The second list of sanctions was revealed within three days from 29.7.2014 to 31.7.2014 but the event window includes one day before and after the announcement. Therefore, the event window consists of days from 28.7.2014 to 1.8.2014. The estimation window includes days from 21.7.2014 to 25.7.2014 whereas the postevent window contains days from 4.8.2014 to 8.8.2014.

Figure 5. Time frames of the second announcement.

Table 2. represents the effect of the second announcement of sanctions on OMX Helsinki 25. It shows the expected returns, abnormal returns, cumulative abnormal returns and the values of t-test for individual abnormal returns. In the case of the second announcement, there are five statistically significant values in 5% significance level. This means, that the second list of sanctions has highly negative impact on the Finnish stock markets within the event window as well as after the event. The postevent shows that the announcement has had also a long-term impact on the Finnish stock markets. Therefore, H1.2 is accepted.

H1.2: *Economic sanctions affect negatively to Finnish stock market.*

Table 2. Effect of the second list of sanctions on OMX Helsinki 25.

Date	Expected return	Abnormal return (AR)	Cumulative AR (CAR)	t-test (AR)	AR significant?
28.7.14	0,38 %	-0,95 %	-0,95 %	**-1,95**	**yes**
29.7.14	0,32 %	-0,30 %	-1,25 %	-0,62	no
30.7.14	0,37 %	-0,86 %	-2,11 %	-1,76	no
31.7.14	0,45 %	-1,53 %	-3,64 %	**-3,13**	**yes**
1.8.14	0,45 %	-1,50 %	-5,14 %	**-3,07**	**yes**
4.8.14	0,33 %	0,06 %	-5,07 %	0,13	no
5.8.14	0,27 %	-0,71 %	-5,79 %	-1,46	no
6.8.14	0,48 %	-1,88 %	-7,66 %	**-3,85**	**yes**
7.8.14	0,40 %	-0,79 %	-8,46 %	-1,63	no
8.8.14	0,42 %	-2,11 %	-10,57 %	**-4,33**	**yes**

The results are not surprising since the sanctions are expected to have multiple negative impacts on the economy. The restrictive measures against Russia's financial institutions as well as ban of trading arms and dual use goods are expected to cause expenses for several countries. This might be due to the fact that the exports of Russia's business partners might decrease. Therefore, the countries having deep relationship with Russia are expected to suffer from the sanctions. The restrictions can be especially harmful for the oil sector since the sanctions prevented Russia's access to sensitive technologies. In addition, the sanctions can harm the financial markets of the economy due to decisions to limit the access of Russia state-owned financial institutions to EU capital markets. The results are in line with the expected results that predicted the second list of sanctions to have negative impact on the stock markets.

6.3. The Third Announcement

The third list of sanctions was imposed by Russia. It included restrictions against the trade of important products such as meat and milk. The event day of the third list of sanctions was 7.8.2014. Therefore, the event window consists of days from 6.8.2014 to 8.8.2014. The estimation window includes days from 30.7.2014 to 5.8.2014 and the postevent window days from 11.8.2014 to 15.8.2014. The time frames are shown in Figure 4.

Figure 6. Time frames of the third announcement.

Table 3. represents the impact of the third list of sanctions on Finnish stock market. According to t-test, the announcement has no significant impact on the stock

returns of OMX Helsinki 25. Therefore, neither H0.3 nor H1.3 can be applied in the case of third announcement of sanctions.

Table 3. Effect of the third list of sanctions on OMX Helsinki 25.

Date	Expected return	Abnormal return (AR)	Cumulative AR (CAR)	t-test (AR)	AR significant?
6.8.14	-1,08 %	-0,32 %	-0,32 %	-0,53	no
7.8.14	-0,65 %	0,26 %	-0,07 %	0,42	no
8.8.14	-0,79 %	-0,90 %	-0,97 %	-1,47	no
11.8.14	0,74 %	0,97 %	0,00 %	1,58	no
12.8.14	-0,48 %	0,53 %	0,53 %	0,86	no
13.8.14	-0,10 %	0,33 %	0,86 %	0,54	no
14.8.14	-0,36 %	0,48 %	1,34 %	0,79	no
15.8.14	-0,40 %	0,15 %	1,49 %	0,24	no

The results are surprising since the Russia imposed an import ban of several important products. The restrictions were against the EU, the US, Canada and Norway and included for example meat and milk products as well as fruits and vegetables. This study expected the third list of sanctions to have a negative impact on the stock markets since the sanctions concerned the Finnish companies such as Valio that are exporting food to Russia.

6.4. The Fourth Announcement

The EU strengthened its economic and non-economic sanctions against Russia in 12th September 2014 concerning supply restrictions harming especially the oil sector as well as ban of trading that is connected to dual use goods. Additionally, the travel bans and asset freezes were extended. The event window consists the trading days before and after the event including days from 4.9.2014 to 10.9.2014. Additionally, the estimation window includes five days before the event window starting from 4.9.2014. The postevent window contains five days after the event

window from 16.9.2014 to 22.9.2014.

Figure 7. Time frames of the fourth announcement.

Table 4. shows the results of the fourth announcement. It represents the expected returns, abnormal returns, cumulative abnormal returns and the results of t-test around the sanctions announcement. Only two significant values can be found and they are both included in the postevent window. It seems that after the announcement OMX Helsinki 25 has had more positive returns than expected. The t-values of the returns in 17.9.2014 and 19.9.2014 are statistically significant in 5 per cent significance level. Therefore, H0.1 and H0.2 can be applied.

H0.1: *Non-economic sanctions affect positively to Finnish stock market.*

H0.2*: Economic sanctions affect positively to Finnish stock market.*

Table 4. Effect of the fourth list of sanctions on OMX Helsinki 25.

Date	Expected return	Abnormal return (AR)	Cumulative AR (CAR)	t-test (AR)	AR significant?
11.9.14	-0,49 %	0,12 %	0,12 %	0,23	no
12.9.14	-0,32 %	0,11 %	0,23 %	0,21	no
15.9.14	-0,37 %	0,30 %	0,53 %	0,55	no
16.9.14	-0,48 %	-0,15 %	0,38 %	-0,28	no
17.9.14	-0,24 %	1,06 %	1,44 %	**1,96**	**yes**
18.9.14	-0,18 %	0,41 %	1,85 %	0,75	no
19.9.14	-0,33 %	1,26 %	3,11 %	**2,34**	**yes**
22.9.14	-0,43 %	0,31 %	3,42 %	0,57	no

The results show that strengthening of the EU sanctions has had no significant effect on the Finnish stock markets during the event but afterwards it has caused significant positive returns. The restrictions against Russia's financial institutions, prohibition of supply of certain services as well as travel bans and asset freeze were tightened and the Finnish stock markets reacted positively to the restrictions. This can be due to the fact that the sanctions were expected to have a positive effect on the economy increasing welfare and reducing the conflict in Ukraine. This thesis predicted that the fourth announcement of sanctions would have a negative impact on the Finnish stock markets. Therefore, the actual results are not in line with the expected outcome.

7. CONCLUSIONS

The purpose of the study was to examine the impact of EU's Russia sanctions and Russian counter sanctions on the Finnish stock market. The hypotheses were based on a study of Schneider and Troeger (2006). They argue that stock markets react positively to the events that will increase the wealth of the economy and negatively to the actions that are believed to have a damaging impact on the economy. Additionally, the study relies on market efficiency theory finding that security prices should reflect all available information that is new (Vega 2006; Bodie, Kane & Marcus 2014: 350). Therefore, the prices of stocks were expected to change when new information about sanctions is revealed.

The fact that Finland and Russia are highly bonded to each other (Etzold and Haukkala 2013), the Finnish stock markets were expected to have some kind of reaction to the sanctions announcements. Moreover, Ministry of Finance (2014) predicted the sanctions to have multiple negative impacts on the Finnish economy. It states that multiple Finnish companies have been forced to change their operations because of sanctions that were able to harm their businesses.

The impact of the sanctions announcements was examined by using event study as a methodology. The purpose was to answer the question: "How do the sanctions announced impact the Finnish stock market?". The results were found by examining the abnormal returns generated by the event. The findings were relatively surprising and some of them against the outcomes expected in the study.

The first package of sanctions included non-economic restrictive measures against Russian and Ukrainian official consisting of asset freezes as well as travel bans. Empirical findings show that the first announcement had highly positive impact on the Finnish stock market. Therefore, the first list of sanctions including travel bans and asset freezes were expected to increase the overall wealth of the economy.

The second sanctions announcement was the most significant one. It consisted of

limitations against Russian state-owned financial institutions as well as restrictions against trading dual use goods for military end users. Moreover, the sanctions reduced Russia's access to sensitive technologies. According to Dreger, Fidrmuc, Kholodilin and Ulbricht (2015), these sanctions are the most powerful ones. Therefore, it is not surprising that Finnish stock market reacted highly negatively on the announcement of sanctions. In fact, five highly negative t-values were found during the announcement. This means that the economic sanctions have a negative effect on the Finnish stock market not only during the announcement but also long after the new information was revealed. Therefore, it is easy to say that the sanctions against Russian financial institutions as well as restrictions against some specific technologies in Russia were expected to have a tightening impact on the Finnish economy. This shows that the business integration of Russia and Finland is strong.

The most surprising results came out when Russia imposed counter sanctions on import of goods against different countries. The sanctions were expected to have remarkable effects on the Finnish economy since they included a ban of importing several important goods such as milk products. One of the Finnish companies that were expected to suffer the most is called Valio since 20 per cent of its turnover came from Russia. Additionally, trading of multiple other goods such as vegetables, fruits, fish and meat products were forbidden. Even though these restrictions seem hard they did not have any impact on the Finnish stock market. No statistically significant t-values of individual abnormal returns can be found during the event.

The fourth announcement of sanctions strengthened already imposed sanctions by the EU including both non-economic and economic sanctions. For example, restrictions on Russia's access to capital markets were even tightened together with limitations against oil sector. Additionally, the list of persons subject to travel ban and asset freeze was extended. The results show that the restrictions of previous sanctions had a positive impact on the Finnish stock market especially after the event. The results are somewhat surprising since the second announcement that included the same kind of sanctions caused highly negative effect on the stock prices. The outcome shows, that the markets expected the fourth list of sanctions to

increase the wealth of the economy.

As a conclusion, this thesis showed that the Finnish stock market is affected by various sanctions announcements. The impact can be both positive and negative. Only one package of sanctions did not have any effect: the sanctions imposed by Russian counter. On the contrary, the most significant impact on the Finnish stock market was caused by economic restrictions against Russian financial institutions as well as limitations against specific industries such as oil sector. Therefore, it is obvious that Finnish and Russian businesses are integrated and the activities that are developed against Russia can also affect the Finnish stock market.

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APPENDIX 1. Prices of OMX Helsinki 25 from 7.3.2014 to 25.3.2014.

Date	High price	Low price	Closing price
7.3.14	2927,88	2885,18	2889,01
10.3.14	2891,88	2853,70	2864,86
11.3.14	2885,89	2858,64	2866,69
12.3.14	2857,36	2807,85	2816,48
13.3.14	2832,15	2775,97	2776,49
14.3.14	2780,64	2741,12	2777,00
17.3.14	2820,72	2770,96	2819,90
18.3.14	2847,80	2798,83	2844,21
19.3.14	2851,56	2814,01	2822,64
20.3.14	2826,05	2783,14	2791,26
21.3.14	2803,91	2776,56	2778,29
24.3.14	2788,67	2740,05	2745,48
25.3.14	2790,95	2751,29	2782,28

APPENDIX 2. Prices of OMX Nordic 120 from 7.3.2014 to 25.3.2014.

Date	High price	Low price	Closing price
7.3.14	827,64	818,43	818,99
10.3.14	821,97	813,10	815,66
11.3.14	820,66	814,88	817,77
12.3.14	817,40	803,22	806,31
13.3.14	811,28	801,48	801,62
14.3.14	801,04	788,55	793,39
17.3.14	805,99	792,91	805,68
18.3.14	813,94	801,26	812,63
19.3.14	814,09	808,69	809,64
20.3.14	807,66	801,09	805,64
21.3.14	807,38	802,47	802,54
24.3.14	805,52	794,25	794,95
25.3.14	804,66	795,60	802,96

APPENDIX 3. Prices of OMX Helsinki 25 from 21.8.2014 to 8.8.2014.

Date	High price	Low price	Closing price
21.7.14	2958,86	2938,89	2955,63
22.7.14	2981,91	2950,83	2960,07
23.7.14	2984,76	2962,91	2981,54
24.7.14	3013,83	2984,67	2995,98
25.7.14	3008,33	2982,78	2989,96
28.7.14	3000,53	2963,03	2973,00
29.7.14	2990,47	2964,59	2973,65
30.7.14	2975,36	2949,98	2959,16
31.7.14	2960,14	2924,37	2927,48
1.8.14	2931,48	2887,22	2897,02
4.8.14	2923,87	2903,48	2908,49
5.8.14	2920,25	2895,55	2895,56
6.8.14	2879,97	2845,51	2855,32
7.8.14	2861,93	2842,28	2844,02
8.8.14	2810,48	2786,92	2796,41

APPENDIX 4. Prices of OMX Nordic 120 from 21.8.2014 to 8.8.2014.

Date	High price	Low price	Closing price
21.7.14	827,86	821,77	824,55
22.7.14	836,55	824,53	836,19
23.7.14	839,57	835,08	838,12
24.7.14	842,50	837,98	840,20
25.7.14	843,11	838,61	841,14
28.7.14	842,51	835,07	836,64
29.7.14	839,73	835,92	837,61
30.7.14	838,19	833,25	834,49
31.7.14	836,43	823,46	823,85
1.8.14	824,23	812,46	813,46
4.8.14	819,13	813,36	813,64
5.8.14	821,02	815,48	819,56
6.8.14	819,01	803,26	806,78
7.8.14	808,35	801,29	801,30
8.8.14	800,33	785,99	793,59

APPENDIX 5. Prices of OMX Helsinki 25 from 30.7.2014 to 15.8.2014.

Date	High price	Low price	Closing price
30.7.14	2975,36	2949,98	2959,16
31.7.14	2960,14	2924,37	2927,48
1.8.14	2931,48	2887,22	2897,02
4.8.14	2923,87	2903,48	2908,49
5.8.14	2920,25	2895,55	2895,56
6.8.14	2879,97	2845,51	2855,32
7.8.14	2861,93	2842,28	2844,02
8.8.14	2810,48	2786,92	2796,41
11.8.14	2849,34	2819,86	2844,68
12.8.14	2856,89	2837,75	2846,11
13.8.14	2866,77	2843,34	2852,73
14.8.14	2865,00	2838,14	2856,28
15.8.14	2875,21	2845,62	2849,09

APPENDIX 6. Prices of OMX Nordic 120 from 30.7.2014 to 15.8.2014.

Date	High price	Low price	Closing price
30.7.14	838,19	833,25	834,49
31.7.14	836,43	823,46	823,85
1.8.14	824,23	812,46	813,46
4.8.14	819,13	813,36	813,64
5.8.14	821,02	815,48	819,56
6.8.14	819,01	803,26	806,78
7.8.14	808,35	801,29	801,30
8.8.14	800,33	785,99	793,59
11.8.14	811,82	793,60	811,62
12.8.14	812,46	808,14	809,08
13.8.14	813,54	808,71	813,01
14.8.14	813,18	809,03	812,50
15.8.14	819,79	811,28	811,29

APPENDIX 7. Prices of OMX Helsinki 25 from 4.9.2014 to 22.9.2014.

Date	High price	Low price	Closing price
4.9.14	3010,53	2965,73	3010,34
5.9.14	3012,17	2992,83	3002,51
8.9.14	3008,18	2992,19	3005,81
9.9.14	3014,67	2977,10	2980,88
10.9.14	2965,51	2947,50	2956,77
11.9.14	2973,53	2941,31	2945,94
12.9.14	2952,74	2938,66	2939,65
15.9.14	2942,90	2926,15	2937,49
16.9.14	2938,01	2908,24	2919,06
17.9.14	2951,69	2940,00	2943,04
18.9.14	2956,22	2944,65	2949,76
19.9.14	2979,53	2960,32	2977,54
22.9.14	2989,29	2962,40	2973,84

APPENDIX 8. Prices of OMX Nordic 120 from 4.9.2014 to 22.9.2014.

Date	High price	Low price	Closing price
4.9.14	846,81	837,68	846,47
5.9.14	846,94	838,27	839,06
8.9.14	842,47	837,59	842,15
9.9.14	842,85	837,54	837,55
10.9.14	838,86	831,82	838,63
11.9.14	841,68	833,37	834,95
12.9.14	839,69	834,21	838,15
15.9.14	839,74	832,61	839,39
16.9.14	839,83	832,83	836,22
17.9.14	843,82	837,31	842,96
18.9.14	852,58	844,51	852,35
19.9.14	858,67	855,06	855,52
22.9.14	856,99	851,38	854,19