

Impact of fluctuation in foreign exchange rate on procurement strategy of a company.

Dissertation submitted to College of Management & Economic Studies for the partial fulfillment of the degree of

MBA (LOGISTICS AND SUPPLY CHAIN)

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Acknowledgement

I acknowledge my gratitude with sense of veneration to the almighty and various who helped me during the course of my dissertation work. Their valuable guidance and wise direction has enabled me to complete my dissertation in systematic and smooth manner.

I would like to put my sincere acknowledgement to my academic mentor Dr. Neeraj Anand, Head of Department, LSCM for his path finding guidance, constant help and strong academic support. Without his support it would have been a difficult task to accomplish this dissertation.

My sincere thanks to Mr. Ravinder Singh of SKF Bearing, my industrial mentor for his support and guidance.

Finally I would like to thank all those who were directly and indirectly concerned in making my dissertation successful. To put it in a nutshell a difficult and arduous journey was made simple and quiet enjoyable due to their support.

Certificate from the guide

This is to certify that the dissertation report on “Impact of fluctuation in foreign exchange rate on procurement strategy of a company” completed and submitted to University of Petroleum and Energy Studies, Dehradun by (student name) in partial fulfillment of the provisions and requirements for the award of degree of MASTER OF BUSINESS ADMINISTRATION (LOGISTICS AND SUPPLY CHAIN MANAGEMENT), 2013-2015 is a bonafide work carried by the scholar under my supervision and guidance.

To the best of my knowledge and belief the work has been based on investigation made, data collected and analyzed by the scholar, and this work has not been submitted anywhere else for any other university or institution for the award of any degree/diploma. I wish him all the best for his future endeavors.

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Dated.....

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Executive Summary

Companies operating internationally are exposed to the foreign exchange risk. This study aims to explore the impact of the exchange rate fluctuation on the procurement strategies of a company. Furthermore, different strategies adopted by the companies in order to mitigate the fluctuation risk have been analyzed.

A detailed understanding of the choice of strategies and decision rules by the organization is done. Different short term and long term strategies have been identified. The information for this study have been gathered from different sources that includes the interview and publically disclosed information.

To make this study more authentic and understandable real life case of SKF bearing is taken and it is analyzed what measures they have taken to minimize the fluctuating exchange rate risk.

CHAPTER 1
INTRODUCTION

1.1 Issue under study

The research work “Impact of fluctuation in foreign exchange rate on procurement strategy of a company” deals with the effect of the foreign exchange rate on the global procurement. It explores various factors which affect the purchasing strategy of a company due to fluctuation in foreign exchange rate and identify the various practices adopted by companies for mitigating the currency fluctuations.

1.2 Context

There is a great deal of confusion and uncertainty about the real nature of procurement. True, management recognized procurement as important and it is desirable to re-examine and reappraise this particular business activity. Exchange rate risk arises due to unexpected changes in the prices of two currencies. These price changes could be favorable or they could be non-favorable. Non-favorable changes in the currency prices could lead to huge losses, if they are not managed at the right time and through the proper hedging techniques. Expectations about the price level, inflation, tariffs and quotas, productivity, import demand, export demand and the money supply play an important role in determining the exchange rate. When expectations about any of these variables change, there is an immediate effect on the expected returns and thereby on the exchange rate.

1.3 Rationale of research

No country is self-sufficient and cannot produce all goods and services due to scarcity of resources, skills, technology, etc. All nations can simultaneously gain from exploiting their comparative advantage, as well as, from the larger scale of production and broader choice of products that is made possible by international trade. And this very basic fact led to rise in the cross-border trade and exploration to the various types of risks in the international market. Under these circumstances avoiding the exchange rate risk is not possible at all; rather learning to manage this risk is the better option for companies, who are into international business. While understanding the use of currency derivative tools in managing the exchange rate risk, the volatility of the exchange rate should be viewed as a source of risk.

1.4 Background

Most internationally operating companies are exposed to foreign exchange rate risk. It is especially common for companies in smaller countries such as Sweden, hence a large part of country’s gross domestic (GDP) comes from international business. Currently, Sweden has a positive trade balance, meaning that the amount of exports is higher in relation to the import levels. This has been the case since the middle of the nineties. Fluctuations in

exchange rates can therefore have a significant effect on Swedish firms through their results, competitiveness and material work. Today there are many different ways for firms to protect themselves i.e. hedge against this foreign exchange risk. By using financial derivatives and by applying different risk strategies, the overall risk can be reduced.

Foreign exchange rate risk is relevant and interesting for multinational companies in Sweden. Since they have to face this risk on a daily basis. Furthermore, it is interesting from a more general point of view, since the foreign exchange market is the largest of the financial markets with a daily turnover of 3.9 trillion US dollar (USD) in 2010. The USD is the world's largest traded currency with approximately 85% of the entire market. However, there has been an increased use of EUR, especially in the European Union and surrounding regions, since the introduction of the currency in 2002.

1.4.1 Company Background

SKF, Svenska Kullagerfabriken AB (Swedish: Swedish ball bearing factory AB), later AB SKF, is a Swedish bearing company founded in 1907, supplying bearings, seals, lubrication and lubrication systems, maintenance products, mechatronics products, power transmission products and related services globally.

The company was founded on Sven Wingqvist's 1907 Swedish patent No. 25406, a multi-row self-aligning radial ball bearing. The Patent was granted on 6 June in Sweden coinciding with patents in 10 other countries. The new ball bearing was successful from the outset. By 1910, the company had 325 employees and a subsidiary in the United Kingdom. Manufacturing operations were later established in multiple countries.

By 1912, SKF was represented in 32 countries and by 1930, staffs of over 21,000 were employed in 12 manufacturing facilities worldwide with the largest in Philadelphia, PA. SKF began its operations in India in 1923 by establishing a trading outpost in Calcutta. The early operations involved importing of automotive bearings. SKF India Ltd was incorporated in 1961 following collaboration between AB SKF, Associated Bearing Co. Ltd and Investment Corp. of India Ltd. In 1963, SKF set up its first bearing factory in Pune, Maharashtra.

Assar Gabriëlsson, SKF sales manager and Björn Prytz, Managing Director of SKF were the founders of Volvo AB in 1926. In the beginning, the company functioned as a subsidiary automobile company within the SKF group. SKF funded the production run of the first thousand cars, built at Hisingen in Gothenburg, beginning in 1927. SKF used one of the company's trademarked names: AB Volvo, which derives from the Latin "I roll", with its obvious connotations of bearings in motion. The ownership of Volvo lasted until 1935 when the last shares were divested.

In the 1970s SKF embarked on a massive production rationalization program in Europe. A visionary project, "Production Concept for the 80s" was launched with the aim to run the night shifts practically unmanned. To increase productivity and safeguard the product quality, a continuous, automatic flow of bearing rings was needed, so SKF developed the Flexlink multiflex plastic chain conveyor system. SKF divested FlexLink as a separate company in 1997.

Today, SKF is the largest bearing manufacturer in the world and employs approximately 44,000 people in approximately 100 manufacturing sites that span 70 countries. Turnover for FY2005 was SEK49,285 million, and total assets were SEK40,349 million. The SKF Group currently consists of approximately 150 companies including the seal manufacturer Chicago Rawhide. Since its founding, SKF's company headquarters have been located in Gothenburg. One recent acquisition was that of Economos, part of Salzer Holding, an Austria-based seal company, Jaeger Industrial and ABBA, Taiwanese manufacturers of linear actuators. The company's clients include General Electric, Rolls-Royce plc. and Pratt & Whitney. It also supplies bearings for Ferrari racing vehicles, used in Formula One races, and is a sponsor of F1. Another focus area is the energy sector, including wind turbines which generate electricity.

By 2013, SKF Industrial Market, Regional Sales and Services, made up about 40% of SKF's total sales. SKF employs 3000 people across six factories in India and has 27% market share of the industrial & automotive bearings market.

SKF sells products within five technology platforms: Bearings and Units, Mechatronics, Lubrication Systems, Services, Seals.

SKF runs its own business excellence program for continuous improvement of its business processes in all parts of the company. The program is based on previous initiatives like TQM and integrates with lean management also statistical methods of Six Sigma along with related project management. Many elements of this SKF program remind of the integrated approach of the actual EFQM model for Business Excellence.

CHAPTER 2
LITERATURE REVIEW

2.1 The Business of procurement by Howard T. Lewis

Procurement is the business management function that ensures identification, sourcing, access and management of the external resources that an organisation needs or may need to fulfill its strategic objectives. Procurement exists to explore supply market opportunities and to implement resourcing strategies that deliver the best possible supply outcome to the organisation, its stakeholders and customers.

Procurement applies the science and art of external resource and supply management through a body of knowledge interpreted by competent practitioners and professionals. One of the difficulties in defining the term 'procurement' is that it does not deal with a single action or process. Procurement covers the complete range of events from the identification of a need for a good or service through to its disposal or cessation. The term 'procurement' in Australia is very similar to the term 'supply management'. Procurement includes activities and events before and after the signing of a contract as well as the general management activities associated with a range of contracts:

- Pre-contract activities such as planning, needs identification and analysis, and sourcing,
- Post-contract activities such as contract management, supply chain management and disposal, and
- General activities such as corporate governance, supplier relationship management, risk management and regulatory compliance.

Strategic procurement is one, it relates to the strategies and mechanisms used to approach and interact with the supply market that take account not just of present business needs but also what the organization's business future needs might be.

Strategic procurement requires an active approach to market building with regard to the acquisition of goods and services that are critical to an organization's viability. It reflects the belief that the buyer can and should influence the behavior of the supply market rather than accept it the way it is.

Purchasing is another, while it may be used interchangeably with buying it is just part of procurement. Purchasing begins with the placement of a requisition, which upon approval, becomes a purchase order and is sent to a supplier. Whereas procurement necessarily includes a contract development stage purchasing does not always include contract development.

„Purchasing“ refers to a process by which an enterprise or organization attempts to acquire materials or products in order to attain their goals. In the process of purchasing the ownership and possession of goods will be transferred from the seller to the buyer. The activities of purchasing include enquiry, an order, tracking the order, supervising and accounting for an order, receiving goods, and making payment. International purchasing relates to a commercial purchase transaction between a buyer and a supplier located in a different country. This type of purchase is typically more complex than a domestic purchase. Organizations must contend with longer material pipelines, increased rules and regulations, currency fluctuations, customs requirements, and a host of other variables such as language and time differences.

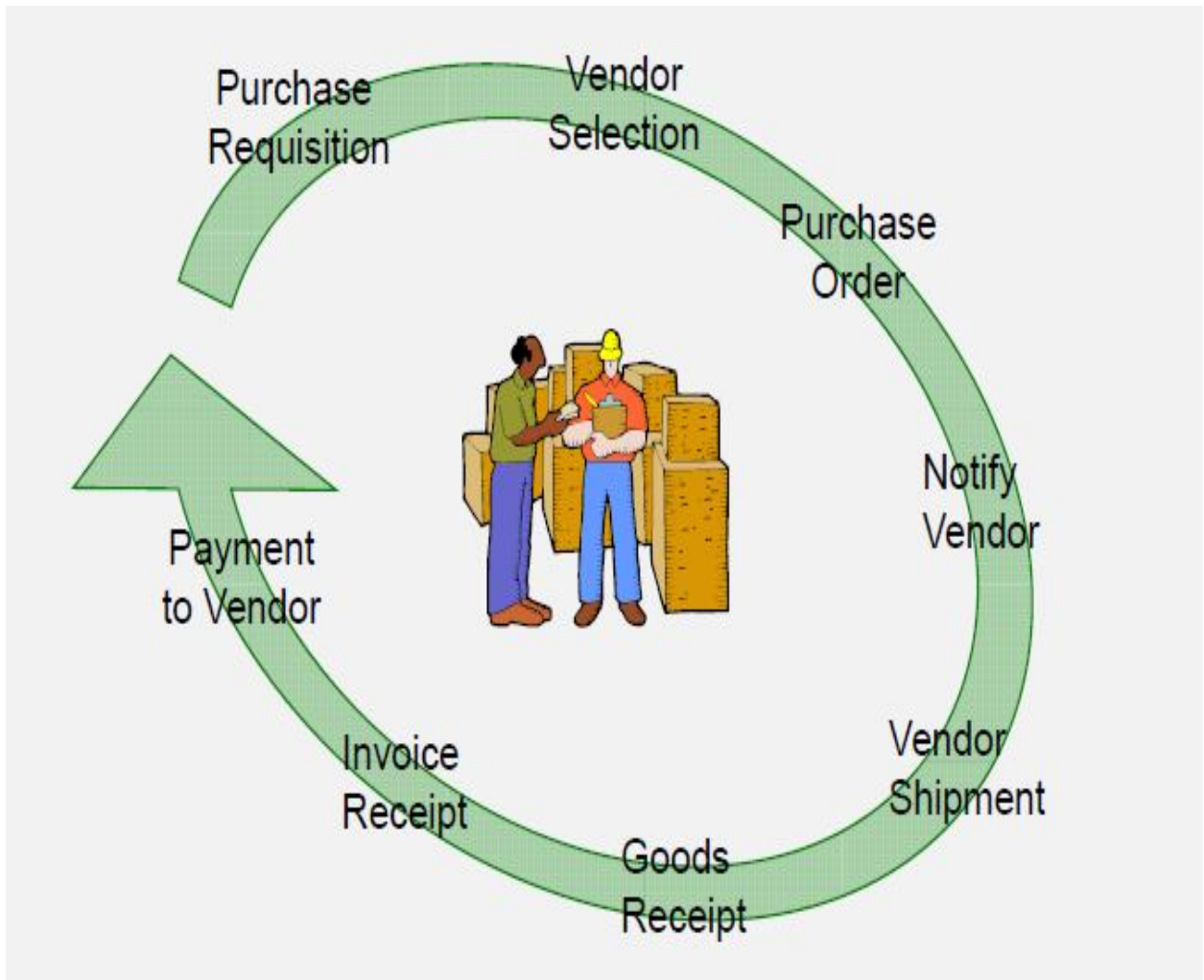


Figure 1. Procurement process

2.2 Problems and Challenges of global Sourcing by Chunnan Jiang & Yue Tian

International purchasing refers to the utilization of global resources; searching for a bargain with the highest quality from all over the world. From the aspect of supply-chain management, international purchasing requires companies to set up a global manufacturing chain in order to make a rational purchasing plan and acquire the high-quality goods with a rational price. Besides, it is an effective way to measure and supervise the efficiency of purchasing processes so that it minimizes the total cost of purchasing.

With economic globalization, the competition among companies is becoming more and more fierce, which requires all the business to enhance the level of T, Q, C, S (Time of research and development ; Quality of products; Cost control; satisfaction with Service), so that they can operate their business successfully in the market.

Global sourcing, which differs from international buying in scope and complexity, involves proactively integrating and coordinating common items and materials, processes, designs, technologies and suppliers across worldwide purchasing, engineering, and operating locations (Trent & Monczka, 2003). Global sourcing is not only a starting point of logistical activities, but is also a set of managerial activities. The object of said activities is to accomplish the goals of manufacture or sale, which includes the choice of suppliers, confirming the quality and quantity, negotiating the price, and so on. The process of global sourcing is a long-term strategy, which includes the evaluation and selection of foreign potential suppliers, while international purchasing involves daily activities supporting manufacturing and services departments. In order to advance from the international purchasing stage to global sourcing, the purchasing department must be elevated to a position where it can make more strategic decisions for the business.

Global sourcing is defined as a centralized procurement strategy for a multinational company, wherein a central buying organization seeks economies of scale through corporate-wide standardization and benchmarking. A definition focused on this aspect of global sourcing is: "proactively integrating and coordinating common items and materials, processes, designs, technologies, and suppliers across worldwide purchasing, engineering, and operating locations" (e.g., Monczka, Trent, & Handfield, 2005; Monczka, Trent, & Petersen, 2008). With growing scholarly and executive attention over the past couple of decades, sourcing and supply-chain management have been shown to play a significant role in achieving competitiveness.

The progression from domestic purchasing to international purchasing and then finally to global sourcing can be visualized as movement through five different levels (domestic

purchasing only; international purchasing only as needed; international purchasing as part of a sourcing strategy; global sourcing strategies integrated across worldwide locations; global sourcing strategies integrated across worldwide locations and functional groups (Trent & Monczka, 2003)). In moving from domestic purchasing to international purchasing, organizations must contend with longer distances, increased rules and regulations, currency fluctuations, customs and language requirements, cultural and time differences. Companies that then go on to pursue global sourcing must contend with the operational issues that affect international purchasing, while also managing a higher level of cross-functional and cross-location coordination.



Figure 2. From Domestic Purchasing, International Purchasing to Global Sourcing

2.3 Exchange rate Uncertainty, Michelle R. Garfinel, Amihai Glazer and Jaewoo Lee

Exchange rate is a key determinant in international finance and turning of world into a Global village has just made this variable all the more important. Forex markets have undergone many changes from setting up of Bretton Woods System in 1944 according to which each country had to fix its currency exchange rate plus or minus 1 percent to its abandonment in 1984 due to increased Balance of Trade deficit of U.S. Then it has witnessed East Asian crisis of 1997 when majority of the currencies of East Asian countries depreciated.

A market-based exchange rate will change whenever the values of either of the two component currencies change. A currency will tend to become more valuable whenever demand for it is greater than the available supply. It will become less valuable whenever demand is less than available supply (this does not mean people no longer want money, it just means they prefer holding their wealth in some other form, possibly another currency).

Increased demand for a currency can be due to either an increased transaction demand for money or an increased speculative demand for money. The transaction demand is highly correlated to a country's level of business activity, gross domestic product (GDP), and employment levels. The more people that are unemployed, the less the public as a whole will spend on goods and services. Central banks typically have little difficulty adjusting the available money supply to accommodate changes in the demand for money due to business transactions.

Speculative demand is much harder for central banks to accommodate, which they influence by adjusting interest rates. A speculator may buy a currency if the return (that is the interest rate) is high enough. In general, the higher a country's interest rates, the greater will be the demand for that currency. It has been argued that such speculation can undermine real economic growth, in particular since large currency speculators may deliberately create downward pressure on a currency by shorting in order to force that central bank to buy their own currency to keep it stable. (When that happens, the speculator can buy the currency back after it depreciates, close out their position, and thereby take a profit.)

For carrier companies shipping goods from one nation to another, exchange rates can often impact them severely. Therefore, most carriers have a CAF charge to account for these fluctuations.

Factors affecting the demand and supply:

There are various factors in a macro-economic environment which affect the demand and supply of a currency and in return affects the exchange rate.

- Interest Rates

If there are higher interest rates in home country then it will attract investments from abroad in the form of FII, FDI and increased borrowings. This leads to increased supply of foreign currency. On the other hand, if the interest rates are higher in the other country, investments will flow out leading to decreased supply of foreign currency.

- Rate of Inflation

If inflation rates are high, central bank will have to reduce the supply of domestic currency in order to curb it. This would ultimately lead to strong currency and vice versa.

- Political or Military Unrest

All exchange rates are susceptible to political instability and anticipations about the new government. All the market players get worried about the policies and may start unwinding their positions thereby affecting the demand and supply.

- Domestic Financial Market

Strong domestic financial markets will also lead to the strengthening of domestic currency as investors will be less worried about their investments and vice versa.

- Sound Domestic Economy

If the domestic economy is strong then there will be lots of investments from abroad which will lead to increased supply of foreign currency, ultimately leading to strengthening of domestic currency; and vice versa is also true if there domestic economy is weak.

- Business Environment

Positive indications (in terms of government policy, competitive advantages, market size, etc.) increase the demand for currency, as more and more enterprises want to invest there. Any positive indications abroad will lead to strengthening of foreign currency.

- Stock Markets

The major stock indices also have a correlation with currency rates as investors link the growth in markets to the economic growth of a country.

- Economic data

Economic data such as labour reports (payrolls, unemployment rate and average hourly earnings), Consumer Price Indices (CPI), Gross Domestic Product (GDP), International Trade, Productivity, Industrial Production, Consumer Confidence etc, also affect fluctuations in currency exchange rates.

- Balance of trade

If the exports to other countries are more than the exchange rate will be stronger as there will be inflow of foreign currency. More one relies on imports, weaker will be the

exchange rate because there will be outflow of domestic currency. A large, consistent government deficit will lead to outflow of domestic borrowing.

- Government budget deficits/surpluses

If a government runs into deficit, it has to borrow money (by selling bonds). If it can't borrow from its own citizens, it must borrow from foreign investors. That means selling more of its currency, increasing the supply and thus driving the prices down.

- Rumours

Any rumour in the markets also leads to fluctuation in the values. Any favorable news will lead to strengthening of domestic currency and any negative rumour will lead to weakening of the currency.

- Terrorism

Instances of Afghanistan war and 9/11 attack on World Trade Centre of America affected the trades between America and Asian countries.

2.4 Draghi's Downfall: the beginning of the End for the Euro

The European debt crisis erupted in the wake of the Great Recession around late 2009, and was characterized by an environment of overly high government structural deficits and accelerating debt levels. The states getting adversely hit by the crisis, faced a strong rise of interest rate spreads for government bonds, as a result of investor concerns about their future debt sustainability, to the extent that four eurozone states needed to be rescued by sovereign bailout programs, delivered jointly by the International Monetary Fund and European Commission - with additional support at the technical level by the European Central Bank.

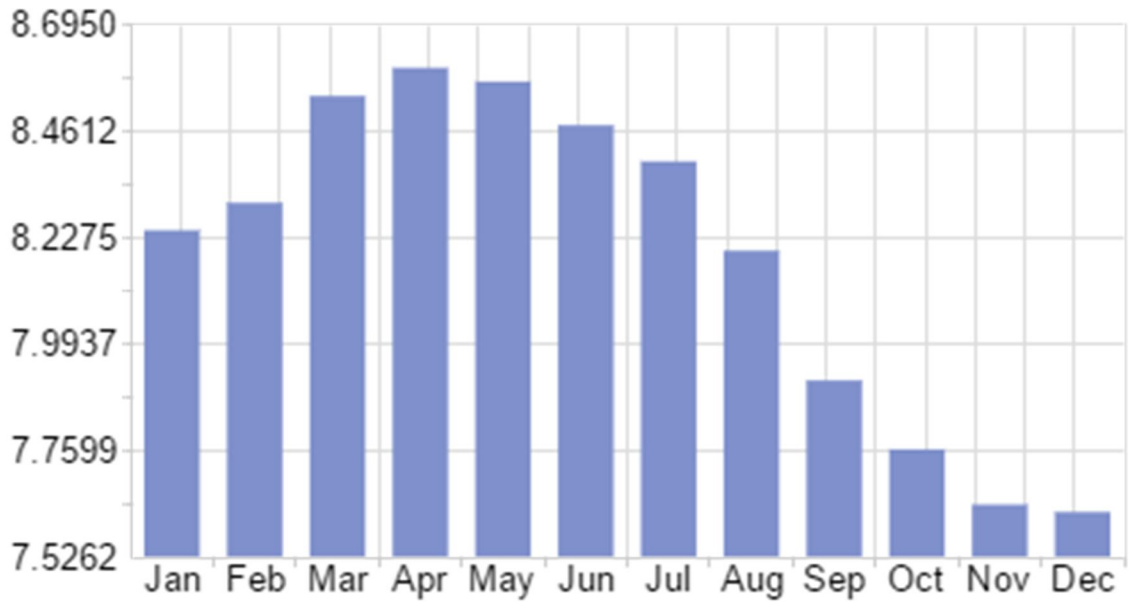


Figure 3. Variation of Euro with respect to CNY, 2014 (Source: <http://www.x-rates.com>)

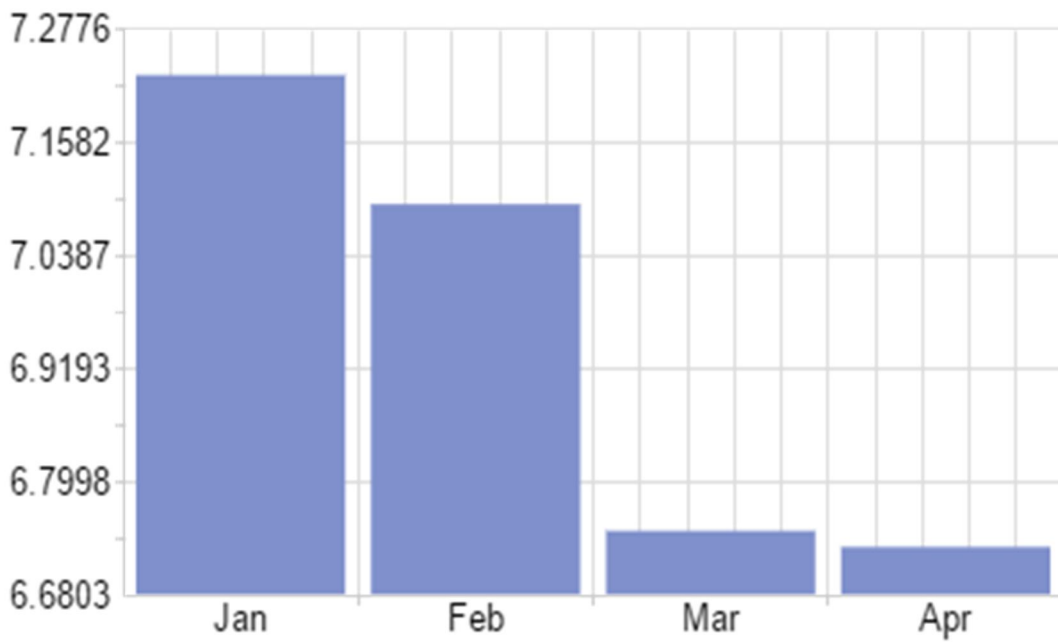


Figure 4. Variation in Euro with respect to CNY, 2015 (Source: <http://www.x-rates.com>)

The current eurozone crisis has been unfolding since 2009, when a new Greek government revealed that previous Greek governments had been under-reporting the budget deficit. The crisis subsequently spread to Ireland and Portugal, while raising concerns about Italy, Spain and the European banking system, and more fundamental imbalances within the eurozone.

There are two more reasons.

The first is serious political short-sightedness. After the 2008 crisis, it was clear that the real economy would suffer a terrible shock. But the 2008 crisis was not just about the sub-prime mortgage collapse. It also marked a fundamental shift in society. The market economy adopted global free trade rules justified by the opening up of markets and the Internet. Thus 2008 witnessed the harsh initiation to Anglo-Saxon-style capitalism, an economic model that has now become a growth standard.

The 2008 shock led governments to activate economic stabilisers and also recapitalize and nationalize banks. Rising government debt was unavoidable, especially as the shock of ageing populations caused spending on pensions to spiral. While government debt skyrocketed for legitimate reasons, an alarming truth was revealed: government debt had for decades financed running costs rather than investment fostering collective growth.

We have therefore been living at the expense of future generations. Although some politicians like Jacques Delors had campaigned for major infrastructure projects to underpin the European economy, nobody listened to them.

Confronted with growing public debt of differing characteristics between Eurozone member countries, the European authorities opted for harsh austerity policies. It was clearly a big mistake caused by an apparently dyslexic reading of Keynesian theory. In the 1930s, Keynes urged countries with deflation not to make matters worse by implementing austerity policies. Nobody listened to him, even though deflationary policies failed (Laval in France, Hoover in the United States, Brüning in Germany, etc.), sowing the seeds of military conflict. In the majority of cases, failed austerity policies also ended in devaluation (the French Popular Front of 1936 and the Van Zeeland government of 1935 in Belgium).

Fiscal contraction is now endorsed by a European pact that will inevitably cause contortions in economic management. The pact requires a reduction in excess public debt of 5% a year to reach a public debt to GDP ratio of 60%. The 60% figure is nothing new as it was a qualifying criterion for Eurozone accession in 1999. This rule is now paired with the so-called "golden" rule of a "structural" deficit (exceptional economic circumstances excluded) of 0.5% of GDP. Deprived of an external currency devaluation

capacity, Europe is imposing an internal devaluation by way of the fiscal contraction and wage moderation demanded in the austerity programmes under the fiscal pact.

The euro is the other additional reason for the deflation because of the project's now alarmingly apparent design flaws. The end result of the Northern countries' competitive disinflation logic is deflationary recession. With the euro basically a deflationary currency, we are falling into a Japan-like trap of currency strength without inflation or growth.

Germany is imposing its monetary sovereignty on the Eurozone. An obstinate Germanic policy of inflation avoidance, at odds with collective solidarity, is being pursued at the same time as quantitative easing in the United States, Great Britain and Japan. Deflation will unfortunately make public debt unrepayable. I fear that without inflation, we will exit this public debt crisis by write-offs of Southern European countries' sovereign debt.

There is another risk now: high real interest rates. All the central banks have said they would keep interest rates at floor levels. That only applies to short-term rates, as long-term yields are determined by the markets. We need to be ready for this. There are several reasons why long-term yields will rise: the gradual completion of quantitative easing in the United States (equivalent to an artificial 2% short-term rate cut), emerging market currency falls, jumps in inflation, etc. Deflation would intensify the rise in real interest rates with catastrophic consequences for Europe.

What should we do? There is no ideal solution. An inflationary shock is needed. This would mean sharply depreciating the euro by truly large-scale quantitative easing or the massive refinancing of weaker countries' public debt (equivalent to new money creation). In other words, since we are in a Japanese scenario, we need to take our cue from present-day Japanese monetary policy. Inflation would, of course, trigger a rise in nominal interest rates. But we can hope that governments have sufficient control over credit channels to temporarily check inflation. An inflationary shock alone will not be enough. The realization is needed that a return to a balanced budget is not the answer when an economy is contracting. Major infrastructure projects to modernize Europe and not just individual nation states would be a better solution. Europe is not yet ready for this and probably never will be. It is bracing itself for a lean decade. There should be no illusions. Europe's currency and social order will not emerge unscathed from deflation. It will mean the downfall of the euro, no longer a common European currency but a German-inspired single currency, i.e. a currency too strong for many ailing economies.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 Research Objective

1. To identify the various procurement strategies adopted by companies for mitigating the currency fluctuations.
- 2 To analyze the various procurement strategies adoptedby companies for mitigating the currency fluctuations.

3.2 Business Problem

Evaluation of risk of doing business at international level.

3.3 Research Problem

To identify the various factors which affect the purchasing strategy of a company due to fluctuation in foreign exchange rate.

3.4 Research Design

The research is descriptive as it examines existing procurement strategies adopted by companies to mitigate fluctuation risk. Existing literature on the subject available on the internet and secondary data of some firms has been used while the primary data has being collected from the semi-structured interviews.

3.5 Data Analysis technique and Collection of Data

The data of this study is primarily gathered through interviews and publicly disclosed data from the different websites. But to support the findings with a less biased picture were taken from the internet. The primary data was gathered during semi-structured interviews. A semi-structured interview consists of several key questions that define which areas to explore in the research. Still, it is possible to deviate from the subject, who gives more details and better responses, since the flexibility in semi-structured interview enables adaptation to the individual interview objects, which was important since neither companies nor individuals are homogeneous.

The results of these interviews have been reinforcing with textual analysis of annual reports and other publicly disclosed information. Presently, much information regarding companies hedging strategies is disclosed in the annual reports and in other publicly disclosed information. Nevertheless, it was hard to interpret the results in a way that would answer the purpose of this study. However, the annual reports and other public information support this study with structured and valid information. This information has helped to give results of changes, but has not solely been able to answer the questions 'how' and 'why'. This makes the combination between data from interviews with

company representatives and textual analysis highly valuable in this study. This qualitative research method with semi-structured interviews and textual analysis aims to give a well-weighted data source that can facilitate an enhanced depth and of this amplitude study. A difficulty with qualitative research is in ensuring validity; hence it does not provide a scope for formal comparison, sampling strategy or error finding. In qualitative research it is important to rule out threats of the reports validity, through recognizing them. However, it is impossible to cover them all.

The combination between interviews and textual analysis supports the validity of this exploratory study. The benefit with this research design lies in the depth of information captured during interviews. The fact that interviews have been conducted solely with managers with many years' experience from treasury activities and currency risk management strengthens the validity of this study. However, it is important to remember that they still provide a biased picture of the truth. Hence, this information in this study is based on individual thoughts and words. Finally, it is important to remember that this study does not give any generalizable answers.

3.6 Scope and Limitation

The scope of the research is to bring out the impact of fluctuation in foreign exchange rate issues on procurement process of a company. Exchange rate risk has risen far more than the amount of foreign trade and due to ever rising overseas investments; exchange rates have become increasingly volatile. Unexpected changes in exchange rates can have important impacts on sales prices and profits. And this situation has created a need to find out different strategies adopted by the companies to deal with the fluctuating exchange rates.

Although it has been established that Fluctuation in foreign exchange rate has a major impact on procurement strategy of a company, information about the impact on the supply chain stakeholders is very limited. It is difficult to forecast the nature of the exchange rate fluctuation.

CHAPTER 4
ANALYSIS

Most internationally operating companies are exposed to foreign exchange rate risk. It is especially common for companies in smaller countries such as Sweden, hence a large part of country's gross domestic (GDP) comes from international business. Currently, Sweden has a positive trade balance, meaning that the amount of exports is higher in relation to the import levels. This has been the case since the middle of the nineties. Fluctuations in exchange rates can therefore have a significant effect on Swedish firms through their results, competitiveness and material work. Today there are many different ways for firms to protect themselves i.e. hedge against this foreign exchange risk. By using financial derivatives and by applying different risk strategies, the overall risk can be reduced.

Foreign exchange rate risk is relevant and interesting for multinational companies in Sweden. Since they have to face this risk on a daily basis. Furthermore, it is interesting from a more general point of view, since the foreign exchange market is the largest of the financial markets with a daily turnover of 3.9 trillion US dollar (USD) in 2010. The USD is the world's largest traded currency with approximately 85% of the entire market. However, there has been an increased use of EUR, especially in the European Union and surrounding regions, since the introduction of the currency in 2002.

SKF has a large exposure towards foreign currencies due to a strong international presence. SKF has a financial policy that works as a guideline for the entire company. In order to reduce the overall risk exposure. Its policy states that the objective is to eliminate or minimize risk and to contribute to a better return through the active management of risk. They use hedging, netting and hedge accounting to reduce their exposure and to create value.

SKF has a centralized structure where the treasury center in Gothenburg has the main responsibility of the group's risk management. SKF works actively with financial hedging, natural hedging and netting to reduce risk exposure. SKF was early to develop a netting system implemented in 1974. The treasury units conduct an activity similar to the factoring of all intercompany flows in the 17 different currencies; this enables them to conduct a more efficient netting process. It is the treasury that makes the forecast of all future transactions that determine all hedging activities.

“SKF's forecast is quite easy to estimate since the historical orders repeat themselves. To secure accuracy of the forecast, we compare it with market projection made by banks, but normally we only have to adjust the forecast for 2 or 3 currencies, due to special events” (Nobel 2013)

SKF's hedging activities and financial policy communicate that the group should perform an active risk management that will contribute to a better return. It has not changed that much over the years. One of the alterations that have been is an increased flexibility regarding managers' hedging mandates, in order to be able to work with market changes in a more efficient way. Furthermore, SKF conducts a relatively large amount of proprietary trading and this is something they are quite unique with in Sweden today. Of the treasury centers' trading volume, 75% is proprietary and the rest is hedging activity.

Major portion of the suppliers of SKF bearing are China and India. They prefer these countries because of the cheap labor, resources available and the currency was very strong with respect to India and China. Thus the procurement used to take place from India and China and fulfill the demand wherever required. But as the Euro started deteriorating and showed a major downfall in years which was approximately 1 Euro= 85INR and presently is around 1 Euro=64 INR.

Due to these fluctuations, SKF bearing made a huge loss of 40 million SAC.

These losses were not due to the fact that there was rise in labor cost or manufacturing but the only reason for this was that Euro currency has weakened with respect to Chinese and Indian currency.

5.1 Comparison between various Techniques

1. Determining final prices depending on the quality parameters and technical level changes

a) Method of base price change by applying constant ratio

The base price is increased or decreased based on fixed ratios, given in percentages or absolute values.

As an example, for chromium ore with 42% chromium, a base price of 100\$ FOB is fixed, the exporting country contribution from the closest point to the production place. It is agreed that for each increase of chromium concentration by 1%, the price will be risen by 5\$ or 5%, and for each decreasing percentage of chromium concentration will be decreased by 10\$ or 10%.

b) Method of base price change by progressive ratios:

A good example is the base price adjusting formula of an iron ore, of a certain quality. The essential parameter of the price change is the metallurgical value, defined by the elements existing in the ore composition.

In accordance with their proportion, the coke and calcium oxide consumption, purity, manufacturing time are established in the cast iron manufacturing process.

$$V_m = \frac{Fe + Mn}{1 + (SiO_2 - CaO)}$$

in which V_m =metallurgical value; Fe= iron; Mn=Manganese, SiO= silicium dioxide, CaO= calcium oxide

2. Adjusting the base price according to price change of the products' components.

There are different formulae which are used to adjust the base prices. They are especially used to adjust the equipment and complex objectives' prices which require much time to be carried out. We are presenting the formula which is most applicable in international trade, formula which is also included in the juridical guide of The United Nations Commission for the International Trade Rights.

The formula is based on price indexes (that is why it is also called index formula):

$$P_1 = \frac{P_0}{100} \left(a + b \frac{M_1}{M_0} + c \frac{N_1}{N_0} + d \frac{W_1}{W_2} \right)$$

In which:

P1= final price to be paid

Po= initial price, stipulated in the contract

a= the percentage fraction out of the initial price which is not changeable

b= percentage fraction out of the initial price which represents the materials' proportion.

c= the percentage fraction out of the initial price which represents energy proportion.

d= the percentage fraction out of the initial price which represents wages proportion: a+b+c+d=100

Mo= basic level of price indexes for materials

M1= comparative level of price indexes for materials

No= basic level of price indexes for energy

N1= comparative level of price indexes for materials

Wo= basic level of price indexes for wages

W1= comparative level of price indexes for wages

3. Price change according to currency fluctuation

Currency fluctuations have an indirect influence over international prices, as a consequence of currency purchasing power' increase or decrease in which prices are expressed. Protection against the risks coming out the currency fluctuation was done by stipulating the gold clause in the contract. This has been replaced by the currency clause under its various forms, such as: simple currency clause, based on a reference currency; currency clause based on DST or ECU. Here are given two examples:

a) Simple currency clause within selling-buying contract

When the contract is signed the US dollar currency exchange is 1.8 DM and if the during the contract development the currency changes more than $\pm 5\%$ the left price of the unfulfilled contract will be correspondingly modified, as well as the delivering prices done by the changing date, but not paid.

Prices adjustment in such cases will be done referring to the whole turning off percentage and not only with the one exceeding the $\pm 5\%$ of the admitted limit.

b) The currency clause based on a bunch of values within a selling-buying contract or a credit contract.

The payment obligations resulting from the contract are in US dollars, as the equivalent of a basic currency calculated as a arithmetic mean of the buying-selling opening

currency of the following: French franc, Swiss franc, Dutch gulden, Swedish crown, German mark.

4. Reciprocal prices freezing in long-term contracts

It is a method which protects both parties against the risks of currency fluctuations. The necessary condition is that the compensation operations be well balanced. Such method is also applicable, with good results, in the case of international cooperation contracts for industrial equipment or other economical objectives, with payment made with the products resulted from those economical objectives or with other products.

If, for example, in the case of two countries A and B, cooperation for carboniferous mines on country B' territory is agreed, based on credit delivering and technical assistance on country A behalf, by coal delivering repayment and the price expressed in Swiss francs, the two parties can agree on the following fix prices:

- equipment and materials' prices which are to be delivered in country A
- service price which are to be carried out by country A
- the coal price which is to be delivered by country B for country A's participation

5. Unpredictability

Unpredictability is a very useful clause within the long-term contracts or medium-term ones, caused by noticeable changing of contract basic prices costs, this could happen when some unpredictable, exceptional events occur, such as: custom taxes newly imposed, most favoured nation status set up, prices blowing-ups, etc.

6. Price determination through technical-economical parameters correlation.

a) The method of simple proportionality

The formula in use has two variants:

- The formula based on exponential index (the Fischer formula)

$$\frac{P}{P_0} = \left(\frac{Q}{Q_0} \right)^n ; P = P_0 \left(\frac{Q}{Q_0} \right)^n$$

- the formula based on the correction quotient

$$P = P_0 \left(\frac{Q}{Q_0} \right) \delta$$

b) Multiple proportionality method

$$P = P_0 \left(\frac{A \times B \times C \times D \times \dots \times N}{A_0 \times B_0 \times C_0 \times D_0 \times \dots \times N_0} \right)^n$$

$$P = P_0 \left(\frac{A \times B \times C \times D \times \dots \times N}{A_0 \times B_0 \times C_0 \times D_0 \times \dots \times N_0} \right) \delta$$

c) The method of dynamic factor

It is used in automobile field and it is based on the American Andrew Cart.

$$P = P_0 \left(\frac{\frac{G_n \times P_m}{G}}{\frac{G_n \times P_m}{G}} \right)$$

d) Other methods of simple and multiple proportionalities

There are to be mentioned:

- the cartograms method
- the unit method
- the six tens method

e) The interpolation method

The general formula is : $P = P_1 + \frac{P_2 - P_1}{C_2 - C_1} (C - C_1)$

f) The extrapolation method:

Essentially, this method is based on this rule:

$$P = \frac{C \times P_o}{C_0}$$

The selection of suppliers in global sourcing is a great challenge for European manufacturers. Regardless the fields of this companies, all of them admitted that the challenges from selecting an ideal foreign supplier or partner are deeply influencing their processes in global sourcing. The problems like supply interruption and quality issues are familiar in this companies when they implement global sourcing strategy. In addition, according to the answer to this section, we found the selection of suppliers in global sourcing is an intractable problem for European manufactures.

Logistics

In global sourcing, international logistics is a necessary and crucial component. Logistics in global sourcing refers to plenty of additional problems such as transportation delays, border-crossing procedures and longer inventory management (e.g., Boyce, 1999;

Bradley, Thomas, Gooley, & Cooke, 1998). Without a doubt, Chinese European have to face this complicated situation of logistics. In most cases, developing countries are seriously lacking in experience with the most advanced approaches and are usually unfamiliar with the high-standard requirements, such as sequence deliveries combined with Just-In-Time; electronic data interchange communications and vendor-managed inventory solutions (Cho & Kang, 2001).

Culture and language

Differences in languages always threaten the cultural communication and even technical transfer in global sourcing. Moreover, main personnel of corporations in developing countries do not always have sufficient command of English or of other languages to engage in lengthy or detailed exchanges.

Fluctuation of currency

Stability of currency facilitates international trade, while instability makes it more complex and introduces risk.

Standards and regulations

According to our theoretical study, the main regulations affecting global sourcing are tariffs and quotas. Non-tariff restrictions including complicated documentation requirements for border-crossing processes, and many kinds of international trade bills are also difficult challenges which the buyers from abroad have to face. Supplier selection and evaluation have an important role in the supply chain process and are crucial to the success of a manufacturing firm.

According to our investigation of the manufacturers the problems emanating from logistics do not annoy manufacturers very much. Three of the six manufacturers who responded said that logistics was not a problem at all and the other three reported that it was only a minor problem. We arrived at this conclusion after telephone interviews with several manufacturers. Basically, three reasons account for this: First, most of the companies are large and experienced enterprises, having special logistics departments to deal with logistics problems, even in complicated global sourcing processes. Second, some manufacturers such as the furniture manufacturer have only purchased some advanced equipments from abroad only two or three times so logistics issues are not an ongoing problem. Third, the utilization of 3PL, or third-party logistics, can provide professional services to help them to overcome the challenges from logistics in global sourcing. And as our questionnaire found, five out of six of the Chinese companies surveyed use 3PL frequently.

When it comes to the long lead time and high-level of inventory, it is unavoidable in global sourcing. European manufacturers are also experiencing these challenges to some extent. Four out of six reported that they had to increase inventory when purchasing from abroad, although not very often. In addition, European manufacturers that purchase materials from abroad are enjoying the relative lower price of international transportation because the fact export from China costs more than the import. Basically, the cargo ships returning to European countries are emptier than the ships departing from there, which leads to the cheaper transportation costs for importing goods from abroad because of the simple economics of supply and demand.

But language issues sometimes affect the processes in global sourcing for Chinese manufacturers. According to the study by Edward T. Hall, Chinese language belongs to high context culture while Western languages belong to low context culture. This means some phenomenon and problems expressed in the Chinese language are not very direct and clear compared with Western speaking habit. The habit of communication in China differs from the Western one; hence some technical problems maybe arise because of the misunderstanding between two sides. This problems and challenges are more serious for the small and medium Chinese companies who are newcomers to the global sourcing strategy. Five out of six of those companies we interviewed reported occasionally having problems with sources because of miscommunications based on the investigation of several Chinese manufacturers, the risk of a fluctuating currency is not a major problem for Chinese manufacturers. Five out of six of the companies surveyed reported that they suffered increase risk because of currency fluctuations, but they also reported that the risk was minor. Perhaps more telling is that only two companies reported switching suppliers due to currency fluctuations, and this occurred infrequently. The important driving force for Chinese manufacturers is improving technology instead of cost-savings. On the contrary, the fluctuation of exchange rates is driving them to do further global sourcing. According to the investigation of the apparel manufacturer, they are preparing to increase the importation of eiderdown from America because of the appreciation of Chinese Yuan. Hence, owing to the appreciation of Chinese currency, it is beneficial for Chinese manufacturers to pursue global sourcing.

As the theoretical portion of this thesis has shown, many international business organizations are striving to unitize different standards in order to facilitate international cooperation. Existing industrial standards which are not synchronized with international standards or expectations still can cause costly troubles and even the failure of global sourcing. However, according to our investigation and analysis, the problems of standards and regulations are far more serious when Chinese manufacturers export goods abroad as compared to when they import. Because this manufacturer normally procures high-tech materials or products from developed countries, they consider the standards of these goods as their model. Hence the problems from standards are not obstacles for

Chinese manufacturers in global sourcing. The automotive and electrical equipment manufacturers both said that tariffs were a serious problem when pursuing global sources and three other manufacturers reported that it was a minor problem only.

The managers of the automaker clarified some problems of the auto industry in China. They confessed Chinese manufacturers' lack of ability to invent and manufacture the crucial parts of an automobile such as the engines and gear-boxes. Therefore they have to introduce this related technology or parts through global sourcing. However the higher customs duties and the restrictions of some technology from Chinese regulations are barriers to global sourcing. They have to suffer the lower competitive advantages caused by expensive importing costs incurred through global sourcing. Consequently, the problems and challenges caused by regulation do exist when developing global sourcing processes for Chinese manufacturers.

The managers from Chinese manufacturers also mentioned the significance of supplier selection in global sourcing. Moreover, from the questionnaire we can conclude the selection of suppliers in global sourcing is a great challenge for Chinese manufacturers. Four out of six reported that supplier selection was a serious problem, another reported that it was a minor problem and the toy manufacturer, which does not source overseas, reported that it was not a problem at all. Two companies surveyed reported that they had some degree of risk. First, Chinese manufacturers lack a systematic method for selecting foreign suppliers. Second, Chinese manufacturers prefer to select suppliers by 'Guanxi' (Personal relationship), which is an obstacle for them to obtain a real appropriate and qualified supplier in global sourcing where relationships are impersonal. Third, after all, most Chinese manufacturers are beginners in global sourcing strategy and the lack of experience makes it hard for them to select a qualified, international partner. To be specific, lack of a complete sourcing and contracting system is hindering the evolution of global sourcing for Chinese manufacturers. According to the interview of some companies, the challenge for global sourcing is the systematic use of E-commerce, which is the groundwork of sourcing and contracting system. Chinese manufacturers need to be aware of the fact that global sourcing is a kind of procurement mode using E-Commerce, which is one of the prerequisites for implementing the global sourcing strategy. With the support from E-Commerce, another challenge to selecting a supplier in global sourcing is the establishment of strategic supplier selection mode. We proposed the model below, which can be a suggestion for Chinese manufacturers to overcome this challenge.

However, we found the situation in China different to some extent. For Chinese manufacturers, due to the lack of experience and low level of procurement mode they are seriously facing the challenge of 'Supplier selection'. Also, protectionist policy ranked highly for Chinese manufacturers because as we mentioned earlier, Chinese regulations place high tariffs on some foreign technologies such as auto parts.

Nowadays the world's economy is experiencing a decline or recession caused by financial crisis. As the third biggest economic entity and the most booming developing country; China should take a greater share of responsibility in stimulating the world's economy as much as possible. More and more Chinese enterprises will take part in the activities of globalization and more Chinese manufacturers will be active in pursuing a global sourcing strategy, which is not only beneficial for them to obtain more competitive advantage, but also meaningful for the world economy to optimize global resources more rationally and efficiently. However, pursuing global sourcing is a long, complicated process and there are numerous setbacks to be overcome. In this complicated situation, there is no universal compass to pursue global sourcing. From the study of this thesis we know there are several important issues like different culture and fluctuation of currency which can affect the success of global sourcing according to the previous researchers. For inexperienced Chinese manufacturers, they have to face these problems and challenges as well and they should pay more attention to the challenges from logistics capabilities, selecting foreign sources, and they should petition the government for the relaxation of protectionist regulations. Managers should also consider elevating the position of their international procurement offices and officers to a more centralized position within the company in order to effectively coordinate international purchasing as part of an overall global strategy. All in all, the business processes of pursuing global sourcing for Chinese manufacturers are showing both opportunities and challenges, which is also significant and meaningful for the worldwide globalization. For the theoretical implications, we recommend that supplier selection in global sourcing for Chinese manufacturers should be researched more deeply in order for them to develop systematic criteria. After all, it is one of the most serious challenges for Chinese manufacturers in the pursuit of a global sourcing strategy. Some processes like obtaining the information from more suppliers, optimizing and systemizing the global sourcing process and supplier base, and keeping more long-term win-win strategic relationship with their suppliers within the global scope require further study and field survey.

The economic trap is closing relentlessly on the Eurozone. It was even condemned as the most dangerous economic hazard. Yet the Eurozone is taking this deadly route because of a lack of vision and political obstinacy. The descent into the economic abyss will be prolonged and frightening, as Europe has lived with the assumption of growth for nearly seven decades.

Deflation is much worse than inflation. After all, you can fight inflation with deliberate interest rate hikes and price controls at the cost of a weaker economy. Deflation, on the other hand, is a shocking capitulation, as it renders conventional monetary policy ineffective. It brings unemployment, economic stagnation, and higher real interest rates (i.e. after subtracting inflation) on borrowings (public and private) that inhibit investment. It often causes a liquidity trap to form through the accumulation of precautionary savings

despite very low interest rates. To illustrate, the velocity of money, i.e. the rate at which banknotes "circulate" in the economy, has declined by 50% in the past 5 years. It is therefore impossible to increase competitiveness and to cut public deficits in deflationary periods.

There are numerous reasons for the deflation, including deindustrialisation and a costly welfare state whose debts will have to be repaid. For too long, Europe believed it could continue with an industrial economic model whereas the market economy is now based on flexible production factors and, increasingly, fast-moving pockets of growth. Governments can no longer perform the same redistributive functions as were permitted by post-war reconstruction and a manufacturing economic model.

There are two more reasons.

The first is serious political short-sightedness. After the 2008 crisis, it was clear that the real economy would suffer a terrible shock. But the 2008 crisis was not just about the sub-prime mortgage collapse. It also marked a fundamental shift in society. The market economy adopted global free trade rules justified by the opening up of markets and the Internet. Thus 2008 witnessed the harsh initiation to Anglo-Saxon-style capitalism, an economic model that has now become a growth standard.

The 2008 shock led governments to activate economic stabilisers and also recapitalise and nationalise banks. Rising government debt was unavoidable, especially as the shock of ageing populations caused spending on pensions to spiral. While government debt skyrocketed for legitimate reasons, an alarming truth was revealed: government debt had for decades financed running costs rather than investment fostering collective growth.

We have therefore been living at the expense of future generations. Although some politicians like Jacques Delors had campaigned for major infrastructure projects to underpin the European economy, nobody listened to them.

Confronted with growing public debt of differing characteristics between Eurozone member countries, the European authorities opted for harsh austerity policies. It was clearly a big mistake caused by an apparently dyslexic reading of Keynesian theory. In the 1930s, Keynes urged countries with deflation not to make matters worse by implementing austerity policies. Nobody listened to him, even though deflationary policies failed (Laval in France, Hoover in the United States, Brüning in Germany, etc.), sowing the seeds of military conflict. In the majority of cases, failed austerity policies also ended in devaluation (the French Popular Front of 1936 and the Van Zeeland government of 1935 in Belgium).

Fiscal contraction is now endorsed by a European pact that will inevitably cause contortions in economic management. The pact requires a reduction in excess public debt of 5% a year to reach a public debt to GDP ratio of 60%. The 60% figure is nothing new as it was a qualifying criterion for Eurozone accession in 1999. This rule is now paired with the so-called "golden" rule of a "structural" deficit (exceptional economic circumstances excluded) of 0.5% of GDP. Deprived of an external currency devaluation capacity, Europe is imposing an internal devaluation by way of the fiscal contraction and wage moderation demanded in the austerity programmes under the fiscal pact.

The euro is the other additional reason for the deflation because of the project's now alarmingly apparent design flaws. The end result of the Northern countries' competitive disinflation logic is deflationary recession. With the euro basically a deflationary currency, we are falling into a Japan-like trap of currency strength without inflation or growth.

29 Apr 2014 00:00 UTC - 31 Mar 2015 20:00 UTC
21 Nov 2014 00:00 UTC close:7.588106



Figure 5. Variation of Euro with respect to CNY(Source:<http://www.x-rates.com>)

1 May 2014 00:00 UTC - 31 Mar 2015 20:00 UTC
26 Sep 2014 00:00 UTC close:77.854384



Figure 6. Variation of Euro with respect to INR (Source:<http://www.x-rates.com/>)

CHAPTER 5
STRATEGIES

Short term strategies

Hedging

One way for firms to limit their exposure to exchange rate fluctuations is by hedging currency exposures. The cost of hedging and the extent to which firms hedge is relevant to thinking about the costs of exchange rate volatility faced by exporters and import-competing firms.

In very simple terms, currency hedging is the act of entering into a financial contract in order to protect against unexpected, expected or anticipated changes in currency exchange rates. Currency hedging is used by financial investors and businesses to eliminate risks they encounter when conducting business internationally. Hedging can be likened to an insurance policy that limits the impact of foreign exchange risk.

Hedging can be accomplished by purchasing or booking different types of contracts that are designed to achieve specific goals. These goals are based on the level of risk the customer is exposed to and seeking protection from and allow the individual to lock in future rates without affecting, to a great extent, their liquidity.

Hedging can be a very complicated enterprise. The various hedging mechanisms range from basic to extremely intricate. The most prudent first steps, when considering a hedging strategy, would be to take note of potential foreign exchange exposure and, based on that, evaluate what goals need to be set and what actions need to be taken in order to mitigate that risk.

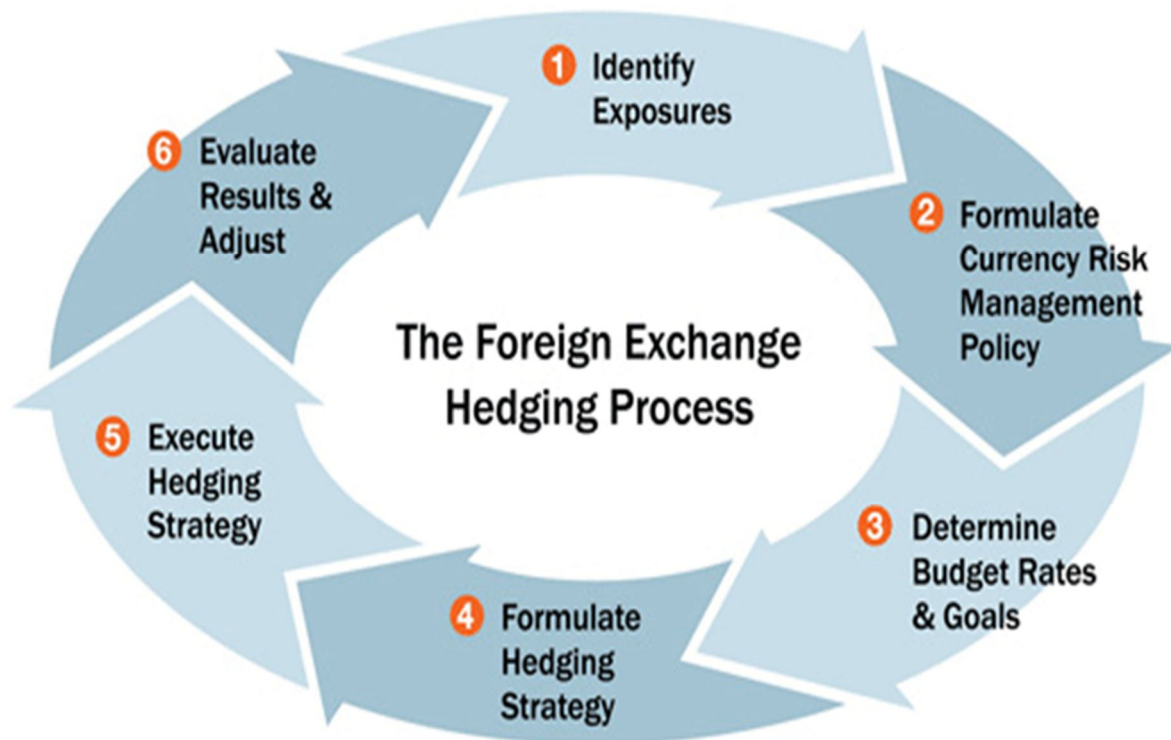


Figure 7. Hedging Process

Hedging patterns vary considerably by firm characteristic, such as:

Larger firms hedge more than smaller firms; however, Fabling and Grimes (2008a) find that smaller exporting firms hedge more than medium-sized exporting firms²

Hedging practices vary by sector/industry. Firms with the highest export intensities have higher hedging ratios than firms with the lowest export intensities

Most hedging is very short term. Fabling and Grimes (2008) find that most hedging is taken out approximately one month (on average) prior to the transaction. A greater use of hedging over short time periods is not surprising given that hedging over long periods (e.g. over 24 months) can be problematic in the following ways (Brookes et al, 2000). It removes the ability of a firm to benefit from any future favorable movement in the exchange rate.

Most firms that hedge use forward exchange contracts; these are not generally considered expensive.

There is uncertainty around forward orders, and it would be risky to lock in cover for orders that might not materialize. Production costs may change over time due to unexpected inflation, which means the hedged export revenue may not be enough to cover expenses. Forward contracts can impose an indirect cost by utilizing credit lines.

A forward exchange option (which gives the right but not the obligation to buy or sell a given amount of a given currency at a future date at an agreed exchange rate) can overcome some of the problems of hedging over longer periods. However, forward exchange options are generally more expensive than forward exchange contracts, more so over longer time periods. Instead, it is cheaper for firms to structure their business in a way that creates a natural hedge to help limit exposure to currency fluctuations over the medium term.

Forward contracts allow a company to set the exchange rate at which it will buy or sell a given quantity of foreign currency in the future (on either a fixed date or during a fixed period of time). They are flexible instruments that can easily match future transaction exposures (generally up to one year). For example, if a company expects to have, over the coming year, a foreign exchange exposure where it receives US\$350,000 more than it needs to pay every month, it can enter into a series of forward contracts to sell, at a predetermined exchange rate, this (or a lower amount) of U.S. dollars each month. By entering into these forward contracts, the company will have eliminated all or most of the transaction exposure it faces. Forward contracts are easy to use and carry no purchase price. However, you do have a contractual commitment to deliver to (or purchase from) a bank or foreign exchange broker a fixed quantity of foreign exchange at a future date. If you don't, then the forward contract could be terminated or extended which could carry a price tag for your company. This last point is important because it explains why banks and foreign exchange brokers set limits on the maximum amount that a company can hedge using forward contracts. It also serves to explain why collateral is often required when you buy a forward contract. If you buy from a commercial bank, the collateral required is usually a reduction in the amount that you can draw under your line of credit. EDC can help eliminate the need for collateral by providing your bank or foreign exchange broker with a guarantee.

Currency options are other tools that can be used to mitigate transaction exposure. Standard options give a company the right, but not the obligation, to buy or sell foreign exchange in the future at a pre-determined exchange rate. Because these options do not oblige the company to sell or buy foreign currency (contrary to forward contracts), they are often used by companies that bid on contracts. Currency options allow companies to benefit from favorable movements in exchange rates, which is why most types of currency options carry an upfront cost.

Managing

Step one involves identifying and measuring the foreign exchange exposures that you want to manage. As mentioned earlier, the focus for most companies is on transaction risk. For an exporting company paid in U.S. dollars, measuring exposure involves

subtracting the U.S. dollars it expects to receive over a one year period, for example, against the money it will need in order to make payments in U.S. dollars over the same period. The difference determines the exposure to be hedged. If your company already has U.S. dollars in the bank, subtract the account balance to determine the net exposure. Some companies only include confirmed transactions while others include both confirmed and forecasted foreign currency cash flows over the designated time period.

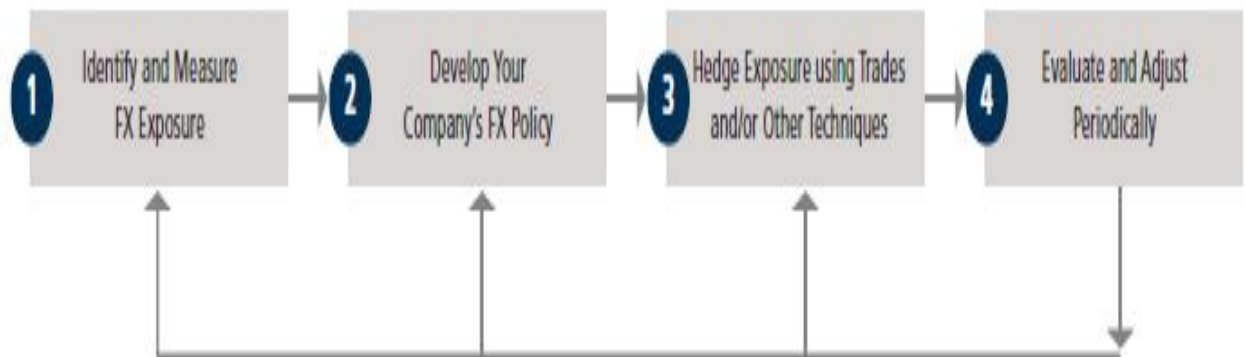


Figure 8. Step 1

Once you have calculated your exposure, you need to develop your company's foreign exchange policy as part of step two. This policy should be endorsed by the company's senior management and usually provides detailed answers to questions such as:

- When should foreign exchange exposure be hedged?
- What tools and instruments can be used under what circumstances?
- Who is responsible for managing foreign exchange exposure?
- How will the performance of the company's hedging actions be measured?
- What are the regular reporting requirements?

The question of when to hedge is interesting. As above figure illustrates, transaction exposure can begin much earlier than accounting exposure. As well, pre-transaction exposure cannot be ignored as selling prices, once quoted, can rarely be changed in today's global marketplace. Therefore you must carefully assess when to start hedging your exposure.

Step three involves putting in place hedges that are consistent with your company's policy. For example, you may want to increase the value of raw materials imported from the U.S. to partly offset the exposure created by sales to U.S. buyers. Alternatively, you

may put in place basic financial hedges with a bank or foreign exchange broker. The most commonly used financial hedges are discussed further below.

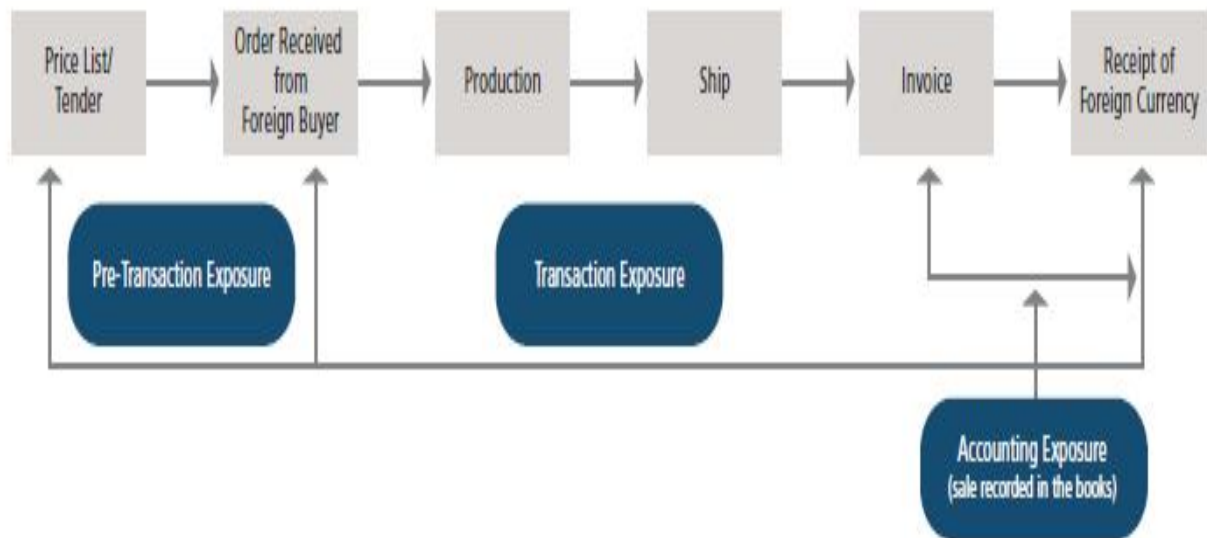


Figure 9. Step 2

Step four requires that you periodically measure whether the hedges are effectively reducing your company's exposure. Establishing clear objectives and benchmarks will help facilitate this evaluation. It will also alleviate the fear of those responsible for implementing the policy that they have somehow failed if the exchange rate moves in the company's favor and the hedges they put in place prevent the company from benefiting from that move.

Netting

Consolidating the value of two or more transactions, payments or positions in order to create a single value. Netting entails offsetting the value of multiple positions, and can be used to determine which party is owed remuneration in a multiparty agreement.

There are circumstances where a company has subsidiaries in multiple countries that actively trade with each other. If so, they should have accounts receivable and payable with each other, which could give rise to a flurry of foreign exchange transactions in multiple currencies that could trigger any number of hedging activities. It may be possible to reduce the amount of hedging activity through payment netting, where the corporate parent offsets all accounts receivable and payable against each other to determine the net amount of foreign exchange transactions that actually require hedges.

A centralized netting function may be used, which means that each subsidiary either receives a single payment from the netting center, or makes a single payment to the netting center. Netting results in the following benefits:

Foreign exchange exposure is no longer tracked at the subsidiary level

The total amount of foreign exchange purchased and sold declines, which reduces the amount of foreign exchange commissions paid out

The total amount of cash in transit (and therefore not available for investment) between subsidiaries declines

Intracompany netting will still result in some payments between subsidiaries located in different countries. Since each subsidiary may be operating its own cash concentration system, this means that cash must be physically shifted from one cash pool to another, which is inefficient. Where possible, the treasury staff should consider creating cash pools that span international boundaries, so there is no need for cross-border transfers between cash pools. The result is essentially free cash transfers within the company.

The same concept can be applied to payables and receivables with outside entities, though a considerable amount of information sharing is needed to make the concept work. In some industries where there is a high level of trade between companies, industry-wide netting programs have been established that routinely offset a large proportion of the payables and receivables within the industry. The net result is that all offsetting obligations are reduced to a single payment per currency per value date between counterparties.

Natural hedge

A natural hedge is unlike other types of hedges in that it does not require the use of sophisticated financial products such as forwards or derivatives. However, most hedges (natural or otherwise) are imperfect, and do not eliminate risk completely.

Natural hedges are techniques used by investors to lessen risk in one investment by making an investment in contrast to the original one. The idea behind this technique is that poor performance by the original investment can be offset by good performance by the second one, and vice versa. Investors use natural hedges to balance out risks in one environment by exposing themselves to another investment which is likely to benefit if that risk is realized. It is also a less-complicated manner of hedging than using intricate investment techniques like derivatives.

The reality is that there is no such thing as an investment without risk. For that reason, investors have always tried to find ways to minimize that risk as much as possible. One

way to accomplish this is with a hedge, which occurs when one investment offers some sort of buffer against another investment going bad. Many investors and companies achieve their goals of lessening risk by the use of natural hedges.

It is important to understand that the concept of natural hedges involves making investments in two different financial securities. This is opposed to hedging achieved by making two contrasting investments on the same security. Many investors, for example, will buy stock in a company and then hedge that risk by opening up an option to sell stock in that same company, but this is not an example of natural hedging.

Long term Strategies

Five major strategies that SKF should shift to so as to mitigate the currency fluctuations and reduce losses are-

1. Awarding more contracts to in-house suppliers located in Europe.
2. Factories in Europe buy more Steel/Tubes wires components in Europe in Euro Currency.
3. Factories outside of Europe can buy more indirect material from Europe in Euro.
4. Postpone the contracts with all the suppliers outside Europe i.e mainly China and India.
5. Negotiate on prices.

Effects of these strategies implementation would lead to:

As the factories in Europe of SKF bearing would buy all steel and tubes, which constitutes of major portion in their procurement process, from their domestic suppliers(i.e. suppliers who are from Europe only), thus providing more and more cost(contracts) to the domestic suppliers which will effect in two ways-

- The transactions would be done in the same currency so there would be no effect of currency fluctuation over the transactions.

- Due to dealing in the same currency there would be no losses in terms of money which SKF could have faced if they would be dealing with a supplier outside Europe.

As we know steel and tubes wires are the major components of inputs in the components that are made in SKF, so what they should do is that they should procure most of these items from domestic suppliers, which will lead to decrease in percentage of currency fluctuation to nearly zero and will reduce the losses to a great extent.

Factories of SKF bearing which are established outside of Europe should buy IDM (indirect material) from European countries in euro only because-

- Buying the IDM product in any other currency will have a huge effect on monetary basis because of currency fluctuation, thus to mitigate this fluctuation they should pursue and be assertive with the companies outside the Europe to buy in euro currency, so that there will be no effect of currency fluctuations and minimize the losses as much as possible and improve the inflow of the money, that will lead to consolidate the position of the company again.

SKF bearing should postpone all the possible contracts with suppliers outside Europe because even though the manufacturing cost, labor cost, logistics cost and all other cost remained same then also SKF was making losses because their currency (EURO) has weakened with respect to the currency of China and India. So for the same amount of product they are paying more now which has reduced their profits and generated more loss, this has all happened due to currency fluctuation. So they should bring all the possible contracts to a hold for some period of time, till their currency strengthens again.

SKF should negotiate on prices with all its suppliers because there can be reduction in the transportation cost as the fuel (oil) prices have been slashed. They should specially negotiate with the suppliers outside the Europe to bring down their cost, looking at the current scenario of the crude oil prices.

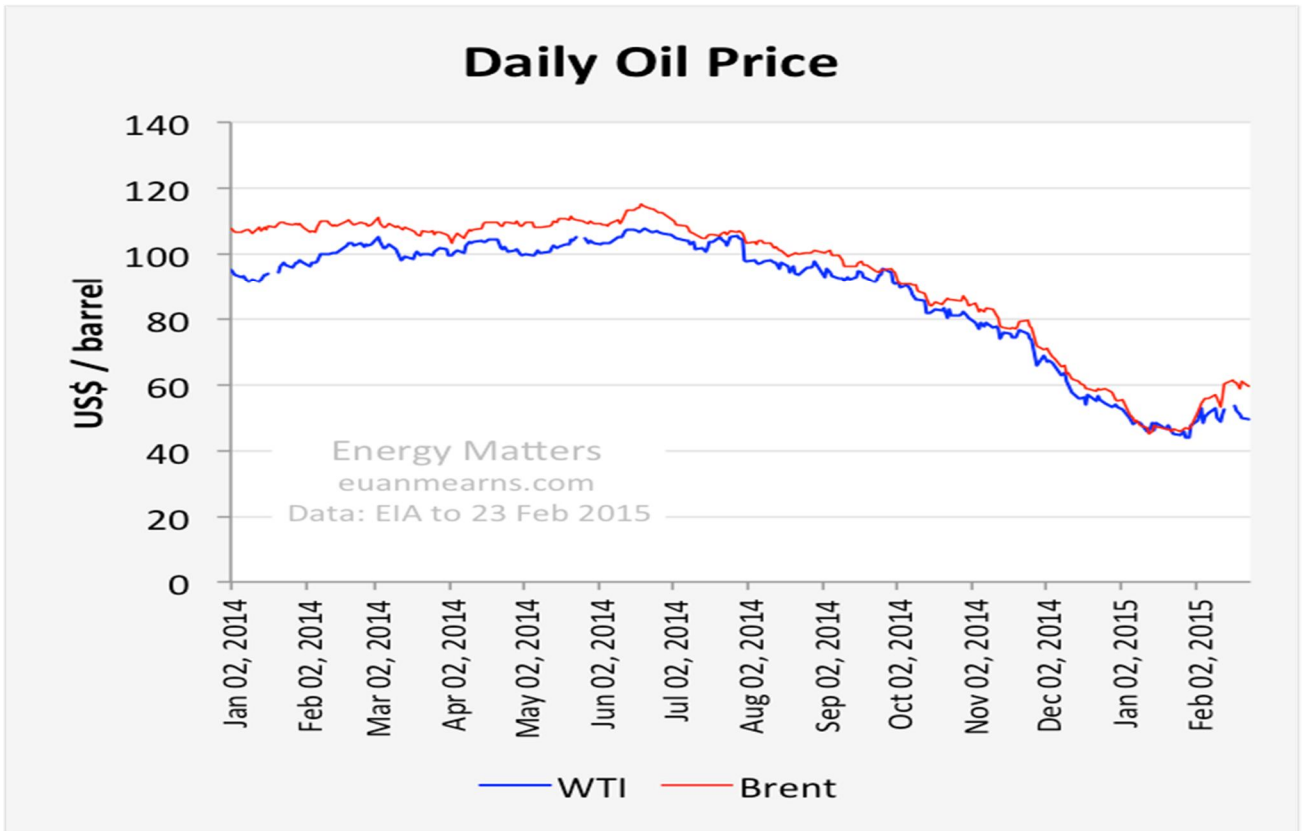


Figure 10. Daily Oil Prices (Sources: [http:// www.euanmearns.com](http://www.euanmearns.com))

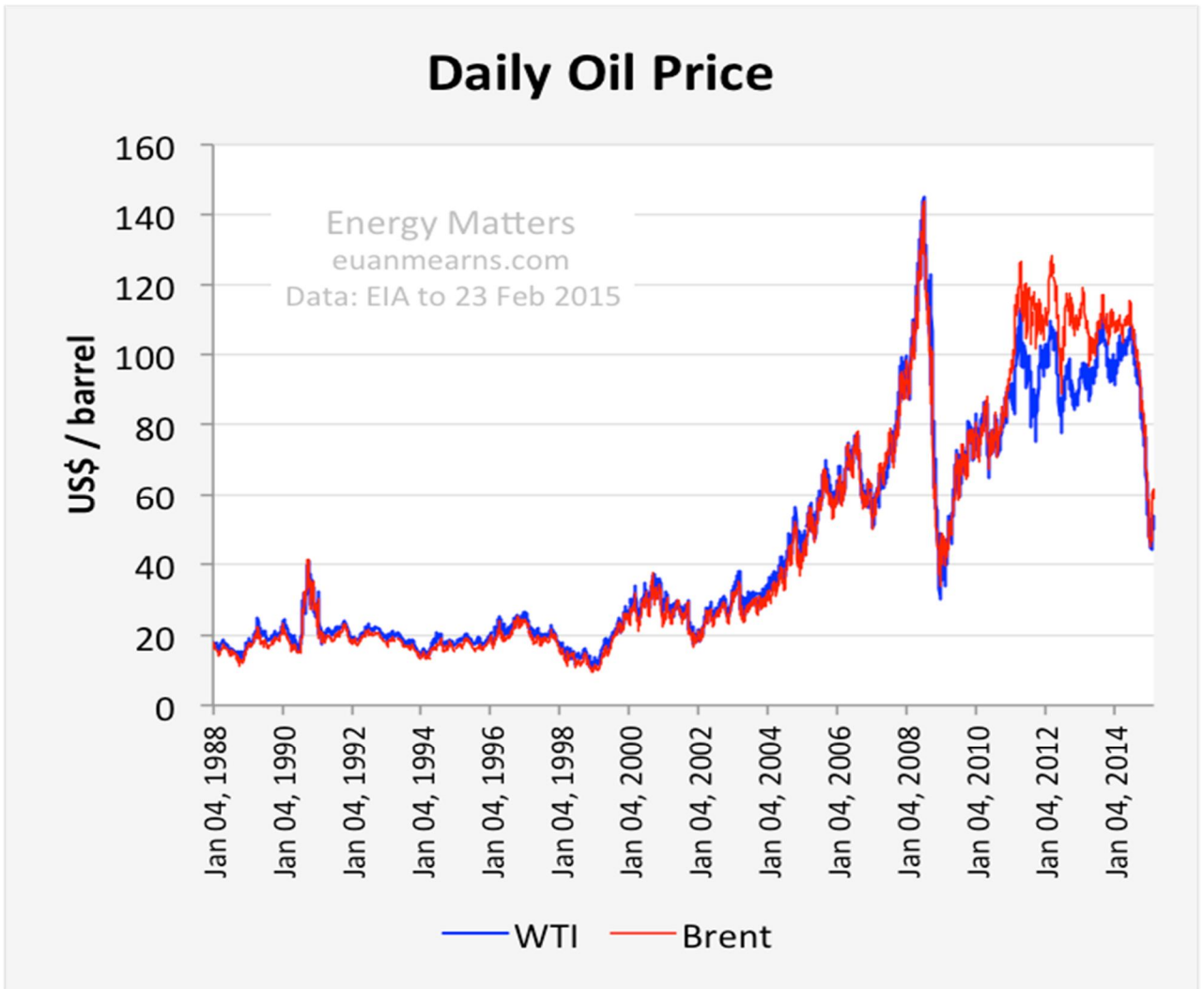


Figure 11. Daily oil Prices (Source: [http:// www.euanmearns.com](http://www.euanmearns.com))

Chapter 6
Conclusion

The result of this study discloses strategies that were adopted by different companies in order to minimize the exchange rate fluctuation risk. The analysis of SKF's strategies communicates an image of a stable organization with a clear purpose of its currency risk management. More noticeable are SKF's active risk taking and the managers' believed in its value adding ability. Furthermore, SKF's sees, the opportunities with the overall development, which allows them to execute trades more efficiently.

During the past few months, Euro started deteriorating and showed a major downfall in years which was approximately 1 Euro= 85INR and presently is around 1 Euro=64 INR. Due to these fluctuations, SKF bearing made a huge loss of 40 million SAC. These losses were not due to the fact that there was rise in labor cost or manufacturing but the only reason for this was that Euro currency has weakened with respect to Chinese and Indian currency. In order to overcome these this study describes what strategies should be adopted, as per the situation.

SKF Bearing, one of the biggest manufacturing companies in Sweden had a major portion of suppliers from China and India. Procurement from these countries was inevitable. So, to match the procurements with deteriorating European currency, SKF Bearing should go for Hedging and Netting strategies with these countries. This would perhaps help to overcome their losses.

Secondly, in order to cut out the exchange rate fluctuation risk SKF Bearing should promote the domestic suppliers, as the procurement would be done in the same currency.

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