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CURRENCY WARS

NEGATIVE EFFECTS OF CURRENCY DEVALUATION

THE CASE OF JAPAN

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Abstract

Currency wars are featured by competitive currency devaluations. Countries endeavor to reach the bottom of their currency prices in relation to other exchange rates. It becomes competitive when one country follows suit after another country and most of the time, the trading partner, has exacted a devaluation in their currencies. There are various negative effects that riddle the markets of the home economy and that of the foreign markets. Multinational corporations and also the local small and medium size enterprises are the most affected entities next to the citizenry.

This study endeavors to provide an in-depth view on the particular situation that Japan has dealt with over decades. Due to the severe and constant deflationary pressure that started since the early 90s Japan has undertaken several policies to prop up the economy. A broad explanation is given about the ample topic of currency devaluation. This analysis stems from an economics topic such as monetary and fiscal policies. But the details explained are elemental to understand the implications of the international business in the core industries in the Japanese market.

This is a qualitative research based on discourse analysis. The mode of analysis is particularly helpful in collecting and organizing the data with the most precise manner. Several interviews were recorded, coded and categorized accordingly. Data was collected through a time period spanning over 9 months.

The results underlined a deficiency in the application of policies to help the Japanese economy. The various interventions exacted by the Bank of Japan have been rather short lived. The case of Japan still extends yonder as the new policies’ results application is yet to be seen. The currency devaluation that the authorities in Japan have applied have been of no avail. The economy is still lagging in the numbers. The industrial sectors of core production for the economy such as the automakers, electronics and banking have dealt with extreme situations under stark uncertainty. The case of Japan is but one situation that is replicated throughout other countries around the world.

As one of the few extant research studies on currency devaluation undertaken via a qualitative approach based on discourse analysis, this study offers a very different angle. This analysis differs from usual research on this area which is quantitative and supported by other parallel research methods. This study follows a call on a more pragmatic understanding of what the situation has been for the particular case of Japan. Discourse analysis has allowed for a very hands-on experience into the very core of the international business by gathering the thoughts of the industry participants and that of the central bankers as well. This study aims at finding the link of government policy application and engineering and how that affects the operations in cross-border business making. Economic policy affects the entire country structure that allows for it to advance and prosper. That is why, this study has taken a particular aim at currency devaluation, as the operations beyond the political borders is what brings a corporation to become a globally sensible, sustainable, profitable and viable entity. Thus, their dealings are affected by how the exchange rate, stability and instability, is monitored and impacted by the governments.

Keywords

Currency war, currency devaluation, competitive devaluation, quantitative easing, transaction cost.
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1 INTRODUCTION

1.1 Background

Throughout many decades, ever since the 1930s governments have intervened in their monetary policies in order to halt their currency collapse (Alshaali 2015). But not only has it meant to hold the collapse of the currency, but towards protecting the over-all country performance. Almost unnoticeable by the naked eye, the governments have stepped up their decision making in pro of securing the progress of their countries despite many costs. Currencies stand as great measure to quantify the level of a country’s productivity against many others. The same that one looks to a company’s share price performance in the market place to check the very company’s performance. Yet, the same applies to companies that are not in the market place, the private share price takes place behind the curtains, and they assess what is the best price per share that the company deserves to be recognized for. Thus, private investing takes place after the appraisal of the company unbeknownst to the rest of the public awareness. Therefore, in both cases, the companies, being private or public, their value in the market place is assessed by the share price. Thus when it comes to acquisitions that is the price they are bought for. In the same line of thought, the correlation regarding countries obeys the same concept. Currencies set the measure of country performance, when paired to another. Given that one country pays for a product from another country based on the other current country’s currency valuation.

Currency devaluation can take place via various measures. Yet, the most important is by cutting the countries interest rate. The Country’s central banks, and in the case of the Euro economic area, the European Central Bank, (heretofore ECB) are the agents that make the decision on the country’s interest rates fluctuations. Some countries enjoy a peg to a major reserve currency, and they do not have to undergo currency intervention. Pegging the currencies to other major economy’s currency assures a constant and more stable currency price. Another benefit of pegging the currency to any reserve currency such as the USD is that the countries can cruise through different market deficiencies almost unscathed.
Currency warfare denotes the race of countries to lower their interest rates as much as possible (Picardo 2015). According to the media, the world is experiencing a currency war. So far, for the year 2015, about 40 countries have engaged in interest rate cuts. According to many commentators, the world is plunging into this phenomenon. The decision of so many countries to engage in the race to the bottom seems plausible. As the rate devaluation actually makes the goods of the country more attractive and cheaper for export. Consequently, as the currency is cheaper and more exports are exacted, more jobs are created to fulfill more sells due to demand by foreign trading partners of the country’s goods and services. Consequently, the Gross National Product (GDP) is boosted as the country exports soar. And economic growth is attained (Picardo 2015). Balance of trade is affected by a lower current account trade deficit and a higher current account surplus (Farr 2015).

After the Great Depression in the 1930s, the Gold Standard was abandoned the member countries let their currencies float freely. Thus, the markets would set the price ever more. And countries engaged in devaluing their currencies, which is also called, competitive devaluation, in order to boost their ailing economics back then. Bretton Woods’ treaty took place twice, yet after its collapse, the markets grabbed a stronger hold of the currency exchange prices with higher influence. Back then, there was only a devaluation based on selling their currency. But from the new millennium onwards there was introduced the Quantitative Easing (QE) which consists on printing more currency and injecting it to the market place in the form of treasury or sovereign bonds. And thus besides the interest rates the QE is strongly considered as well as another strong method for countries to devalue their currencies over time (Jones 2015).

1.2 Study Goal

The motivation to examine this topic is of personal value as well as for the general public. There is not much known about it by the regular individuals, and how it really affects them. I have been deeply interested in providing further research on this topic for future developing, and scientific research for the benefit the common knowledge. The motivation extends to the fact that the same way that a company is interested in having a good valuation in the market place. And the firms try their best to perform
in accordance with the consumer demands by offering and delivering products appealing, and thus creating opportunities. The same applies to countries. Personally, I consider that the level of importance is higher in the case of the currency government intervention programs as they affect the entire population. Thus, the effects are felt all throughout their economic structure as their companies grapple with the effects across diverse time spans.

My interest is a mirror of the interest that major economic powerhouses such as the World Bank and the International Monetary Fund pay close attention to the situation that unravels from country to country that involves in such measures. Beyond these regulatory agents, the interest and relevance is also shared by the multinational enterprises which engage in business across political borders. The currency value also dearly affects travelers’ buying power to the better or worse. Therefore, the effects felt are not only within the country, but the ripple effect is felt globally. And trends are created and trashed in the same fashion. As some countries currency holds a higher value than the other.

Thus, such elemental information is needed by every individual as we all are engaged in the use of currencies to live by. Especially the information need relates to those individuals coming from and living in the countries where most of these currency interventions are taking place. Thus, the regular folk, politicians of all levels, students, tourists, business people of all levels, business entities especially the multinational and global sort, market makers, university’s economics and business management departments, et al. The need to understand the situation that goes on with the currency that one holds is prevalent. Even when considering the smallness of cash spent on frivolities.

1.3 Research Gap

The only element that is known thus far is that the purpose of the currency wars is of beneficial nature. And so are the expectations of the various countries that have engaged in them throughout the many years. And the fact that it brings more overall economic growth is enough for the countries to be content with.
Yet, little known are the negative effects of currency devaluation. The expectations of country betterment after the currency devaluations have fallen short (The Economist 2015). Or for instance, Sweden’s interest rate lowered to below cero levels scores a move never seen before by economists and poised for country-wise experimentation (Spence 2015). Much is ignored of how counterproductive the currency interventions can be (Cooper 1971, Duggan 2015). Countries engage in tilting the opportunities by lowering their interest rates (price of currencies). On the long-run the benefits erode according to Gylfason and Risager (1984), Gylfason and Schmid (1983), and Branson (1986).

Alas, extant literature is very scant for properly understanding the drawbacks of the currency devaluation central bankers’ decision. Furthermore, the existing literature is highly based in the understanding of developing or Asian countries effects such as Kim and Ying (2007) and Chou and Chao (2001). But there is a deficit in research on what is the effect on developed and industrialized countries. The fact that so many countries of all caliber engage in currency intervention speaks volume of the mishaps committed with blinds-eye. Amongst the 40 countries that engaged in the interest rate cuts to propel their economies include but not limited to, Angola, Sierra Leone, Chile, China, Vietnam, Sweden, , ECB, Canada, Russia, et c. (Ranasinghe 2015.)

1.4 Thesis Questions

Therefore, based on the pronounced research gap and the noticeable effects of the currency wars my research questions are the following:

*R.Q. 1. How currency wars and thus, currency devaluation, bear a negative impact for the country involved in terms of international business within the core industries?*

Furthermore, the question requires answers to the following sub-questions:

*R.Q. 1.1. What are the negative effects of engaging in interest rates cutting leading to currency devaluation?*
R.Q. 1.2 What are the negative effects of engaging in devaluing the currencies via quantitative easing?

More precise description of events with a more local focus and development of knowledge dissecting will be provided on the case country Japan. Over a long period of time, Japan has had a strong difficulty in trying to make the situation bring benefits to the country. To no avail, have all the currency devaluations taken place thus far. (Khan 2015, Carr 2015.)

1.5 Research Methods

Qualitative research method will be employed to provide the answer to the research questions aforementioned. The study is undertaking as a means to describe and uncover the suggestions for governments to adopt. Therefore, a deeper analysis will be undertaken in order to offer very descriptive view on the topics covered. Thus, suggestions will be made. Furthermore, an abductive analysis will be undertaken to better understand the theories that will be uncovered, and giving room to better enrich them and test them.

Much information is available over books, printed and digital media, news-channel interviews, press releases, televised hearings, statistics, etc. Thus, I shall utilize all that valuable information from a discursive point of analysis to solidify my findings and offer solid responses. They are very suitable for answering the questions as the interviews to central bankers, prime ministers, finance ministers take place via the mentioned hearings where various journalists from various major newspaper and other organizations such as World Bank and IMF representatives ask questions over to the central bankers. Such interviews are of extreme relevance towards my research, which are also otherwise improbable to secure on my own.

Thus, qualitative research is the best way to explain this topic in order for the general public to better understand it. Given that the qualitative method delves into interpretative analysis. And more readable data is produced. Thus, it shall contain more information that keeps a more understanding nature.
1.6 Study Structure

The thesis will first feature the theoretical background in the first chapter. Next, chapter 2 will address the theoretical perspective of the study. This chapter will cover the background analysis of central banks interventions and its various kinds. It would cover the defenses of the national currency, beggar-thy-neighbor policies. The research questions will be answered, albeit theoretically at this phase of the study already. Chapter 3 will cover and explain the methodology used to develop the current study. This chapter will focus on covering and explaining the use of discourse analysis and how it best served for performing a research on this relevant topic. Chapter 4 will introduce the case country Japan. The chapter will further delve into the core industries that feature in the Japanese economy. Car making, electronics manufacturing and banking are the main industries of analysis. Chapter 5 will provide the conclusions, suggestions, and summary of the overall study.
2 CURRENCY WAR – COMPETITIVE CURRENCY DEVALUATION

2.1 Industry: A brief history and background

It “is accepted everywhere from end to end of the earth. It is admired by all men and in all kingdoms, because no kingdom has a currency that can be compared to it” (Lopez, 1951:209) were the words of a Greek monk in the VI century expressing his surprise of the usage of the Byzantine Empire’s currency the Bezant; as quoted by Lopez’ work, “The Dollar of the middle ages”. Currencies have always been of utmost importance in the effectuation of transactions and carrying on value and goods, as well as experiences from one place to another throughout history. And globalization or international currencies is no concept of the present or the future but rather something taking place for several centuries before our current times. International economic activity just like that of a national local country is of highly crucial understanding of the way business is taken across political and sociological boundaries. The international use of currencies and their effects on humans is what has served to “lubricate the wheels of commerce” (Matsuyama, Kiyotaki & Matsui 1993:283). The means of payment throughout the globe as the records showed started with the Byzantine coins that stayed in use and coverage until the seventh century, followed by the Arab’s Dinar. Afterwards, in the seventeenth century the Florino of Florence kept the international economic recognition for commerce. Two centuries later it was taken over by the Ducato of Venice (Cipolla 1956:21). Then further in the years the British pound sterling rose to dominance as the major role playing currency in the international business sphere until 1914. The timeline was then followed after the World War II, by the U.S. dollar as the vehicle currency featuring the Bretton Woods (BW) system. (Yeager 1976.)

Much has been discussed about what can explain the change over from one currency of major usage to another. But research has ran dry on the issue. Rather it is an effect that is coined by Matsuyama et al (1993:284) as the “Invisible Hand”. There can be legal restrictions or policies affecting the countries in questions that then exact an impact in the way their currencies have had to move back to the back scene. All in all, what is of importance is the understanding of that the world has currencies that keep higher value over others. This value against other currencies that require
individuals to exchange their national/local currencies for the major currency has effects on the availability of a number of currencies in order to make purchases and sells at an individual level. And at the same time the currencies are thus coupled with another and thus are measured to quantify the profit and losses regarding the activities of a firm in the international arena.

There are two types of countries, home and foreign. In each country, individuals or agents engage in the production and consumption. Such activities generate an exchange of goods and services. And same interests are surface with symbiotic synergies as result. These activities are taken through with the trust and hope that the currency in use will be backed up properly and responsibly. It brings us to a very delicate issue. Currently there are no currencies backed by commodities, as was the case of the Gold Standard and Bretton Woods. After the collapse of these monetary schemes of global proportions, the currencies are simply backed but their own value and the countries strength that keep them in balance. These non-commodity currencies are called Fiat currencies. Therefore, the currencies must have a constant value and appraisal that others would gladly receive in another part of the world, with confidence, and for future use. (Matsuyama et al. 1993.)

Due to the strength of an international currency, certain countries use it to price their assets when running their exports. The trade is based in trust and ease of transacting throughout the world. And countries must endeavour to keep and secure an equilibrium in their home currencies related to that of other strong economic regions and countries or set of countries (currency union areas). Every country decides to couple their country up against the major currency at best in order to measure the health states of their affairs internally. And to also measure their strength internationally to price their goods that move to and fro of their borders. (McKinnon 2011.)

However, should the currency unit be debased due to the lack of control in various branches of the vehicle currency country, then the situation will turn awry, and the lost will be abysmal. As many assets are priced in that vehicle currency worldwide. But the transition has taken place from one currency to another, as was the cases previous to the current vehicle currency of these times. In the current study attention
is not provided to that type of events that unfolded in history regarding the previous debasements. As Bullock (1934) stated, under such conditions, prices start to show the symptoms of events occurring: commodities are dealt at wholesale levels, same for raw materials and food staples as well. The prices increase when money is debased. It is a matter that has been fully known several centuries ago. In his eminent work, David Hume’s Of Money and Other Economic Essays, (1752) after considering a money debasement regarding the European kings and observing the price revolution that ensued after the discovery of America, he stated that the price of “the specie may increase to considerable pitch” (Hume 1752:25). Therefore, the fluctuations start to be worrisome for analysts, especially the inflationists, and measures start to be considered to be taken implemented (Bullock 1934).

The prospects loom for higher prices (inflationary pressures). Governments engage in bringing their economies to a more reasonable stance in order to enjoy, preserve and ignite prosperity within their borders for the common good of their citizens. In doing so, the countries monetary policy authorities (central banks) move on to intervene in their monetary behaviours in order to secure proper and most profitable-as-possible standards for the producers of their countries.

After the Great War (WWI), the long trailing and successful Gold standard with roots back into a storied and eventful existence through a myriad of centuries back, it collapsed. England’s accounts were not in good standing as to no longer provide the same price for it. And the world stock of gold was in limited supply and not enough for the Great War’s price levels within the industrial countries of the world. And even though Britain tried to revive it, but it came to no avail. Restoration of the shine of the specie (gold bullion) landed a disastrous crash: 1925. Intervention started to take place as Britain tried to avoid money outflow. By 1931, Britain abandoned the gold parity and the currency floated freely: crashing taking the Scandinavian currencies along with it. The US started to do all in its power to keep the dollar up. And the rest of the countries in Europe saw no other alternative but to abandon the gold standard as well. They were already suffering from plummeting exports and precipitating industrial production. (Plumper & Troeger 2008, McKinnon 2011.)
But the world went into war again, and towards the end of that WW II more preparations were laid to make effective once again, better and more stable monetary system which could alleviate the worlds lack of confidence in the economic situation as a whole. Therefore, the Bretton Woods (BW) agreement was set in place in 1944. Amongst the clauses that were agreed at that time was that they would never again engage letting their currencies to move uncontrolled across their boundaries. The countries involved were the allies led by Britain and the USA. The economic standard started to take place with better and more promising features. All the countries in question, but to a lesser extend the US than the others, were trying to rebuild their country brick-and-mortar and political/organizational infrastructure. During the war, the USA had acquired most of the world’s gold. Therefore, with the balance tilted with no fair play. The countries agreed not to base their currencies on gold anymore. Rather, the new vehicle currency was to be the most stable of them all at the time, the US dollar. Consequently, all the other countries would base their currencies on to the new Dollar Standard with the opportunity to change it, but moderately. The permission to change the parity to the US dollar would have to be approved by the newly created International Monetary Fund. (Stiglitz 1999b, McKinnon 2011.)

As the USA kept increasing their amount of gold but selling bonds at 35 USD per ounce, their strength in the newly minted regime kept staking up. The power was asymmetrical, given that the US was the only one in the middle of the whole structure of the Bretton Woods (BW) with the power to make drastic changes and the others would be the subordinate agents, per se. Therefore, the new system would be in fine working conditions as well as the USA were responsible as to control and stabilize any disparity In the prices for their benefits and that of the world. And secondly, they were also not to question the way other countries would set their exchange rates to the dollar. (McKinnon 2011.)

The recovery of the post WW II conditions in Western Europe and Japan were of terrific standards and good pace, so were their economic situation of constant multilateral growth but the mid-1960s. Yet, during the high Bretton Woods period or the “Halcyon “(MacKinnon 2011:2), money could not move freely. But economists such as John M. Keynes were frightened that if the policies would be loosen up, the
money flow situation would again turn to the same instances as in the intra war period. Then it was devised that the central banks would clear all the transactions of import and exports under the International Clearing Union. But earlier, in 1945 it was the White Plan, which actually stayed in force that allowed for the private currency interbank exchange markets were re-opened with the US dollar as the clearing currency. However, until today, it still remains the Keynesian clause in the IMF that nations can impose any capital control on payments but not on interest or dividend payments. (MacKinnon 2011.)

In 1971, the then US president Richard Nixon intervened and took measures to delink the US dollar from the convertibility to gold and that forced to dollar to devalue and with it, the Bretton Woods system reached its end. The aftermath of that intervention brought the exchanges to a complete and pure dollar standard with no link at all to gold (fiat currency). Since then, the behaviour of the monetary agent in the market place has been very erratic with tail swings of inflation, deflation for decades to come. Internationally, the industrialized nations complained to the USA that they did not intervene on the fall and drastic behaviour of the dollar in the interbank market. (Sarno & Taylor 2001.)

During the Convention of Versailles in 1982, they created a Working Group to oversee the roles of intervention (Kenen 1987). In 1983, after the convention, the Jurgensen Report stated that the intervention and more precisely the sterile intervention was not effective but only in the very short run when the other developed and some emerging nations were trying to cope with the US dollar behaviour (Sarno & Taylor 2001). Kennen (1987) further informs about the creation of G-5 countries of the Plaza Communiquè in the Plaza hotel in New York. The purpose was to agree on avoiding getting caught in the erratic behaviour of the dollar as the free float was wrecking several economic situations in their home markets such as inflationary pressures, and dire effects on their exchange rates. Both of these agreements of the Working Group and the Plaza communiqué were condensed in a message of discontent from the countries involved as “recent shifts in fundamental economic conditions…, together with policy commitments for the future, have not been reflected fully in exchange markets” (Kenen 1987:195).
Following the Plaza agreement ending in a sketchy picture, in 1987, G-7 meeting took place in Paris, France at the Louvre. The meeting had the outlook to still seek to set “reference ranges” (Sarno et al. 2001:840). The meeting was to secure and control the losses following the decline of the U.S. dollar. Sarno et al. (2001) further states that after the meetings in the Louvre and the Plaza the interventions have been of heavy and constant. Such consensus on European countries to create controls against dollar behaviours gave way to the formation of the European Monetary System (EMS), and later the Exchange Rate Mechanism (ERM) and currently, after the introduction of the Euro, ERM II. (Stiglitz 1999b.)

All in all, after the WW II, and following the fears and effects of the great depression, major world powers convened to create institution that would seek the common markets, economic and socio-economic stability and cooperation. The General Agreement on Tariffs and Trade (GATT), the International Monetary Fund (IMF) and the International Bank of Reconstruction and Development (IBRD) were created. The GATT has evolved to what we know today as the World Trade Organization (WTO). The WTO is to work on lowering trade barriers and prevent beggar-thy-neighbor policies that were considered as one of the most elemental factors that triggered the great depression. The IMF was setup with the aim to monitor the international payment system and the gold standard that was reinstated after the war. Very influential in the creation and correct structuration of the IMF, John M. Keynes was deeply concerned with economic, social and political wellbeing of nations. And lastly, the IBRD, which later became the World Bank was instrumental in the reconstruction of the battered and destroyed European countries. But the WB focus was shifted to alleviating the needs of the then Third World countries. (Stiglitz, 1999b.)

Currently after 2010, more measures have started to take place in the intervention of the international monetary spectrum of the world trade. Countries still need to control their currency behaviours. Another worrisome turmoil in the markets took place in 2008 with the collapse of the financial system across the world starting with the USA. The depth of the situation did not resemble much the scale of the fall in the 1930. But consequences were dire. Several changes in the financial industry took
place. Yet, the decline of the markets requested the monetary policies makers to exact interventions that have lasted to this date.

2.2 Currency Market Intervention: A closer look into its intricacies.

Governments take the steps and measures to weigh into the foreign exchange market in order to control their exchange rate equilibrium balance. Equilibrium in the currency exchange of a country is at proper levels when the demand for the currency is equal to its supply. The tilting of the currency into different levels regarding the equilibrium is based on various economic and fundamental (news) factors that take place in the country: employment, balance of trade, inflation, wages, manufacturing, job creation, etc.

In figure 1, the exchange rate of the USD dollar against the sterling pound is in equilibrium as the demand matches the supply of the currency. Increase in demand leads to increase in the price of exchange of U. S. dollars per U. K. Sterling Pounds. The interventions aim at trying to move the approaching exchange rate form the equilibrium or, conversely, to move it closer to it.

![Figure 1. Currency equilibrium (adapted from Davies 2002:358).](image)
Interventions can also be considered as currency manipulation. Governments step in to increase or decrease the value of their currency in the international interbank market (Kenen 1987). The monetary authorities engage in interventions in order to prop up the economy or to avoid cool it off. That is, should the economy be performing too strong, their currency could increase in value too much over other partner countries. And conversely, should the economy be running too slow on growth their intervention is to bring more confidence in the market so as to increase the citizens spending and increase the economic performance of the country.

Monetary policy authorities’ participation in the market place can be tracked via two types of interventions, direct and indirect interventions (Figure 2).

2.1.1 Direct Intervention

2.2.1.1 Non-Sterilized Intervention

Direct intervention consists of sterilized and non-sterilized intervention. The simplest of both is the non-sterilized intervention. It entails that the country increases or decreases the country’s money supply by the purchase or sell of foreign assets. Clearly it is directly linked with the movements of the exchange rate of the currency up against that of other trading partners. And it is deeming an issue, should the other parties or trading partners consider it so according to Sarno et al. (2001). Via this sort of intervention, the impact in the market is more present as it may change the monetary base, for instance increase the reserves of another country’s currency. Other effects comprise the market expectation, exchange rates and interest rates of the country.

2.2.1.2 Sterilized intervention

On another hand the sterilized intervention has its roots in actions taken to offset a sell or a purchase of assets or foreign assets, respectively. That is, the country sterilizes the money that comes into the country via a purchase by selling the same amount out of the country. This measure has no effect in the money supply into the
country’s local markets. But its nature is very controversial. (Adams & Henderson 1983, Sarno et al. 2001.)

The main difference between the two forms of direct intervention is that one (non-sterilized) intervention affects the monetary base and deals with foreign assets holdings and through the other (sterilized) intervention, the assets being dealt relate to domestic holdings.

Furthermore, the direct intervention in the form of the sterilized sort has two important elements to it. The intervention measures carry certain intricacies that the market place allocates close attention to, given that this type of direct intervention deals with a two way operation: Portfolio Balance Channel and the expectations or signaling channel. Exchange rate management has gained more favoritism than intervention, but the line that divides two is ephemeral. (Kenen 1987.)

2.2.1.2.1 Portfolio Balance Channel

Via the portfolio balance channel or portfolio balance model (PBM) the implications are so that the country has to assess their portfolio exposure upon the sell or purchase of their assets. Given that under the sterilized operation, one asset is bought, and at the same time or within a short lag of time the same value/amount of the asset is thus sold, there must be a total parity and balance. The transaction must be under total control otherwise the asset purchase or sell is not sterilized. Therefore, it is an interaction of international assets balancing, accumulation and decumulation and the impact in the exchange rate (Dooley & Isard 1983). The consecutive and constant rebalancing of their books/portfolios of assets, the monetary authorities are thus engaged in changing and impacting the exchange rate, and thus intervention takes place via that channel. The agents act as monetary authorities (central banker operators) must always be weighing their operations with the utmost care. They must find the right substitutes for the assets that were purchased and acquired in order to find the right balance. The substitutability is more important for should they (agents) find that the assets can substitute one another and cancel each other out perfectly. They are already caring only about the amount and not over other quantities (Sarno et al. 2001). Thus non-sterilized intervention can have a very long lasting impact in
the market place as per Kenen (1987). That way, this sort of intervention would “buy the biggest bang for a buck” Kenen (1987:197). (Sarno et al. 2001.)

2.2.1.2.2 Signaling Channel

On another hand, the expectations or the signaling channel theory is still important should the aforementioned substitutability be still at play (Mussa 1981). The difference with the previous perspective is that at this level of direct intervention, the country is viewing the scenario as a future policy perspective. Giving that the perceptiveness is looking at the future for the market behaviour, the expectations of the markets, the activities change the market now. Basically, with the signaling theory, the information is provided by the central banks so as to affect the market. Thus it exacts a psychological stance that the officials at the monetary institutions have a better grip and more relevant information than the rest in the market place. Therefore, the change of views in the future monetary behaviours from the central bankers is what affects the exchange rate, and it is thus considered an intervention as they signal decision making. By all means, it is safe to note and understand that the official interventions can be very expensive in terms of money allocation. The country’s economic situation commands the correct adoption of the position to signal from the authorities; it is most important. If they decide a path, their decisions ought to be clearly stated and followed upon (Sarno et al. 2001). Yet it is not as clear cut, the operations from central banks can be very secret and more into a mystery. The markets are not friends of mysteries, thus: “The rules of exchange rate management should be as transparent as possible. That is to maintain credibility, not by studied ambiguity, which breeds disagreement and distrust” (Kenen 1988:52). Sterilized intervention can be very controversial. That is because of the substitutability effect that is sought after in the PBM (Portfolio Balance Model). The counteracting assets are held in foreign assets. Mr Kenen (1987) further states that the whole effort of the perfect matching of the assets is rather naïve as it means little to the asset holders since the assets are not exchanging hands with much benefit to them, but rather, a very square deal. The question then surfaces whether the sterilized intervention is helpful or not (Kenen 1987). In the same vein, the study by Obstfeld (1982) states that such intervention lacks usefulness. Yet, Kaminsky & Lewis (1996) does show that it is effective. Above all, Lewis (1995) found a interesting link between the
sterilized direct intervention and the prediction of fiscal policy making and that vice-versa, the later may predict interventions.

2.1.2 Indirect intervention

The indirect intervention is mainly related to capital controls, restrictions on assets acquisition and asset purchases that entail the trade in currencies. This sort of intervention is not widely practiced. It has strong permanent consequences in the market place and its abandonment can mean a lot for the country in question. These measures can have the negative outcome and affect the market sentiment, especially within multinational enterprises. These measures usually come into play when there is a stark need of them, i.e. crisis times. As previously stated, Mr Keynes was strong proponent of capital controls regulated by the IMF to regulate the industry stemming from the war time market turmoil. Furthermore, after the ERM crisis in 1992 and 1993 capital controls started to be considered strongly propelled by the Paul Volcker, then head of the US Federal Reserve to help keep currency attacks at bay. And in the same perspective, the Tobin tax is an element that still comes into the negotiating tables regarding the taxation of foreign exchange transactions in order to ‘throw sand in the wheels of finance” (Tobin 1969). (Sarno et al. 2001.)

When it comes to intervention, the study by Kenen (1987) bluntly remarks that the monetary authorities must decide plainly and with no obscurity the actions to proceed. Central bankers and policy makers should stand and abide by their views. The interventions are closely followed by the entire world of commerce in every step of the way when it comes to currency of international stature as many of them are vehicles that command the economies of various countries. For instance, the case of monetary unions and currency that carry others pegged to them. Thus, the authorities should be prepared to state when their rates are not in line with expectations, and should not act if they have not indicated to. (Kenen, 1987.)

2.1.3 Quantitative Easing (QE)

Prof. R. Werner coined the term “quantity easing” in his article in the famed financial newspaper Nikkei on 2nd September 1995. Prof Werner was discussing a
policy that would implement expansionary measures in the economy via the creation of credit (Herbst, Wu & Ho 2014). Quantitative easing is also named as large asset purchase (LSAP) (Neely 2015) or “monetizing the debt” (Herbst et al. 2014).

After the deep financial turmoil of 2008 several nations engaged in applying Large Asset Purchases in order to veer the economic hardship to prosperity again by tackling deflation. This type of policy intervention is also related to “interest bank cuts, liquidity support, liability guarantees, and recapitalization” (Neely 2015). In these turbulent contexts of international financial debacle the central banks responded in ways to bring back the creation of better monetary stability by first decreasing the interest rates so that it would lead to consuming, borrowing and investing (Albu, Lupu, Calin, & Popovici 2014). As the interest rates were closed to cero, then the asset purchases plans or QE could start to take place. The QE was inspired by the deflationary period of Japan. (Albu et al. 2014)

These unconventional set of monetary policies of QE can be either sterilized (Szczerbowicz 2012) or non-sterilized form (Herbst et al. 2014). Given the nature of the QE, the asset purchases entail bad loans from other nations, and these bad loans are sterilized by substitutability fashion with other assets in order to avoid absorbing the toxicity of the intake assets. (Szczerbowicz 2012, Bauer & Neely 2014, Neely 2015.)

Putnam (2013) considers that the asset purchase or QE is a useful and operational tool for banks to fence the lack of solvency and liquidity. Also, Putnam (2013) further states that the purchase of troubled liquidity by the central banks from banks in difficulties allows for the latter to revive and bring themselves back to operational capacity. Putnam goes on stating that the QE is better in bad asset purchase than providing loans as another of the forms of QE as well. Conversely, the study by Herbst et al. (2014), claims that the QE provides no service to the economy. Furthermore, the study emphasizes that the money that the central banks acquire stay in the banks and not in the economy. “Reserve trap” Herbst et al. (2014), means little to the overall economy as there is no real liquidity provided by those actions. In real terms, the operation can still cause currency depreciation (Herbst et al. (2014). The liquidity trap can be intended by the banks via a decision to lend or not to lend, or via
a change in policy making. Still the operations are very pervasive. The entire money flow situation in the domestic country is rather non expansionary and it can affect the terms of trade and the export led recovery. (Herbst et al. 2014.)

QE exit strategies can be very difficult for the country to engage on as it can have lasting effects. The country must make amends in the monetary policy. Otherwise the actions of exit can be negative for the overall economy. Exitng QE hurts currency values, economic growth and exacts upward inflationary pressures. Alas, QE has little impact on job growth or economic betterment once the banks are in stable form. (Putnam 2013.)

The competitive devaluation or the race to the bottom of the zero bound interest rate is understood as currency war. Countries involved have a dire situation to deal as they try to tackle with their economic situations and slowdown. But the affected nations that suffer from the devaluation seem to have no other option other than retaliate or become beggars themselves. In 1934 in the analysis of devaluation of the price of the gold in terms of the dollar, the monetary upheavals tend to “disrupt exchanges, disturb markets, create apprehension, and contract credit” (Bullock 1934:44). Bullock (1934) study was further concerned with a currency war as a second devaluation back then would so trigger unwanted consequences. And to this very day, the situation is no different, as the currency war looms over the difficulties that the international markets have dealt with as countries try to keep a proper performance of their economies to benefit their free enterprise and open economy stances. Lastly Eichengreen (2013) further states that the economic policy coordinators failed to agree on international policy coordination, entailing that the currency war can still be noticed and perceived, since the best choices of policy modeling were not fully embraced.
2.1.4 Currency crisis

Erler, Bauer & Herz (2015) studies the monetary authorities (central bankers) interventions in the currency market. The decision making from the central bankers could well be to effectuate no intervention at all. The question always persists, to intervene or not to intervene. It is of utmost importance that interventions are followed up or kept properly maintained. Otherwise, the country’s production and the result of the intervention can incur in a loss for the country. The effects can be severe and with lasting consequences, including mistrust from the global markets. On another hand, should they not intervene, then the results can be minimal, which can be risky. It leads to currency attacks coming from other private market players to jolt the risk-averse central bankers to a decision. A currency crisis is the attack of the market over the value of the currency. It does so via the interbank market worldwide affecting the money supply which is the same as the available credit of the country, and international reserves measured in the domestic currency value (Eichengreen, Rose & Wyplosz 1994).

Furthermore, Erler et al. (2015) does provide a basis of interest considering the interventions. As per the study, before intervening the analysis and assessment must be done of what types of currency crises are at play in order to intervene. Exchange rate interventions from the central banks have a robust and impacting effect in the market place, as it is also the case of no intervention. Yet the currency crisis does require a decision from the central banks. Erler et al. (2015) determine that there are three scenarios in which the central banks find themselves when acting against a
currency crisis: immediate depreciation, successful defense and unsuccessful defense (Figure 3).

2.1.3.1. Immediate depreciation

With depreciations the central banks can take two stances. The monetary authorities can stay away from any intervention when the currency attacks take place and let the currency depreciate as it happens. The other scenario is that should the attempt to intervene not render any positive results, the depreciation is immediate as attempt attained no expected results. One cannot rule out the speculative attacks that currency markets have over the currency of a country. Erler et al. (2015) further state that countries that decided to let the currencies depreciate can have different reasons than the countries that do intervene. The fundamentals (economic factors, monetary policy and fiscal modeling, etc) can have a very different shape from country to country. (Erler et al. 2015.)

2.1.3.2. Successful defense

Successfully defending the currency markets, the central banks can achieve a lower impact in the GDP output. As the attack is controlled, multinationals firms can have a more sustainable performance on the fiscal year ahead. And besides, that builds trust for other multinationals to enter the market. The multinationals also can increase market participation as the country gains favour by having fend off the country’s currency attacks with their intervention in the market place. All in all, should the intervention be successful, it represent no output loss to the country but growth. Therefore, that tells of the very high risk of intervention. For should the intervention be successful be benefits are abundant. But should the defense fail or be abandoned completely, then the consequences can be dire and disastrous to the economy, even in the long run. (Erler et al. 2015).

2.1.3.3 Unsuccessful defense

Unsuccessful defense is also considered as a depreciation that has come late as it happened at an untimely basis. A central bank failing to intervene in the currency
market flow happens for two reasons. The bank may not intervene because it is no longer able to. For instance, the reserves of the country can be depleted. The second reason is that the monetary authorities are no longer willing to intervene. The lack of willingness can take place due to the analysis that the expected results are lower than the cost of attaining them; thus an unprofitable opportunity cost. Erler et al. (2015) considers that not being able to run a stark distinction of both of these reasons, the intervention is thus rendered unsuccessful. (Erler et al. 2015)

Erler et al. (2015) pointed out that with the depreciation stances such as the depreciations and the unsuccessful interventions the linkage to high inflation is robust. That is the case especially for the unsuccessful intervention or delayed intervention. The study was unable to observe any inflation relationship to successful intervention. Yet regarding the currency reserves of a country experienced a slow increase in the case of an unsuccessful depreciation than in the other forms of crises. Thus, the output loss is higher should the bank abandon all intervention once started. Even under immediate depreciation, the output loss is only intermediate.

![Diagram](image)

Figure 3. Bank intervention during currency crisis (adapted from Erler et al. 2015).
2.2 Currency Devaluation Leading to Currency War

It might be a misnomer, but heretofore, the term devaluation and depreciation will be used interchangeably. Both terms entail the downward pressure of a currency by its national authority’s intervention with the depreciation as the outlook.

As per Cooper 1971, devaluation is exacted when there is disequilibrium in payments in and out of the country (balance of payments) say via imports and exports (balance of trade) or money inflows outflows regarding even remittances. Mr Cooper further states that devaluation is a “most dramatic –even traumatic– measure” (1971:3) of economic nature for a country to implement. These measures often generates clamors from other countries and even by some entities within the domestic country as it can entail various changes in the structure companies do business with. Therefore, considering the implications in the local and international economies that partner up with the specific country, thus it becomes a measure that is used of nothing else works.

Given the international currency nature of the US dollar, the devaluations are measured via paring of the currency against the US dollar. As per Cooper (1971), devaluations take place when the disequilibrium means that the country cannot cope with its costs of international payments, therefore, the country must engage in the use of their reserves in order to prop up the economy and increase the employment levels. But the depreciation but inertia would take too much time. Therefore they decide that with the stroke of a pen, they can engage in devaluation and thus, eliminate the payment deficit. There are three different approaches that explain the situation that follows after devaluation: elasticity approach, absorption approach and the monetary approach. (Cooper 1971.)

2.2.1 Aftermath of the devaluation

2.2.1.1 Elasticity approach

The elasticity approach entails the responsiveness from the market towards to changes in the markets regarding the imports and exports. The ideal situation is that
the money flow or balance of payments (BOP) is at a proper level when the exports start to take place at a better pace and this is called the Marshall-Lerner condition (Cooper 2001). After the devaluation, income is diverted to other goods and not to imported products, especially if the country is very influential in the international markets. The shift takes place in consumption and production at best. Thus the resource will be allocated and drawn towards the allocation and production of exporting goods. The industries start to grow faster and the employment is thus secured. As per Cooper (1971) the main resources that are allocated are the labor and materials. The elasticity means that there is synergy of benefits within the balance of payments (imports/exports) that companies and individuals start to profit from. Furthermore, should there be too much elasticity or responsiveness towards the exports oriented policy due to cheaper money, the “agriculture will be required to be boosted and land may have to be recropped or heards rebuilt” (Cooper, 1971:6). It must be carefully assessed, for if the devaluation is not working, it means that the exports are not satisfying the loss of capital that the imports were bringing, especially after lowering the price of the currency. Thus, with cheaper currency the sells/exports must increase by as much as to have the devaluation work in the right way. Otherwise, exporting companies from the multinational enterprises to the small and medium size ones will bear the brunt. (Cooper 1971.)

2.2.1.2 Absorption approach

Secondly, the absorption approach stands for a more united form of calculation. In the elastic approach, it was more segmented. But now under the absorption approach there as more complete and cohesive calculation of the entire economy of the country. In essence it comprises from financial assets, to goods and services, as well. It absorbs the deference on the amount of money people need. The population would be absorbing more than they produce should there be not enough imports and fewer exports (deficit). And conversely, should there be enough exports they can have more expenditure and absorb more of their own total production (aggregate output). But these forces require government participation via the monetary policies. (Cooper 1971.)
2.2.1.3 Monetary approach

Thirdly, the monetary approach concerns the excess supply of money in the market should there be enough demand for the good and services. Thus, should there be a deficit in the balance of payments, more imports than exports, the money supply must be less. Devaluation will engage in decreasing the value of the currency, otherwise, the prices of local goods and services will rise (Cooper 1971). It is expected that the people will tighten their purse and less expenditure will be attained, in short, they will become spendthrift. And thus, they would wait-and-see for the value of their currencies to accommodate to the market and reassess their spending habits, giving room for the economy to stabilize again. Consequently, the devaluation will help to correct the balance of payment deficit. Conversely, the economies will again set out to spend, and the effect of devaluation will be undermined. That is why Mr Cooper states that the credit increase in the country to satisfy the demand for money, given that it has a lower value, will deteriorate the effects of devaluation and it will have a “once-for-all-effect” (1971:7).

Interestingly, and worth noting, the three approaches are non-competitive and hold important characteristics about devaluation that will set the base for further developments across this study. The first element of elasticity comes from the Marshall strawberry market study regarding the prices in open market economies and trade concerning the labor intensity it requires and the access to foreign markets impacting the responsiveness of prices (elasticity) in the exporting arena. The second approach is brought by the famed and influential economist John Maynard Keynes as he considered the total output (production) and expenditures. He was not contemplating the sectors, but changes in exchange rates which, the elasticity elements lacks traction on. The third element is concerned with the age old philosopher and economist famed for his assertions on economic matters, who was previously quoted in this study, David Hume, certain other schools of thought such as the Chicago university have used that approach, but it certainly dates back to the analysis of Mr Humes regarding the stock of raw material and money management in tandem analysis. (Cooper 1971.)
2.2.2 Devaluation packages

Under a general perspective, the comprehensive study by Cooper (1971) further states that devaluation features four main “packages.” The first element is the *Straight* devaluation which entails exchange rate changes applied over a specific period of time, i.e. notches every 2 weeks. The second form of devaluation is the one carrying a *Stabilization* package pursuing the reduction of the level of aggregate demand via certain monetary policies. The third is the *Liberalization* packaged devaluation that assigns quotas over imports or other international payments that were prohibited before. And under the new devaluation measure, the conditions are more relaxed than what the previous characteristics were. The fourth measure of devaluation bears a unification of exchange rates at a partial or full fashion. That is, to bring into order the diversity of the exchange rates that preexisted, are now encased in a unified rate or at least two.

It is important to note that these devaluation forms are not exclusive of each other. Rather, they may involve more important coordination from the central bankers. In turn, they may include all or tree of the forms of devaluation in the package so as to attack the desired ailing part of the economy. Basically, a deep study of the economy must take place in order to understand which of the exchange rate devaluation packages will be applied. For instance, there is a stark difference in an open payments deficit of more imports than exports and thus a better steps needs to be taken towards the improving of exports and expenditure controlling. And on another sphere is the other category of the devaluation scenario where there are deficits happening due to import controls. Under such situations a re-engineering of the policies need to be assessed and controls removed and other measures put into motion. Generally, most devaluations in countries around the world have tackled a combination of balance of payment deficits and a controlled ones. (Cooper 1971.)
2.2.3 Beggar-thy-Neighbor or beggar-thy-self policies.

2.2.3.1 Beggary-thy-neighbor

Also known as dirty float, were commenced and were common during the 1930s. After the great depression countries were trying to boost employment and the bounded rationality of self-preservation of every man to himself in the form of country international trade and monetary policy making were adopted so as to avoid extended economic hardship. After the gold standard collapse during the intra wars period, the countries were left with economies in disarray, upon that scenario the decided to depreciate their currency at a faster pace than wait for its regular inertia of the markets. That decision rendered the neighboring partnering and non-partnering countries with very high deficits and terrible unemployment. Give that the country that depreciated would have better exports picking up and thus employment, due to their currency devaluation intervention, the neighboring country would be left rather importing more and more and their exports would not move given that they had a pricier currency than that of the country that devaluated. Therefore, the non-devaluing countries would stay in a beggar position, scrambling for whatever that could be found, and minding the smallness they could cling to. As the export prices are set in the currency of the local consumer, the domestic country can increase and better the terms of trade “at the expense of its neighbor’s” (Tervala 2012:372). (Pope 2009, McKinnon 2011.)

Of course, the begging position could not remain for long before, the countries retaliated (figure 4). The countries turned back and accordingly so devalued their currencies as well. Such move would give the country the breather needed to recover from the other countries currency devaluation that was drastically affecting them as well (Pope 2009). Of course, this retaliatory move would not bring a better global system as a whole, given that after some time, the global trade started to have a lackluster development. Since all countries embark on retaliatory actions then little can be expected of the world terms of trade a single economic trading bloc. (Stiglitz 1999a.)
Various economists were forgetting to check on the basis of the continuous collapses in the world economies and the corporate circumstances that some countries would find their industries ensued on. Events that by the 1920s and late 1930s brought the world to its world trade knees. Researchers were producing great work to explain how best assess these dangerous scenarios. So as to avoid the predatory chain of reactions from one country to another, the study of Swan came about. Swan (1952) produced an algebraic economic modeling with macroeconomic implications and explanations stating the ways that a country might maintain equilibrium. The equilibrium was internally and externally, that is, economic activity and balance of trade, respectively. Swan (1952) further stated that the country could avoid the external shocks via working with the exchange rates and the fiscal policies (to tackle demand). Swan (1952) further stated that should the labor cost (wages) be too high or robust/resistant to change (stickiness), depreciation would then restore the economy to equilibrium. In addition, Swan (1952) trusted the powers to exact the change in the country: exchange rate to be moderated by the central bank and fiscal policy by the treasury.

On another hand, Mundell (1961) In this important contribution, used Swan’s model. Mundell was trying to find the real path for finding the types of shocks most a country find in order to restore equilibrium. Not only what shocks would be identified, but also what kind of exchange rate movements would need to be identified to be inefficient for reaching the equilibrium. Thus, Mundell came to the conclusion of forming a currency union so as to better buffer and cushion against the shocks. The way Mundell used the model captured the imagination of several economists around the world for many years. Way over 50 years later and the same notion still exists so as to understand the relationship of the optimal currency union area and the neighboring countries’ currencies and their exchange rates. Swan-Mundell model of two countries where one understands the other and would not retaliate should the other would devalue its currency. (Mundell 1961, Pope 2009.)

It must be understood that should the world be as the way that Mundell (1961) paints it, the world would be a fair and perfect place. “No country would ever be accused of Beggar-thy-neighbor policies” (Pope 2009:329). Alas, the complexity is far another. The real world features a very many difficulties, ambiguities and hesitations on what
and where the equilibrium is as well as what and when are the shocks to occur. (Eichengreen 2013.)

2.2.3.2 Beggar-thyself

This is a more dangerous, pernicious and vicious scheme of events that a country can incur into should it lack maneuverability in the grand scheme of competitive devaluation. It entails that the country cannot move its devaluation and make others become beggars as they have a pricey currency compared to that the devaluing country. Stiglitz (1999a) explains that should a country need to fix a crisis but due to the trading block where it belongs, the country cannot devalue the currency to fix the terms of trade deficits, and cannot receive bail-outs. Furthermore, the country is not able to meet its international creditors, or more precisely, the private firms cannot meet the deadlines. The country poses an international business problem. That is, the country is at the same time unable to raise the taxes for they would have to reach wrecking levels. The only solution that the country would in turn need to make is to reduce the income. By doing so, the citizens would incur in fewer purchases of imported goods and recession ensues. Maybe then, the trade deficit will be fixed. The country cuts its income via the application of fiscal and monetary policy aiming to cause a contraction in the economy. In the end the demand has been lowered, by reducing the income and recession takes place, the scenario and fixing scheme would stay for the long run. Render the country isolated from global partnership. (Stiglitz 1999a.)

On another note, Stiglitz (1999a) goes further to state why the beggar thyself policies are justified and used. Countries may find some comfort in using them as they have experienced the competitive devaluation from the 1930s and such economic problems may not go away any times soon. Thus, the looming scenarios always threaten the stability of the systems that countries enjoy in living and utilizing. Thus related to these measures is the fear of contagion. The devaluation and fixing of exchange rate instabilities and BOP deficits becomes a disease. If treatment is not applied promptly, it can spread through the tissues of international commerce from country to country, with dire consequences to the domestic country. And lastly, Stiglitz (1999a) is concern that should devaluations be the modus vivendi of
economic and monetary policy affecting international trade from one country to another, then the international debt cannot be honored. The local currency would be already too devalued and the international debt already priced on a foreign currency denomination would be too pricey to pay. Therefore, international capital flows and corporate dealings of multinational and global enterprises that are emblematic in the countries operations would fall prey of the inefficiencies of the market place and be rendered with null capacity to respond to the creditors. Moreover, the world economic prosperity will be undermined and weakened affecting those that earn the income from exercising international capital flow. In the end, as the international debt will not be honored, the very essence and pillar of capitalism will debased: “the sanctity of contracts” (Stiglitz 1999a:13).

Concerning the both papers understanding the beggar-thy-neighbor and beggar-thyself policies, Stiglitz goes a further way on to fully explain the beggar thyself policies. But the two papers deal brilliantly with the same concept and problematize them both. However, Pope (2009) train of thought entails that he is more interested in the world achieving a one currency for the entire world commerce dealings. Pope (2009) goes on saying that the single world currency would eradicate the tendencies of countries to engage in such measures of devaluation. As it is the case of currencies under a currency union that cannot move their monetary policies but depend on the decision of the general currency monetary decision making of the entire block. But Stiglitz (1999a) does not mention the one currency world of commerce engaging. But does make a strong point on agreeing how economically and sociologically unsafe are the beggar-thy-neighbor and beggar-thyself policies to the country that applies it and to the neighboring countries as well. And to this extend Pope (2009) also makes a strong note that such exchange rate devaluation policies are “uncooperative” Pope (2009). These policies damage and run counter to the international competitiveness of countries and their main private business entities. By all means, Pope (2009) abides by the study that the paper introduces and discusses, that is the Swan-Mundell model of two countries which points to the enactment of a single currency for the world. Yet it is worth noting that Mundel (1961) contrary to Swan (1952) was not in favor of the powers making the decisions on altering exchange rates. Rather, Mundell (1961) blames the disasters of the 1930s, which also led to beggar-thy-neighbor policies, to the lack of economic dexterity for not making the Bretton
Woods agreement quick enough and avoiding the free floating of exchange rates. Certainly, Mundell (1961) thus states that he stays away from free floats, which is a Keynesian view as well. Yet Mundell (1961) also backs the one world currency. Stiglitz (1999a), though not professing a one world currency encourages that more economic reform and policy re-engineering needs to be attained and better educate the minds about the errors of the past to avoid the future intricacies. (Stiglitz 1999a, Plumper et al. 2008.)

On a very different and refreshing note, Baldwin and Evenett (2012) in their paper on Beggar-thy-neighbor policies explain the role of cross-border commerce from the perspective of state protectionism. Baldwin et al. (2012) do acknowledge the dangers of beggar-thy-neighbor policies. It is clear that they are on the same route as Mundell (1961) who was not in favour of powers intervening in the grander scheme of international trade, as was Swan (1952). Baldwin et al. (2012) refer to a protectionism that was the fashion of the world commerce, where countries would increase their tariffs barriers to high levels and keep their economic momentum at bay. Currently, the protectionism takes a different turn, devaluation policies push the governments to impose tariffs on imports and exports following their fiscal policy shaping to tackle economic woes. Thus, companies set-up cross border organizations, including outsourcing and internationalization of production networks. These networks have created coalitions within certain nations with anti-tariff nature. (Baldwin et al. 2012).

2.2.4 A contagious disease

Alas, as Stiglitz (1999a) explained before, there is contagion of currency depreciation onwards to beggar-thy-neighbor or beggar-thyself policies (see figure 4). And Haile and Pozo (2008) also agrees on the contagion of economic hardship. The main channel that propagates the contagion to other countries in the neighboring region is through the trade channel. Both studies agree on the lack of analysis on the prevention of the crisis. Yet both studies concentrate the analysis in the same geographical region. But it is Haile et al. (2008 more so than Stiglitz (1999a) that further explains the contagion of the crisis to other countries. Should the contagion take place via the trade channel, there must be ways to make a diversification of the
trade staples that the country has or reach togetherness in fixing the exchange rates amongst the trading partners. Should the spread be via the financial channel, then capital controls should be imposed. Furthermore, lenders-of-last-resort such as the IMF and World Bank should step in and help in neutralizing the contagion (Haille et al. 2008). Stiglitz (1999a) does state that the country suffering the contagion would be robbed of what was needed to survive by using the beggar-thyself policies, given that the income would be less in the market place. But Stiglitz (1999a) does believe that the country’s channel of contagion happens and spreads via the financial markets. Investors holding assets from one devaluing country may dump the investment altogether from another country that can have the same consequential shocks of devaluation due to the similarities of the countries. The market weakness of one country does bring to the mind of the investor that his holdings can come to a risky edge (Stiglitz 1999a) Both studies urge on the importance of acting against the contagion and devising the way to tackle it. And both studies are concerned with the lack of attention from the economists peer consideration of the problem that there is concerning the contagion, since it is very much undermined and disregarded. Yet, although Stiglitz (1999a) analysis covers one geographic area, his concern envelops the entire global terms of trade as they can very much suffer from the contagion of the crisis stemming from the contrarian policies.

Figure 4. Beggar-thy-neighbor policies’ ripple effects (adapted from Jain 2015).
2.3 Are devaluations effective? A literature review

Cooper (1971) stated that devaluations are effective. But Cooper (1971) further states that it has to be analyzed carefully whether it is totally feasible to engage in the devaluation. On another note, Cooper (1971) stated that basically emerging markets are the ones engaging in devaluation due to the fragile economic situation. But as of today, the situation does not stop at the emerging markets as Kalyoncu, Artan, Tezekici & Ozturk, 2008) studies the effect of exchange rate depreciation in 23 OECD countries, but only 9 do show output growth. And the findings are mixed with a negative effect in the long run in 6 of the 9 OECD countries. The other three countries including Finland do show a positive outcome in the long run but not in the short run. Edwards (1986) also showed mixed results with an analysis of 12 countries stating that they have a neutral output growth in the long run and negative effect in the short run. Yet Gylfanson and Schmid (1983) found a positive relation in the output growth with expansionary effect by using a macroeconomic model to study the effect of income, expenditure and trade balance. Their result was linked to the market being sensible to the export and import of oil and other inputs, thus reaching the equilibrium of balance of payments, or terms of trade (figure 5).

![Figure 5. Devaluation expectations.](image)
Yet, on a more pessimistic view, Gylfanson and Risager (1984) did find that devaluations have a contradictory effect on the economy. Though some of the study focuses on emerging economies, such as Branson (1986) it did show that the devaluation causes the inflation rate to be high economic growth slow and unemployment stays high (stagflation). Alse and Bahmani-Oskooee (1995) found no relationship of devaluation and the terms of trade in the long run as he studied 20 countries for a period 15 years and found no relation of devaluation with the terms of trade. On another hand, Chou and Chao (2001) analyzed other Asian countries and found that devaluation does have a short run contractionary effect. But the analysis also showed that there is no aggregate output (total production) of the economy in the long run. Yet Upadhyaya (1999) considers devaluation a tool to stabilize markets. As it solidifies the terms of trade, the country can have a better way to deal with external shocks, as per Garcia-Solanes, and Torrejon-Flores, (2010). Truly devaluation cannot be exacted by a country involved in a currency union agreement. But besides countries with their own currencies, also currencies with linkages (pegs, crawling pegs) to international currencies can still effectuate devaluations (Garcia et al. 2010). For Upadhyaya (1999), expenditure plays an important role in in decision making from the monetary authorities to engage in the devaluation. Expenditure dictates whether the population is using resources to acquire tradable goods. Yet he had a concern that such focus on expenditure can cause a deteriorating effect in the economy at the same time as the income can be shifted from lower earners to higher earners and thus affecting the saving rate. Thus with higher propensity to save there is less spending. Currency loses value and so the population and companies remain on a stand by which causes a recessionary situation in the overall economy. For the study, Upadhyaya (1999) analyzed 6 Asian countries and found that there are again some mixed results as the previous studies. The findings showed a neutral stance of impact of devaluation in the economy in the long run for 4 out of the 6 countries. For the remaining 2 countries it did show that the devaluation played a negative role over the long run as the economies showed a contraction in the overall production. On another study, by Upadhayaya and Upadhayay (1999), studies again other Asian countries with the interest in finding an effect of devaluation over the economy concerning the output relationship. This time the analysis is somewhat different than the last, as the last studied the effect in the long run. Yet Upadhyaya et al. (1999) tries to analyze the effect on the prices of imports and exports and how that affects
the total production (output) in the economy. They found that it is not related to
devaluation but related to the difference of foreign to domestic prices (Upadhyaya et al. 1999). Yet, both studies are still concerned that the devaluation is exercised when there is crisis in the economy and needs repairing. The correction of the crisis is the main goal for the utilization of the devaluation tool (Upadhyaya et al. 1999). Thus the study explains that due to the fast increased of the exports, and the lower spending of firms and the population as there is less imports, the benefit of having an ailing deficit (less exports, higher imports) gets repaired. Consequently, contrary to the previous study (Updhyaya 1999), here in the latter analysis, they do point out that devaluation can have an expansionary (positive) effect on the economy in the short run. Nonetheless, Kalyoncu (2008) during the study of the OECD countries did exact his concern over the fact that devaluation does deliver a negative impact over the demand and supply side of the economy. On the demand side of the economy the impact can be regarding the shifting of income from the low to high saving groups which affects the demand and thus total production (aggregate output), a view that was also shared by both of Uphadyaya (1999) studies. Further effects on the demand side concern that more prices actually press demand downward which in turn hits overall productivity of the economy (output). And the same as Upadhyaya (1999), Kalyoncu (2008) does states that in the demand front, the prices of imports and exports weigh on the trade balance and the domestic currency get hit and the economy begins to suffer a recessionary situation. Furthermore, on the supply side, Kalyoncu (2008) states that as the currency exchange rate depreciates the imported goods are more expensive and supply decreases, view also shared by Upadhayaya et al. (1999). Kalyoncu (2008) further discovers that devaluation brings the inflationary pressures that increase the prices as the economy battles with deflation, once the ailments are over, the inflationary pressure is unleashed and the controls are sporadically correct which also runs counter to wages. On another hand, Kim and Ying (2007) study offers an insight look that devaluation is rather expansionary (positive) in the overall economy, but warns that it does not always has the same effect. Devaluation tends to have a strong effect depending on the country form and shape of economic maneuvering and also the time period, and geographic location the devaluation takes place (Kim et al. 2007, & Cooper, 1971). Even though the study of Kim et al. (2007) did find that countries experienced a growth of production (output) via the study of pre-crisis data, they stress the following. As previously
stated, devaluation can be applied with different packages combined. The application of a liberalization package with wrong picked policies for the economy can have a negative effect as the balance sheets of companies are affected and the impact is felt primarily with the multinationals and the financial or non-financial firms. There is relatedness with the high issue of credibility as the currency has less value and the debts are not honored by the private community in the country (Kim et al. (2007) a view also shared by Stiglitz (1999a). Consequently that causes a severe interruption of external financing as the economy loses trust from its neighbors. Financing from public and private investors is lost. Kim et al (2007) also warn world economies of contagion as previous researchers here mentioned have also expressed their concern (Haile et al, 2008 and Stiglitz 1999a). Furthermore, the Francis (2006) analysis the role of currency flow within the corporate structure of an economy and impact of monetary policy intervention measures. The study found that there is strong relationship as the multinationals exact great movement of currencies within political borders. All the same, they are concerned with what information is transmitted from one country to another. Information can be classified as worrisome or worry free as it can have a reading on the exporting economy’s weakness or strength. Therefore, the relationship of the equity (corporate) market with the currency features a lock-step situation. As there are price of goods transmitted from companies over to the local economy based on the impact of the currency policies adapted by the corporations. Again, the variable of contagion is again played out and cautioned against as a spillover effect from currency markets over other economies from ailing countries to other countries as the studies from Baillie and Bollerslev (1999) show and Hamao, Masulis, and Ng (1990). Effectively so, Francis (2006) tries to discover the link that the currency markets have and the equity (companies)of the country in order to determine the communication of both that propagates the impact. The study has concluded that it is the information that bridges both variables together. The anticipation of the markets of currency fluctuations due to monetary policy intervention has an effect that is transmitted as information reading to corporate band back again to the currency markets and to the consumers within the currency where the intervention takes place (Garcia et al. 2010). As previous stated, spillovers of the currency crises on other markets are by all means supported by the information flow in the markets from country to country and accounts (Garcia et al. 2010.)
Furthermore, Babecky, Havranek, Mateju, Rusnak, Smidkova & Vasicek (2014) runs a very detailed analysis of the correlation amongst the banking crisis, the debt crisis and the currency crisis regarding 40 developed countries spanning 40 years. The analysis makes a very strong point stating that there is not much of a difference from developed countries to emerging countries when it comes to economic and/or currency crisis. A point that by the time of Cooper (1971) could not be considered and so he mentioned that developed economies were not in need of dealing the currencies crisis and devaluations. In both cases of economic strength or matureness the banking crisis and the debt crisis can cause currency crisis. Rather, it is more common to have banking crisis in developed economies than otherwise in other emerging economies. Usually that is the case due to the varied characteristics of the banking systems feature in the developed economies compared to the more straightforward but still structured banking system that the emerging economies have. Plainly, the link to debt crisis is stronger than the link to the currency crisis due to the debt that the markets have accrued and the intervention of the monetary officials to alleviate the ailments in the market place, as in the recent events of bailouts. Babecky et al. (2014) found no link that a currency crisis can follow into a debt crisis. However it must be noted that should currency turmoil or attacks progress to become currency crisis and should the debt exposure be high and determined in foreign currency, the outcome will disastrous (Stiglitz 1999a). Usually this last scenario is more related to developing countries as they hold debt denominated in foreign currencies. Certainly Babecky et al. (2014) and Cooper (1971) do have an agreement on developing countries having a large exposure in the foreign debt and thus the dangers of devaluing can be incurring into dishonoring their debt. This default was already covered here by Haile (2008) and other studies as the analyses do show that such defaulting also causes contagion. Babecky et al. (2014) is yet concerned that the studies regarding developed economies is still small.

Losses of productivity output in an economy can incur in less money supply into the economy, the devaluations can be detrimental to the trade flows (Kaminsky and Reinhart 1999). And as previous stated, the debt crises can pose serious issues with the overall debt structure in the economy. In turn, it can lead to lack of trust suffered in a large extend by the country’s corporate structure with by being incapable to secure future financing. As devaluations can affect the terms of trade, there are less
opportunities for country market participants to commercialize their goods out of the country should there be a stagnating effect. The country fights the recession and exports are not enough to rescue the main profit securing sectors of the economy. That plays a big role should the other economies engage in a retaliatory action over the devaluation of the neighboring country and engage beggar-thy-neighbor policies (Baldwin et al. (2012). Kerr 2012 warns over political convenience the countries may experience when deciding to engage in devaluation incurring into other measures hard to deal with: beggar-thy-self (Eichengreen, 2013). The study is mainly concerned with impact of devaluation in the economy of countries that practice it. Lastly, the International Monetary Fund found no link of devaluation affecting the aggregate output of the practicing country (Leigh, Lian, Poplaswski-Robheiro & Tsyrennikov 2015). But a more connected and concerted downward pressure exists between the exchange rate devaluation and the total productivity of a country, as per the World Bank report (Ahmed, Appendino & Ruta 2015). Both studies analyzed the import/export part of the economy on manufactured goods mainly. Ahmed et al. (2015) found out that currency devaluation increase in competitiveness of exports happened though only slightly.

Jon Maynard Keynes was very aware of the discrepancies that retaliatory action can bring from other neighboring countries, which in the majority of times are trading partners, when in 1943 he suggested:

> We should like to have some agreed system to prevent competitive exchange depreciations. Exchanges have to be altered from time to time because the social and wage policies of different countries do not keep step with one another necessarily but there should be no exchange depreciations which are merely passing on one country’s perplexities to neighbours. Some should be made against that. (Kerr 2012:8.)

2.4 **Transaction costs of devaluations**

2.4.1 Introductory briefing

From the writings of Adam Smith on the “Wealth of Nations” during the XVIII century in 1776, the purpose of the companies started to be scrutinized. Adam Smith analyzed a pin factory also looking at the labor that runs the factory altogether. A
few centuries later, a young student provided a presentation on the same structure in the vein of Mr Smith. The 21 year old student, by the name of Donald Coase, whose presentation was largely unappreciated, introduced the foundation of the economics of firms, “The Nature of the Firm,” later published in 1937. The published work was received the same way as the very presentation 5 years earlier, with scant attention. Very many years later, the writing has received the Noble attention it deserved. (The Economist 2010.)

The study of the nature of the firm is based on the costs that a firm has to maneuver with in order to exist. The firm is able to exist if it is able to be responsive to certain of the human needs, if it is able to adapt and cover the costs associated with their functions (Coase, 1937). The pricing mechanics that the company must deal with entail labor and negotiation of labor and production. The production within the firm is locked with the transaction of the structure of the companies departments and goals. Outside of the company, that structure matters little as the company has one single focus and that is to bring about solutions to customers, which is the way to increase their growth and market coverage.

The entrepreneur must engage in co-ordnation of transactions that can bring the better benefit for the company. The negotiation of raw materials the company needs to the negotiation of labor are some of the primary functions the founder must be preoccupied with. The factors of production are put together to form an entity that hires individuals, and exact a change in one way or another in their midst of operation. Land, labor, capital and entrepreneurship are quantified the most cost effective way to discover the importance of the company and reach a sustainable economic system (Coase, 1937). Multinationals and Small Medium Size corporations are born that way. Perhaps in the current times, the one factor of production that may lack much attention and appraisal is the land, as many companies do not need an extension of land to be already born global. With the globalization much attained via the digitalization of the internet and its great benefits, land may become a subjective need betimes.

To a large extend the there is a cost in the organization of the resources that the company needs in order to exist via the production. The organization is anchored
with the prices that come attached to securing every input: labor, per se. Yet, the entrepreneur is always cautious to his choices for the factors of production can at some point the market be obtained at a better, lower cost. All in all, the size that the firm reaches will be determined by the marketing costs attached to their operations and focus. There are various entrepreneurs involved in the company and the reasons of the company existence can be enhanced and expanded as the product line gets a diversification to other areas when the company thus diversifies operations. There is a question of events of why should there be another second product if the current product is selling at proper levels at a prevailing price. But there is a point in which, it costs less to organize the productivity of another product than to update the productivity of the old product. Yet, the more that the company is organizing the more the costs increase. The founding entrepreneur must weigh the choices and negotiate with the branches in the company the operations in focus. (Coase 1937.)

Mark Casson (1996) asserts that despite much research has been undertaken regarding the eminent work from Mr Coase, there is little consensus reached on what the real reason the existence of a company. Different theories have come at play In order to better explain why companies are about in our midst. Theories the like of transaction costs and the theories of contracts and that of entrepreneurship do show a lot of promising progress, yet none provides a most definite point. Certainly, each theory provides a solution to the point incognita that various market players, economists, scholars and students, may have. Over all, Mr Casson states that the theories and his analysis shed light on the fact that there are market shocks that disturb the functions of the firms with persistent or long-term duration and transitory effects on the firms. The long-term shocks can be dealt with stimulus to form new firms or to restructure the current one. The companies improvise with the persistent shocks which are generally addressed by the founder of the company. Yet on another note, the transitory shocks do take place in a repetitive basis and thus the improvisation is replaced by routines as the company knows what to do when it comes to dealing with the same situation. According to Casson (1996), the firm is a coordinator, a view shared also by the analysis from Coase (1937). But Casson analysis further states that the market is also a coordinator. The only difference is that in the markets the negotiations are scattered and take place all throughout and across countries. In a firm, the negotiations and responsibilities are upon itself.
Therefore, it is safe to conclude that firms have a singleness in being responsible to a very high degree with great specialization in decision making. “The essence of coordination is decision making” (Casson, 1973:58). Thus, stemming from the analysis of the firm from Messrs. A. Smith to R. Coase to the present analysis by Mr Casson, the firm distributes the operations to deal with these varieties of market/economic environment shocks via a distribution or scrambling of talent within a company: its organization. Therefore, firms can be found to be “islands of conscious power in an ocean of unconscious cooperation” (Robertson, 1923;85).

2.4.2 On the transaction costs of doing business

From the study of Coase (1937), an offshoot of analysis is undertaken. Mr. Oliver Williamson creates the main branching theory from Mr Coase work above mentioned. (Williamson, 1998). The new theory endeavours to understand the transaction costs economics (TCE) that a firm must balance with to keep operations on pace. In principle, the theory of Transaction Cost analyses the interaction of people and the markets to secure the least costly measure to attain the goal. The company must be vigilant to make the right allocation of resources as there are market imperfections to be faced. The coordination of this situation takes place via the hierarchical order of the company. Williamson (1973) explains that there are market conditions that cause ‘friction’ with the transaction the company places. TCE has become very influential over the year and it is in use to study various fields such as transfer pricing, the organization of work, multinational corporations, marketing, corporate finance, franchising, contractual partnerships, etc. (Shelanski & Klein 1995.)

Thus, transaction costs economics of the firm is concerned with market failures and how to confront them. But not only market or external failures have an impact in the company, but also the failures that take place within the firm. Large corporations tend to be complex firms and the management of these organizations requires the allocation of resources. Such view is strongly shared and spoken for by Coase (1937) concerning the deployment of internal and external resources. These decisions making to move about the resources is strictly related to human capital as that is what constitutes the core of the firm’s functioning and that of the market yonder. Should
the human element be factored out, there would be none and nothing to count with. Furthermore, as firms expand and their operations reach other bounds, their resources must tackle the market disturbances and uncertainties, plan strategically; bring forth innovative ideas and actions, iteration and a cooperation empowered atmosphere. (Williamson 1973.)

2.4.2.1 Market failures

Transaction is the sole unit of analysis in the study of transaction costs (Williamson 1998). It is central to the study of organizations to study the market failures that affect the structure of the firm: the human factors and transactional factors. The human factors are devised thus: bounded rationality, opportunism and atmosphere. And Williamson (1973) further provides other transactional factors concerning the difficulties of engaging in the negotiations of resources upon weighing the transactions. Thus, the transactional factors are thus: uncertainty, small numbers, and information impactedness.

2.4.2.1.1 Human factors

2.4.2.1.1.1 Bounded rationality

Individual must be able to act flawlessly when securing the information needed. Bounded rationality can run counter to the contractual purposes of the firm, should the individual fail to deliver. It can limit the amount of transactions that are taken through. A margin of error in dealing with the information means that the person may fail to avoid unforeseen obstacles. Williamson (1973) is concerned with the cost of information and the strategies to relay them to subordinates and ways to manage those boundedly rational. It is considered the key factor affecting the organization of the company. The boundedly rational agent is required to have computational capabilities so as to deal with the information received, stored, and transmitted upon acting on the transactions. But being bound to be rational makes a person to feature uncertainty and complexity (Pessali, 2006). There is also the second notion on being bounded rational that the individuals can be satisfying. That is, that the individuals can act to their own benefit. The individuals may follow the rules of the company
and the productivity required, but will be acting onwards to maximizing their own security. (Pessali 2006.)

2.4.2.1.1.2 Opportunism

It relate agents securing advantages to themselves even by the lack of “candor and honesty in the transactions” (Williamson, 1973). One of the two forms that opportunism can take form and shape is via the disclosure of information that tilts the benefits to the one's own advantage in an asymmetric way. According to Williamson (1973), negotiations can be crippled through this form of opportunism as the parties may realize results via cunning behaviour. The other form of opportunism is applied over the contracts of various sorts. The individuals may take away important elements of the contracts and deprive the writing of important parts of it. Williamson further states that individuals who have taken benefits of previous rounds of negotiations or transactions by reaching the opportunistic way of taking parts of the contracts off can determine a win for the second round of negotiations. Although there are various ways of self-interest, the strongest form of them all is opportunism. (Williamson 1979, Pessali 2006.)

2.4.2.1.1.3 Atmosphere

The third type of market failures regarding human factors is atmosphere. It entails personality traits ranging from “reciprocity, dignity, trust and loyalty” (Pessali, 2006). These latter human features can well replace opportunism. Yet, Williamson still explains that the market failure is that the atmosphere can have people with interest of money seeking techniques at all costs: opportunistic. Such situation will hinder probabilities of proper performance. But not all individuals have the same inclinations. Furthermore, individuals who are independent will favor the markets as for atmosphere instead of the hierarchies of the companies. And others would find interest in organizations as they are more interested in such structures. Thus, individuals can decide which form of both atmospheres they care to belong to. (Williamson 1973, Pessali 2006).
2.4.2.1.2. Transactional factors

2.4.2.1.2.1 Uncertainty

Should the human factors come into play against the completion of transactions, certain elements must be understood specially if the competition secures a head-start by managing a more efficient cost structure. The first of the human factors is uncertainty. The market impact on uncertainty is negative and very many procedures need to be organized in a way to cope with the ever occurring uncertainties from the markets. The bounded rationality was the main characteristic of the uncertainties that the markets may post, as per Williamson (1973). Therefore, markets and/or people are uncertain, especially with the issues related to the frequency regarding the contractual structure with the company. (Williamson 1979.)

2.4.2.1.2.2 Small numbers

Small numbers relates to related to a “lack of competition” (Pessali 2006). Transaction costs economics explains that should there be small-numbers-condition in the negotiation table or the transaction, then the outcome is not promissory. Yet should there be large-numbers-condition at the first round of negotiations, but may not reach the same outcome can subsequent round of successful negotiations, if there is a first-mover-effect in the midst. If a large number of traders can deliver the proposed goods at beginning as honoring the agreement, there is a high probability that the large number of traders can deliver again. Yet, it can lead to illusory perceptiveness and lead to what “small numbers haggling and associated maladaptations” (Williamson 1973.)

2.4.2.1.2.3 Information impactedness

The third form being information impactedness is related to knowledge asymmetry as one individual has more knowledge than the other. More so, it is more expensive for the other group with less information to gain that missing portion and become competitive. Therefore, it is a troublesome to identify who is the agent that is acting with honesty and the one acting with opportunistic means. One of the two will
disclose all the information that there is, and the other can simple conceal some of it. But the differentiation of them both can be very difficult to make. Thus, it can be pervasive to deal with this ambiguity, which leads to a high impact as it can be very costly. It is safe to note and stress that the agents with bona fide can end up withdrawing from the market altogether as such failures can disrupt trust and subsequent business relationship. (Williamson 1973.)

2.4.2.1.3 Transaction types: asset specificity, uncertainty and frequency

To measure consistency across firms and industries, TCE has different types of transactions. Asset specificity is concerned with the uniqueness of certain resources and assets, including human capital of specialized knowledge. When it be related to human factors, the theory explains that the previous contract individual can transfer the knowledge to the new recruit. When related to regular assets, the high asset specificity determines the high transaction cost to obtain it. The second type of transaction used is uncertainty, which is the same term previously used as the transactional factors. But it also entails uncertainty with people or behavioral uncertainty. Frequency becomes the third type meaning that the cost of governance can be explained better if there, are more transactions taking place due to higher volumes of sales of a product with specificity features.

Transaction cost theory or TCE is mainly concerned with company structure and how to coordinate the different asset types primarily for achieving a cost reduction and increase competence. This theory has interdisciplinary roots as it brings together the aspects of organizations and economics, and has a reach into contract law as well. Yet more definition of it has been needed as mathematics approach has been involved much with its calculations and less on explaining verbally (Williamson, 1979). The contracting understanding of TCE deals as well with labor contracting. As the theories main concern in the market place are the decision of people and their personal traits as the makers of negotiations: boundedly rational and opportunistic individuals. The field of contracts is very complex, yet TCE can at least offer some sight into its intricacies (Williamson 1979, 1981).
2.5 Currency devaluations and transaction cost

Even though much analysis can be undertaken, little can be forecasted whether a devaluation will in real terms have an expansionary effect on the economy. As previously discussed, several studies indicate various forms of analysis stating the benefits and the drawbacks of devaluation. Yet, as Diamond (1982) puts it, that there is no exact way to predict whether a trade will be correct in the end. The least that could be done is to analyze the situation and brace for the best. Markets will always display uncertainties, as was the case in the world as per Mundell (1961). In that world the situation was very fair and there would have never been a need of a market intervention. All in all, in the real world economy there will always be “unrealized, unrecognized opportunities” (Diamond 1982). As Diamond studies the need to find aggregate demand equilibrium in a country, it finds that the there are several complexities to reach such a goal. That aggregate demand (total demand) is one of the panaceas that the devaluing countries are also looking for when intervening in their economies. As previously stated, devaluation is expected at the onset to increase exports and so aggregate demand and decrease unemployment. Yet, should the exports not be enough, then the situation is disastrous (Stiglitz, 1999). The aggregate (total) demand for goods in the country is low, as the imports are still increasing in prices, given that the imports will decrease as it gets more expensive to by them. And also, the aggregate output (total production will be less, which in turn renders the country in a contractionary economic event Kalyoncu (2008). Consequently, the country experiences the lack of achieving full realization of their goals as the cost of information is high (Diamond, 1982). The opportunities were not reached and the transaction cost concerning the uncertainty of the market was high as well. (Pope 2009.)

On another hand, and under a less pessimistic view, devaluation would have a contradictory effect on the currency as its exchange rate reaches lower to those of the foreign partners, which is the expected result of the devaluation. It is also of good cheer for those who earn an income or hold foreign exchange cash balances as their income and current sort of assets will be priced better compared to the domestic currency’s value. The same applies for those businesses that hold positive cash balances in the appreciating foreign currencies their balance sheets will see a better
yield as a way to hedge their costs a devaluation. Siow (2013). However, when the devaluing interventions are decidedly taking place the liquidity in the country suffers an erosion since it has less worth compared to other markets, and the companies can suffer if they are unable to hedge (Bris 2009).

Furthermore, ever more increasingly, there is a number of companies that engage in currency exposure hedging by using the interbank exchange rate system. Especially large corporations that have large share of businesses abroad engage in the acquisition of currency derivatives in order to protect themselves against the market disturbances (Hagelin 2003). Such decision making goes in hand with the TCE as it entails that the coordination of operations is the basic part of the transaction. And when doing the coordination the most important element to it is the decision making. Therefore, companies identify the future exposure in the markets and deal for the expected transactions. But also, they operate on a contingency basis on the grounds by keeping reserves and special managed accounts (Hagelin 2003).

Therefore, the companies tackle their uncertainties and increase their options of having better transaction costs to their benefit by securing counseling on the purchase of foreign exchange derivatives in the forms forward, futures, swaps and options to manage their risk. Hagelin (2003) study was performed in Sweden and the companies were headquartered in Sweden, foreign companies were not included in the study so as to avoid any noise in the data gathering. Firms can increase their value by reducing their exposure risks. The reduction in the probability of unexpected costs in financial or currency crises has a better impact in the company within the partners as they become more trustworthy. Moreover, by having a better balancing of the benefits of utilizing such tools in their way into the financial difficulties presented by the local economies, the companies can also enjoy the benefits of a better trained labor force (Hagelin 2003). A point that is also seconded by the analysis of the transaction cost theory as it relates to the asset specificity, when it also relates to human capital as assets. The extensive study by Hageling (2003) also discovered that companies that engage in currency derivatives purchase plans can get ahead of the expenditures concerning the fixed costs associated with training their employees in hedging strategies. In addition, the firms that were hedging their costs were experience less underinvestment. As the employees and the
market was noticing their stable performance, the employees increased their holdings of the very employer company and so did other investors. Underinvestment is usually the case for companies that were incurring into costs and having too high an exposure. (Hagelin 2003, Bris 2009.)

Moreover, there is a cost of communication inherent in the labor market, as broadly interpreted by Howitt (1985). The analysis further states that there are higher transaction costs in markets where there is a low number of buyers and sellers (thin market). Thus the transaction units are less and depend on the activity of the market. It may help that a trading firm can have labor operations on the other side (foreign) country to care of a part of the business and mitigate the transaction costs. All in all, a decrease in the labor (or higher unemployment) makes it harder to land a job as well as exacting a wage reduction. It leads to even less interviewing, as there is less advertising, etc. The markets with low sellers and buyers (thin markets) can pose higher transaction costs as there is the need to engage in “identifying, contacting, and negotiating with the suitable trading partners” (Howitt 1985.)

On another view, amongst the companies incurring into large costs concerning the monetary devaluations are the import and export oriented companies. The iteration of the devaluations can render their goods become an expense on their own. The companies will be facing time period to pay for in the inventories to rent as the import prices become more accessible to the public. Thus, the reaction is a “short term implosion of imports” (Alessandria 2010). Certainly, engaging in international trade is already a costly enterprise. The holding of inventories must be a sustainable expense. They have to use the product line available with escalating periods as to always keep updated products. International trade participants do experience more inventory management backlashes than other types of businesses. Prices for imported goods do not increase drastically over time, rather it does take time as most of the goods are dealt on a whole sale basis. Also, should the decline be in the short run, then the prices can erode any profits. Even though the number of imported goods decreases, prices do not really increase fast enough. So, inventories keep increasing. There is a close correlation with the large varieties of goods that importers hold the collapse of the business opportunity as they cannot work with increasing the price for retail sales. Consequently, importers are only left with
wholesale price and many times, no enough to offset the costs of holding the inventories in storage until the imports sales start to pick up so they reduce the inventories after canceling imports for some time. (Alessandria 2010.)

Inter alia, for devaluing countries that bear exporting capabilities may have some contradictory situations. Various countries that devalued their currencies were expecting to export more, but their operations were eroded when their companies had to lower the prices with those exporting the same items, who at the same time had undergone devaluations (Forbes 2002). These explains even more the transaction cost of market failures of uncertainties in the transaction cost by Williamson (1973). And this also reflects the contagion (Stiglitz, 1999). As per the analysis from Forbes (2002), not only were the neighboring countries involved in the devaluation having a difficult transaction cost, but also other countries in another continent; linked to the same devaluation problem. Many of the economies rely heavily on exports as a large percentage of their GDPs. Exports brings into the economy foreign currency which helps them for the situations such as dealing with currency crises or for covering their foreign debt. Besides, although much research has been published on other grounds of currency issues concerning exports, thin analysis have been provided to homogeneous goods. Over all, many export oriented merchandise requires high investment to be produced. The transaction cost for these goods is already high which explains the reason why there is already a painstaking event should the product be marked down due to market disturbance of that nature cripple their operation, the loss is imminent. (Forbes 2002.)

Much of the literature on the currency devaluation phases out the transaction costs when assessing labor market. What can be found only is that there will be a rising wage after currency devaluation. The analysis by Hon (2014) is the first and only analysis thus far concerned with including the Coase (1937) perspective of transaction costs into the labor market and currency devaluations. Some of it was already mentioned by the already cited work of Diamond (1982). The analysis by Ling (2014) showed that when the devaluation takes place and the employment levels are down, the current workers will ask for wages increase. The company will answer with a cut on the wages but increase in work to be done to increase sells, still compensate for the loss of value in the currency, and keep the employees. Yet the
opposite is not the same, should the employment be in the top range, upon devaluation, the employees will ask for wage increase. But the company will not be able to provide it. Thus, the company cannot increase the labor to compensate for wage increase. Thus, the company cannot increase the wages. Consequently, the company lets go of some employees. (Ling 2014.)

Consequently, since the existence of transaction costs in the labor market causes other costs attached to it (transaction cost externalities), the labor market will be in either low or high equilibrium (high or low employment). Thus the results are mixed. The findings show that there is an expansionary effect should there be low employment. And there is a contractionary effect if there is high employment. (Ling 2014.)

Being the only analysis that deals with transaction costs and its direct effect on the labor market caused by the devaluation, more analysis is required. Howitt (1985) does provide a recount on the effects of transaction costs and employment. But, the study is only concerned to employment. Forbes (2002) finds an interesting development on the dealings of commodities companies that were studied that were in the numbers of 1100 firms, but the focus on labor was only related to capital expenditures over labor at a very small scale of being mentioned. Over all, the entire study rests on the effects of devaluations and the cost it meant for the economies involved in terms of their exporting capabilities.

Clearly, transaction cost economies is a theory that features very strong foundation. As such it can provide analysis over the development of dealings of companies in the international sphere under the devaluation of their economies. As the world is picking of the pace after the lasting financial turmoil of 2008. And many economies are having close to zero interest rate policies with capabilities to engage in quantitative easing if necessary (Erler, 2015). Thus, much analysis can be undertaken via the transaction cost theory to better understand the overall impact not only in labour but also on corporate governance, organizational structures, large corporations’ management, transfer pricing, etc. There is a need to document the information for others to learn and develop strategies to deal with the unforeseen consequences of market failures and contractions (Stiglitz 1999a).
3 METHODOLOGY

3.1 Qualitative research

The development of the current study was undertaking by following the path of interpreting the data. Qualitative research stands for working with words. That in turn is the main difference with quantitative research, which exercises analysis based on quantities in the data collected (Bryman & Bell 2007:29). Qualitative research allows for a better understanding of the current phenomenon on the research of this topic from a different perspective. Truly, one of the main advantageous points on engaging in quantitative study is the existence of previous research from different angles on this issue on currency devaluation. Rather, most of the previous research done on the current topic of examination has been quantitative analysis. Thus, engaging in a different and scarce type of research method is elemental as to further provide light from a different angle with still consistent results.

On another note, the research undertaken is based on abductive approach. Usually, qualitative research is characterized with inductive approach (Bryman et al. 2007). But it is also of note that the studies can be taken through via a theory already in place and having the mixture of testing the theory and generating and developing it even further. Such was the case of a research by Hochschild (1983) where the analysis was centered on emotion in the workplace. Hochschild used the theory of emotion and then profited greatly from the results and generated and enriched version of it. (Bryman et al. 2007.)

Furthermore, qualitative research will allow me to understand and dig deeper into the values of other researchers and individuals that provide the information. The values, beliefs and messages expressed become more relevant. Such stance cannot be totally perceived and generated by the quantitative research, though to a small extend. Thus the interpretation of data is better applied as the focus shifts to the scope of knowledge shared by others. As a result it renders a very rich epistemological perspective to the study. (Bryman et al. 2007.)
To a certain extend it is considered at times that the qualitative research is somewhat limited as it can be subjective, difficult to replicate, generality of situations, and low transparency. That is, researchers’ views may come subjectively in the way of the analysis many times. The replication becomes an issue because of the structure of the study. It can be too based on the perspectives of the researchers. Besides, the application of data can be anchored in what the researcher deemed important and what was not important. Thus a glimpse of biased work could feature the research to a large extend. That in turn fails to ignite confidence on others on taking through a study on the matter. Moreover, the range of the findings and interviewing can pose a generalization problem. The fact that input from a few individuals may or may not be the total truth of the matter. And that has been the issue of application on generalization of the research that has been of question towards the findings from Prasad (1993), Perlow (1997), Watson (1994), Ram (1994), and various others ranging from software engineering to managerial implications in international settings. On another note, it is argued by various analysts how a qualitative researcher arrived at the conclusions. It is explained that the lack of structure on the qualitative studies fail to provide transparency. However, recent progress on this research field via computerized processes has achieved a better and more consistent set of results. Thus, more codification has been developed when doing the research, which has elevated the quality of the results than ever before. Particularly, this last criticism is also shared regarding the quantitative analysis. (Silverman 1993, Bryman et al. 2007:403)

Qualitative and quantitative research methods do share the same drawbacks and criticisms. Not only is qualitative more attacked for the way research is undertaking, but both sides of research can pose several limitations. But not because of the situations that hold back the research perspectives is research halted. Rather, the more research is undertaken the more progress and discovery is attained on reaching other grounds in the research fields as well as on the research methods used as well. (Bryman et al 2007:402.)
3.2 Discourse analysis

“Civilization began when an angry person casted a word instead of a rock” Sigmund Freud. Discourse analysis (DA) is related to language (Bryman et al 2007:535). This type of analysis is concerned with the examining gestures, utterances via texts, genres and interviews. Utterances become action. Such utterances are performative as they bring about an action, i.e. open the door (Pustejovsky 2006). Discourse analysis is very versatile as it allows for the study of not only conversations, but also documents and other research. This latter feature allows for cross referencing by studying other writings that supports the topic in discussion. Thus, discourse analysis constructs, studies, facilitates and communicates diverse cultural, political and socio-economical parameters of the field or organization being analyzed. Consequently, the analysis explores the relationship between discourse and reality. Thus, language is the catalyst; it becomes the focus of interest, and not only the medium of communication of the message. Furthermore, this study takes on the discourse type of analysis based on the utterances that are executives (ordering, advising or appointing) and verdictives (estimating, assessing, describing). (Searle 1975, Wodak 2015.)

It became apparent that this sort of analysis would be most advantageous to use in order to understand the very nature of the topic at hand. The coverage required as much information as possible from different genres. Attention to special details is given in the analysis to what Searle (1975) stated as the three elements that stem from speech. Locutionary stands for what the speaker is saying; illocutionary is the intention of the speaker; and perlocutionary is concerned with the utterances effects on the listeners and/or market place.

Therefore, it is important to note what people do with language and words. Discourse can be subdivided and categorized or segmented in order to communicate a function. Consequently, the actions can identify already the responses that stem from the words or utterances said. This leads to pragmatism and actions can take different shapes. It all relates to the speech act theory that entails the hearer’s recognition to act is based on what the message said and did not say as well. (Searle 1975.)
Discourse analysis allows for the proper development of data collection regarding this topic. The variety of information stemming from different channels in the media is vast. Most of the previous research on this topic is not based on discourse analysis. Rather, the investigative approach undertakes quantitative stances, as was previously explained. But it goes unnoticed how important and relevant is the use of this type of analysis to show relevant results. Now-a-day, central banks and the international community is more willing to share information. Words come coated with actions that the market participants, from small and medium size enterprises to multinational corporations adopt and put in places towards their current and future actions. Markets act based on the words uttered by central bankers and head of companies when being interviewed. The price of goods and services change as the individuals signal and say or do not say. (Bryman et al. 2007:411, Koranyi 2016).

3.3 Data collection

This data is fully suitable as it is very relevant. It is the information that goes beyond the usage of the researcher. It is information that has been already applied by the markets and all its participants. The analysis is focused on a case study of Japan and the negative effects they have experienced due to currency depreciation. Much has been written and discussed in the media regarding that topic. Not only media anchors have had their say on the matter, but also central bankers and heads multinational corporations throughout various industries. That makes the data fully relevant and suitable.

The data was collected over a period of 9 months since mid-summer 2015. Special tracking was placed on developing the recording of the interviews and the research of the information as it was coming into the market place. The data spans over more than ten years back in order to better understand the situation that Japan, as a country, and its industries are experiencing.

Bloomberg business TV channel interviews were recorded and transcribed, categorized and codified. Various news articles were reviewed and classified. Past and current research articles were also used to further understand the meaning of the effects of the devaluations in the country (Japan) regarding the international business
setting. To this purpose, all the other interviews and remaining text also provided strong and solid support. Central bankers, university professors, industry participants, and world renowned managers were recorded during the interviews held. The data was organized as to attain cohesiveness in the light of the current research to make it current and keep it relevant.
4 CASE COUNTRY – JAPAN

The 128.9 million population far-east island country features the world’s third largest developed economy in terms of nominal GDP. But in terms of purchasing power, the country stands at fourth place after India, where it has remained since 2011 (Lah 2011). Despite the recent earthquake in 2011, the country has managed to stay within the first five places of world advanced economies (Bajpai 2016). Innovation and resilience has allowed Japan to remain very competitive over the years. Certain industries do show salient performance within the country and within the global commerce structure. (IMF 2015.)

With USD 12.7 billion in revenues on car exports, Japan retains a solid second place in car manufacturing worldwide. Yet, Toyota still remains after 3 consecutive years, the world’s top car producer. Since the 1960s, the far-east country has managed to stay within the first 3 places in car manufacturing. The consumer electronics goods industry had remained on the top of the innovation curve around the planet, but was taken over from Korea and China, yet it still keeps a third place. And the level of importance is still felt as one of the main producers of innovation as the responsible for the Walkman and VHS and LCD screens (The Economist, 2014). Yet the production is still strong with 88% of electronics today still manufactured in Japan for worldwide export. The imports of semiconductors from the US rank high on the 11% mark. For the US, the exports of semiconductors to Japan rank second and still very competitive. China and Taiwan still keep 50% of the world market share. (Cheng 2012, Trade 2015, Greimel 2015, Workman 2016.)

A few decades back, the Japanese electronics industry used to provide the main household name, as they called the Sony Homes, a jack-of-all-traits type. But the positions have rescinded and been taken by other neighboring countries, South Korea, China and the USA (Cheng 2012). Several factors are at blame, including but not limited to a focus on the development of low-value asset in a rapidly changing world environment and customer preferences, and with large manufacturing operations in expensive Japan to run such industries (The Economist 2011). But their efforts of staging a comeback and remain competitive make their efforts to keep a salient development of their offerings to the market place. Apple and Samsung have
provided a replacement to the Walkman. Now the old Japanese giants are focusing on getting back on track. The companies do experience other sorts of travails in reaching the outer world beyond their borders.

The financial constraints are also prevalent as the companies deal with the growing competition around the world (BBC 2013). The banking sector makes the financial industry the third most important industry in Japan. Certain similarities are shared with the financial systems featured by other developed economies around the world. A very well structured platform of a competitive stock exchange, government entities, and private institutions making up for the entire industry’s output. After the years of government and Bank of Japan participation in the in the markets via their changes application in the monetary and fiscal policy, the changes have taken place in the industry thus far feature mixed results. The benefits have been somewhat apparent as the banking institutions become worldwide competitors in the international arena of loan offering. As per the Bank of International Settlements the banks are now enjoying a strongly dominant position in the banking industry worldwide via a strong presence in cross border lending. They are now above the once main player, the United Kingdom. The banks are now looking to secure more international tendering of their excess and massive cash in their balance sheets. So after the lowering of the interest rates, they now look to other countries for the export of those services. The USD 3.53 billion cross border loans so far amounts to a dominant position as the United Kingdom ceased of engage in international operations of that sort, and starts to shift the focus nationally. (Frost 2016.)

The ideal scenario would be for banks to focus on lending within the country to the companies that need the cash injections from their operations to retain fruition. Yet, after the changes in the interest rates structure, the benefits of applying their balance sheets to the advancement of their national peers proofs not profitable. Thus, the banks need to start focusing abroad. Such stance explains the large cross-border lending that has toppled the likes of the UK. The banking industry finds it very hard to make a profit with the current interest rates levels. The remaining industries see their exports increase, but not to the expected levels. Thus the pain is felt dearly by the multinationals. That in turn makes a good scenario for the small and medium size
enterprises to strike a generative progress in their operations. (Cheng 2012, BBC 2013, Frost 2016.)

4.1 Historical Recount

4.1.1 The prelude to a promising growth

But in order to understand the current situation Japan is facing, it is imperative to understand where it is coming from in order to shed light into some of their current travails (figure 6).

![Brief economic development timeline of Japan.](image)

From 1868 to 1912, major changes in Japan’s political spectrum took place. The emperor consolidated the political strength. Several policies were changed and overhauled. The changes brought strong progress to the nation. After that it has been called by the name of the emperor, the Meiji Restoration. Such progress took place at great leaps and volumes that it brought the country to a modern state into the
twentieth century. After the long decades of strong growth and industrialization forging, it all came to an end with the advent of the World War One. Japan went into stagnation in the 1920s. It all loomed even further as the great earthquake moved the country further into troubled waters. And the financial crisis, in 1927 was also a deep blow to their performance. Furthermore, deflation started to be a worrisome situation as the country was moving into the gold standard to alleviate their issues. On top of the already disheartening events, came the great depression that hit the US who exported that depression all over the world partners directly and indirectly, much as a contagion (see, i.e. Stiglitz 1999a). Japan was no exception and it went back to the Gold Standard by 1930. (Cha 2003.)

Joining the Gold Standard was deemed as “opening a window in the middle of a typhoon,” (Cha 2003:127), stated an industrialist concerned with what the outcome could be. The period within the Gold Standard was short lived and Japan soon came out of it. The world stood surprised at the rapid growth that the industries started to experience after 1929 (Figure 3). In 1931, Japan delinked from the Gold Standard. The industrial growth was explained by some due to the early separation from the Gold Standard, others indicated that it was due to the changes in policies from the ministry of finance at the time: Takashi Koreikyo, considered as the man who saved Japan. The Japanese growth is also attributed to the changes in the political scheme as the Taisho democracy was replaced by Fascism in the form of heavy pressure on the wage system as was the case in Germany. That in turn, propelled the industrialization of the chemical sector, which was the main driver of generating investment demand as a form of stimulus. (Cha 2003)

Other minor changes in the form of Ministry of finance in the form monetary policy do receive considerable study. It concerns the changes in fiscal, monetary and exchange rate of their currency. Policy makers stated that the progress in a country can take different shapes and manifestations rippling throughout the industries based on how early a country leaves the Gold Standard. For Japan it was a very bold move as the country was to face deflationary pressures that would impact the country later. But Japan targeted a break away from the depletion of the gold stock. And thus expansionary policies were in place. And other countries followed suite. Post great depression, Britain, Germany and Japan left in 1931, the United states, 1933, with
France trailing last in 1936. Yet, Japan, even though leaving a few months after Germany and Britain, had faster recovery after delinking from the Gold Standard (Figure 7). (Cha 2003.)

Figure 7. Industrial production of countries after abandoning the Gold Standard (adapted from Cha 2003:129).

Thus, Japan’s growth rate from 1932 to 1936 was impressively standing at a 62%, above the world’s average. And the growth rate was even higher than that of the other countries that had exited early as well, with a 45% over them. The private sector was inarguably the leader of the recovery. It came as a result of the devaluation of the currency that took place during the early years after delinking from the Gold Standard. But the Bank of Japan was forced to take-in the excess of quantitative easing that had provided to the market. At the time, it was not termed that way, but rather, as debt monetization. That stabilized the yen and demand started to help the economy via larger exports. As a consequence, other countries noticed the changes in liberalization from the interventions from the government. In Japan,
government intervention started to help. And the cooperation amongst industries and firms was propelled as a way to increase profitability via increments of production as well. The devaluation was a one-time effect on the economy. After the years, more countries abandoned the Gold Standard and more progress was attained around the world. Thus, reaping the benefits of a world in decline was short lived after countries like the United States returned to a positive growth after 1933. (Sato 2002.)

It was a very unique situation that experience Japan. It was an escape from the drawbacks of post war after-shocks that still amazes economists and central bankers today. Japan’s fiscal policy implementation was rarely in the same way practiced by other governments around the world. Rather monetization policies were used, such as the US and Britain which used nonsterilization of the gold supply. It is noted that the use of government intervention in the economy via the collection of taxes and other forms of revenue (fiscal policy) had a stronger effect in Japan as they were more prone to have constant requests from the military to increase the stimulus for military expansion and buildup. This situation explains what came to be known as the Japanese Miracle, as it was the first country that after being in the block of first Gold Standard abandoning countries, it had the fastest growth. Conversely, taxes did not have to be adjusted to be able cope with debt. Due to high growth, there was no need to make amends to the public structure of taxes to affect national income. So pronounced was the growth that even under high debt a strong economic progress makes up for the fiscal deficit of the country. (Sato 2002, Cha 2003, Ko 2015.)

Following the innovativeness and progress of the Japanese industries, the interwar periods tested the economy to a grand scale. Yet the country still experienced proper progress despite the other issues other developed economies encounter due to the World War II. But after the WWII occupation in Japan, the country regained the productivity it had enjoyed pre-war times. After these periods of growth the years can be grouped into “rapid growth (1952-1974) slow growth (1975-1990 and ultra-slow growth (1990s)” (Sato 2002:214). The economy can be recognized as one experiencing great resiliency. (Sato 2002.)
4.1.2 The 1960s

Onwards to 1960s the Japanese economy displayed a 10% percent growth on average. But the first oil shock (1973-1974) proved very difficult for other countries within the G7 group. And Japan industries were hit hard. After that the country’s output stood at 4% roughly leading to 1990. The country was experiencing a full-employment effect. And the government still had much participation in the markets turning japan into a regulated economy. With strong manufacturing and the country started to command markets around the world. Exports were a solid percentage in the growth of the economy with scarcely any bounds to their impetuous progress. The automotive industry became world renown and the country gained a place in the world market capitalization by standing high in the competitive standards. The country started to enjoy the rare surpluses in the terms of trade that were hardly seen before that and ever after as exports exceeded imports. The banking industry started to be highly regulated as the loans could not be placed from foreign markets. The regulation in the capital flows was affected by the low savings rate. And more investing capital was used within borders to increase the cash flow of the national companies. (Sato 2002.)

4.1.3 The 70s and 80s

But growth slowed down during the 70s and 80s. But savings kept increasing. Consequently, the banks did not need regulation from the government. Then it provided still more capital for banks to provide to other industries and secure the continuum of growth. The credit depth started to emerge. Employment was full still. Young labour was on the high mark. Flexibility in the exchange rate system became the norm as the government stepped away. Yet, the surplus still abounded. At this time, the aforementioned oil shock moved the Japanese economy into the first recession after the war. The output drop was noticeable, from a 10% to 5% level. The savings that were still taking place made the economy a high savings country. And the expenditures were lower as the population was not interested in spending but trying to secure their economic permanence. The companies started to suffer at a slower pace and their profit rate was hurt. By 1975, the economy was rescued by government spending from their fiscal coffers. That stopped the oil-shock-prompted
recession. The previous rapid growth would not return ever again to Japan after the 70s. (Sato 2002.)

During the 1980s, the yen was very weak which in turn helped the exports to expand again. After the period of strong growth, the output of the countries surplus was of great proportions at a 3.9% of the GDP by 1986. This led to a great accumulation of foreign exchange reserves. The purchase of foreign assets was in high supply and this scenario would then push the interest rates lower so that the acquisition of local currency would then be appealing to the international players. But other countries around the world were having issues with a very expensive U. S. dollar as most of other currencies were on the cheap mark. To this issue, was the Plaza Accord created with the G5 involved in order to lessen the shock of such an expensive dollar in their terms of trades. Conversely, the value of the currency and particularly, that of the yen, increased dramatically to a double rate over a period of 3 years. The government responded by lowering the interest rate even lower to a record of 2.5%. The government stopped all deficit spending and the surplus peaked the most by the 1990 and 1991 to 2.6% and 2.4% respectively. Consequently, this followed a stark increment of money supply into the economy. More and more businesses had increments of capital for investing and the markets were reaching very mature states as they were already a competition against major market players. The asset prices were welcomed news for the regular folk with real estate and for multinationals which had considerable real estate in their portfolios. “The late 1980s as a time of economic euphoria” (Sato 2002:216). The economy experienced a bubble in their markets after they agreed to be part of the Plaza Accord and their economy started to experience an overvalued Japanese yen. (Asher 1996, Brunner & Kamin 1996, Sato 2002.)

As much money flow flooding the markets, so were the changes in the asset prices increasing all the same. The commercial properties were having an increment in prices unlike never before. Tokyo became the most expensive city in the world with a ten times increase by 1989. The rate of land prices increments were so much that the ministry of construction once called out that Japan could buy the whole of the United States, “a country 25 times its size, about four times over” (Asher 1996:216). On another note, even the bank of Japan allowed for companies to borrow up to 80
percent of their value due to their land assets. Consequently, they engaged in the so-called zaiteku or high finance to dress their books to participate in the market with more aggressiveness. Thus, they were allowed to dress their book supported by the ministry of finance. And it allowed for their share prices to be traded at seventy times their earnings, which manifested another peak in the Nikkei trading not seen since the 1980. The bubble scenario was severely underplayed, the growth of land prices and that of companies was regarded as strong data coming from the industrial production. Even after the boom and bust of the stock market, the banking market participants stated that the situation at hand was just a market correction and a platform for future growth. Little did they know. But the end of the 1980s, the economic miracle was happening so strongly that Japan had transcended the bounds of capitalism that was set by the western partners pre and post-world wars. (Asher 1996, Sato 2002, Sakakibara 2016)

It is important to note that during the 1980s an important development in the employment structure started to shape the industries. The working week started to shrink from 1988 to 1993 to about 30, from 48 to 40 hours per week, respectively. It was a major change for the companies and employees. For the first time a revision of the labour laws and standard was taking place. That change was taking away a day out of the working week, from 6 to 5 days. Holidays increased by three and government offices would be closed and have remained so on Saturdays ever since 1992. (Hayashi & Prescott 2002.)

4.1.4 The 1990s

By the beginning of 1991 a new recession started: Heisei recession. Though it lasted briefly for 32 months, the recovery was very slow and unlike Japan. By 1996 the growth rate stayed at 5.1% and the government authority expected already a recovery in the market place from all the great events that were happening in the economy. But the expectations were wrongly categorized, the government tried to lower the fiscal spending to veer away any recession looming, but the move came too late, and the economy went into recession again. Unemployment stated to take up higher levels, the rate of applications and available jobs were in levels not seen before since the records had started in 1959: 0.50. The recession was strong and with some
precipitation of permanence. Worries of more troubles did come through. Deflationary pressures were very strong. With inflation already in the red (deflation) it came to above cero levels for a brief time during the year 1997. But it was to no avail. Land prices started to fall. The media coined the lack of proper inflation “price destruction-Kakaku hakai” (Sato 2002:2016.) The 1990s proved to the onlookers and for the Japanese market players that the economy was having no benefit from the application of the fiscal spending lowering or from the monetary interventions. (Sato, 2002.)

Besides, the land prices were still falling by the end of the decade. The vicious cycle started to take place which over the years would propagate strongly. By 1992, the five Ds started to take shape and accommodate into the making of the economic fabric of Japan: deflation, debt, de-industrialization, demand decline and default. The land price drop was a staggering 63% of their national average by the 1991 top. With the highest levels of household and corporate debt within the G7 group, Japan was mirroring exactly what they have stated about the US. That slow growth the US was experiencing was due to low growth and high debt. Clearly, it was the same that Japan was going through, as they were retaining a 215% of debt to GDP versus a 145% the United States featured at the time. All the same, consumer loans were holding on a 23% of the disposable income they society had versus that of an 18.2% the US citizenry were having. In terms of international and national companies, there was a glue that kept a sense of togetherness with the banks and the corporations. When the times were good, the companies would secure loans from the banks and hold a strong relationship with them in the form of cross-shareholding structures that were part of the business modus operandi. But after the end of the awesomeness in the land prices, the situation changed the glue became faulty and the relationship waned. The debt also affected several companies and industries throughout the local markets. The high debt to GDP ratio was daunting as it eroded competitiveness as companies saw sales and profits at stake and in deterioration. The value of their assets was hit as well with depreciation in their land and office space prices that were in many occasions used to dress the books for engaging in market capitalization. It was indeed a sad picture to behold. The difficulties were reining and weighing in strongly, all the excess of capacities the companies once boasted of as well as a debt to equity ratio standing in a 2.5:1, the earnings were meager. It led the companies to
engage in take their share of the cross-shareholding agreements once had with banks and cash that into earnings to show for income. It was at the same less expenditures (capital expenditures-CapEx) by an average of 8% by 1992 and 1993. Other companies started to liquidate land assets they once held just to be able to increase their balance sheets. The president of the renowned car maker Honda at some point stated that the economy had dealt a severe blow and that now “everything we have done in recent years has been ‘over’-overproduction, overselling, overkill” (Asher 2002:219). At the end of the millennium, the Japanese economy sealed the century as once the fastest growing economy, now, the slowest growing one of the G7 group. (Sato, 2002 Asher 2002.)

4.1.5 The lost decade

The 1990s economic turmoil the Japanese economy faced was later coined as the Lost Decade or the Heisi recession (Hayo and Ono 2015). Several industries endured such heavy burdens. The economy was trying to juggle at best with their discrepancies. Changing in monetary policy and fiscal policy came and went with those troubles still at hand. The postludium was darker than the preludium. Between 1992 and 1995 in an effort to re-incentivize the economy, along with the Ministry of Finance, the government applied a cut of the interest rate to 0.5% and started a package to give stimulus to the economy (quantitative easing) worth 60 trillion yen and some other enhancements of regulatory measures. The efforts were also dedicated to keeping the prices of land and other assets such as stocks by tapping on the pension funds and postal savings. The price keeping scheme brought the vast amounts of capital into the country from overseas as the investments were deemed secure, given that they were backed by the government. And the Clinton administration was in favour of a strong Yen. The yen thus surged. But the more it surged the worse it was for the companies that held funds in foreign (dollar) denominated bonds as they lost value. But when the Bank of Japan sought to change the rates to a low, the yen further appreciated as the money managers rapidly sought to capitalize from the bull market in yen-bonds. (Motonishi 1999, Asher 2002).

The currency devaluation in that year of 1995 was the largest implemented by any central bank on record by procuring the aforementioned stimulus package. It was a
success, as it brought the yen to the 100 yen per dollar mark. Certainly, the Bank of Japan did choose to go for the “printing press option” (Asher 2002:223). Other big elements were behind the strength of the yen such as the still-running trade surplus. But the most important element was not so cross industry related: the price keeping option which was mainly related to the finance industry. And though it did help to keep the yen in check, the end of 1996 proved the remedy to be short-lived as the yen had another spike. The companies were soon to engage in the repatriation of asset holdings such as bad loans, but its benefits would not deliver any profits. (Asher 2002, Sato 2002).

It was discovered that monetary policy had a major role in the Lost Decade that Japan experienced during the 1990s. Government intervention via the role of money was as important as the other variables such as price keeping or private sector events in the realm of terms of trade surpluses misapprehensions. But monetary policy also had an important role and Japan makes a country of long recessionary events with a lot to learn from. The prolonging of the output faltering and the changes in the deflationary pressures overtime in Japan seem to stem from different causes, including, the oil shocks. But it is also to blame the untimely manner that policy makers stepped into the markets to amend the monetary structures. Certain times, the appointment of changes in interest rates were duly applied, but others were off by much. When the market was unable to cope with the lack of exactitude from the bank, the crises prolonged. It is noted that the monetary policy has been rather tight and restrictive since 2003, and that has had outcomes for corporations as well as for regular individuals. Thus, the recession has been kept even for extra years. The situation has changed since, but at no expected levels. (Suzuki 1996, Canova 2010)

After the turn of the new century the troubles have not stopped. The real estate prices have not made a come-back. And the deflationary pressures still abound. In 2001, the bank of Japan started the quantitative easing program after lowering the interest rates closed to cero in 1999. By 2003, ministry of finance (MoF) started to counter the appreciation of the dollar that had begun a year earlier. The interventions were not apparent and noticeable. Rather, interventions were masked and stealthy so as not to cause any market shocks. The interventions were later left to be read from the words of the announcements from the monthly publications. Later on, data was announced
on how many interventions had the bank engaged with, and how many were successful in affecting the value of the yen down for the years 2003-2004 (figure 8). (Gerlach-Kristen, McCauley and Ueda 2016.)

![Graph showing currency intervention and JPY/USD exchange levels 2003-2004.](image)

Figure 8. Japan: currency intervention and JPY/USD exchange levels 2003-2004 (adapted from Gerlach-Kristen et al. 2016:4).

Today Japan is facing severe hurdles with an economic situation that comes with a must storied background. Much was discovered in the analysis of what is the explanation of the behavior of this Far East economy. The Japanese industries are experiencing difficult times with the deflationary pressures looming forward. The words of the Economic Planning Agency director, Mr Sakura Shiga can well explain the feelings on perceiving their economy.

*Many myths held dear by Japanese have completely collapsed... Japanese have believed the economy would grow continuously, full employment would endure, and that financial institutions protected by the Ministry of Finance would never go bankrupt. We even believed Japan was the safest country in the world... We can no longer predict the future.* (Asher 1996:234.)
4.2 Japan in the now

4.2.1 Keiretsu

The Japanese business groups divide into different groups called *Keiretsu* and it is a commonly known and strongly established characteristic in the Japanese business culture dating back to the 1600s (Twomey 2009). Literally translated, it means headless combine (The Economist 2009). The six largest groups are Mitsui, Mitsubishi, Sumitomo, Fuyo, Sawa, and Dai-ichi Kangin. These groups feature subdivisions into other categories. These categories are subdivided into four financial companies, 26 nonfinancial firms which in turn, 20 are manufacturing into the heavy industry sector. The financial companies are city bank, a trust bank, a nonlife insurance firm (nonlife, fire and marine), and a life insurance company. The city bank and the life insurance are of dear importance as they secure the loans for the groups’ nonfinancial corporations. The Fuyo group is under the Fuji Bank and the Dai-ichi Kangin on Dai-ichi Kangyo Bank. Years back, the groups and financial institutions were featuring eponymous names. But mergers and acquisitions have changed the naming as much, and now the Mitsubishi group is under the Tokyo-Mitsubishi Bank and the Mitsui group bank is Sakura. (Sato 2002)

By 1945 the groups were controlled by the Zaibatsu families. These families engage in allocating investments into capital and technology intensive industries. After the WWII the United States felt that these families were to blame for most of Japan’s travails and war prone events. The families were forced to sell their equities and their holdings were dispersed throughout various industries and other market players. As a regulated economy, it was expected the more corrupt is a country. And Japan was no exception. Soon after, the companies started to regroup. And the new corporations were called keiretsu. But the Zaibatsu families were no longer in place a group is considered the cooperative organization of firms, the city and the life insurance are the main players of the groups. Manufacturing and trade were the main sectors of focus, but the time went on and soon after, also finance started to emerge (table 1). These groups pay a very important role in the making of the business operations in the multinational corporations. And all the same, they have a lot of say of who they choose as their supplier or manufacturer inside and outside the country. Ever since
2013, certain car makers such as Toyota and Honda have chosen to work with other suppliers outside of the Keiretsu. Such openness has proven very promising for multinationals to gain potential business entry in Japan. Before, it was one of the main complains that foreign participants in the local markets had over entering the Japanese markets: the close knit of business entities. (Sato 2002, Legewie 2013.)

Table 1. Shares of assets held by financial firms in the Keiretsu (adapted from Sato 2002:229).

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</thead>
<tbody>
<tr>
<td>Major Keiretsu (a)</td>
<td>53</td>
<td>64</td>
<td>77</td>
<td>77</td>
</tr>
<tr>
<td>All (b)</td>
<td>53</td>
<td>42</td>
<td>48</td>
<td>52</td>
</tr>
</tbody>
</table>

(a) Percentage of assets held by all firms in the Keiretsu in the financial firms
(b) Percentage of assets held by the entire corporate sector in all financial firms

It all means that the companies had started to increase operations in the service industry as manufacturing was taking a severe toll. The increasing participation in the financial industry in turn meant poor performance, as the financial sector was performing poorly from the recent currency interventions. Thus, not only some of the branches of the groups were getting hurt, more so, it was an over-all picture. All the same, the employment was taken through via the manufacturing. But after 1992, the changes in the industry started to morph the employability schemes too. Whilst other countries were transferring the employability to services as was the case of the other G7 countries as the industries were readying for the shift. But in Japan the employment in the manufacturing was plummeting to a 14% and increasing. Such changes in employment state to shape the demand as well. Young individuals spend on industrial goods, while the older generation focuses on services and medical. And with an aging population, manufacturing was dragging and lagging behind to service the nascent needs of the current population. Consequently, the companies reacted with other measures and decided to engage in merging of the banking institutions (table 2). The system was then consolidated after these measures in order to bear the brunt of the changes in the market place. (Sato 2002, Legewie, 2013.)
Table 2. Major financial groups in Japan by 2001 (adapted from Sato 2002:230).

<table>
<thead>
<tr>
<th>Major Financial Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mizuho Financial Group</td>
</tr>
<tr>
<td>Dai-ichi Kangyo Bank</td>
</tr>
<tr>
<td>Fuji Bank</td>
</tr>
<tr>
<td>Industrial Bank of Japan (IBJ)</td>
</tr>
<tr>
<td>Yasuda Trust &amp; Banking Co. Ltd.</td>
</tr>
<tr>
<td>Mitsubishi Tokyo Financial Group</td>
</tr>
<tr>
<td>Bank of Tokyo-Mitsubishi</td>
</tr>
<tr>
<td>Mitsubishi Trust &amp; Banking Corp.</td>
</tr>
<tr>
<td>Nippon TrustBank Ltd.</td>
</tr>
<tr>
<td>Sumitomo Mitsui Banking Corp.</td>
</tr>
<tr>
<td>Sumitomo Bank</td>
</tr>
<tr>
<td>Sakura Bank</td>
</tr>
<tr>
<td>UFJ Group</td>
</tr>
<tr>
<td>Sanwa Bank</td>
</tr>
<tr>
<td>Tokai Bank</td>
</tr>
<tr>
<td>Toyo Trust &amp; Banking Co.</td>
</tr>
</tbody>
</table>

4.2.2 Current standings

The results of fiscal and monetary surgical operation that has taken place over the years in Japan have not taken the country to a better and expected level. Certainly, there have been natural disasters along the timeline, though culprits as they may be; they are not to receive the full blame for the outcome of Japan’s financial crisis. There is disequilibrium, the root cause have been stemming from different factors that the central bankers and the ministers of finance have not been able to find and factor in. Currency depreciations have been taking place over the years not only in the developing countries but also, to a large extend in the developed economies. After the 2007 financial troubles that pained the world stemming from the subprime crisis that started in the United States and peaked in 2009, devaluations have been more closely tracked concerning banking crises (Denning 2011). But in reality, the currency exchange depreciations have been taking place even before the banking crisis, linked or not linked to them (see table 3 and 4). Several countries started to apply the quantitative easing packages to their economies after the Japanese decision making on the same range circa 2001. The Federal Reserve Bank of the USA (Fed),
the European Central Bank (ECB), Bank of England (BoE) and several others followed suit (see appendices 1 and 2). There is a crisis, but not with the same strength as the one from the age-old American investment bank, Leman Brothers. (Girardin 2006.)

Global financial markets, being in kind of turmoil, it is not like the situation immediately after the Lehman crisis, because started in the US, which is by far the biggest economy, has biggest financial sector, and that country has suffered from Lehman crisis. And that affected global economy through the dominant role of the dollar. But I don’t think even if China slows down a little bit, and even if oil producers and the European countries their growth rate slightly slow down, I don’t think there is a global financial crisis or global recession like the situation after the Lehman crisis. (Kuroda 2016.)
Table 3. Large exchange rate depreciation not related to banking crises (adapted from Leigh et al. 2015:127).

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Advanced Economies</strong></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>1985</td>
</tr>
<tr>
<td>Ireland</td>
<td>1993</td>
</tr>
<tr>
<td>Israel</td>
<td>1989</td>
</tr>
<tr>
<td>Italy</td>
<td>1993</td>
</tr>
<tr>
<td>Korea</td>
<td>2001</td>
</tr>
<tr>
<td>New Zealand</td>
<td>1991, 2000</td>
</tr>
<tr>
<td>Portugal</td>
<td>1991</td>
</tr>
<tr>
<td>Spain</td>
<td>1989, 1997</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1993</td>
</tr>
<tr>
<td><strong>Emerging Market and Developing Economies</strong></td>
<td></td>
</tr>
<tr>
<td>Belarus</td>
<td>2009</td>
</tr>
<tr>
<td>China</td>
<td>1994</td>
</tr>
<tr>
<td>Comoros</td>
<td>1994</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>1999</td>
</tr>
<tr>
<td>The Gambia</td>
<td>1987</td>
</tr>
<tr>
<td>Guinea</td>
<td>2003</td>
</tr>
<tr>
<td>Haiti</td>
<td>2003</td>
</tr>
<tr>
<td>Honduras</td>
<td>1996</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>1999</td>
</tr>
<tr>
<td>Kiribati</td>
<td>1985</td>
</tr>
<tr>
<td>Libya</td>
<td>1993, 2002</td>
</tr>
<tr>
<td>Madagascar</td>
<td>2004</td>
</tr>
<tr>
<td>Mozambique</td>
<td>2000</td>
</tr>
<tr>
<td>Nepal</td>
<td>1991</td>
</tr>
<tr>
<td>Nigeria</td>
<td>1999</td>
</tr>
<tr>
<td>Pakistan</td>
<td>2009</td>
</tr>
<tr>
<td>Poland</td>
<td>2009</td>
</tr>
<tr>
<td>Rwanda</td>
<td>1991</td>
</tr>
<tr>
<td>Solomon Islands</td>
<td>1999, 2002</td>
</tr>
<tr>
<td>South Africa</td>
<td>1984</td>
</tr>
<tr>
<td>Syria</td>
<td>1988</td>
</tr>
<tr>
<td>Trinidad and Tobago</td>
<td>1986, 1993</td>
</tr>
<tr>
<td>Turkmenistan</td>
<td>2001</td>
</tr>
<tr>
<td>Zambia</td>
<td>2009</td>
</tr>
</tbody>
</table>
Table 4. Large exchange rate depreciations linked with banking crises (adapted from Leigh et al. 2015:128).

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Advanced Countries</strong></td>
<td></td>
</tr>
<tr>
<td>Finland</td>
<td>1993</td>
</tr>
<tr>
<td>Iceland</td>
<td>2008</td>
</tr>
<tr>
<td>Japan</td>
<td>1996</td>
</tr>
<tr>
<td>Korea</td>
<td>1998, 2001</td>
</tr>
<tr>
<td>Norway</td>
<td>1993</td>
</tr>
<tr>
<td>Sweden</td>
<td>1993, 2009</td>
</tr>
</tbody>
</table>
| **Emerging Markets and Developing Countries** | |}
| Albania                          | 1997       |
| Argentina                        | 2002       |
| Burkina Faso                     | 1994       |
| Brazil                           | 1999, 2001 |
| Cameroon                         | 1994       |
| Central African Republic         | 1904       |
| Chile                            | 1985       |
| Colombia                         | 1997       |
| Costa Rica                       | 1991       |
| Cote d'Ivoire                    | 1994       |
| Dominican Republic               | 2003       |
| Equatorial Guinea                | 1994       |
| Ghana                            | 1993       |
| Guinea-Bissau                    | 1994       |
| Haiti                            | 1992       |
| India                            | 1991       |
| Indonesia                        | 1997       |
| Kazakhstan                       | 2009       |
| Malaysia                         | 1998       |
| Mali                             | 1994       |
| Mongolia                         | 2009       |
| Nigeria                          | 1991, 2009 |
| Paraguay                         | 1998       |
| Russia                           | 1998, 2009 |
| Sao Tome and Principe            | 2001       |
| Senegal                          | 1994       |
| Sierra Leone                     | 1995       |
| Tanzania                         | 1984, 1987, 1992 |
| Thailand                         | 1997       |
| Uganda                           | 1991, 1993 |
| Uruguay                          | 2002       |
| Zambia                           | 1998       |
The last stimulus packages (quantitative easing) that have been applied to the Japanese economy have been majorly concerned with the financial travails they face. For over 20 years, the Japanese economy policy makers have been dealing with unresolved issues concerning deflationary or disinflation pressures in the economy. Industries of the variety already mentioned have been experiencing the effects of the depreciations in the currency. Deflationary pressures “are a real risk because of sharply declined oil prices, sharply declined commodity prices. Inflation rate everywhere has slowed down… Japan or US or Europe, inflation rate are at cero” (Kuroda 2016). Consequently, the fight for the economic recovery based on the attacks on inflation due the erosion of value in the assets may be proving futile. The inflation is measured based on the prices of final goods to the consumer and the prices of components for goods manufacturing. The market calculation that ministers of finance and central bankers organize to provide the answer to the assessment of inflationary pressures is the Producer Price Index or PPI. The world expects the Japanese economy to achieve the inflation target. The length of disinflation has been of worsisome since the time span has been very considerable. Mr Kuroda finds that quantitative easing does help the economy with expansionary (helping) policies for the economy over the years (Kuroda 2016). The marked disinflation can be explained via the lack of the demand and high supply. Figure 9, states the walk of the PPI and how it behaved when the stimulus packages began to be applied. The low energy prices and cheaper imports weighed in. The quantitative easing started to tackle the Heisi recession spanning from 1990 to 2003. (Girardin 2006, Hayo & Ono 2015.)
Figure 9. Producer price inflation in percentages from 1990-2009 (adapted from Hayo et al. 2015:73).

It is expected that the benefits of the applied measures from the Bank of Japan to bring the economy to better standards. But after 2009, immediately after the application stimulus packages, the prices started to fall. By the last quarter of 2015, the economy falls into the 4th recession it has experienced since the global financial crisis. This strongly suggests that the benefits of the quantitative packages to benefit the economy are rather temporary. The quantitative easing shocks are led by lowering the interest rate. Consequently, the prices are expected to increase as the demand is expected to increase, as there is no benefit of keeping the funds in the bank. (BBC 2015, Harding 2015.)

The lack of demand makes it hard for companies to increase the wages. Thus the 2 percent inflation target is rather harder to reach. And companies become reluctant of investing in the economy. By November 2015, business spending had fell by 1.3% against a forecast of 0.4%, quarter to quarter. Even though the growth of companies balance sheets have increased instead of contracted. The growth contraction has been small, a 0.7% coming from a 1.2 from the previous quarter. (BBC 2015, Harding 2015.)

At this stage, corporate sector has a very strong investment plan and wages are rising. At this stage, we don’t think that the current market situation has been affecting or shaped our duty… (Kuroda 2016)

However, in 2015, the lack of investments had taken off 0.7% from the overall country wide annual growth rate. The prime minister, Mr Shinzo Abe had been finding it difficult to exact conviction in the corporate sector to increase investments and spending within the country. Companies instead find it more profitable to invest overseas (Harding 2015.) The resulted activity does not lead to the general expectations and consensus. The inflationary pressures are still prevalent and the changes corporations are finding it hard to profit from the packages that the economy is applying to keep the yen from rising and to increasing demand for the nationally produced goods.
Central banks and ministries of finance aim at keeping a targeted interest rate of 2 percent inflation in their economies (Kuroda 2016). The BoJ, BoE, Fed, BoE, in the developed economies the 2 basis points are a good measure to keep the economy at equilibrium. “2% inflation is not particularly low but it’s also not particularly high inflation, should we expect a 2% inflation is quite a reasonable outcome” (Jersey 2015).

A variety of input is received from the market place on a panoramic condition of the crises lived. The zero lower bound (ZLB) or negative interest rate policies (NIRP) has started to play an important role in the making of policies for increasing the likelihood of bettering the economic prospect in several advancing and advanced countries (Randow & Kennedy 2016). Negative interest rates movie is not the most crucial element to propel the economy.

*It’s difficult because whether you have minus 20 basis points or minus 30 basis points, it’s not going to stimulate the economy, quantitative easing has worked, it saved the world from the deflation, the great depression. That’s a lesson we have learned from the 1930s... (Soros 2016)*

However, it has been warned that reaching a very low interest rate regime can hurt the private and public sector alike with a flood of money into the economy that has no benefit as it sits on a no interest baring benefits for the investors. That effect called liquidity trap has riddled the Japanese economy since 1998. The result was a lost in the grasp of fiscal and monetary policies that are seen still today in the performance of the interest rate. Thus, an economy such as Japan must remain and develop some tools to manage and careful maneuver through the interventions in the currency exchange in order to work on the price levels of goods (Hamada 2009, Kuroda 2016.) The intervention in the Japanese economy can be noted in the following figure 10 and table 5 with the behaviour of the exchange rate through the intervention on one and the amounts of money supply on the other.
However, it is safe to explain that the banking industry was little affected by the massive injection of capital in the markets. The exchange rate might have been affected to a certain extent. But the overall industry where that supply of money actually is going to rest was not proportionately affected. The result is directly related and obeys the parameters of the liquidity trap. Firstly, liquidity stands for the money the bank holds in the vaults. The bank can also have deposits at the Bank of Japan in order to profit from the deposit rate. Besides, there can be also deposits in other partnering banks as well. The intention from the central bank by injecting
liquidity is to increase money supply in the current accounts of banks by increasing those holdings of cash. Yet, the results do show differently as previous stated. The liquid assets in banks only increased by 14 trillion yen in the period of most intense intervention: 2001-2003. That amounts to less of the 25 trillion yen that the banks actually held at the bank of Japan Current Account Balances (Figure 11). Thus, the results strongly points to the noticeable issues of liquidity trap that feature the markets. Banks had increased the holdings of deposits at the Bank of Japan but were featuring a reduction in their liquidity holdings (Figure 12). At simple inspection, it reveals that the banking industry was having less liquidity despite the increment on deposits from the Japanese central bank. In short, even as domestic banks increased their deposits at the Bank of Japan, their holdings at other banks were decreased. The money was simply moved around. The increment from the cash injection from the Bank of Japan was not visible. Clearly, certain situations can explain the fact that banks transferred the funds from their peers. It can be due to risk that they decide to increase their deposits on the Bank of Japan. Secondly, with funds rates close to cero, and the Bank of International Settlements (BIS) requiring the banks to divert 20% of their assets to risk as they deposit with each other, there was a benefit of depositing at the Bank of Japan. That way, the categorization of the BIS is no longer required. (Bowman 2015).
Figure 11. Current accounts and liquid assets of domestic banks (adapted from Bowman 2015:19).

Figure 12. Banks interchangeability of deposits with other banks and the Bank of Japan (adapted from Bowman 2015:20).

It must be stated that in the midst of the financial crisis the lack of fiscal stimulus would have left the banking industry with another worry. The banking industry benefited to a certain extent for having the holdings increased at the Bank of Japan. That changed the factors of their operations, but the liquidity trap was still in place. Results further show that the credit sector was not expansionary. There was not increase in the lending from the banking industry despite their funds received from the government. The same effect on the lending sector has been seen even after the confidence has been restored. (Swift 2011, Bowman 2015, Kenourgios, Padamou & Dimitriou 2015.)

4.3 Abenomics

The Prime Minister Shinzo Abe upon taking office in 2012 started with committing to make a better economy. The changes were to be directed via three main categories of action: Monetary policy, fiscal policy and economic growth (figure 13). His campaign was characterized via an unconventional monetary policy on the look to
stave the consumer spending to be increased. Change the outlook of a depressed economy after the earthquake that also provoked a recession in 2012. There is also a very large government debt to be tackled, which comes from way back in the 1990s as was previously explained. And lastly, a strong yen has contractionary effects into the exports (terms of trades). On the second scheme of the plans, the fiscal policy was to deal with the government changes in the status quo of their operations in terms of the welfare system, also including the debt issue and the public services. The country finds several hardships with an aging population. The third element is directed to the private sector. The corporate Japan has been dealing at length with severe financial crippling over the last 20 years. The economy needs a revitalization and reengineered management. Amongst one of the main changes that they are to implement is the inclusion of foreigners in the working society and more women in the workforce. (Fukuda 2015, Austin 2016.)

Figure 13. Shinzo Abe’s growth strategy structure for Japan.

All three strands of policy making are known as Abenomics. Mr Kuroda has been appointed to head the Bank of Japan as he has been more prone for taking up the
stimulus packages into the economy more deliberately. More so than his predecessors, Mr Kuroda has proven more hands-on approach in applying and using the tools that his job provides. Mr Abe then manages in close proximity with other ministries and Mr Kuroda, the other two strands: economic recovery towards encouragement of private investment and the policies regarding the fiscal expansionary strategies. (Fukuda 2015, Austin 2016.)

Alas, though to a certain extent, but the benefits of the policies applied have come to some point at a level of help that have fallen short of the expectations. Again, the management of the third largest economy has proven very difficult to steer to safe shores. Private investment in Japan as was previously explained has been in decline. The banks have received the fiscal stimulus, but there have been no increment of the lending to the society. The inflation rate is still very low. The levels of the inflation rate are currently very low at close to zero. The measure that excludes food but includes energy prices stands at zero. But should the energy be also excluded, as the price of oil is very low, there are claims that the prices gauge can be very different. But in reality it does not change much: at 0.8%. Even though it was an increment from the beginning of February this year that showed a 0.7%, the levels in the Tokyo area have fallen. The Tokyo calculations are a reading that mirrors that of the rest of the country. In the capital, there was a fall of the inflation rate of 0.3%. (The Economist 2015b, Nakamichi 2016, Austin 2016.)

Lastly, the employment situation does show signs of foreigners’ inclusion. But there is still a lack of job filling. Japan is still struggling with an aging population and difficult situations with finding the talents to shoulder the job market requirements. Japan currently features as the main country in the world finding it the most difficult to find people for their jobs. The aging population is still an issue of note. And there are no signs of regression. That is why the economic growth and the fiscal policies most both look into the same direction. But the economic woes have not dwindled, the saving rate still increases and the sentiment in the market place is not open for changing jobs as it happens in other countries (figure 14). (Allen 2015.)
4.4 Negative Interest Rates

However, the continuum in the markets for the Japanese industries took another turn after the Bank of Japan lowered the interest rates on January 29, 2016. Lowering the interest rates to below zero levels brings Japan in line with other powerful central banks if not under the same stance. The European Central Bank (ECB) was the most recent institution to lower the benchmark interest rate to 0.4% on March 10. The club is already featuring the Swedish Central bank, that of Switzerland and Denmark’s. It was a bold move that took the world markets by a stark surprise. The change in the interest rates was to change the landscape of things with unprecedented move to the negative interest rates territory (NIRP). “Negative rates is a very, very desperate step, Kuroda, correctly, is a little bit nervous of going further” (Micklethwait 2016). It was apparent that the economy has been experiencing very strong deflationary pressures that prompted such a move. All previous events that the economy has
undertaken by 2013 and 2014 with efforts to make the inflation vanish were not working, the treatment was merely symptomatic. The quantitative easing and the currency devaluation had helped to a certain point if at all. Central banks have a mandate on the global economy beyond the national economy. In currency wars or collective currency debasement, central banks have a responsibility. And their currencies are the main tools as a tightening or loosening mechanism. It is a practical matter that they have to understand that they are to be held accountable for a collective reaction by/to the markets. (Purves 2016, Randow & Kennedy 2016, Bank of Japan 2016.)

Alas, the economic struggles of the far-east innovative highly exporting powerhouse of a country still linger onwards. Not only have the corporate sector suffered but also the population as a whole. The economies around the country have been rather fragile as well. Half of Japanese exports go to Asia, especially China (Kuroda 2016). The neighbouring economies are also in delicate economic state. Inside the country, the move to lower the interest rates to -0.1%, may prove disastrous and challenging. Consequently, Japanese banks are pushed to lend money to companies, which in turn are forced to hire more. Regional banks are also affected by the move as they have to rethink their strategies. There can be consolidation in the banking industry and the big banks can move on. Smaller banks can be squeezed to use their big cash reserves as the Bank of Japan can charge for keeping deposits. (Bradsher 2016, Wilson 2016, Harding, Fleming & Jones 2016, Randow & Kennedy 2016.)

On the day of the rate cut announcement, a troubled bank official stated thus:

*We’re in trouble, it’s very tough... Each of us will have to start from scratch to think of a strategy for the next fiscal year.* (Wilson 2016.)

The consequences for the financial industry within Japan and internationally are very troublesome. The positive outcome was that during the day of the announcement the yen plummeted dearly over 1.5 JPY per USD (Figure 15). (Harding et al. 2016.)
Figure 15. Yen’s depreciation on the day of the interest rate cut announcement (adapted from Oanda 2016).

It was a laudable day for the Abenomics of the monetary policies. The Yen depreciated much on the very same day and on the days that followed (figure 10). However, the results were short lived. The yen did plummet to low levels, but it has reached boundaries that hurt the corporate sector. Figure 10 also shows how the yen has reached and remains below 110 JPY per USD, which is the lowest level for multinational corporations remain profitable and competitive in terms of cost-effectiveness in their international transactions.

Thus, it signals that the exporting companies and currency traders had taken the move with the right sentiment as the Bank of Japan had expected. The devaluation of the currency also stated that the situation of some strands of the country’s industry will have severe blows to deal with. And such was the case of the banking industry’s branch that deals with the financial instruments moving debt along the markets: the fixed income asset class category.
After the move to cut the interest rate to a below cero level, the countries involved in negative interest rates placed their bonds held by investors around the world at a loss of value. By the end of February, the amount next USD 7 trillion tendered in the fixed income securities section with their owners not up for getting their money’s worth upon maturity of the bonds (Figure 16). Though bankers are trying to avoid losing clientele basis, the pressure is still much. Thus, some banks have started to pass on the charge to large depositing entities. (Randow & Kennedy 2016.)

![Figure 16. Investors in short-term Japanese and German bonds are to receive negative yields on their investments. As of 18th of March, 2016 (adapted from Randow et al. 2016).](image-url)

### 4.5 Beggar-thy-neighbor policy and the stance on industry performance

In the consumer electronics industry, certain companies have received mixed results out of the competitive export oriented policies that the countries implement. In China, a drop in the Yuan increases the exports hurting neighboring economies. And vice-versa y Japan, a drop in the Yen makes the exports increase at the back of other
economies. These neighboring economies are the business partners as well. Protectionism also comes into play as some countries find the ways to fight for their national gems and assets to avoid falling into rivals hands.

The main researcher of Beggar-thy-neighbor policy was the British economist Joan Robinson in 1937. As per Ms Robinson, one of the main characteristics of such a policy is the protectionism feature that it manifests. Ms Robinson stated that “Political, strategic and sentimental considerations add fuel to the fire and the flames of economic nationalism blaze higher and higher” (Brittan 2013).

One of the world’s leading consumer electronics firms, Sharp Corporation is going through a very difficult chapter. Sharp has been scoring loses in the last years. And by January, it received an offer from the Taiwanese electronics maker Hon Hai Precision Industry, better known as Foxconn. Foxconn serves as one of Apple’s main component’s maker. The offer for Sharp was for USD 5 billion. But the Japanese ministry immediately launched a plan to bail out the company and avoid losing it to a rival economy or foreign hands. The deal is not over yet, but the result is highly spoken about. There will be quasi-nationalization. Investors will not be benefited, but only the state for the sake of nationalistic measures. It rather runs counter to what the Abenomics is all about. Once again the principle is set aside. The investment and corporate growth will not be an incentive. Sharp has been dealing with sever market discrepancies and the exports have not been able to pick up. The markets have been much competitive for Sharp who once enjoyed high innovativeness. But others are also showing strong signs of innovativeness as well. Alas, not only companies as Sharp are in the same doldrums, but rather the whole consumer electronics industry. Their exports have not experienced the growth that the devaluation of currencies policies were seeking to spur. Sub-sectors such as the solar power are also at odds with adverse market trending and stark international competition. (Harner 2016, Inagaki 2016.)

*It is difficult to communicate to market... We need to go back to Abenomic, we need a comprehensive solution. I think it’s that side of comprehensive solution, I think it’s that side of credibility, which is needed in the market once its patience is losing.* (Yu, 2016.)
Of late, rises in the Yen over the Chinese Yuan have hurt several companies in the Japanese market. The declines of manufacturing from the Japanese part makers for Apple’s devices parts sent the world’s most valuable company in a losing day. Japan’s Display Inc. had lost 3.5 percent, Alps Electric Co. shed 3.2% and Sharp Corp dived a 3.3%. All three companies are some of the main part manufacturers for western hemisphere companies. (Nakamura & Sano 2016.)

And on the automakers sector, the air-bag supplier, Takata Corp. which had several loses of partnering contract sentiment do to faulty manufacturing was at a loss of 7.7 percent. There is no discussion in the Japanese Auto Manufacturers Association that there will be a bail out for this troubled part maker. But the losses were erased as there were news that some carmakers may provide support for the company to survive. (Nakamura et al. 2016.)

Stemming from the rising currency depreciations and changes in the policies of the sort in the neighboring economies, there have been several restrictions applied. The application of import tariffs to protect the economies from Beggar-thy-neighbour policies has come to place with stern consistency. By October 2014, the G20 nations had imposed closed to 962 trade tariffs. Such move amounts to a 12.4 increase from a year earlier a total of USD 757 billion worth of imports. Fortunately, from 2014 onwards, Japan committed efforts to keep the tariffs low and to reduce the regulatory barriers. It also made progress by signaling better negotiations with the EU and TTP (Trans-Atlantic Trade Partnership). (Barone & Bendini 2015, Coghill, Yao & Qing 2015).

Fortunately, there are great monetary winnings from the Abenomic policies taking place in shaping the Japanese economy at large. Such is the case for the country’s largest firm, Toyota. It has had the best performance stemming from the Abenomics stances. However, it does not bid well for the real economy within the country as its actions are not bringing good marketing campaign for Kuroda’s policies. The automaker had very decent close of fiscal quarter income numbers as of February 2016. It had earned USD 62.7 billion in revenues, though flat sales but an increase of income in the range of 2.4%. Even though the operating profits felt from 10.6% to 9.8%, the world economic slowness meant little for the relentless auto maker. And as
of last year 2015, the company had scored a base profit of USD 18 billion. Thus it stood as a true performer worldwide in the auto industry in the eyes of the envious competitors’ beholding eyes. (Bomey 2016.)

Yet, for Mr Kuroda, the head of the Bank of Japan, Toyota is not complying with the expected corporate behaviour towards the citizenry they employ. The 63,000 employee union had requested from Toyota an increase in wages of JPY 3,000 increase don monthly wages. Nonetheless, Toyota backed down at the negotiating table and only, scantly agreed to an increase of JPY 1,000 an equivalent of USD 9 on monthly wages. The same agreement on difficult grounds was struck by the authorities with the other automaker, Nissan whose salary increase is expected to be the largest of the industry. It is still on a measly USD 41 monthly increase. (Pesek 2015, Bomey 2016, Hagiwara & Trudell 2016.)

The automakers are not that willing to commit to increase in wages if they do not see a better performing stance from the Abenomics policies. The development of the economic situation is not helping them to gain any confidence. As the moves from the ministry of finance and the Bank of Japan do not lead to securing permanence in a revival, the industrialist such as Akio Toyoda are finding hard to commit as well. Understandably, that the policy strands are seeking to strike a wage growth to flare up consumption in order to increase the prices of goods and services in the economy. Such efforts for driving sustainability of growth in the economy is not holding strong. Under such economic situations, companies cannot embrace stark increase in fixed costs. Rengo, the largest labor union associations is coming back for securing pay increase of about 2 percent. Last year 2015, it had backed away from a deal of similar percentages. With the dim economic prospect, small wage increases are creating the link necessary to keep the workers at producing; even if it means small extra income. (Pesek 2015, Ujikane 2016, Hagiwara et al. 2016.)
5 CONCLUDING REMARKS

5.1 Discussion of theoretical and empirical implications

Currency wars have been in the talks of economists and corporate directors within the various industries around the world. The ramifications of decision making in the world ranging operations of the central banks are of staggering proportions. In a globalized world with quick reaching news and events that take place anywhere else, the actions have more consequences than before as there are far more participants. Devaluing the currency of a country in order to prop up the economy has gained momentum of late. And more so, has been the case of lowering the interest rates of the central banks. Even though the lower of the interest rates is more to do with financial crisis that are part of the economic modus vivendi of countries, negative interest rates are becoming the norm. Economists are being cautious about what these recent actions can cause. The implications of such devaluing, thus, have repercussions throughout the industrial output.

Japan has been the latest to reach and surpass the zero interest rate and go further into negative territory. It makes a particularly excellent case study situation as the country has trampled and battered with a lasting and painful economic slowdown. In this research, particular focus is given to the corporate or industrial behaviour that stemmed from reacting to the lack of efficiency in reaching economic growth in Japan. As previously stated, economic growth policies were largely influenced by monetary policy as one of the commanding strands of Abenomics. For more than two decades, the country has been facing several challenges on what to do and how to engineer a recovery.

In order to undertake this research, one main question was formulated and two sub-questions were thus formed in order to give support for answering the first question. The interplay of the theory previously developed at length will be paired with the findings. The consequent result is that both walk in a non-random lock-step. The theoretical implications have given the right background for better understanding what happens in a real life structure. The main research question and sub-questions were:
R.Q. 1 How currency wars and thus, currency devaluation, bear a negative impact for the country involved in terms of international business within the core industries?

R.Q. 1.1 What are the negative effects of engaging in interest rates cutting leading to currency devaluation?

R.Q. 1.2 What are the negative effects of engaging in devaluing the currencies via quantitative easing?

The answering will be undertaken in a bottom-up fashion. Thus, tackling the second sub-question is in order as it would lead to finally answering the main question for last. The second sub-question enquires about quantitative easing’s negative effects in the economy. As previously discussed in the theoretical part, quantitative easing entails the supply of money into the financial structure of the country. That financial structure relates to the banking sector. It is thus provided, that once the money does come into the banks. The money will be channeled to the individuals and other various corporate entities in the form of loans to carry on more business. The extra liquidity in the streets will then have an impact in the wage structure. The currency will weaken as there is more money in the streets, but there will be more auguries for spending as access to capital will be in easier form. As per the findings from Shioji (2015) for the quantitative easing to have a positive effect, the prices for manufacturing components and that of final goods for the consumers should increase.

The exchange rate prices with the US dollar or the Chinese Yuan ought to be experienced in the economy as a positive outcome. That transfer of exchange rate price into the economy is known as pass-through. That pass-through effect has been felt in the economy structure in Japan. It does follow the expected walk of the Abenomic monetary policies as it has happen just in time. But on the other hand, it is of note that the energy prices have had a strong weight on the developments of the overall prices in the country. The constant lowering of the international oil prices have pushed the prices downward. This has caused the economy to remain cautious. In the last public press meeting taking place on the 15th of March, there was not
announcement of the Bank of Japan head Mr Kuroda adding any stimulus (more money increase into the economy). The stance is a wait-and-see as they keep adding the same amount of funds so that the money supply increases under the same range as before: JPY 80 trillion/USD 640 billion per year. (Fujioka & Hidaka 2015, Ians 2016).

However, in the studies by Girardin (2006) and Schenkelberg and Watzka (2013), the former states that quantitative easing does work and the latter address that the cash injections were rather small, barely accommodative to the requirements of the public. According to Schenkelberg et al. (2013), the shortened supply of money explained why the economy did not enjoy an increase in the inflation rate. And in the same line, Soros (2016) also stated that quantitative easing has worked in the past. The benefits erode as the economy falls into a liquidity trap. This effect of excess of cash with no immediate benefit to the corporate sector in the form of payment has been extensively warned by Bowman (2015), Matsuki (2015), Kobayashi (2006). Previously it was stated the worries that regional banking officials had in regards to the changes in the interest rate close to cero. That obeys the studies issued by Matsuki (2015) as it states that the increase in the current account when there is negative interest rates will dampen the growth prospect and confidence in the sector. And Kobayashi (2006) further states that some banks can be in trouble by the time they receive the funds injection from central bank. Thus, the remedy will be for the bank to a large extent and to a lesser event to the other corporate borrowers and regular individual clients as the bank needs time to recover, and potentially pass on charges to the clients. (Svensson 2003, Wilson 2016.)

The second sub-question wonders about the drawbacks of currency exchange devaluation stemming from the interest rates cutting. Within this topic, the two main strands of investigation are to be understood. The Zero Lower Bound (ZLB) and the Negative Interest Rate Policy (NIRP) are the end roads when undertaking such interest rate policy moves.

At both levels of interest rates, Schenkelberg et al. (2013) warns of the economy getting stuck and the deflation may take longer to go away. We have noted that lowering the interest rates to zero and bellow is taken with the expectations of the
market will react positively. Not only has Japan engaged in taking the interest rates to ZLB and below to NIRP but also other industrialized nations such as Switzerland, Denmark and the main banking institution of the EU, the European Central Bank (Randow et al. 2016). Throughout the study it is noted that the countries engaging in lower the interest rates, are experiencing severe deflationary pressures. United States Texas Representative warns that currency wars can apply severe inflationary pressures as they are much looked after, once attained can be hard to control (Paul 2014). The increment of the money supply will cheapen the currency and that would lead to more exports and more capital to spend. Imports will be pricier as they will come on shorter supply (Cooper 1971). But in the case of Japan, the contrary have been noted, aggregate demand (total demand from household for goods) has not increased (Brunner 1996). Thereby, it leads to a further loss of prices (deflationary pressures. In practice it can clearly be noted as the further devaluation of the Yen took place when there was a rate cut to negative territory at -0.1%. The question always abounds whether there will be further measures on the same line. The central bank counts with various tools to engage in propping the economy.

The thing about a currency is that you can do what you want with your monetary policy, but the impact always depends on what’s going on everywhere else in the world. The days when Japan would intervene daily at the Ministry of Finance...those days pretty much are over. The yen is as much dependent on the monetary policy of Japan’s trading partners as it is on what’s going on in the BOJ building. (Moss 2016.)

Cutting the interest rates goes in hand with the quantitative easing. Application of the quantitative easing requires for the interest rates to be low. Thus, the capital flow will not be expensive for the central bank. That explains why quantitative easing always takes place when the interest rates are in the ZLB or in negative territory. Therefore, as Bank of Japan met during the middle of the current month of March and left all the policies unchanged. By having the interest rates at low levels risks the money to have less value. Such stance is backed by the Bank of Japan. But it is not backed by the corporate sector and the individuals to a large extend. The effect in Japan is noted that the prices are not changing as expected. “Governor Kuroda has introduced negative rates. That was supposed to spur lending, spur economic activity. What we are seeing in fact is that people are buying safes, buying 10 000 yen bills; tucking
them away under their mattress. These things are really very much unintended consequences of their policy” (Miller 2016.)

Consequently, both sub-questions have answered to a large extend the main question. The sub-questions were formed in separate form since both are different in definition. Yet in terms of purposes and application are strongly linked. Currency devaluation from the early days has not been noted from that perspective. The cash injection in this fashion such as quantitative easing had been used sparingly in the past. Japan was one of the first countries to introduce such moves as has been previously explained. The US also applied such measures when it was delinking from the Gold standard. That was the scenario that featured the Nixon Shock.

As previously stated, the banks have a dilemma with intervening or not intervening (Erler 2015). Decades ago, the interventions were in a different fashion. The injection of capital in the markets was more apparent or less complex. Currently, these new measures such as interest rate cut and quantitative easing are called unconventional policies given that their practice is not common. But as we have learned, they are becoming the new norm. The banks have surmounting pressures of how to manifest the message when expressing their actions. Words become a very important element to pay attention to. They are more important in many cases, than the very market intervention itself. When exacting change in the policies to any degree, the communication has a lot to do with the way currencies will be devalued or overvalued as well. That has a commanding nature on the intentions of the bank when trying to devalue their currency. This other element must also be considered an unconventional measure as it has high levels of relevance in the outcomes of policy implementation. (Koranyi 2016.)

Ministries of finance around the world have pledge their separation from the Central Banks’ decision making. That is with the objective to avoid further intervention from the governments themselves. Rather, participatory presence in the markets such as Abenomics is not considered as an intervention from the Japanese authorities points of view. In reality, the interventions are real. And as we have seen, the yen does move accordingly and so does the market react to them. (Jackson & Landers 2016.)
Whatever the circumstances, we must definitely avoid competitive devaluation, and I think we should refrain from arbitrary intervention in currency markets. (Abe 2016.)

Therefore, currency devaluation is expected to better the economy in various ways as previously stated in the theoretical part. Cooper (1971), Upadhyaya et al. (1999), Kalyoncu et al. (2008) and Gylfanson et al. (1984) were in favour of currency devaluation. They pointed out that the exports could be increased in the long run, some in the short run as well. But other strands of research noted that currency devaluation was not prompting the benefits they had set out to attain. Such were the end results of the analysis by Upadhyaya (1999) Kim et al. (2007), Francis (2006) and Stiglitz (1999a). Over all, one of the seminal studies such as that of Cooper (1971) even though it backs up the currency devaluation, it states that there must be cautious steps as it can have inflationary pressures (Paul 2015).

In the case of Japan as we have analyzed in a real life scenario, the situation has not been of reputable results for the strategies of the Bank of Japan. Even though Toyota has had a tremendously profitable year over major car makers around the world, subsequent actions have not be applauded by the Bank of Japan. That is, Toyota is not able to give increments in salaries to its employees that go in line with economic situations. Even though the unions have tried to acquire a higher pay, the unions have settled for less than what they were seeking for at first. The empirical findings further show that the exports have not remained strong as it is expected in an environment where you have low to zero or negative interest rates. Some of the concerns by the bank of japan for taking the stand on such unconventional monetary policies are slow exports and low productivity (Ians 2016). Exports and output is in turn exactly what the currency devaluation is supposed to propel. And that is a fresh issue taking place only of late. The research by Harioka (2006) analyzes the demand and supply factors that affected the growth of Japan during the Lost Decade (1991-2003). The lack of household consumption led the slowdown. But it was only the effect; the causing variable was also to blame the untimely government policies. The study further noticed that although many considered that the exports were one of the many contributors of the GDP output growth. The analysis stated that the exports impact rather came in at a third place after government consumption. Furthermore, it can be
noted that the inventory investment were negative and also the private investment as was the government fixed investment as well (table 6).

Table 6. GDP contribution by components on an annualized average growth 1980-2003 (adapted from Horioka 2016:380).

<table>
<thead>
<tr>
<th>Component</th>
<th>Average annual real growth rate (%)</th>
<th>Contribution to real growth rate of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual final consumption of household</td>
<td>3.59</td>
<td>1.56</td>
</tr>
<tr>
<td>Government actual final consumption</td>
<td>3.54</td>
<td>3.22</td>
</tr>
<tr>
<td>Private gross domestic fixed capital formation</td>
<td>6.11</td>
<td>-0.59</td>
</tr>
<tr>
<td>Housing</td>
<td>2.44</td>
<td>-2.48</td>
</tr>
<tr>
<td>Plant and equipment</td>
<td>7.44</td>
<td>-0.14</td>
</tr>
<tr>
<td>Public gross domestic fixed capital formation</td>
<td>0.85</td>
<td>-0.24</td>
</tr>
<tr>
<td>Dwellings</td>
<td>-0.13</td>
<td>0.09</td>
</tr>
<tr>
<td>Plant and equipment</td>
<td>-2.83</td>
<td>-1.06</td>
</tr>
<tr>
<td>General government</td>
<td>2.45</td>
<td>0.02</td>
</tr>
<tr>
<td>Changes in inventories (inventory investment)</td>
<td>9.56</td>
<td>na</td>
</tr>
<tr>
<td>Net exports of goods and services</td>
<td>0.78</td>
<td>6.39</td>
</tr>
<tr>
<td>Exports of goods and services</td>
<td>4.61</td>
<td>4.26</td>
</tr>
<tr>
<td>Imports of goods and services</td>
<td>3.94</td>
<td>3.63</td>
</tr>
<tr>
<td>Gross domestic expenditure (product)</td>
<td>3.89</td>
<td>1.14</td>
</tr>
</tbody>
</table>

Therefore, even though Japan has been known for being a very strongly export oriented economy and as was previously discovered having a terms of trade surplus, rarely seen, it was not enough a support for their industries. The recent findings here stated showed the case of the electronics giant Sharp in troubled waters after long years of low exports and loss-making balance sheets. Sharp Corp is at the brink of getting internationally acquired and under the loop of the government protectionism scheme could actually be quasi-nationalized, but through a spin-off and downsized. (Horioka 2016.)

Beggar-thy-neighbor policies also come to note when exacting devaluation on the national currency. As previously stated, Japanese electronics companies saw their share price slashed by a cheaper Yuan. The economic slowdown affects other countries that are of neighboring geographical proximity. But as Stiglitz (1999a) and
Haile (2008) warn against the transmission channels of currency devaluation. Beggar-thy-neighbor is further contractionary as it acts as a contagion of a disease. The empirical findings showed the American innovative powerhouse, one of the world’s most valuable companies loosing value in their share price as the component makers in Japan lost value when the yen appreciated over the Chinese Yuan. The devaluing home country gains on the back of the trading partners. As exports become cheaper, goods flood the foreign market, increasing their trade deficits. Thus, beggar-thy-neighbor entail “robbing from foreign Peter to pay domestic Paul” (Gerlach-Kristen et al. 2016). (Jain 2015.)

5.1.1 Transaction Cost theory, further theory involvement.

This leads us to understanding the implications of transaction costs that apply to the operations of the various companies in the Japanese market. It was noted how the banking industry, the auto manufacturing industry and the electronics industry have experienced setbacks after the devaluations they have suffered. The transaction cost theory is proposed by Williamson (1973, 1979, 1981, 1998), it stems from the original structure of research by Coase (1937) on the nature of the firm. And Coase strived to understand the nature of the firms after analyzing the main findings of Adam Smith when studying a pin making factory and the cost of their operations (The Economist 2010.)

Over all, the transaction cost theory’s main unit of analysis is the transaction. Williamson (1998) two main aspects affect the transactions: the market failures and the human factors. The former is ever present due to the actions and inconsistencies of the latter. But the company itself has another role as its product features may set it apart in terms of productivity costs. Thus, the transaction can be affected by how specific or unique is the asset they are negotiating. Furthermore, the uncertainty of dealing with another individual or company can have consequences as the scenarios can be unpredictable. And the frequency of transactions taking place is the third element that explains the overall behaviour of the cost in transacting.

As for the present study and what other analysis, the market failures and information impactedness are the main elements that come to light. The previous research by
Diamond (1982) stated that the markets can have unrecognized opportunities. Finding proper aggregate demand (total demand) is the main goal for a company to reach profitability. But it becomes a panacea for companies to reach such a goal. It can be a daunting experience. That is why companies decide to instead find other markets in order to find demand for their products and eliminate the transaction cost negative effect of staying in one country.

In Japan, Banking industry decided to move their lending abroad because of the low interest rates that the banking system within their national/local market was offering. At such point, they became the largest cross-border lenders surpassing the UK. Global corporations like Toyota and Nissan have reached world competitive standards since seeking to find the right markets with demand abroad. And it is safe to say that they have been rather success to a better degree than the American counterparts. The Japanese cars were already flooding the markets since the 1960s.

The same is applied to the consumer electronics has they have pioneered a lot the markets for decades. Clearly, it is the devaluations that Toyota has profited the most. It cannot be said the same about other companies whose benefits have come short. The focus on foreign markets by the banking system has decreased the lending structure that other companies desperately need for growing. “There are reports from Japanese companies claiming that exchange rate stability is important for back-and-forth transaction of intermediate goods in international production networks” (Slow 2013:26).

On another note, the only theoretical analysis undertaken by Ling 2014 directly related to currency devaluation only relates to wages and employment. The finding stated that in low employment economies, currency devaluation will proof beneficial for the economy as there will be prospects of wage increase as the company allocates more jobs for selling more products. The company has then a positive outcome as it allocates more work in the hopes of reaping better results. But, should there be high employment, it would be too costly for the company to raise wages or take more workers. There cannot be increments on the labor. So should wage increase be requested, the company can be forced to let the employee go. Thus, at high
employment economies, the results can be contractionary for the company and for the country’s economy as well. (Ling 2014.)

It comes to light that in Japan, the employment equilibrium is high (high employment). As per the most recent readings, employment in Japan is amongst the highest in the world. Japan features a 3.1% unemployment rate, one of the lowest amongst the developing world, Norway stands at 3.4. Japan has reached the highest employment number in 20 years. It is also of note that the job to ratio has increased dramatically to a ratio of 1.28, the highest in 24 years. This measure sheds light into the amount of jobs available and the amount of job applications filed for them. The job numbers only include the amount of individuals that are actively seeking for jobs. (Trading Economics 2016, WorldBank 2016.)

In regards to the transaction cost application, the recent numbers bring good news for the incumbent Prime Minister Mr Abe as he embraces his three arrowed policies. Mr Abe presses the business sector to increase the employment and higher wages in order to increase spending. Abenomics is committed to decrease corporate taxes should companies increase in employment and wages. Furthermore, increase in spending leads to upward moves in prices, which will stave off the deflationary pressures that the economy is for long experiencing.

It goes in line with the economics of the transaction cost theory as per the discoveries from the only research on currency devaluation by Ling (2014). The high employment feature in Japan has made the powerful international corporations to increase the wages. But only the big and solvent corporations have been able to add more wages. Such was the case of Toyota and Nissan which can increase on the wage for their workers. However, as it was discovered. The increments are not to the levels that the unions have expected. Even when the companies have profited dearly from the currency devaluation, the prospects of continued slowdown dampens commitment. But for companies that are less solvent or have smaller market share, the SMEs, the pressures for wage increase and more hiring can be daunting.
Those small tiny firms, which are always losing money and don’t pay taxes, are not making any money at all. If they have to raise wages their losses will grow and they will find it hard to survive. (AP 2015.)

5.2 Managerial implications and suggestions

Clearly, as it has been analyzed, monetary policy is the main arm in the economic decision making of an economy to keep the rates in check and under control via the use of currency exchange interventions (Kenen 2016). Central banks would never openly/publicly agree that they are engaging in an intervention of their exchange rate. It would affect the markets drastically. And companies CEOs would take positions against specific regimes more bluntly. The secrecy of the central banks is paramount. They only reveal what is the amount to be used, but they do not say when (Bowman 2015). As for the Japanese corporations, the currency devaluations can only go as far. Otherwise, the results can be disastrous. The range for devaluations to be in good standing for profitability towards the internationally active Japanese corporations is “110 to 125, 100 the lowest” (Sakakibara 2016).

The impact of exchange rate devaluations in the companies of various industries is very close to their decision making. Should the company not be an international operator, in the case of Japan the Abenomics pressure for further employment will require more financial input and reengineering of the business plan. On another note, in order to save the company from extreme transaction costs, it must be able to deal with the troubled market conditions. Japan has a very particular situation. The measures that they have applied so far have not rendered the expected results. Therefore companies must face as most precise planning as possible over their future projections. The research thus far provided the insight on the market can take unforeseen turns. Companies must be ready for those changes as the government steps up the efforts to remain and retain competitive against other economies.

The government and corporations in the time to come can make certain amends to their decision making and projections. Suggestions can range towards both sides. The international markets are an arena where not only corporations are at stake but also the dexterity of governments to preserve employment securing and revenue making companies within their borders or see them become extinct due to lackluster policy
making: Sharp Corp. The misguided application of policies is directly responsible for the behaviour of multinationals in several jurisdictions.

Thus, governments should borrow funds from the banks instead of buying from international markets. Such move would increase the lending that is usually stuck with the liquidity trap that ends in the banking industry. That is the real purpose of the quantitative easing, to provide creation of credit but it falls short not only in Japan but basically in other countries where low to negative interest rates abound. Another method increase the lending and better the prospects of the economy is to provide funds for conducting management of corporate investment. Such move would highly be participative with the private sector. This latter option does not bring privatization, but allocation of credit via another fashion. The companies can enjoy better access to capital and can increase the likelihood of making other plans for progressing in their industries with better velocity.

In the move to take the countries out of recession, central banks have the main say and the industries are at their hands reach (Lyonnet 2012). Not only are corporations susceptible to the policies of the country where they are headquartered, but is also bound to the chain of reactions from other partnering economies (Stiglitz 1990a). Thus companies must keep in mind the discrepancies that may exist with the contagion effect that stem from beggar-thy-neighbor policies. This case is particularly true for companies that have a global chain of production. It was in the past years when the companies would make the product wholly in one country and be ready for shipment. But now-a-day, the manufacturing takes place throughout various countries. The global supply chain is thus affected by the exchange rates from country to country and it affects the transaction costs of producing a unit of the product. Not only are the transaction costs affected from a company to another, but also companies do also take into account the transfer pricing operational transaction costs. (Khan 2015.)

All the same, the banking industry must be prepared for changes in the decision making from central banks should they change the modus operandi. Currently, the banking industry is the middle-man for bringing the money into the market place. The banks provide the loans to the corporations and individuals. That chain of
operation has been in talks to take the middle-man out of the scenario. Thus, banks should brace for changes of such nature in the markets they operate. The same goes for the rest of the industries should the central banks decide to engineer other types of tools to prop up their economies that can run counter to corporations operations. For instance, one of the tools that central banks have in order to step into their currency behaviour is capital controls. On 15th of March China stepped up the efforts to have the foreign exchange transactions taxed. The Tobin tax exacts a percentage fee on all foreign exchange transactions (Tobin 1969). It can be beneficial to curb high speculation on the currency. Thus, the real valuation will be more based on the country’s core economic performance. The tax was set at 0.00 percent. It is a signal to state that the country is willing to take further unconventional and untried steps. Multinational enterprises dealings would be also absorbing the tax. (Curran 2016)

Lastly, multinational corporations and investors seek security from the governments. It is risky environment to conduct business in very unstable and unreliable markets. One of the world’s leading investment firms Blackstone Management LLC, suggests that governments with recession prone economies should create deflation insurance. It entails a protection against deflation for companies and individuals. As the money value is less, debt value would increase, even if the real money amount will not increase. As severe deflation takes place, companies and individuals can claim the benefits of the insurance on their tax filings with the government. As a safety net, the government can request that the insurance paybacks be used towards decreasing the debt. Additionally, a ceiling can be agreed upon by the creators of the plan for how much can the claims amounts be, to avoid abuses in the system. It would in turn spur growth as corporations and individuals would know that they count with an insurance against deflation, and more investment can take place. (Hill & Morris 2016, Hill 2016, Morris 2016.)

5.3 Limitations that lead to further research

Currency devaluation is a very broad topic. It is a theme that belongs to the economics field. Economics entails the use of scarce resources in the most efficient and sustainable way. That is the function of companies. That is one of the reasons of existence of firms. The management of their operations gives the existence to the
transaction costs they face. Therefore, the study may be lacking further depth in the field of economics, but the main focus was to cover the impact of such a macroeconomic situation in the industries of the particular economy of Japan.

Furthermore, this field is highly analyzed based on quantitative approaches. This study is an exception. It features qualitative research based on discourse analysis. It obeys the request of further research that was stated by Cooper (1971). On another note, and very importantly, a different hindrance to the current analysis is the short supply of research material on the effects of currency devaluation affecting the corporate structure of countries. It is a field hardly covered. Therefore, literature is rather scant. For instance, Ling (2014) was the only research thus far made that studies the transaction costs theory and the effects of devaluation. Even that study faces limitations as they are not strictly covering the behaviour of corporations in the face of currency devaluations, but rather a mixed behaviour of companies and country with a bird’s eye view.

Therefore, this study can have further increments of analysis in several streams of topics. It would be very beneficial for corporations to understand more about the effects that they would face with beggar-thy-neighbor policies. In the globalized world of today, there is economic interdependence. It is bound to happen that the monetary policies of one country will cause “damage or frustration” in another, knowingly or unknowingly (Strange 1971:215). Available research mainly observes the situations that countries face but not corporations.

On a different line, it is paramount to further understand the main effects on corporations that that regime changes bring into a country. Every regime brings a different policy, affecting national and international companies. The currency interventions, especially devaluations start to be exacted via different methods as different regimes develop and engineer different tools.

Another strand of future research is the study of currency devaluation and the effect of the world aggregate output strictly focused on international corporations operations. It is elemental to understand that the currency devaluation has not benefited the involved countries as much for as long as expected. What are the main
solutions that countries can engage to change the adverse effects of currency
devaluation with a worldwide production pick-up in focus? Furthermore, it is
relevant to start seeing a more mixture of economic perceptions with international
management infrastructure as a way to better understand the decision making of
companies that face market uncertainties. To a large extent, uncertainties are created
when governments start experimenting with untried policies. It is an experiment as
there is not even a length of studies on such policies. Such is the case for either the
application of the Tobin Tax on capital controls or the application of Negative
Interest Rates Policies (NIRP).

More so the negative interest rates than the Tobin tax need much research. The
research of the negative interest rates becomes highly more relevant as it is a
measure that more and more countries are implementing. It is a method that even
under the economics loop has not been extensively analyzed. There is much more to
discover and bring the light of knowledge for the decision makers of central banks
and corporations around the world. There is not tested environment for this policy
type. Every country that has embarked into it is precisely a type of experiment as
every country has a different sort of economy to the other. Corporations and
investors regardless of the industry business sector cannot rely on a lack of security
in the market place to establish their operations. Projections cannot be set in place
with a lack of a frame. The unexpected has happened. Negative interest rates were
unspoken or even frown upon. Currency devaluations in the 1950s were a move
typical of in the emerging markets. Now-a-day, the policy makers can bring any
measure at any moment. Corporation must be prepared to buffer the challenges.

Therefore, it is imperative to move a step ahead in the research and study more the
solutions in the events of recessions and adverse market trends. International
corporations face severe backlashes with operations in several markets due to
currency devaluation. As we have noted, not only are exports the most important
elements for devaluing a currency. As this study shows, the Japanese economy has
not seen much recovery by having the massive export of innovation and specialized
products bound worldwide. Therefore, relevant research becomes part of the
wherewithal for surviving another day in a market riddled with uncertainties where
the transaction costs become dearly high.
5.4 Robustness

In order to understand the research quality the reliability and validity will be used to better understand results. Reliability stands for the transferability or duplicability of the study should another person undertake it and achieve the same results. And validity refers to the correct application and competence in measuring or matching the theories and the observations effectuated. These two main veins of quality assessment differ in application. Some researchers such as Mason (1996:21) state that reliability and validity analysis is part of a quantitative method and lacks application to the qualitative approach. Mason study further states that there is a measurement taking place when it comes to proving the quality of the research based on strength of the research potential. Still, validity and reliability can be applied to qualitative research method (Hammersley 1992). (Bryman et al. 2007:411.)

Regarding the reliability of the study it can be well replicated by another individual who follows the same steps of collecting the information as was exacted by the current researcher. The interviews were transcribed with precision. The codification was categorized and subcategorized for proper understanding of the theory applied. Much attention was applied to the discovery and analysis of the data from different perspectives as to avoid biased conceptions from the researcher. Consequently a clear, solid and reliable information analysis was developed. The vastness of information available allows for the study to be developed with updated and previous data.

In terms of validity, the theory was extensively and comprehensively explained as to appropriately cover the topic’s depth. The theoretical detail description provided the right links to the data that was discovered and used. Thus, a full degree of theoretical information was provided to prepare the reader towards any development on the data that would be used. On another hand, the use of easy to understand language was elemental to gain the readers developing attention and focus. The study in question is related to aspects related to socioeconomic, international corporations and local business sectors matters. Therefore, the spectrum of the analysis was forged in order to provide the most encompassing information on the analyzed topic as possible. Information used from one source was also corroborated from another source. The
discourse analysis used in this research allowed cross referencing from one author to another to solidify the findings. Discourse analysis became an elemental instrument to precise the validity of the study. Several interviews were collected to further develop the understanding of the case country of study and its industries in question. Furthermore, the use of the theory in question as it was further enhanced by the Transaction Cost theory by Williamson (1979) became extremely useful to understand the implications of international business structure in the current environment of analysis. The topic is by nature very broad, but Transaction Cost theory allowed us to better understand and narrow down the scope of research into the international business. Industries and its key participants were covered to have the correct outlook of the situation in the case of Japan.

5.5 Conclusions

The current study of currency war as an analysis of currency devaluation is of paramount importance to the full understanding of pairing corporations’ behaviour and effects and government monetary and fiscal policy application. The study engages in understanding beyond the economic plethora of research considering the currency devaluation and the effects only on their countries. The corporate fabric makes up for the strength of a country. Private investment is as essential in a country as it is fiscal spending (government spending). That explains the existence of corporations as they bring benefits and growth into the country by developing and innovating technologies and infrastructures that breed on qualified labour to sustain them. The factors of production are thus put to use in equal form for the benefit of the shareholders as it is for the country where they operate. Therefore, it became of utmost relevance to understand the effects that currency wars can bring into an economy and thus, their corporate web, and consequently their citizenry.

This study has been undertaken with Japan in scope as the country of choice for better understanding the drawbacks of currency devaluation. The extensive timespan of over 20 years of a stagnating economy serve as a perfect scenario for understanding properly the effects. Japan was an exception when it was able to secure the fastest growth after leaving the Gold Standard in 1931, to end up having the slowest growth in the developed world. Yet, with a current employment rate in
the highest levels unseen in other developed economies, the country faces severe deflation. The elements point to facts in the extremes. Toyota with the numbers boasting as the biggest car maker in the world can only increase USD 9 per month to their workers. And one of the most well-known electronics household names is to be quasi-nationalized: Sharp.

Clearly, several countries around the world are dealing with deflationary pressure which is why many engage in devaluing their currencies via unconventional measures, wittingly or unwittingly. That leaves us with further research to be undertaken whether this is a true currency war or just world slowdown. And interdependency thus, highly plays the darkest role. Much further analysis also needs to be undertaken as to understand what the negative interest rates may bring to the light. In japan all market participants remain cautious as to what market and economic conditions may further prompt:

*If necessary to achieve 2% inflation target, and particularly if underlying inflation trend is seriously affected, and if necessary, then, expand or further strengthen QE in many ways. There are many ways to further strengthen, expand QE... even more creatively... there are no technical limitations of monetary easing or QE implementation.* (Kuroda 2016.)
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APPENDICES

Appendix 1. Interest rates cuts worldwide during the year 2015 (adapted from Central Bank Rates 2016).

(*) stands for countries or central banks with negative interest rates.
Appendix 2. Interest rates cuts worldwide during the year 2016 (adapted from Central Bank Rates 2016).

<table>
<thead>
<tr>
<th>Countries in Devaluation - 2016</th>
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<tr>
<td>1. Armenia</td>
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<tr>
<td>2. Belarus</td>
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<td>3. Bulgaria</td>
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<tr>
<td>4. EU - ECB*</td>
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<td>5. India</td>
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<td>6. Indonesia</td>
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<tr>
<td>7. Japan*</td>
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<td>8. Moldova</td>
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<td>9. Morocco</td>
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<td>10. New Zealand</td>
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<td>11. Norway</td>
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<tr>
<td>12. Serbia</td>
</tr>
<tr>
<td>13. Sweden*</td>
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<td>14. Taiwan</td>
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</tbody>
</table>

(*) stands for countries or central banks with Negative interest rates.