

Economic and Financial Structure Influenced by Negative Interest Rates Policy

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Abstract

This paper is called Academic article that describing about the implementation of the negative interest rate monetary policy during the period of 2015-2016 using qualitative method to discuss the effect on economic units, financial institutions and the negative interest rate monetary implementation in specific countries. Two main objectives are: i) to investigate which group in the future is mostly affected from the negative interest rate policy; and ii) to suggest the policy maker aspects that are less favorable of this new policy including to make them realize what affect those decision have in the future. The study concludes that the financial institutions are impacted by the negative interest monetary policy the most. Profit margins decrease and the overall risk level that insurance companies and pension funds take increases. The policymaker seem to harm financial institutions and increase overall risk levels indirectly due to the fact that insurance companies and pension funds have to take more risk to please their customers.

Keyword: negative interest rate, economic units, financial institutions, monetary policy implementation, policymaker

1. Introduction

In recent News, (Forelle, 2016), the term negative interest rate came up more frequently. Several nations' central banks especially in Europe and Japan have implemented negative interest rate policies. The central bankers implemented the negative interest rate policy, which was thought of before of an only theoretical given which is actually now practically applied, to stimulate economic growth. Consumers saving rates have dropped significantly over the years with the lowest point being

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now, with zero percent in saving rates. In the future the interest rate might even fall to a negative interest rate level which would indicate fees that would be charged on money deposits. In contrast loans are cheaper than ever in terms of interest rates that have to be paid to the banks. Hence, one can say that the Central Banks' motive is to stimulate spending instead of savings. At first in this paper, the intention was to showcase the saving rate of the consumers and how it changed over the years. However, with many Articles and Journals' published concerning with the structure of the system and participants, in particular the commercial banks, household and business sectors. It got clearer that the importance of the saving rate for the consumers is not focused on and how the next generation can actually grow their money. The main concern of the central bank in response to government is the economic growth but not on the saving rate for consumers. Hence, the concentration will broadly be on the whole system of the central bank and its negative interest rate policy. Another focus is on how it affects the financial intermediaries' especially commercial banks and consumers. The intentions of research are to display the system in its whole and to express the effects of the negative interest rate monetary policy by the central banks on several financial intermediaries and consumers.

After intensive research in the background of the study, one has found various problems that arise in the financial system. Commercial banks are immensely affected. In the past negative interest rates were not a given only a theoretical thesis, however now several nations have implemented the negative interest policy to stimulate the economy by using monetary tools such as required reserve ratio, discount rate and open market operations. By decreasing the required reserve ratio, commercial banks wouldn't need to deposit as much in reserves which would free up more money to lend out which increase the money supply and decrease the interest rate. Decreasing the discount rate which allows the commercial banks to borrow from the central bank for a cheaper price, which would then allow commercial banks to lend out more money and which would increase money supply and decrease interest rates. The most significant tool of all is the open market operations were the central bank buys or sells government securities to either inject money into the economy or takes money out of the economy. For this particular expansionary monetary policy the central banks buy government securities from the market and inject money into the

economy by this process which increases money supply and decreases interest rates. The problem with this negative interest rate policy is that commercial banks suffer the most. Due to the fact that commercial banks with excess reserves are getting punished by paying fees to the central banks due to negative interest rates. Loan interest rates also decreased significantly, reducing the profit margins of commercial banks. In some cases the commercial banks even had to pay the loan owner instead of receiving payment which was the case of a Danish couple in Denmark where the commercial bank had to pay interest on the mortgage loan instead of the couple paying the commercial bank (Charles Duxbury, 2016). Deposits made by consumers now have zero interest rate, however commercial banks would need to enforce fees on deposit accounts to offset the losses and fees it has to incur by central banks and in some cases loan owners. With this problematic in place when commercial banks try to charge negative interest rates on deposit accounts, the question is if the depositor will accept negative interest rates on their accounts or if they will take out the money. However at some point if interest rates become too negative if depositors will take out all their money, which would then impact the monetary policy negatively due to the fact that the commercial bank would not have sufficient amounts of deposits to make loans from. What we observed so far is that the commercial banks suffer to the greatest extent, the risk lies mainly on the commercial banks and if profits cannot be realized bankruptcies might be the case for many banks and the financial system might collapse were many banks might need to be bailed out. The central banks argue that commercial banks can earn a profit by lending to other commercial banks; however this is not necessarily true in this scenario of negative interest rates. The commercial banks bid each other down in terms of lending out money to each other and the result is that the interest rate they charge each other, the interest rate will be negative.

Therefore, the paper's objectives are to investigate which group in the future is mostly affected from the negative interest rate policy and to suggest the policy maker aspects that are less favorable of this new policy including to make them realize what affect those decision have in the future.

The paper is organized into sections. Section II follows introduction revise empirical into literature review. Section III construct conceptual framework and

explore the effects over the period used. Section IV discusses the case of the real evidence for European Union, Japan, Sweden, Denmark and Switzerland. Section V is conclusion and suggestion for policy implementation.

2. Literature review

According to the limit of the previous studies, so this paper will emphasize on empirical review which is used to support and to investigate how previous articles have been done.

Empirical Evidence

There are three main aspects on looking at. First, the impact of the central bank's negative interest rate monetary policy on economic units; Second, the impact of the central bank's negative interest rate monetary policy on financial institutions and Third, the central bank's negative interest rate monetary policy and the policy implementation in specific countries. Each aspect will include sub-sections and sub-categories which will be discussed more in detail.

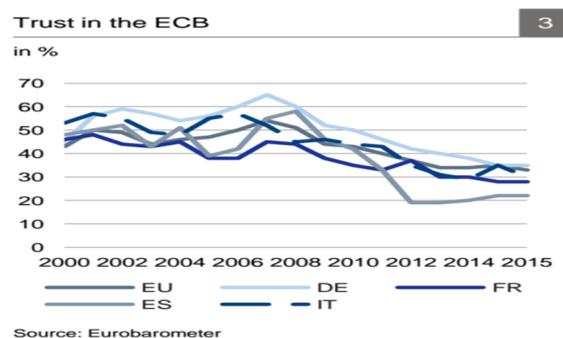
First, the impact of the central bank's negative interest rate monetary policy on economic units: economic units being discussed are Households, Businesses, Foreigners and Investors. Households, according to Kantchev, Whittall and Inada from the Wall Street Journal found out that the Central banks policies in several nations had actually the contrary affect then expected that consumers and businesses are saving more instead of spending more which left some economist confused. Some economists and bankers argue that this scenario might have happened to this extent due to fear that the economic growth might be low in the future and households' hoard more money away. The confidence of the households in the future market is also a very vital aspect that impact savings. (Georgi Kantchev, 2016)

According to the Independent Authors the saving rate when people are more fearful, they tend to save more, even though the saving rate is very low due to the uncertainty in the global economy. In Japan the fear of losing jobs; having not much confidence in the investment opportunities has led to more savings than actual spending. (www.independent.co.uk, 2016)

Consumers don't necessarily spend more. An in depth study from the Standard and Poor was published which indicates that below zero interest rates could lead to consequences to the global economy which could also lead to more savings by consumers. (www.aljazeera.com, 2016). According to prominent bond managers, negative interest rates make things worse. They believe that people will pull out their money from their bank accounts and put it so to say under their mattress which would have a contractionary affect. (John Gittelsohn, 2016). The same view is voiced by Cavanaugh who works at the insurer's asset manager, that spending after this policy was put in place would increase and what actually happened is that people bought safes and hoard more cash. (Chiglinsky, 2016)

Some predictions indicate that the public and businesses will stop using traditional savings if negative rates are passed on to ordinary bank customers. Storing cash will increase.(knowledge.wharton.upenn.edu, 2016). Deutsche bank believes that this negative interest rate monetary policy is a fatal strike to European economy. Deutsche Bank took data from Eurobarometer to show how people feel about the ECB in terms of Trust and it is now the lowest since 2000 which indicates that people might be skeptical about the overall monetary policy (Martin, 2016) appearing in Figure1.

Figure1: The Trust of the people in the European Central Bank from 2000-2015



A beneficial factor that negative interests bring if they are low enough is that mortgage loans will pay you instead of normally where you need to pay the mortgage

loan. One Danish couple gets interest paid on their mortgage. (Charles Duxbury, 2016)

Businesses, according to Walker are with large balances are being charged mainly for now. Ordinary bank accounts are not yet charged negative interest rates. (Walker, 2016) Small businesses confidences in the market suggest according to surveys that optimism levels are low and that they are less willing to invest their spare cash. Easy to say that businesses now will less likely spend more and decrease their cash reserves even though interest rates are negative. (Prosser, 2016) Like we mentioned before that Households are less likely to spend more if they are fearful about the future and not as optimistic about future conditions, the same is true for businesses. There are reports that businesses now hoard money away from their profits instead of putting it back into the business in terms of reinvestments, uncertainty about the global economy in future terms makes many businesses hold on to their money. (www.independent.co.uk, 2016) Large corporations that sitting on vast amount of cash reserves will not necessarily lend more because the interest rate has changed by 25 basis points only. The larger corporations already have too much money on their hands to find suitable investments for. However smaller and medium sized businesses have it harder to borrow money due to the fact that they cannot borrow in the capital market and have to borrow from banks. Banks will not lend to small and medium sized businesses that cannot reach the requirements, in this particular market condition lending is more risky and the ability and the interest of banks to lend particular to small and medium sized businesses is not there. Especially those SMEs that generate jobs in larger numbers have it harder to borrow money. (Stiglitz, 2016) Foreigners; negative rates impact the way investors think and the demand for foreign currency should increase if the interest rate is more favorable, hence the foreign currency demand increases and the local currency value decreases. This currency devaluation helps the Swiss national bank by decreasing interest rates even further into the negative in order for the local currency not to strengthen against the euro. (Forelle, 2016) According to Charles Kane, the negative interest rate will impact the foreign exchange market were Interest rate differentials in the world economy drive the future value of currencies and in the case of the ECB the negative interest rate will put downward pressure on demand for Euro which in turn

will improve exports to other countries in the short term.(Kane, 2016)According to Mather, negative interest rates will have impact on currency levels and volatilities. Keeping the own currency level down by monetary policies might in the future increase protectionism and nationalistic policies of several countries to counter the vast of imports of the own country due to foreign currency devaluations, which such policies in place it could hurt the whole global economy, which might be put in place if the currency devaluation war goes out of hand.(Mather, 2016)Currency Devaluation through monetary policies taken to the extreme might give way to policies such as protectionist trade policies that would harm the global growth.(Diggle, 2016)Investors, according to Mather have to accept lower rates of return in the future due to negative interest rates which act as a tax on savings. (Mather, 2016)Investors now flee bank stocks due to commercial bank issues arising from the negative monetary policy which impacts banks to make a decent profit. Investors as well as various other groups see the monetary policy as a dark outlook for world growth in the future.(John Gittelsohn, Pimco's Mather Says Negative Interest Rates Making Things Worse - Bloomberg:, 2016)

Second, the impact of the central bank's negative interest rate monetary policy on financial institutions: Financial Institutions being discussed are Commercial banks, Non-depository Institutions such as Insurance Companies, Pension funds. Commercial banks, according to the editorial board of the New York Times believe that below zero interest rate was the idea to discourage banks from hoarding excess cash in central bank and punishing them with fees, this policy was thought of that banks will give out more loans to businesses and consumers with lower rates, however that hasn't worked well, it only had a modest impact on growth. (THE EDITORIAL BOARD, 2016)Banks need to pay fees to store cash in central bank, however they can just keep it in their own vaults instead of lending it out. Due to fear of bank deposits being withdrawn because of negative interest rates implementation, commercial banks incur the costs, instead of passing it to the consumer. The banks will not give out more loans because of the cost of funds is lower, the future growth aspect is much more important to look at. (Dr.K.C.Ma, 2016)Due to the nature of the negative monetary policy commercial banks have to pay fees to central bank for excess cash stored with them. The commercial banks would also need to do the

same to the customers but due to fears of withdrawals of their funds the commercial banks have to absorb the costs, which cuts their profits significantly. Bank stocks have suffered which in turn depressed the global and the European equity market. The European banking sector is likely to suffer severely if the policy is deployed over a longer period. (Kane, 2016)The World Bank has shown that the effects of negative interest rates can be undesirable especially for commercial banks that banks profitability will decrease. Excessive risk taking of banks which could have been encouraged could lead to asset bubbles. (Skidelsky, 2016)According to some analysts and their believes that banks might hoard more cash rather than lending it out due to spread of negative rates and fears that customers might withdraw their money, banks fear to lend out money. Deutsche Bank is pointing out that the bank that first implements negative rates will most likely be killed in the media. (Edwards, 2015)Negative interest rates reduce banks profit margins, if interest rates lower even more this could cause many banks to become unprofitable. (Borin, 2016)Commercial banks fear to impose fees on their customers from to the negative monetary policy the central bank set up, the commercial banks the net interest margin is reduced and if it falls even more interest margin will be tighter compressed further.(Diggle, 2016)According to Mike Norman the negative interest rates act like a tax on commercial banks deposits in the central bank, eating away the banks' profits. (Norman, 2016)Businesses especially SMEs wanting to borrow money from banks now still need sufficient collateral to borrow or other criteria that have to be met. Lending in this particular time, which seems more risky, banks are not interested in. (Stiglitz, 2016)Insurance companies and Pension funds, to deliver on their commitments to policyholders and pensioners are less and less given due to the reduced future portfolio returns.(Mather, 2016)

The supply of relatively safe but positively yielding assets has decreased significantly causing serious trouble for money managers of pension funds and insurance companies. (Matthews, 2016)Life insurers used local government bonds traditionally for asset liability management, however due to the negative interest rate environment life insurers struggle to meet return requirements. (Stephan van Vliet, 2016)In order for Insurance companies and pension funds to generate an income in this market environment, they have to increase their risk exposure; this will impact the

credit quality of their portfolio negatively as well as the global financial system will be impacted.(Spiro, 2016)

Third, the central bank's negative interest rate monetary policy and the policy implementation in specific countries: Countries being discussed which implemented a negative monetary policy are Switzerland, Denmark, Sweden, Japan and the European Union. Since early 2014 Interest rates fell below zero in the European central bank, the bank of japan and the central banks of Sweden, Denmark and Switzerland. (www.advisoryhq.com)According to Charles Kane, Sweden's central bank was the first to implement negative interest rates following the ECB, Danish National Bank, Swiss National Bank and as the latest the Bank of Japan. (Kane, 2016).The European Union, the negative interest rate has been implemented by the ECB as of 16th March with an interest rate of negative 0.40%(www.ecb.europa.eu).

The ECB used Quantitative easing measures by increasing monthly bond purchases by 20 billion euros. (Kane, 2016).Japan, Bank of Japan's interest rate lying at negative 10 basis points is expected to be cut to negative 30 basis points. (Choudhury, 2016) The Bank of Japan reaches its limit of qualitative easing because there are not enough government bonds to buy in attempt to reduced deflation.(Kawa, 2016).In Sweden, Sweden's interest rate lying at negative 0.50 or negative 50 basis points according to 14 September 2016 data. (www.riksbank.se). Sweden's Riksbank could reduce interest rates into the negative due to quantitative easing measures.(Durden, 2016).

Denmark, according to Bloomberg, the Danish central bank's interest rate was negative 0.75 percent or negative 75 basis points. (Peter Leving, 2016). Danish bank used quantitative easing measures to decrease interest rates.(Peter Leving, Denmark Tests QE as Central Bank Seeks New Ways to Save Peg - Bloomberg;, 2015). In Switzerland, Switzerland's central bank holds its negative interest rates steady at negative 0.75 (John Revill, 2016)Quantitative Easing was used by the Swiss Central bank to reduce interest rates and to devaluate own currency. (Krugman, 2015)Switzerland's currency battle to devaluate own currency Swiss francs against the Euro.(Catherine Bosley, 2015)

Table 1: Summary on economic units, financial institutions and negative interest rate policy implementations in specific countries

	Author	Year	Method	Summary
Economic units				
Households	Georgi Kantchev, Christopher Whittall, Miho Inada	2016	Qualitative	Fearfulness of households in the future of the economy results in hoarding more money. Confidence in the future has decreased. Study by Standard and Poor indicate that savings by consumers will increase with negative interest rates.
	independedent.co.uk	2016	Qualitative	
	aljazeera.com	2016	Qualitative	
	John Gittelsohn, Charles Stein	2016	Qualitative	The Monetary Policy was put into place so that consumers spend more money, however many put their money in safes or to say under the mattress and simply hoard cash.
	Katherine Chiglinsky	2016	Qualitative	
	knowledge.wharton.upenn.edu	2016	Qualitative	
	Will Martin	2016	Qualitative	The Trust of the people in the ECB has decreased significantly over the years, which might indicates then that the people might not have confidence in the new monetary policy.
	Charles Duxbury, David Gauthier-Villars	2016	Qualitative	Benefit to Households of negative interest rates, is that in some cases the Bank has to pay interest on Mortgage Loans
Businesses	Andrew Walker	2016	Qualitative	Business Accounts with large amounts are mainly charges negative interest fees now.

	David Prosser	2016	Qualitative	Fearfulness of current negative interest environment and low optimism levels in the future economy by small business and medium sized businesses, results in more hoarding of cash and less reinvestments.
	independedent.co.uk	2016	Qualitative	
	Joseph Stiglitz	2016	Qualitative	Large corporations have already sufficient cash reserves and the negative interest rates have not much impact on them. Large Corporations have it easier to obtain funds. SME's on the other hand that create the most jobs have it harder to please the Banks in terms of their requirements.
Foreigners	Charles Forelle	2016	Qualitative	Interest rate differentials in the global market and due to the negative interest rate, investors will invest in other countries devaluating their own currency in the process which is one aspect of the Central banks to compete in the world market place.
	Charles Kane	2016	Qualitative	
	Scott Mather	2016	Qualitative	If Currency devaluation is taken to the extreme many countries might put protective measures and nationalistic policies in place which can then hurt the global economy.
	Paul Diggle	2016	Qualitative	
Investors	Scott Mather	2016	Qualitative	Investors believe that the

	John Gittelsohn, Charles Stein	2016	Qualitative	negative interest rate monetary policy will have a negative impact on the world growth. Lower rates of returns on investments have to be accepted in the future.
Financial institutions				
Commercial banks	The Editorial Board	2016	Qualitative	Due to the negative interest rates parking Excess cash in the central bank is now punished with fees and due to fears of the future market conditions banks might store the money in their vaults instead instead of lending more out. As well due to fears many Banks will not charge negative interest rates on ordinary bank accounts because they assume that many will take out their deposits. Profit Levels of Banks have decreased immensely. The Banking Sector is likely to suffer due to this policy. If interest rates lower even further many banks become unprofitable.
	Dr.K.C.Ma	2016	Qualitative	
	Charles Kane	2016	Qualitative	
	Robert Skidelsky	2016	Qualitative	
	Jim Edwards	2015	Qualitative	
	Matthew Borin, James Grant	2016	Qualitative	
	Paul Diggle	2016	Qualitative	
	Mike Norman	2016	Qualitative	Net interest margins of banks are decreasing, interest margin being compressed eating away the banks' profits. In this particular time banks are less interested in lending out money due to concerns.
	Josepg Stiglitz	2016	Qualitative	

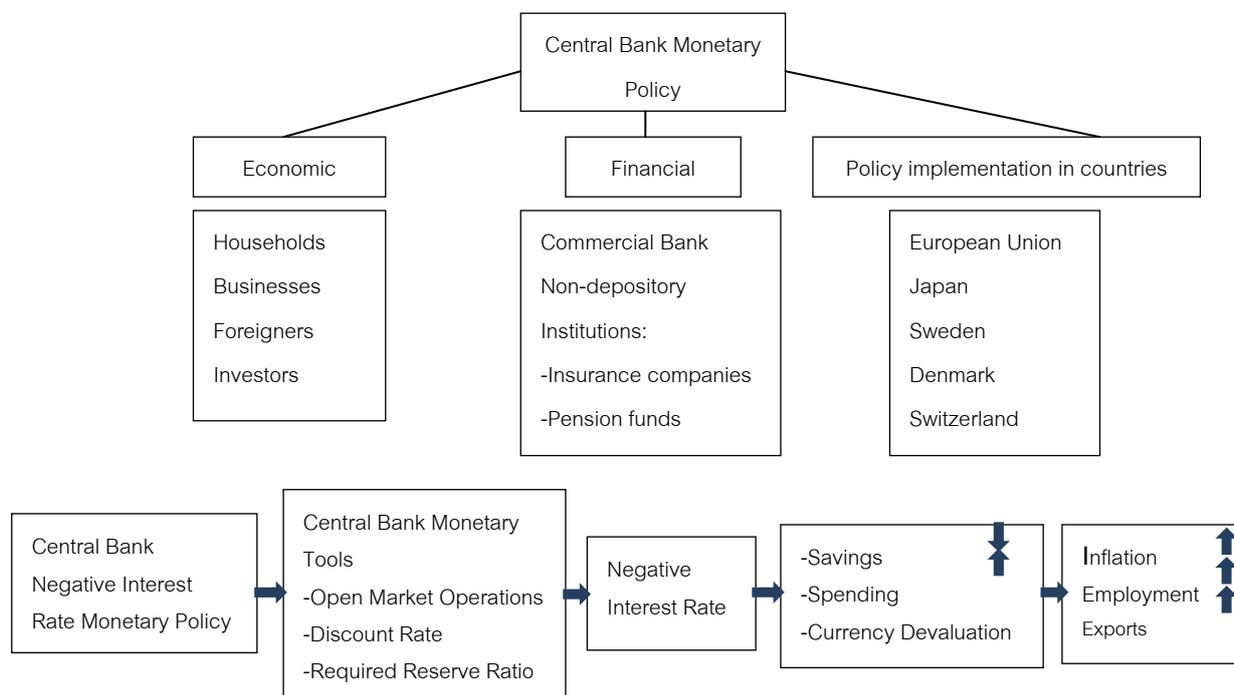
Insurance companies & Pension funds	Scott Mather	2016	Qualitative	Insurance companies and Pension funds struggle to meet return requirements and to deliver on their commitments to policyholders and pensioners which are less given due to reduced portfolio returns. Positive yielding safe assets have decreased significantly making it harder for money managers to invest. In order for them to generate an income they would need to increase their risk exposure which reduces the portfolio quality and well as the global financial system will be impacted.
	Chris Matthews	2016	Qualitative	
	Stephan van Vliet, Yongho Lee	2016	Qualitative	
	Nicholas Spiro	2016	Qualitative	
policy implementation in specific countries				
European Union	ecb.europa.eu	2016	Qualitative	As of 16 March the ECB Interest rate lies at -0.40%, the ECB used quantitative easing measures which was done by buying excessively government bonds in the market.
	Charles Kane	2016	Qualitative	
Japan	Saheli Roy Choudhury	2016	Qualitative	Bank of Japan's interest rate lies at - 0.10%, BOJ used quantitative measures to buy securities in the market. ETFs were bought immensely and government bonds as well as other securities.
	Luke Kawa	2016	Qualitative	
Sweden	riksbank.se	2016	Qualitative	Sweden's interest rate which was published by their central bank Riksbank is -0.50%

	Tyler Durden	2016	Qualitative	according to 14 September 2016 Data. Quantitative measures were used to reduce interest rates by buying government bonds.
Denmark	Peter Levring, Frances Schwartzkopff	2016	Qualitative	Danish central bank's interest rate which was published is negative 0.75 percent.
	Peter Levring, Frances Schwartzkopff	2015	Qualitative	Quantitative measures were used to decrease interest rates.
Switzerland	John Revill, Brian Blackstone	2016	Qualitative	Switzerland's central bank holds its negative interest rates steady at minus 0.75 percent.
	Paul Krugman	2015	Qualitative	Quantitative Easing measures by buying government bonds to reduce interest rates were used to devalue their own currency to battle the Euro.
	Catherine Bosley, Josh Robinson	2015	Qualitative	

3. Methodology

Qualitative data is used to describe the negative interest rate monetary policy implemented by the central banks. Paper conducts by using the online news articles and journals; however one finds out that academic articles are scarce to some extent and not be easily found on published. The variables use in the paper: economic units, financial institutions and the policy implementation of negative interest rates in the European union, Japan, Sweden, Denmark and Switzerland.

Figure 2: Conceptual Framework



Source: Self-development (2016)

4. Discussion

In this paper a discussion about the academic aspects relating to negative interest rate monetary policy will be conducted on three main aspects, first the impact of the central bank's negative interest rate monetary policy on economic units; Second, the impact of the central bank's negative interest rate monetary policy on financial institutions and Third, the central bank's negative interest rate monetary policy and the policy implementation in specific countries. This paper can be seen as the guideline for central banks around the world.

First describes on the impact of central bank's negative interest rate monetary policy on economic units. According to interest rate theories studied by economists and central bankers and their effects on Households spending in the case of negative interests and the negative interest policy implementation should have brought an increase in spending by households. The economic theory when negative interest rates are applied suggest that households should spend more because they would

be penalized by saving money in the bank; several sources however revealed that Household savings increased in many cases. Sources suggest that households are not that confident in the future and that they are fearful which impacts the monetary policy negatively by people actually saving more. Another aspect to mention is when negative interest rates will be applied to ordinary accounts many people will hoard their money at home, not increasing spending as expected by the central banks which implemented the negative monetary policy, but increasing savings. In practice the negative interest rate monetary policy does not yet fully live up to its expectations, the effects till now are mainly contrary where even more money is saved. Businesses on the other hand are now charged negative interest rates if their bank balances are large. Small businesses are also pessimistic about the future of the economy or are skeptical, therefore spending of the small businesses or investments are limited. Even though smaller businesses are encouraged by the central banks to borrow more money they are not able to borrow from the central bank, the financial system structure is set up to be that the central bank is linked with commercial banks, therefore businesses have to borrow from commercial banks which hang on their money and the requirements to borrow money from the commercial banks is not made easier. Small businesses that were not able to make a loan contract with a bank prior to the negative monetary policy will not be able to make a loan contract now. Mid to large businesses have excess cash in larger quantities where they cannot find good investments on or projects. Many mid to large businesses don't need to borrow much if they already have excess amount of cash lying around. The negative interest monetary policy implemented by the central banks in specific country doesn't work as sufficient as expected. Foreigners are impacted by the negative interest rate monetary policy implemented by specific countries which will appreciate the foreigner's currencies. Central banks goal is to devalue the currency so that the products in the economy can be purchased cheaper from foreigners which would increase sales which would then increase production. However the complication for the ECB for example is that other neighboring nations also implemented negative interest rates in order to cope with the Euro devaluation. If the currency wars are taken to the extreme, some countries might implement more policies for Importers, in

order for governments to cope against such currency devaluations. Investors see the negative monetary policy as a disadvantage to the overall economy.

Second uses the impact of the central bank's negative interest rate monetary policy on financial institutions implemented. Central banks implementation of the negative interest rate monetary policy impacted Commercial banks the most. Sources indicated that commercial banks excess cash that is placed in the central bank earns negative interest, which should force commercial banks to lend more money out. However due to the fact that the lending requirements haven't changed, businesses that couldn't get a loan are not able to obtain one now. Commercial banks have also problems charging negative interest on ordinary accounts in fear of customers withdrawing all their money. This indicates that commercial banks profit margin decreased significantly due to obstacles made with the monetary policy. Lending out money to households or businesses the commercial banks still rely on the same requirements. The commercial banks future growth aspect in the future is a much better indication for them to lend out more than if the cost of funds just lowered. Central banks believed Commercial banks will lend out more and charge negative interest rates to their ordinary customers, however sources indicate the contrary. Insurance companies and Pension funds also face huge obstacles due to the fact that they invested also in government bonds which are very safe and gave out interest payments. However, due to the monetary policy, government bonds and its yield are impacted severely by the central bank buying the government bonds. The central banks implementing negative interest rates should ask themselves if the implementation will do more good than harm the economy and its financial institutions. Commercial banks face the greatest obstacle which reduces their profit margin and impact how insurance companies and pension funds have to invest to please their customers, which would increase the risk willingness of the portfolio managers. If risk increases the portfolio quality will decrease and if another recession comes in the future it will have an even worth outcome in the future.

Third brings up an idea on the central bank's negative interest rate monetary policy and the policy implementation in specific countries. Countries that implemented the negative interest rate policy are Switzerland, Denmark, Sweden, Japan and the European Union with the highest negative interest rate being negative

0.75 percent by the Danish central bank and the lowest negative interest being 0.30 percent by the Japanese central bank. The central banks around the world have to think if negative rates are actually beneficial in the long run or if negative interest rates will do more harm than good.

5. Conclusion

According to the objective provided the group that is mostly affected by the negative interest rate monetary policy is the Financial Intermediaries. Commercial banks profit margin has decreased significantly; this is mainly due to the fact that commercial banks will not pass along negative interest rates to their ordinary bank account customers in fear of withdrawals. Storing the excess cash of banks in the central bank earns commercial banks negative interest rates. Requirements for lending out money hasn't decreased, hence many small businesses will not be able to obtain a loan even though the interest rates are lower because the requirements are not met. The negative interest rate monetary policy impacts the commercial banks the most in terms of profit margin reduction. Insurance companies and Pension Funds are also impacted by the negative interest rate monetary policy unfavorably; both of them were heavily relying on government bonds as a secure investment. Government bonds earn now a negative return on the investment due to the open market operation tool used to buy securities to inject money into the market, making it useless for Insurance companies and pension funds to invest in government bonds.

The policymaker of the new negative interest rate monetary policy should reconsider their stance on their policy. Insurance companies and pension funds in order to please their customers would need to invest in more risky investments to earn a decent return which would impact the overall portfolio quality in the market, making it more risky. Commercial banks however are still hanging on to their requirements of lending out money. The question policymakers should ask themselves is if hanging on to the negative interest rate monetary policy in the long run will actually do more harm especially to the financial institutions than impacts the overall economy positively. Therefore this idea of academic aspects relating to the real situation concludes that newly implemented policies can be more harmful if the risk taken by institutions especially by insurance companies and pension funds would

increase. Commercial banks stability is also at risk due to the profit margin decrease due to the negative interest rate monetary policy.

There are some limitations in the paper and the suggestion for further academic paper:(a) The discussion is based on qualitative method because the topic is more conceptual in nature; (b) lacks of sufficient published materials relevant to and hard to obtain.

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