IS QUANTITATIVE EASING AN APPROPRIATE WAY FOR THE SUCCESS OF MONETARY POLICY IN A POST-CRISIS PERIOD?

PETRE PRISECARU
PhD., Senior Researcher
Institute of World Economy
Romanian Academy
ROMANIA
petreprisecaru@yahoo.com

Abstract: - Quantitative easing is an unorthodox monetary policy focused on buying large quantities of bonds, mainly government bonds, by central bank in order to increase the reserves of commercial banks and thus to support private bank lending. It first started in Japan 14 year ago and this country experienced 3 rounds of QE with limited success. ‚After that it spread in USA and UK with a certain degree of success and finally it was adopted by ECB in March 2015. Although huge amounts of money were injected in the banks it is difficult to assess to what extent liquidity trap was overcome and economic recovery after the recent crisis was helped. The opinions of different financial analysts and technocrats are divided and their arguments are not based on serious analyses using reliable statistical data and clear scientific evidence.

Key Words: monetary policy, financial crisis, interest rate, bond, financial asset, money supply, credit

JEL Classification: E 31, E 41, E 43, G 12, G21, O23.

1. Introduction

Quantitative easing is an instrument of monetary policy used for stimulating the economy in a period of recovery or stagnation after a financial crisis. This instrument is used by the central banks not only for buying financial (toxic) assets from commercial banks and other financial institutions but also for increasing money supply. Due to liquidity trap, cutting or reducing short term interest rates close to zero is not able to stimulate the economy, hence monetary authorities usually buy assets (bonds and other assets) of longer maturity from banks increasing the availability of their funding. Quantitative easing is meant to prevent the deflation process but increasing the money supply may lead to higher inflation in the longer term, coming into collision with the objective of monetary policy of keeping inflation in check. Usually central banks use overnight interest-rates mechanism for controlling inflation and for stimulating economic growth. By cutting interest rate they encourage credit activity, preventing the economy from falling into recession and by raising interest rate they discourage a too large credit expansion and spending and try to prevent inflation rising. It was obvious that after the financial crisis central banks could no longer reduce the interest rates, under zero level. The only alternative or last resort measure was quantitative easing and they were forced to buy large quantities of bonds to support private bank lending. Quantitative easing involves a strict control of currency used in a country but in the case of the Euro Area central banks have no control which was lost in favor of European Central Bank.

QE is not about money creation because it is described as reserve creation as a central bank buys securities and pays for them with bank reserves (liabilities of the central bank and assets of commercial banks), thereby increasing the central bank’s balance sheet and the reserves of its member banks. But there is an indirect linkage between QE and money supply as commercial banks may use or not these new reserves to create money. When they use them, the reserves are an active constraint on lending but they may be an inactive constraint when banks are not willing to lend or borrowers do not wish to borrow. QE does not increase the money supply and do not cause inflation when banks are looking for raising their capital and borrowers are paying their debts.

Quantitative easing started in Japan in March 2001, followed by USA in November 2008, United Kingdom in March 2009, Japan again in October 2010 and April 2013 and finally EU through ECB in March 2015.

2. Quantitative easing in Japan

For the first time QE started in Japan in 2001, a country affected by deflation and an economic stagnation after the banking crisis of 1997–1998 triggered not only by financial crises from Eastern and South-Eastern Asia but mainly by the asset price (real estate) bubble which led to non-performing loans and damaged balance sheets, crisis that was largely resolved by the early 2000s. Japan made strong efforts to restart economic growth and to get prices rising again, beginning with the year 2001 and lasting five years (**Ashworth**, 2015), but this monetary programme failed to revive the world's third largest economy of its long stagnation and deflation, and the failure of this non-orthodox monetary policy was remarked and repeatedly cited by QE's critics. So Japan is the birthplace of modern-day QE and has the longest experience with QE. In March 2001 Bank of Japan began purchasing Japanese government bonds and the process lasted until March 2006 when the Japanese economy showed the first signs of exiting deflation.

The second round of QE in Japan started after the global financial crisis hit its economy in 2008, and deflation and recession were again menaced this country. The Japanese central bank had to introduce comprehensive monetary easing in October 2010 in order to fight this old nightmare, stagnation associated with deflation.

The third round of QE and the most recent QE programme of the Bank of Japan began in April 2013**,** when central bank boss Haruhiko Kuroda promised to unleash a massive QE programme worth $1.4 trillion as a part of a set of policies known as Abenomics (formulated by Japan's prime minister Shinzo Abe). Under the QE plan, the Bank of Japan (BoJ) vowed to buy $70 billion of government bonds each month, using electronically created money. At that time, the US Federal Reserve was spending only a little more per month of $85 billion, compared with $70 billion by the Bank of Japan, but the size of US economy was almost three times that of Japan's. But with inflation at very low levels and consumer spending languishing, the Bank of Japan went even further and in the same week that the Fed was stopping QE, Japanese policymakers revealed plans to move in the other direction and to re-enforce their already massive QE programme. Japan's central bank said it would raise the amount pushed into the system each year to $675 billion from $500-590 billion a year previously, mainly through the purchase of government bonds. This was a surprising move, explained by central bank boss Kuroda through policymakers wish to avoid a return to deflation doing almost everything that can be done to this purpose. The question is how much QE helps ward off stagnation and deflation and the critics of the policy look to Japan's long economic record and relatively poor results linked to its vast QE scheme**.**

3. Quantitative Easing in United Kingdom

The Bank of England argued for QE and started it to support economic growth and the jobs market, but it also accepted the conclusion that the scheme did more for wealthier households. The Bank of England launched its QE programme in March 2009 with an initial spending target of £75 billion over three months and at the same time it cut interest rates to a record low of 0.5%. Between March 2009 and January 2010 the Bank of England bought assets worth of £200 billion (about 14% of GDP), to help the revival of UK economy following the credit crunch. In October 2011, in the face of a potential danger of a double-dip recession and a certain Euro zone crisis, central bank policymakers voted to resume QE and pump another £75 billion into the financial system, increasing the QE budget to £275 billion and later on Bank of England raised the total amount to £375 billion (**Allen,** 2015).

After six years from its start, the debates concentrate not on the opportunity of QE but on its role, if this was the most adequate way to stimulate Britain's economy and extract it out of the credit crunch. One of the allegations facing Bank of England was that QE has exacerbated social inequality, partly by helping banks in handing wealthy people big amounts of money while doing little to support small firms and households. Even Bank of England recognized that wealthy families had been the biggest beneficiaries of QE due to the rise in value of shares and bonds but also argued that almost everyone had benefited from the boost to the overall economy and therefore also to jobs. Business groups or corporations also complained that by focusing on buying government bonds rather than corporate bonds, following Japan's example, the Bank of England did little for the real economy. QE did not tackle the problem of poor access to loans for small and medium sized companies struggling to stay on market and keep on workers. But those supporting QE scheme argued that the economy would probably not have recovered and asset prices would have been lower without such an unconventional loosening of monetary policy. Martin Weale, a member of the Bank's Monetary Policy Committee said the QE programme contributed to around 3% to GDP or £50 billion since it was first introduced. He also suggested QE had a significant impact on inflation than first thought and that it had a role

to play in dampening stock market volatility by reducing uncertainty. After the implementation of QE programme the UK economy has enrolled on a recovery track but is has shown some signs of slowing in the late 2014 although it was the fastest growing of the G7 rich nations in 2014 with a GDP growing rate of 2.6%. Inflation meanwhile has fallen well below the Bank's 2% government-set target, hitting a record low of 0.5% in December 2014, leaving policymakers worried about the threat of deflation, of falling prices.

4. Quantitative Easing in USA

After the financial crisis erupted in US, the Treasury and the Federal Reserve took some important and urgent measures: control of mortgage giants Fannie Mae and Freddie Mac and injection of $200 billion in them, bailing out of AIG with $ 85 billion, adoption of $ 700 billion bail out plan for banks, cutting the key interest rate to 1%.

The first round of QE in United States began in November 25, 2008 and ended in March 31, 2010 and during that period Fed initiated purchases of $500 billion in mortgage-backed securities; announced purchases of up to $100 billion in debt obligations of mortgage giants Fannie Mae, Freddie Mac, Ginnie Mae and Federal Home Loan Banks; cut the key interest rate to near zero in December 16, 2008; in March 2009 Fed expanded the mortgage buying program and said it would purchase $750 billion more in mortgage-backed securities and announced it would invest another $100 billion in Fannie and Freddie debt and purchase up to $300 billion of longer-term Treasury securities over a period of six months (**Da Costa& Ponder**, 2015). This round of the quantitative easing program, or QE1, concluded in the first quarter of 2010, with a total of $1.25 trillion in purchases of mortgage-backed securities and $175 billion of agency debt purchases. Initially Fed did not set an end date for the program until about six months out, as it slowed the buying pace. The significant result of this round was that the mortgage rates dropped significantly, to as low as 5%, about a year after QE1 started.

The second round of QE deployed between November 3, 2010 and June 30, 2011 when Fed continued to reinvest payments on securities purchased during the QE1 program and in addition began the purchase of $600 billion of longer-term Treasury securities. The Fed expected that QE2 would help promote a stronger pace of economic recovery while keeping mortgage rates low or push the rates lower. Contrary to what was expected, mortgage rates spiked more than half a percentage point in a little more than a month after QE2 started. When the program ended, the 30-year fixed-rate mortgage was about 30 basis points higher than it was when QE2 started.

The third round of QE started in September 2012 and ended in December 18, 2013 and the Fed was planning to buy another $40 billion in mortgage-backed investments each month until the economy improves, besides the tens of billions of dollars in mortgages it already had been buying each month, making U.S. banks flush with cash. Fed intended to continue to sell short-term bonds and use the money to buy long-term bonds and the time period during which it would keep interest rates near zero was extended from the end of 2014 to mid-2015. The aim of QE3 was to hold rates down or reduce them on mortgages and other financial instruments and it was hoped that with new cash injections, banks would lend out the money and give the economy a boost. The result was an initial fall of the 30-year and 15-year fixed-rate mortgages but since then they bounced up and down.

The last phase of QE program in US was between December 18, 2013 and October 29, 2014 and was characterized by a certain dilution, as Fed began to reduce its $85 billion-per-month asset purchases by $10 billion per month at each Fed meeting, cutting them to $35 billion in June 2014. Fed continued to keep the federal funds rate between 0 and 0.25%, and expected to keep it there at least as long as it could reach its goal of maximum employment and inflation rate remained around the committee's 2% goal. The intention of Fed was to maintain a low level for mortgage rates and to spend another ten of billions of dollars a month to keep downward pressure on longer-term interest rates, support mortgage markets and promote economic recovery. Months before tapering began, mortgage rates rose in anticipation and when the announcement finally was made in December 2013, mortgage rates rose for a couple of weeks but later on they have declined. In the brief time since tapering began, the effect on home prices can't be separated from housing supply and demand. In September 2014 Fed injected only $ 15 billion while keeping the federal funds rate near zero and continued to reinvest principal payments from its holdings and rolling over maturing Treasury securities at auction. While industry experts anticipated that mortgage rates would move higher as a direct result of QE3 ending, mortgage rates increased only in the short term, declined through the first quarter of 2015, but reversed their course by the end of the second quarter of 2015.

We have a lot of different viewpoints about the U.S. Federal Reserve's quantitative easing program, some of them are quite favorable, others are very critical. Among financial field specialists one could see extremely

negative opinions, some even announcing potential disasters like the enormous danger for financial sector, hyper-inflation peril, collapse of the dollar, disturbing the stock market, but none has shown to be real. While the Fed used the research departments at its various branches to validate its monetary policy, including QE, all coming with different academic justifications, some far from the truth, other specialists tried to seriously investigate the true results of QE.

One of them is **Shah Gilani** (2015), a recognized expert on the credit and financial crises, who writes for Money Morning and believes that QE has greatly contributed to growing income and wealth gap between the rich and poor in USA, being the greatest financial disruptor of modern times. The policy of cheap money was good only for private equity companies and venture capital firms and for financial intermediaries who reaped big fees from arranging loans, orchestrating mergers and acquisitions, and taking companies both public and private. Owners of financial assets and financial intermediaries have enjoyed a windfall at the expense of the middle class and the poor. The Fed openly stated the purpose of QE was to create a "wealth effect" by lifting financial asset prices so people would feel wealthy and start consuming again. But most of the middle class and poor people do not have many assets, they are savers and retirees and their interest income on the hard-earned savings and on the fixed-income investments are close to zero. The wealth they could be accumulating has been redistributed to everyone who has the means to borrow cheaply to acquire appreciating financial assets due to the implementation of QE. As a result of the credit crisis and Great Recession, the household sector from US, meaning the middle class, lost $11 trillion in wealth and 10 million jobs. The country lost an estimated $21 trillion worth of productivity. The Great Recession's middle-class losers haven't bounced back, but QE has made the rich even richer.

Bob McTeer (2015), a former Dallas Fed president, thinks that the Fed's QE programs didn't work as expected because it took huge bond purchases to achieve modest to moderate results. When there is a Keynesian liquidity trap and short-term interest rates reach effective zero, more money cannot reduce interest rates further, and significant bond purchases may stimulate the economy by increasing the "quantity" of money and credit. Asset purchases by the central bank would increase bank reserves and the money supply initially by the same amount and the excess reserves created in the banking system would result in a further multiple expansions in the retail money supply. Banks may use their new reserves to create new money by lending their newly created excess reserves. While the QE programs were not very successful in speeding up M2 growth, they did put downward pressure on longer-term interest rates and the Fed and others started touting QE as an interest rate tool. It is obvious that the increases provoked by QE rounds in the money supply haven't had the results (inflation and a weak dollar) that it was believed they would have. The low rate of M2 expansion after QE seems quite strange and it has dropped even lower since QE3 expired in October 2014.

Stephen D. Williamson (2015), vice president of the St. Louis Fed, believes there is no evidence QE boosted economy and finds fault with three key policy tenets: a) the zero interest rates in place since 2008 that were designed to spark good inflation actually have resulted in just the opposite; b) the Fed has not used proper means to communicate its intentions and thus succeeded in confusing investors; c) quantitative easing (or the monthly debt purchases-exceeding $4.5 trillion) that led to a strong pressure on central bank's balance sheet has at best a weak contribution to the actual economic improvements. Ben Bernanke, Fed's President, was determined to inject cash into banks in order to avoid great monetary errors made during Great Depression from 1929-1933. For Stephen D. Williamson there is no work that establishes a link from QE to the ultimate goals of the Fed—inflation and real economic activity-because the results targeting spurring inflation, reducing unemployment or generating sustained economic activity are "at best mixed." Casual evidence suggests that QE has been ineffective in increasing inflation and QE seems to have worked in the stock market, where the S&P 500 has soared by 215%.

Joseph Stiglitz (2015) finds that aggressive monetary policy (so called quantitative easing) focused more on restoring stock prices than on relaunching the SME's lending and therefore it was more effective to re-establish the wealth of those rich than to bring benefits to the average American and create jobs for him. In the first three years of economic relaunching around 95% of income growth went to the top 1% group and six years after the crisis burst average wealth was 40% below the pre-crisis levels.

Chris Brightman (2015), chief investment officer in Research Affiliates, believes that it is not easy to give an answer to the question whether QE has been a success or a not. Paul Samuelson(2014) considers that the answer depends on the central bankers' intentions—their objective for adopting a policy of QE in the first place. Under the circumstances created by the global financial crisis, the first round of QE seems to have been effective in averting a financial collapse in USA. Through QE Fed provided liquidity to the financial system by buying large quantities of securities from the market rather than waiting for banks to strongly involve on bond

market. Beyond providing the liquidity necessary to avoid financial panics and bank runs, QE may increase economic output and employment but the evidence sustaining this statement is quite mixed. There is a belief that if an economy is operating below its potential growth rate, lowering interest rates to inflate capital asset prices indirectly stimulates the economy through a wealth effect: people owning stocks, bonds, and houses will spend more if they feel wealthier. Other opinions worry that intentionally inflating capital asset prices distorts markets, creates bubbles, and leads to malinvestment. Monetizing the national debt and facilitating the increase of the public deficit, by purchasing newly issued government bonds, is similar to printing money, so one may say that QE plus substantial fiscal stimulus is money printing and may cause inflation. As the QE increased monetary reserves was not inflationary but it may become inflationary if it achieves its intended purpose of stimulating more economic activity by fueling bank lending and money creation. Indeed, many specialists are concerned that, if and when loan demand accelerates, the Fed will need to drain the excess reserves created by QE from the system in order to avoid rapid money creation and inflation.

5. Quantitative Easing in Euro zone

The European quantitative easing programme, the Public Sector Purchase Programme (PSPP), started on March 9, 2015 and was forecasted to last at least until September 2016. It was supposed to consist of purchases of sovereign bonds and securities from European institutions and national agencies. The ECB, and national central banks in the Euro zone, are going to create new money or increase the money supply by buying bonds at a monthly rate of € 60 billion and it was assumed that purchases would continue until the end of September 2016(total is € 1080 billion) but they can run longer if necessary to restore inflation to the ECB's target of just below 2%.The central banks from Member States are buying government bonds only in the secondary market, they can't buy directly from the issuer due to EU legislation. As interest rates are at very low levels, effectively at zero, the ECB hoped that QE would push down bond yields (which moved in the opposite direction to prices) and thus to lower borrowing costs across Europe, not just for governments but also for households and businesses.

The Governing Council of European Central Bank imposed limits to ensure that the Eurosystem will not breach the prohibition on monetary financing but these limits will apply only to the size and duration of the programme if it continues after September 2016. There is the possibility for national central banks to buy securities from national agencies, but their number is limited and Eurosystem should find more eligible agencies, based on some criteria. Another problem is related to European institutions especially concerning their number and outstanding debt securities and also their high ratings. The PSPP profits that will be repatriated to national treasuries will be small due to current very low yields. Maybe profits will result from the major increase in reserves following the implementation of QE, to which may be added the negative deposit rates on excess reserves at the ECB. This year ECB started buying bonds issued by governments in the Euro zone.

In anticipation of the ECB's arrival in the market government bonds performed quite well in Europe, e.g. benchmark 10-year government bonds in Germany yielded just 0.3% -- nearly 2% less than the equivalent U.S. Treasury bonds and yields on five-year German bonds have entered on negative side, which eased the pressure on governments budget across Europe. The prospect of strongly increasing monetary supply had two positive effects, on one side euro exchange rate decreased 10% against the dollar in 2015 to trade at below of $1.08 in November, and may reach parity with the dollar late this year, which makes European exports cheaper on world markets and drives up the cost of imports, giving a boost to Euro zone prices, after a deflation period. On the other side cheap money may also push investors into surging stock markets in search of better returns.

QE may not help Greece as bond purchases are not supposed to apply to the countries receiving bailout funds from the EU. Greece's difficult financial situation aggravated during the spring despite the extension of bailout program. Due to the fact that radical left wing coalition-Syriza- won the elections in 2015, this brought a political blockage in the negotiations with Troika and to the prospect of a true Grexit.

On August14, an agreement was finally concluded to support Greece through the European Stability Mechanism (ESM), it is the third agreement of international financing to Greece in five years and amounts to €86 billion, the Greek government committed itself to undertake a number of structural reforms, in the fields of pensions, taxation, bankruptcy code, independence of national statistics, and the automatic cutting of public spending in the case of missing budget deficit targets. However, Greece must transfer in a fund located in Luxembourg state assets worth of €50 billion. Euro zone leaders rejected the call for a new cutting of Greece's public debt (already cut twice with about € 140 billion), the Greek government had to basically support all the

reform measures proposed by the Troika and the Euro group, although the Greek population voted against further austerity in the referendum organized by Syriza on July 5. The ECB that stopped for a while the funding of Greek banks could accept junk-rated Greek bonds, but only if it is satisfied with Greece fulfilling the conditions of the new agreement. Any participation by Athens in QE is highly unlikely this year, and next year its participation will depend on how economic situation evolves and how the hard terms of the new agreement are implemented.

There are three possible advantages of QE for Europe. Firstly, it allows governments to refinance their borrowings at much cheaper interest rates and longer maturities, so that governments may use this opportunity to pay down debts rather than embark on new borrowing, public debt burdens will ease appreciably reducing fears about its long-term sustainability. Secondly, quantitative easing has driven up the value of bonds held on bank balance sheets, and banks with high amounts of government bonds may now sell the bonds at a larger profit, boosting their capital ratios, and a back-door recapitalization of the Euro zone banking system should support future growth in bank lending. Thirdly, quantitative easing intends to mitigate the geopolitical risks for eurozone and help economic recovery started in 2014. So far in 2014 and 2015, the Euro zone had to face an escalation in the Ukraine crisis, the deepening of economic crisis in Greece, and the dangers of local military conflicts in the Middle East attracting a massive wave of immigrants to Europe, all being important tests for EU cohesion after the end of cold war.

6. Nouriel Roubini's ten points referring to QE

Nouriel Roubini, professor at NYU's Stern School of Business and Chairman of Roubini Global Economics put some questions about the effectiveness and risks of QE and identified ten potential costs associated with unconventional monetary policies (**Roubini**, 2013). **First,** Roubini correctly noted that the Austrian school response, austerity, to asset and credit bubbles may lead to a depression. *QE policies that postpone the necessary private- and public-sector deleveraging for too long may create an army of zombies: zombie financial institutions, zombie households and firms, and, in the end, zombie governments***.** So, any QE program must end some time. **Second**, too many and repeated rounds of QE are not effective as the channels of transmission to real economic activity, like bond channel, credit channel and stock market channel, are not functional due to low bond yields, banks liquidity trap, limited short term boom (reflation) of stocks. **Third,** the currency weakening or decrease of exchange rate implied by monetary easing (another channel of transmission) is considered ineffective if several major central banks pursue QE at the same time, as under these circumstances QE becomes a zero-sum game, not all currencies can fall and not all trade balances can improve, simultaneously. So Roubini sees a link between QE programs and currency wars.

Fourth, QE applied in developed economies may lead to excessive capital flows to emerging markets and the sterilization of them may keep domestic interest rates high and stimulate these inflows. If sterilization is not made and domestic interest rates are maintained at reduced levels this may lead to inflation and asset and credit bubbles. Any appreciation of currency leads to erosion of external competitiveness, causing large external deficits. Imposing capital controls on capital inflows is quite difficult but macro-prudential controls on credit growth are useful, although they can be ineffective in stopping asset bubbles due to the impact of low interest rates on liquidity conditions. **Fifth**, persistent QE can lead to asset bubbles in the countries where is implemented that may spill over to other countries**.** Such bubbles may occur in equity markets, housing markets, commodity markets, bond markets and credit markets. QE may be justified by weak economic recovery and growth fundamentals, but keeping interest rates too low for a long time may eventually create asset bubbles as happened in 2000-2006, when the US Federal Reserve cut the federal funds rate to 1% during the short 2001 recession and subsequent weak recovery and then kept rates down, thus fueling credit/housing/subprime bubbles.

Sixth, QE may create moral-hazard problems by weakening governments' will to pursue needed economic reforms and may also delay the fiscal austerity if large deficits are monetized, and, by keeping rates too low, prevent the market from imposing discipline. **Seventh,** exiting QE too slowly and too late, could result in inflation and/or asset/credit bubbles and selling too many long-term assets purchased during QE may lead to a sharp increase in interest rates affecting economic recovery and may cause large financial losses for holders of long-term bonds. If the exit attracts a rise in the interest rate on excess reserves it may cause important losses for central banks' balance sheets. **Eighth,** a long period of negative real interest rates can produce a redistribution of income and wealth from creditors and savers toward debtors and borrowers**. Ninth,** QE and other unconventional monetary policies may have serious consequences like an excessive inflation or slowing down the credit growth, if banks – faced with very low net interest-rate margins – decide that risk relative to

reward is insufficient. **Tenth,** there is a risk of a difficult return to conventional monetary policies due to giving up to inflation-targeting regime which involves no anchor for price expectations.

In Roubini opinion monetary policies are becoming more unconventional, not even knowing short-term effects, unintended consequences, and long-term impacts. QE and other unconventional monetary policies have important short-term benefits, but such policies cannot remain in place too long as their side effects could be severe and the longer-term costs very high.

7. Conclusions

It is quite difficult to evaluate the positive and negative effects of QE programs applied in the most developed countries. While for European Union it is too soon to measure these effects, for the other countries the impact of QE on economic growth, lending, inflation and deficits is hard to quantify it on statistical basis. We have some opinions of renowned experts, more or less subjective, more or less objective, and a quite pertinent analysis of a great economist and analyst, Nouriel Roubini. It is quite obvious that QE was an effective monetary tool in USA and UK, less in Japan. QE had a certain contribution to the economic growth and commercial lending recovery, and especially to the boom of capital market, although other important factors may be brought up, like regaining of consumers and investors confidence. Increasing the money supply as a result of QE did not lead to inflation raising and thus to higher interest rates. The danger of deflation still persists in the context of an anemic consumer demand due to huge losses caused to the households by the financial crisis and increased propensity to save. The very low level of deposits interests also have their major contribution to the new boom of capital market, a possible new asset bubble, together with the strong decrease of oil, raw materials and gold prices. In USA QE and growing confidence of investors in the economy have allowed loans to grow across categories, the biggest gainer has been the country's commercial lending sector. Outstanding commercial and industrial loans by U.S. lenders were in April 2015 at a record high of $1.85 trillion. This represents a growth of more than 50% over the last five years – outpacing every other loan category over this period. The table 1 highlights the proportion of loans held by all U.S. commercial banks at three specific periods: in October 2008 (when loan sizes were at their peak before the recession), in February 2010 (when loans were at the lowest level since the recession), and in April 2015 (the period with available data).

Tabel 1. Loans held by all US commercial banks in 2008, 2010 and 2015(in $ billions)*

Field	**Oct.2008**		**Feb.2010**		**Apr.2015**	
	$ bn	**100%**	**$ bn**	**100%**	**$ bn**	**100%**
Residential Mortgages	2,103	28.9	2,099	32.1	2,050	25.0
Commercial & Industrial	1,586	21.8	1,223	18.7	1,856	22.7
Commercial Real Estate	1,721	23.6	1,620	24.8	1,655	20.2
Credit Card	374	5.1	318	4.9	625	7.6
Retail	486	6.7	494	7.6	587	7.2
Other	1,017	14.0	776	11.9	1,414	17.3
Total	**7,287**		**6,530**		**8,187**	

Source: Forbes, Investing, 2015, Q1 2015 U.S. Banking Review: Outstanding Commercial Loan Portfolio, June 17
* statistical data are compiled by the Federal Reserve

During 2011-2014 US capital markets as measured by debt and equity issuances continued their growth trend with $1.23 trillion in 2011, $ 1.63 trillion in 2012, $ 1.72 trillion in 2013 and $1.80 trillion in 2014. The majority of financing activity on capital market took place in the investment-grade and high-yield debt market. Another beneficiary of QE is consumer spending which increased in the United States to $11,268.60 billion in the third quarter of 2015 from $9,740 billion in the first quarter of 2013 and from $ 8,999 billion in the last quarter of 2008. At the same time, economic growth was slowly returning in USA being 1.6% in 2011, 2.3% in 2012, 2.2% in 2013 and 2.4% in 2014, in a low inflation environment with improving macroeconomic fundamentals, including employment and housing.

In **Europe**, in Euro zone in fact, the need to implement QE was imposed by feeble economic growth (1.7% for EU 28 in 2011, -0.5% in 2012, 0.2% in 2013 and 1.4% in 2014) caused not only by the impact of the crisis but also by the effects of austerity policy imposed by Germany and European Commission. Three years ago, on September 6, 2012 the president of ECB Mario Graghi announced the Outright Monetary Transactions (OMT) or bond-buying programme for purchasing Euro zone countries' short-term bonds in the secondary market, to bring down the market interest rates and to save the single currency, euro. The size of the

programme was unlimited but any purchases under the OMT were going to be subject to "strict and effective" fiscal conditions, most likely to take the form of austerity measures and structural reforms. This was established in order to avoid the weakness of a previous ECB bond-buying plan, the Securities Markets Programme or SMP, which was both limited in its scope and unconditional.

It should be noted that a contributing factor to the increase of public debt and its share in GDP was the big difference between the interest on government securities and the growing rate of nominal GDP. In Greece case this tumbling effect of public debt exceeded 30% of GDP in 2011 and at the same year it represented 10% of GDP in Spain and 15% of GDP in Italy. As of February 2013 no country had yet applied for help under OMT, but the very fact of its existence had greatly calmed financial markets. Similar to the purpose of OMT the quantitative easing is meant to diminish the cost of financing of public debts.

As concerns **Japan** it is interesting to note that between 1992 and 2012 Japan's economic growth averaged 1% and the country struggled to survive the devastating impact of deflation. Over 20 years, Japan's stock market lost about 80% of its nominal value, as did property values. The nation became deeply indebted, as it tried fiscal stimulus to revive the economy. The yen soared in value against the U.S. dollar. Inflation rate in Japan averaged 3.13% from 1958 until 2015, reaching an all time high of +25.0% in February 1974 and a record low of -2.52% in October 2009, but after the beginning of the third round of QE, inflation rate started to grow from –0.3% in May 2013 to +4.4% in May 2014, decreasing to 2.9% in December 2014, 0.8% in April 2015 and 0.10% in September 2015. On October 31, 2014 the Bank of Japan (BoJ) unexpectedly expanded its programme of quantitative easing, showing a solid determination to end deflation, but the bank's action is also an admission of partial failure of QE. Its bond-buying has succeeded in sparking some inflation, but its goal of achieving price rises of 2% a year by around April 2015 has remained a distant dream. Both central bank and the government underestimated the dampening effect of a hike in the consumption tax in April 2014, which caused the economy to shrink by 1.7% in the second quarter and due to stagnation of consumer and corporate demand, and falling oil prices, inflation was heading in the wrong direction in 2015, and decreased even under 0.5%.

Many economists had questioned Mr. Kuroda's commitment to removing Japan's strong deflationary psychology and suggested that the central bank's formerly conservative mentality might even be returning. Mr. Kuroda's predecessor, Masaaki Shirakawa, pursued monetary easing rather unconvincingly and achieved little as a result of this program. Mr. Kuroda had sought to extend the deadline for exiting deflation but this did little to reassure that Abenomics was on track in spite of stalled growth and low inflation. When he announced the additional easing, Mr. Kuroda admitted that problems had reached a "critical point", as the bank's efforts were losing momentum.

In April 2015 it was OECD that drew attention on Japan to keep an eye on how much its massive bond-buying program is disrupting the bond market, although it was right to tackle perpetual crippling deflation." *QQE (qualitative and quantitative easing) has been very successful at raising inflation expectations to around two percent…and we have to trade off the risk of qualitative and quantitative easing with allowing deflation to continue*," said Randall Jones, the OECD's Head of Japan & Korea Desk. After two years of a 80 trillion yen ($671 billion) quantitative easing program, the Bank of Japan's 2% inflation target has proven to be only a dream and the country is again flirting with deflation. In February 2015, core consumer prices were flat year-on-year and many economists were forecasting that low oil prices would lead Japan's inflation rate into the negative over the next months which were not happened but the inflation rate reached very low levels. Ageing of population, low birthrate, cultural aversion to immigration and depreciation of labor force, associated with famously high savings rate, had severe repercussions on incomes and consumer demand, and seemed to be the main problems with Japan in the last two decades of economic stagnation. Besides the deflation danger Japan could suffer a possible fiscal crisis, sometime between 2021 and 2023, so the government should increase sales tax to over 15% from its current level of 8%.Printing money for covering deficits and public debt is not an alternative, but any tax increase will affect the consumer demand and also the inflation rate, as it did in the past.

References:

[1]. **Allen, Katie** (2015) - *Quantitative easing around the world: lessons from Japan, UK and US*, The Guardian, January 22;

[2]. **Ashworth, David** (2015) - *Japan: The Birthplace of Quantitative Easing?,*Market Realist, May 15;

[3]. **Brightman, Chris** (2015) - *What's Up? Quantitative Easing and Inflation*, CURRENTS, January;
[4]. **Da Costa, Polyana& Ponder,Crissinda (**2015) - *How Fed moves affect mortgage rates***,** Bankrate.com;
[5]. **Durden, Tyler** (2015) - *The U.S. Federal Reserve's Quantitative Easing (QE) Was "A Big Mistake"*, Global Research, August 20;
[6]. **Gilani, Shah (**2015) - *The Ugly Truth Behind the Federal Reserve's Quantitative Easing,* Money Morning, July 31;
[7]. **McTeer, Bob** (2015) - *Why Quantitative Easing May Not Work The Same Way In Europe As In The U.S.*, Forbes, January 26;
[8]. **Roubini, Nouriel (**2013) - *Ten QE Questions*, Project Syndicate, February 28;
[9]. **Samuelson, Robert**.(2014) - *Did the Fed's QE Actually Help*? Real Clear Markets, November 10, http://www.realclearmarkets.com/articles/2014/11/10/did_the_feds_qe_actually_help__101383.html;
[10]. **Stiglitz, Joseph (**2015) *The Great Divide: Unequal Societies and What We Can Do About Them*, Publica, Bucharest;
[11]. **Forbes Investing** (2015) - Q1 2015 U.S. Banking Review: Outstanding Commercial Loan Portfolio, June 17;
[12]. **PWC** (2015, 2014) - *US Capital Markets Watch Analysis and Trends*, January, www.pwc. com);
[13]. **The Economist** (2014) - *"What Is Quantitative Easing?"* The Economist Explains, January 14, http://www.economist.com/blogs/economist-explains/2014/01/economist-explains-7.