

Analysis of the Global Stock Market Trends

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Abstract The article has studied the dynamics of world trade market testifying, that is not taking into consideration its regeneration, the market development is connected with a sharp increase of uncertainty both at developed markets and in developing ones. The authors concluded that the dynamics of different segments of the world stock market depends not upon the economic situation in certain countries, but upon the actions of central banks, in the first place of the Federal Reserve Bank that actively pursue the policy of the quantitative easing. Desynchronization of the dynamics of different countries' stock markets is the demonstration of the increase of fluctuations at the global level, what leads to a weakening of economic growth rate and changes for the worse financial market situation, which become serious risks to the global economy.

Keywords: trend, stock market, quantitative easing, volatility, index MSCI

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1. Introduction

The present day condition of world trade market (and the whole world economic system) is characterized by strengthening of instability under the conditions of system uncertainty of the institutional dynamics of the global development process. A negative factor of development is a disproportion of the growth among developed countries and developing ones, which may deepen crisis phenomena in the budget, and financial sectors of these countries. Thus, consideration of the tendencies of development of different segments of world stock market is extremely topical.

2. Literature Review

Some researchers were been carried out similar researches in are of global stock market.

In a large number of studies have been investigated the financial market effects of the quantitative easing, especially with regard to the Federal Reserve's asset purchases, and found noticeable effects, on balance, on long-term interest rates. This article [6] describes the circumstances of and motivations for the quantitative easing programs of the Federal Reserve Bank of England, European Central Bank, and Bank of Japan during the recent financial crisis and recovery.

These QE_i (Quantitative Easing) policies were potentially important to the extent that they allowed

central banks to respond effectively to economic conditions—to ease credit conditions and provide liquidity even with short-term interest rates near the zero bound. The proliferating research on the effects of QE_i generally indicates that it had the desired effects on asset prices but the effects on the broader economy are much more difficult to discern because it is not possible to know with any certainty how economic conditions would have evolved without these policies in place.

Although the Federal Reserve's quantitative easing program likely helped to stabilize the economy during the financial crisis as it provided liquidity in financial markets that were seizing up, Eric M. Engen, Thomas T. Laubach and David Reifschneiders [9] estimate that the FOMC's unconventional policy actions provided no material additional monetary policy stimulus in the first two years following the financial crisis, probably reflecting the relative modest changes to policy expectations that occurred during this period, anticipation that the economy would rebound more rapidly than proved to be the case, and the inherent lags in the transmission of monetary policy.

Authors [9] have been examined the scope for international stock portfolio diversification, from the viewpoint of a United States representative investor, concerning both the Asian and the European stock markets. Their findings have indicated that despite correlation style evidence to the contrary, the European stock markets have provided a superior long-term diversification opportunity relative to that provided by the Asian stock markets. Hence, a short-term measurement of interdependence appears to be uninformative with respect to the

diversification opportunities of investors with longer-term investment horizons. In terms of methodology, they have been adopted common stochastic trend tests, including a common stochastic trend test, which accounts for generalized autoregressive conditional heteroskedasticity effects in conjunction with the recursive estimation of these tests to estimate the development of long-term stock market interdependence linkages. Recursively estimated robust correlations between the international stock markets were utilized to reveal the nature of short-term stock market interdependence linkages.

The following authors [15] were been presented a study, which is being contemplated with the objective of studying the degree of stock market integration. In their study, month-wise average prices of BSE-Sensex, NYSE, NASDAQ, S&P500 [16], HangSeng, Nikkei225, SSE Composite index and FTSE100 have been selected. Multiple Correlations has been computed for the select stock market indices. Statistical Significance of the correlation has been tested by applying correlation t-test. The results of those studies support the view that there is a substantial integration between domestic and international financial markets. BSE-Sensex has witnessed greater fluctuations, which has been indicated by very high Coefficient of variation compared to other select indices. Sensex, the Indian bench market index, has been shown strong association with NYSE and Hang Seng. Chinese stock index i.e., SSE Composite index has been exhibited strong correlation with BSE-Sensex and with Hang Seng. Japanese stock index i.e., Nikkei225 has had strong correlation with all the select indices except Sensex, HangSeng and SSE Composite index. The European index i.e., FTSE100 has been exhibited strong correlation with all the US stock market indices and with Nekkei225, the Japanese stock market index.

Authors [18] were been presented a manuscript, the purpose of which is to study the principle fluctuation modes of the global stock market, which is regarded as a complex system. It has been proposed that the systematic risk can be reflected by the trace calculated from the cross-correlation matrix, and the integrity can be classified into clusters according to the plus-minus signs of the elements of the eigenvectors corresponding to several top largest eigenvalues whose total value accounts for more than 60 percent of the trace. The principle fluctuation modes of 30 stock markets were in the same direction in each year of 2005-2010. According to the classification criteria proposed in their manuscript, the stock markets of the America, Europe and Asia & Oceania were been automatically classified into different clusters, while Brazil, Russia and China are separated.

The following well-known authors [8] were been published the manuscript, which describes long-term estimates of expected return on equities, which were typically derived from U.S. data only. There were reasons to suspect that these estimates are subject to survivorship, as the United States was arguably the most successful capitalist system in the world. They have collected a database of capital appreciation indexes for 39 markets going back to the 1920s. For 1921 to 1996, U.S. equities has had the highest real return of all countries, at 4.3%, versus a median of 0.8 percent for other countries. The high equity premium obtained for U.S. equities were appeared to be the exception rather than the rule.

Authors [11] believe that foreign QE affects more risk-taking in emerging markets through an expansion of credit supply to riskier firms rather than improving real outcomes of firms in emerging markets. Moreover, low foreign monetary policy rates and expansive QE increase disproportionately more the supply of credit to borrowers with higher ex-ante loan rates-reach-for-yield-and with substantially higher ex-post loan defaults, thus suggesting an international risk-taking channel of monetary policy.

3. Current Trends

Notwithstanding the fact that the sharpest phase of the world crisis took place nearly 7 years ago, renewal of the economy rates in the majority of countries in the world are lagging behind the planned ones. As a result of financial pumping up economies black marketing is strengthening and main global disparities deepen, which is responsible for the cause of the crisis. The use of so-called 'anti-crisis methods' causes a sharp increase of the state debt levels already in a global scale. However, if in the previous decade's debt problems were intrinsic in the developing countries today main debt risks are formed and come from developed countries.

Supporting insignificant economic growth of global economy of late is supported by different methods of non-traditional monetary-credit policy applied by the central banks of different countries (in the first place by the USA). One of the most significant is the use of different programs of 'quantitative easing (QE_i)'. Just the same, despite infusing money into economy (money emission, debt monetization, lowering reservation rate, refinancing, etc.) and hoping that, at least a part of this money will be directed to the real sector of economy, economic growth is very moderate and the possibility to provide full employment is absent [1].

One of the main reasons for this is that the excess liquidity does not turn into credits for the real sector of economy and only raises the level of borrowed means usage and financial markets speculations (at the stock market in the first place). Considering the consequences of QE_i it may be asserted that stock markets grow actively in the time of easing and fall when the program of acquiring asset is over (Figure 1).

Any kind of monetary stimulating introduces a disbalance into the development of some or other sectors of economy. In spite of the fact that main decisions in the policy of quantitative easing were adopted at the end of 2008 renewal of economy growth and productivity rates in the majority of developed countries proceed in lagging behind rates compared to the population growth.

At the same, some trend models were been built based on analyzed lines (Figure 1), which are presenting below (with the indicated approximation credibility – R²):

For the "MSCI World"-line (blue line), the dotted line showed of polynomial trend of the 6th degree:

$$y = 6E-16x^6 - 2E-10x^5 + 2E-05x^4 - 0,8701x^3 + 26779x^2 - 4E+08x + 3E+12, R^2 = 0,9304.$$

For the "MSCI Developed Markets"-line (red line), the long dashed line showed of polynomial trend of the 6th degree:

$$y = 5E-16x^6 - 1E-10x^5 + 1E-05x^4 - 0,7129x^3 + 21941x^2 - 4E+08x + 2E+12, R^2 = 0,9415.$$

For the “MSCI Emerging Markets”-line (green line), the short dashed line showed of polynomial trend of the 6th degree:

$$y = 7E-16x^6 - 2E-10x^5 + 2E-05x^4 - 0,9119x^3 + 28028x^2 - 5E+08x + 3E+12, R^2 = 0,7974.$$

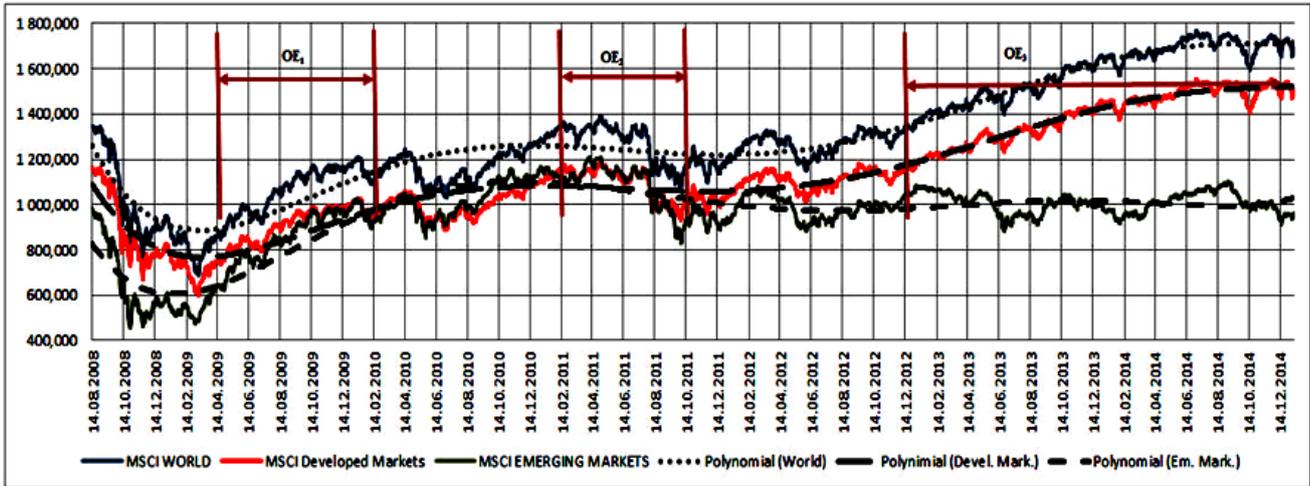


Figure 1. Influence of quantitative easing policy upon the stock market (accordance to MSCI data [10])

In addition, we can see enough simple trend models, but with the quite good volume for the approximation credibility (which are larger than 0.8 for everything volumes), because the studied time line is quite long. However, in any case, we can say about possibility for forecasting for those similar data sets.

Thus, applying these instruments is not enough for providing stable high economic growth. Besides, bearing in mind that short-term interest rates remain close to naught, they have nowhere to fall in order to stimulate a raise of investment spending to provide full employment in the economy.

In addition, carrying out quantitative easing in developed countries leads to excessive capital outflow to the markets of developing countries, since interest rates for state bonds in the USA, Japan, Great Britain, and Germany are at a very low level. The monetary policy of developed countries (the USA in the first place) has a great influence upon South America, Eastern Europe, and Middle East Africa. Index MSCI [12] analysis for developing countries corroborates this: during the first

quantitative easing MSCI-index for developing countries increased by 80%, during the second quantitative easing the increase was much smaller – 18,7% (that shows the ineffectiveness of solving the problems of stability of the financial system though the methods of financial infusion). In the period between the two infusions index fell by 4.4% (Figure 1). Consequences of the third quantitative easing are even more pessimistic – if developed stock markets grow, the markets of developing ones are characterized by negative tendencies (accordance to data of World Federation of Exchanges [17] and MSCI Index [12]). In 2014, the majority of stock markets of developed countries have shown the highest return, for example, National Stock Exchange India – 68.7%, BSE India – 67.2%, Buenos Aires SE – 52.14%. At the same time, some stock markets of developed countries have the most dropping, for example, Budapest SE – 13.5%, Moscow Exchange – 12.24%, Malta SE – 2.45% and Colombia SE – 2.39%. These events have occurred against the background of common growth of the world stock market on 10.2% [1]. This tendency is continuing in 2015 (Figure 2).

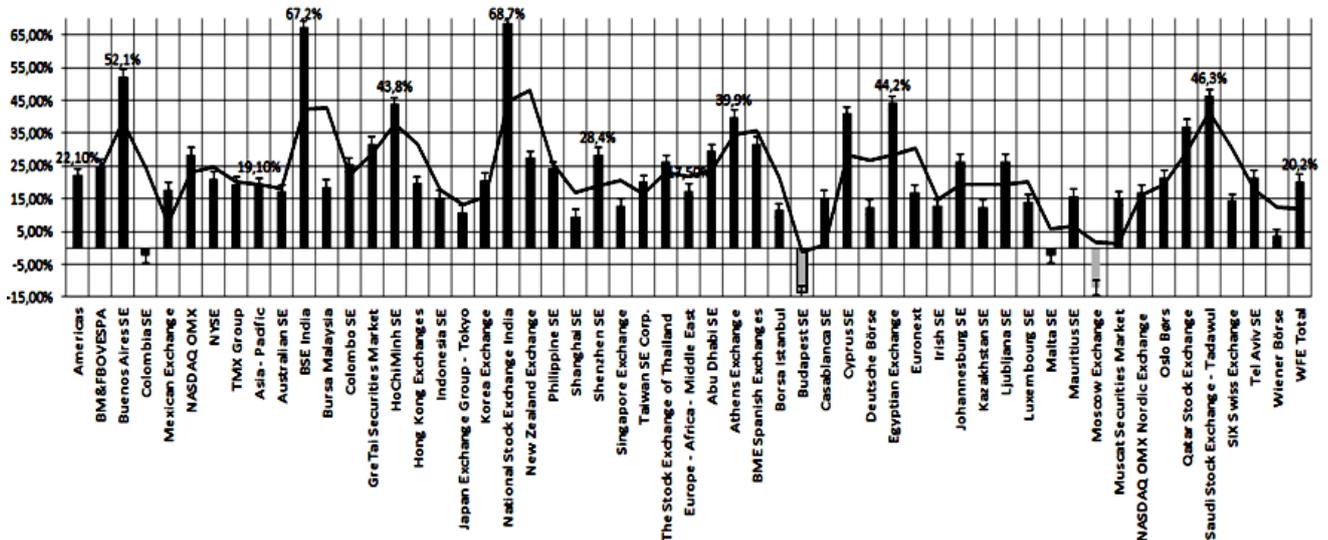


Figure 2. Profitability of world stock exchanges in 2014 (accordance to the World Federation of Exchanges data [15])

Nevertheless, there exist risks, which the developing countries encounter. They are mainly connected with the capital flows ability to enlarge the problems of home politics. Capital influxes may stimulate inner credits boom and assets prices increase that later on turn into a quick abatement. In the report on international financial stability, the IMF [7] studied capital flows to the developing markets and concluded that instead of concentrating on the power of a country the flows of 'portfolio' investments ever more depend on the general financial situation in the world. Therefore, stock markets of the developing countries become more integrated into international financial expanse becoming one of the main channels of widening financial crises. Even now in a lot of developing countries the signs of overheating of economy are already observed. External emission of corporative bonds of these countries is the highest during last years. These debt securities are more frequently considered as a substitute for highly profitable corporative USA bonds because they are characterized by a similar market capitalization, lower advantage, and higher profit norm with the same credit ratings, which makes them more attractive for a wide

circle of investors. It seems to be a positive dynamics as the companies that previously felt lack of credit would gain access to capital now. The risk is in the following if such a tendency goes on then a too large volume of capital may too quickly move to the countries with forming markets and it will form a risk of fixing the wrong credit interests and an unexpected change of financial flows provided that negative events lead to a sharp reduction of risk inclination.

A quantitative easing consequence may become 'the bubbles' creating in different sectors of financial market. Many economists mark forming of potential bubbles. Among them, Nobel prize-winner Robert Shiller [13], who warns that there is an overheating observed at the market. In August of 2014 Shiller (Figure 3) P/E ratio (average companies profit from index S&P 500 [16], corrected according to the inflation during last 10 years) was on the level 25, and since 1881, it exceeded this indicator only three times – in 1929, 1999 and 2007. At the same time, the line trend (shown in Fig. 3 by dashed line) has positive tendency during all researched period with the angle 3.147 degrees.

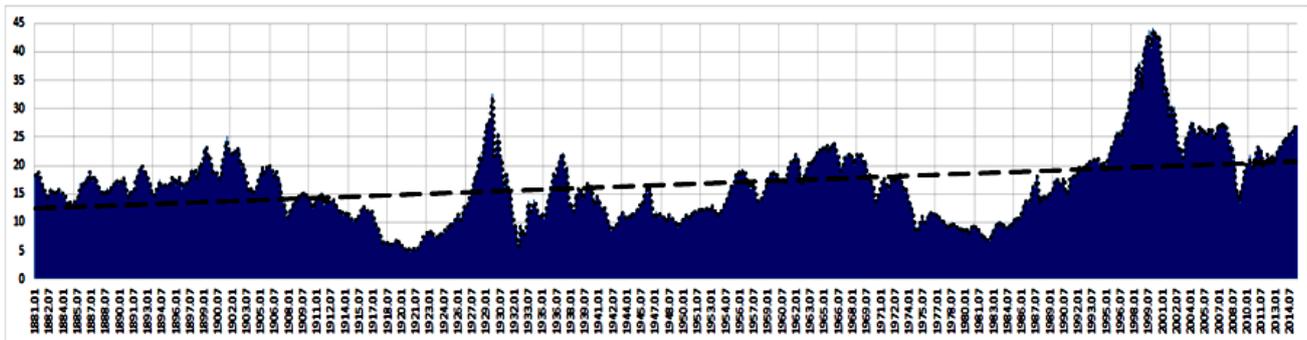


Figure 3. Dynamics of the Shiller's coefficient P/E (accordance to the Standard & Poor's data [14]; Shiller, 2000, 2005, 2015 [11])

Permanent research data of the markets [2] have shown that 78% all European shares (in April 2015) were in a state of speculative bubble (only 3% of these similar shares were in December 2014); 76% shares in the government bonds sphere were in that alike state (36% of these similar shares were in December 2014) and 79% shares in the corporate bonds sphere were in that alike state (5% of these similar shares were in December 2014). Those data were been obtained to accordance to results of Luceya and Muckley [9].

Thus, financial world is stating in a waiting process when the bubbles will start to burst. Based on our opinion, this event can be occurred in 2016, because this event did not occur in 2012-2013 based on active policy of quantitative easing.

The financial sector growth against the background of a deterioration of the macroeconomic indicators builds the negative effects for the further development of world economy and separated countries and sectors. Cecchetti and Kharroubi [3] in their research work for the Bank for International Settlements have proved the negative interconnection between growth rates of the financial sector and growth rates of total factor productivity. Thus, the financial growth disproportionately harms to financial dependence of the real sector enterprises.

The following fact cannot forecast, how the world financial system responds to increase rates in the US. In this case, can be the following actions: increase of

volatility and turbulence of the financial market (especially for the developed countries, as it happened in 2013 when the first time was been proclaimed on the possibility of reducing purchases of bonds); increase of the dollar and fall of other currencies, even more slowing of economic growth and deterioration of the macroeconomic indicators. The consequences of the policy of quantitative easing is unknown even direct developers of this policy; forecasts of Federal Reserve System each year do not come true – for the 12th from the last 14th years Federal Reserve System is overestimated the speed of economic growth in the next 12 months.

Nevertheless, based on the author's opinion, the most important shortcoming of the QE_i is a fact that government and society does not see any incentives for carry out the necessary economic reforms, it does not solve the structural problems of the world economy, does not resolve the trade conflict between countries, does not allow refuse to credit pumping of aggregate demand, does not reduce the state budget deficit (i.e. those imbalances that led to a crisis).

4. Conclusion

Thus, the analysis of the word stock market testifies that in spite of renovation its development is connected with a sharp increase of uncertainty at both developed

markets and developing ones. The dynamics of different segments of world stock market depends not on economic situation in definite countries but on the actions of central banks, first place FRS, which actively pursue in the politics of QE. Increasing interest rates could have a negative impact on different segments of the financial market and on the growth of the world economy. Financial markets instability is possible. It may occur in the case if US FRS begins to increase interest rates, as the liquidity excess at the markets will reduce. Unwillingness of the global financial community to reform radically the system for retention short-term profits may result in an unexpected way against them over the long term. Desynchronization of dynamics of stock markets of different countries testifies of fluctuation strengthening on the global level, that leads to the weakening of economic increase tempos and, also deteriorating the situation at financial markets which become one of serious risks for global economy.

In any case, the first increase in interest rates since June 2006 will mark a new stage for the stock markets. The impact of higher rates will be less predictable, than normal, but historical comparisons do not help to predict a magnitude of all changes. The entire financial system expect huge changes. At the same time, given the poor macroeconomic performance and policy preferences, it is possible that the FRS will start fourth round of the quantitative easing. As a result, other central banks will be forced to do the similar actions, so as not to lose in the global currency war.

Thus, the obtained results have confirmed that QE policy creates additional risks for the markets for developed countries, and for developing countries. Nevertheless, in our opinion, an important area for the future research should become a development of more coordinated global monetary policy and macro prudential national policy, which must reduce the negative external effects of the foreign monetary policy on domestic stock markets.

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