



Each of the following components of the list of factors can also be detailed. That is, the indicator  $R_{kmakro}$  in the formula 1 is also complex and its simplest formalized expression has the form:

$$R_{kmakro} = f(ER_i, FN_i, TR_i, IK_i, KP_i, \dots, n) \quad (2)$$

The total impact of external factors can be not only positive but also negative because it will be more correct to use the sign « $\pm$ » before of the sign of the second sum in the Formula 1. Further formalization of external factors in the future will make it possible to their quantitative assessment, and therefore the implementation of such studies is rather relevant area for scientific researches.

Also, it is necessary to form the principles for constructing a multi-level and multi-criterial mathematical model in order to provide the possibility of individual application of the developed approach to a particular enterprise. This, in turn, requires the development of a classification of individual factors of influence, the substantiation for choosing their optimal amount and the method of such choice. In addition, the application of developed approach should also provide a multiplier effect (including social).

Outlined direction of scientific researches will help achieve adequate assessment of the strategic position of the entity subject to development and contribute to the development of effective management decisions.

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## CHANGES IN STOCK MARKET VOLATILITY: LESSONS FROM THE GREAT RECESSION

The Great Recession of 2007-08 was the worst economic downturn experienced by the United States since the Great Depression of 1930s. Even though this recession originated in the U.S. housing and financial markets, it resulted in large declines in output, trade, foreign direct investment and prices of financial assets in the rest of the world.

In this paper I focus on the effects of the Great Recession on changes in the patterns of stock market volatility. During the recession, and in the years that followed, there were several major changes in the patters of stock market volatility: (1) There was a large increase in overall market volatility as well as volatility of individual stocks; (2) Correlation among stocks increased during



the recession and remained very high since; (3) Global correlation among stock markets has increased. Combined, these changes have many implications for both the policy makers and individuals. For policy makers, this change in global correlations presents a new set of challenges because all recessions have become global – an economic downturn in one country, especially a large economy like U.S., has global effects. For individual investors, as well as large institutional investors, the change in the patterns of risk upends traditional approaches to risk management and potentially reduces the benefits from diversification.

The changes in volatility patters of U.S. stock market has been documented in Lebedinsky and Wilmes (2017). In that paper, we used the approach developed by Campbell et al. (2001) to examine the patters of stock market volatility using U.S. data. Campbell et al (2001) showed that stock market volatility can be decomposed into three main components: market, industry and firm volatility. This decomposition allows us to see stark differences between the Great Recession and the other most recent downturn in the U.S. financial market – the Dot-com bubble.

Figures 1-3 show how these three components of overall volatility evolved over time. The details on how these series were computed can be found in in Lebedinsky and Wilmes (2017). The data used to compute these volatilities are daily stock prices covering the period from 1963 to 2014 for all the stocks traded on U.S. stock exchanges. The graphs show that during the Dot-com bubble, there was a large increase in both firm and industry volatilities but only a relatively moderate increase in the market volatility. During the Financial Crises, all three measures of volatility had large increases. This finding is intuitive – the Dot-com bubble was mostly confined to technology sector resulting in an increase in industry and firm volatility. The Great Recession, on the other hand, affected the entire economy.

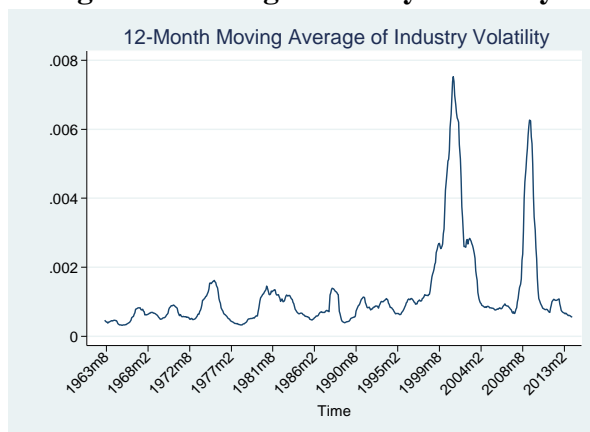
**Figure 1. Average Market Volatility**



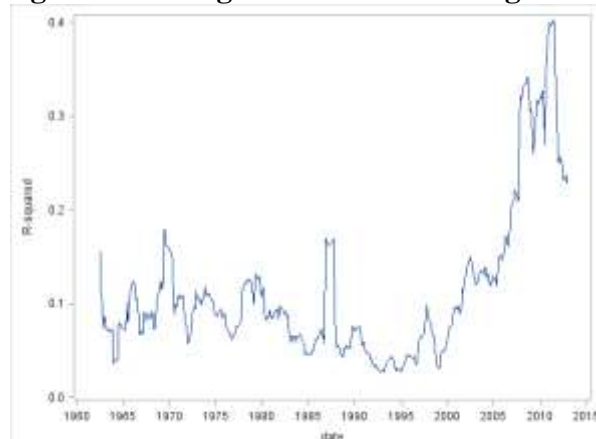
**Figure 3. Average Firm Volatility**



**Figure 2. Average Industry Volatility**



**Figure 4. Average Correlation Among Stocks**





Another notable result from Lebedinsky and Wilmes (2017) is the change in the correlation among stocks. For each month, we estimated the market model for each of the stocks in our data. Then, we computed the average R-square of these regressions. This measure shows how much the stocks are correlated with the market and, hence, with each other. Figure 4 shows that correlation among stocks went up dramatically during the Great Recession and continued to remain high after the recession. This implies that the stocks in the U.S. market are much more correlated with each other than they used to be. This should pose a challenge to investors because as correlations among stocks go up, so does the overall risk of any portfolio that relies primarily on stocks.

It is a well-known fact that correlations among stocks with a market increases during a downturn. Ang and Chen (2002), Cho and Engle (2000), Hong et Al. (2003)) find that correlations among stock increase during the bear markets and decrease during bull markets. What was different about this recession is that correlation remained high even during the recovery.

The Great Recession appears to have changed the volatility patterns well beyond the U.S. stock market. Cheung et al. (2009), show that the Financial Crisis had a direct impact on financial markets in many developed economies. Their findings re-inforce the key results from the contagion literature – that correlations across countries increase during crises. They find that during the crisis, shocks linked to U.S. economy had twice the effect on other countries' stock markets compared to normal circumstance.

Even though emerging markets are not as closely integrated with with global economy as developed economies, they were not immune from the crisis either. Boamah et al. (2016) showed that the Financial Crisis affected African stock markets as well, with greatest impact falling on the most liquid and most capitalized markets.

As the world economy becomes more deeply integrated, so do the financial markets of individual countries. Thus, the shocks originating in one economy have an effect on the rest of the world. Thus, the social and economics costs of business cycles are no longer confined to one particular country. This raises an important question for policy makers: How much should the policy makers in one country take into consideration the effects their economy has on the rest of the world?

Unfortunately, while there are many reasons for policy-makers to react to such crises, Kenourgios et al. (2011) argue that there might be very little that can be done to prevent such crises from becoming global. As one country goes into a recession, investors quickly pull their money from that country and reduce their exposure in all other countries that might be affected. This collective flight of investors into safe havens increases cross-country correlations, thus amplifying global effects of downturns.

Therefore, the fact of increased correlations within and across the economies may be simply a fact of life which the policy makers and investors should adjust and learn how to mitigate their consequences.

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## **FINANCIAL STATEMENT OF MNCs**

Today's global economy is characterized by rapidly ongoing process of transnationalization, in which the main driving forces behind the multinational corporations. MNCs play a leading role in the internalization of production, expansion and deepening of production linkages between enterprises in different countries. Thus, MNC together with their foreign affiliates are increasingly active on the international scene, becoming recently the main force of the world economy.

A multinational company (MNC) has conveniences and other assets in at smallest amount one country other than its residence country. Such companies have offices or factories in different countries and generally have a federal head office where they organize global management. Extremely huge multinationals have budget that exceed those a lot of undersized countries [1].

With the development of economic relations in MNCs as improved accounting add social structure, increasing its value as evidence property liability. Accounting concept is quite broad and multi-faceted, as it relates to the economic activity of people.

Financial Statements of MNC represent a formal record of the financial activities of an entity. These are written reports that quantify the financial strength, performance and liquidity of a company. Financial Statements reflect the financial effects of business transactions and events on the entity. Financial statements of MNC are a collection of reports about an organization's financial results, financial condition, and cash flows [2].

Financial statements of multinational corporations usually contain of income statements, balance sheets, statements of retained earnings and cash flows. It is standard practice for businesses to present financial statements that adhere to generally accepted accounting principles (GAAP) of International Financial Reporting Standards (IFRS) to maintain continuity of information and presentation across international borders. Financial statements of MNCs are useful, because they show the financial condition of a company at a given period [3].

MNCs not only integrate, through their internationalization and activity location strategies, local suppliers and industries into the world economy, they also integrate local markets. In particular, in the transitional markets their role as change agents is very obvious: foreign MNCs shape, stimulate and create markets through immense investments, the establishment of supply and