

Corporate financial behavior towards global recession

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Abstract

Present study identifies the corporate financial behavior towards the global recession. Study explores how financial markets reacted to the economic downturn. Study reveals that old financial theories and models could not predict the worldwide recessionary conditions and were replaced by new financial concepts like behavioral finance, multi-factor & agent based modeling and non-trivial probability etc. Financial mix was also redefined as per changing the priorities of investors during the global financial crisis. (G10, G11, G12, G13, G14, G15, G17 7 G18)

Introduction

In the history of human beings the kind of events, global financial recessions have been witnessed time to time and have a significant effect on the economic systems but generally we fail to predict them apparently and when they happen then we throw away our orthodox and move towards the new ways and approaches [Rudd Kevin, 2009]. Recently world has faced severe economic crisis during the year 2008-09 where even AAA rated securities didn't follow the Efficient Market Hypothesis and were found crashed [Jeremy J. Siegel, 2010]. Aftermath of various economic crises at global level, the term "Herd" is again on the edge of disapproval in financial literature [Bikhchandani, S. & Sharma, 2000]. Traditional financial theories have again been questioned during the period of global recession which needs to be incorporated the behavioral finance with the integration of various disciplines. Efficient market hypothesis gained a lot of dominance in 1970s but during the 1980s it couldn't predict the financial market behavior significantly. During 1990s the behavioral finance emerged as a research concept and various feedback theories were developed. Models of assessment of impact of smart money on investors were also designed in this era [Robert J. Shiller, 2003]. The global crisis in subprime mortgage bank loans in US, could have been better managed with the involvement of all stakeholders, investment fund managers, rating agencies, regulatory and monitoring authorities of financial and banking markets [Pezzuto, Ivo, 2008]. The fourth quarter which is the peak point of the global financial crisis, 2008 declined the rate of new loans to big borrowers by 47% in comparison to previous quarters in US [Victoria Ivashina, 2008]. Despite the innovative financial strategies of leveraging and funding, the banks couldn't reduce the systematic risks and financial instability in 2008 and they were titled as 'Old Wine in New Bottle' [Mah-Hui, Michael Lim, 2008]. Many of the financial firms which took rescue operations during the economic crisis became insolvent. This financial crisis is not last, it will happen again but in some other sort [Alan Greenspan, 2009].

As we know, traditional financial theories have again been questioned during the period of global recession occurred in 2008. These theories have been failed to predict and address recent global financial crisis which has pushed to financial professionals and economists to rethink about financial theories to make their disciplines compatible with changing present scenario. No one can deny that there is a gap between theory and practice or there is a fundamental problem in finance theory itself. Even if the problems are only with the practice and not with the theory, finance academicians must revisit how financial theories can be renowned so that these problems do not reoccur. If there are problems in finance theory itself, then finance academics must reflect on the directions that finance research should take to redress these problems.

Now question arises what kind of change is required in finance mix/ theory to make it compatible with global economic slowdown. Need to answer this question initiated the researcher to make the study on this topic. This paper focuses on how finance theory needs to change to cope with global economic meltdown.

Literature review

Present study reviews the following previous studies made on global recession occurred at different time intervals.

Author, Year	Title of Research	Findings
John H. Cochrane, 1999	New Facts in Finance	CAPM explains the cause of variation in average returns of different stocks, assets, portfolios and funds etc. but not all investment options. So multi-factor models have been superseded to CAPM to explain it further in adequate manner. To infer the market expectations, price variables are used by the firms. Rewards for risk of recession, financial distress along with the risk of market fluctuations, are also offered by the financial marketers.
Burton G. Malkiel, 2003	The Efficient Market hypothesis and its critics	Stock markets are efficient and cannot be predicted precisely and accurately.
Ian M. McDonald, 2009	The Global Financial Crisis and Behavioral Economics	Traditional economics which is based on home-economics was not found enough to explain the financial crisis 2008-09. Behavioral finance has emerged as a predictor of market movements. Free market, self-interest approach based on rationality
J. Doyne Farmer & Duncan Foley, 2009	The economy needs agent-based modelling	Financial behavioral patterns are changing at global level. In micro-structure theories, agent-based modeling has been emerged as a necessity of the economies to enable them to predict the market behavior.
Jeremy J. Siegel, 2010	Efficient Market Theory and the Recent Financial Crisis	Efficient market hypothesis didn't work in the economic crisis 2008-09. This recession was not because of EMH. Efficient market hypothesis doesn't mean the prices are right and risk is none. EMH cannot be made responsible for this meltdown.
Schwaab, Bernd and Koopman, Siem et. Al, 2011	Systemic Risk Diagnostics: Coincident Indicators and Early Warning Signals	Study formulated a model to assess the financial system risk and with the help of this framework conterminous measures and predictors based on underlying macro-economic and credit risk constituents for the whole world were constructed. Study revealed that credit risk conditions can be segregated from macro financial fundamentals significantly in a continuous manner which can function as an alarming signal for wise macro- economic policy.
Andrew K. Rosea & Mark M. Spiegel, 2011	Cross-country causes and consequences of the 2008 crisis: Early warning	Study is based on cross sectional analysis of 107 countries. No common cause was found to the incidence of such severe economic downturn across the countries. Such negative findings disappointed the researcher.
Nicola Cetorellia & Linda S. Goldberg, 2012	Liquidity management of U.S. global banks: Internal capital markets in the great recession	Location wise pecking order theory was adopted by the parent banks to reallocate the liquidity in case of financing shock arisen in global economic downturn. From revenue point of view, more valuable affiliates to parent banks were prioritized in protection.
Eamon Duede and Victor Zhorin, 2016	Convergence of Economic Growth and the Great Recession as Seen from a Celestial Observatory	Study evidenced that the mechanisms driving the convergence couldn't work properly and recession started at global level. Macro-economic theories had massive effect on domestic as well as worldwide economic and social policies.
Troy Davig, & Aron Smalter Hall, 2017	Recession Forecasting using Bayesian Classification	Study uses the Naïve Bayes model which is closely connected to Markov's switching models and logistic regression with some significant differences as well, to predict the recession. It revealed that a very large asymptotic error rate was found in naïve Bayes Model, but it merges this error quicker than the logistic regression.

The available literature on global recessionary conditions and interpretations thereof, provides the scope to researchers to make a consolidated view of all studies to determine a new roadmap to predict and prevent such economic slowdown. The present study is purely based on the literature evidences and opinions of financial experts.

Objectives of the study

Present study aims at knowing the corporate behavioral change towards global recessionary conditions. It also examines the practical implications of financial models/ theories in worldwide economic crisis to explore the substitutes of traditional financial mix.

Research methodology

Present study is descriptive in nature which describes the implications of financial models applicable to the recessionary conditions. Study went through the review of various studies made on global meltdown along with the personal interviews of financial experts engaged in financial consultancy to the corporate; to draw some concrete results regarding to failure of prediction about the worldwide recession occurred. Study is based on following assumptions:

Preferences: It implies the risk preference. Generally, investors are found risk averse, but it is to be found whether it is time invariant or it varies with market conditions or trade cycles.

Probabilities: It implies the uncertainty in returns in terms of cash on investments which depends on the investors’ prediction with precision and accuracy. Investors may have homogenous expectations or subjectively heterogeneous.

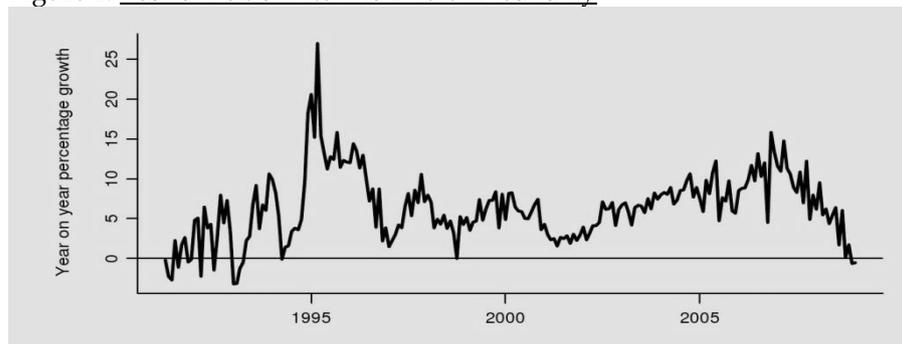
Prices: It implies the investment options with investors. Being the reaction of quotes and orders a very complex process, it is not necessary the price to be in equilibrium at every point of time.

Global recession in India & UK

A recession is a downward state of trade cycle which is officially declared by the National Bureau of Economic Research (NBER) for any economy. Economic activities in terms of real GDP, employment, income, industrial production and sales turnover (retail and wholesale both) get declined significantly. International Monetary Fund (IMF) which is global nodal agency of management of finance defines the global recession considering many aspects as if any of the economies keeps its growth rate equivalent or less than 3%, will be taken in global recessionary condition. As per this specified measurement here time periods i.e. 1990-93, 1998 and 2001-02 have been qualified as global economic slowdown.

Most of the countries have been got influenced by the global economic crisis stringently. America, Europe, and Japan faced a severe crises of liquidity as well as credit during the recessionary periods but India has not been insulated as much of it, Being the India a developing and rural based economy with a large untapped markets, running on cautious reforms, it has not been found much affected but it could not completely isolated itself from the recessionary impacts.

Figure 1: Economic downturn of Indian Economy



Source: <http://www.nipfp.org.in>

Table 1: Volatility of UK Macro Economics Variables during the Great Moderation Compared with 150-years Average

Variable	Volatility (1998-2007)	Volatility (1857-2007)
GDP growth (%)	0.6	2.7
Earnings growth (%)	0.5	6.4
Inflation (%)	0.9	5.9
Unemployment (%)	0.6	3.4

Source: Haldane (2009)

Results & discussion

On the basis of review of the various studies and opinions of financial analysts, it has been found that conventional financial theories could not indicate the early warning signal of the global meltdown in 2008 but the enterprises which adopted the behavioral finance models and new theories to cope with changing patterns of the markets were found least affected by such worldwide recession. Results of the study have been presented in following table:

Table 2: Move of Financial theory during Global Recession

Aspects of Finance Theory	Move during Global Recession	Substitution in Global Recession
Efficient Market Hypothesis	Irrational investment decisions	Behavioral Finance
Factor Models	Inadequacy of CAPM	Multi-Factor Model
Liquidity	Micro has become macro!	Systemic Risk- non diversifiable risk
Risk Free Rate	Mere a useful approximation	Overnight Index Swap
Microstructure theories	Heterogeneous Players	Agent-based Modeling
Tail Risk – Real Risk	Non-linear dependence	Quantitative models based on non-Gaussian fat-tailed distributions
Econometrics	Several possible regimes	Non-trivial Probability

Global recession has opposed the two aspects of Efficient Market Hypothesis (EMH). Burton G. Malkiel (2003) clearly stated that first aspect is that there is no free lunch means it is not possible to beat the market in risk adjusted terms. During recession low-risk, high return investments turned out to be high-risk that failed the EMH. Second aspect is that prices are “right” in the sense that they reflect fundamentals. The economic slowdown has also denied this claim. Many prices were clearly not right.

Global Recession has proved that CAPM should be substituted by Fama-French three-factor model and it should be taken as core financial model in prediction of market behavior. Further finance analyst should go beyond even to reflect liquidity as an overt risk aspect.

Most of the studies depicted that during the global meltdown, liquidity risk has been identified as a systematic risk that cannot be diversified. The second important aspect is that there is key relationship between funding liquidity and market liquidity, both were found deeply connected. As it is well known that market liquidity is related to microstructure of markets whereas funding liquidity is associated with macroeconomics. It shows that how suddenly micro has turned to macro.

After worldwide economic downturn Overnight Index Swap (OIS) has been regarded as a thing very closely associated to the risk-free rate of return. It is supposed that high credit rated entities have very low (negligible) probability of being defaulter over a one-day time span. Its front runs to a very popular two curve discounting model. Hence the usefulness of risk-free rate of return should be taken only in approximation.

Financial behavioral patterns are changing at global level. In micro-structure theories, agent-based modeling has been emerged as a necessity of the economies to enable them to predict the market behavior. Agent based modeling permit arbitrary number of heterogeneous market players having diverse information sets, dealing approaches, and purposes. If it is taken correct that microstructure theories are capable to understand the portents at macro stage, then it becomes essential to adopt agent-based modeling in finance theories.

Financial move in recessionary conditions have also explored that a large amount of tail risk doesn't depend on tail risks of assets individually but on ordinary jump and other conditions of non-linear dependency. Quantitative models which depend on non-gaussian fat tailed distributions based on nonlinear structure have been suggested to apply. These models are hard but technical sound.

Risk models having Gaussian probability distributions along with linear correlation are now no longer defensible after witnessing the facts related thereto during global recession.

Before occurrence of this global meltdown, Great moderation had been accepted as a perpetual structural change in the global economy which signified permanently reduced volatility but this global crisis 2008-09 has compelled to review the statistical procedures in wholesomeness of probability of various policy regimes. Hence it should be taken that nontrivial probability of moving to a separate regime exists.

Conclusion

The global economic slowdown has caused the serious problems with the rejection of implications of traditional finance mix and theories. It seems that finance courses have not coped with the developments in finance theories in the last decade or more. Since late 1990s, finance theory had shifted to new multifactor Network models that are used in modern finance. In other words, change in finance teaching is required, a lot in comparison to change in finance theory itself. Interpretation of the various studies states that home-economics actions were found inconsistent with the prediction of the global crisis. This is the era of a large amount of innovations in financial markets and products where free markets and self-interest approach are taking place. Study also reveals that there are some aspects of finance which are required to be espoused in mainstream of new models in better manner. However, finance theory itself is upgrading with the incorporation behavioral finance which integrates the new ideas and insights from several other disciplines and models, but the this worldwide economic meltdown has depicted that sociological factors have significant impact on many financial phenomena. To achieve the optimized point of finance theory, not only sociology but finance professionals must incorporate newly evolved biology, neurosciences, financial antiquity, and the multidisciplinary arenas of network theory in finance. At the end, it can be said that in globalization and increasing complex world, finance theory must be converged with sophisticated mathematical models and statistical tools.

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