Volume : 2 | Issue : 11 | Nov 2013 • ISSN No 2277 - 8160

Research Paper | Economics

Global Financial crisis 2008: Role of Asymmetric Information

Ms. Pragya Madan Assistant Professor, S.G.T.B Khalsa College, University of Delhi

Ms. Jasdeep Kaur Assistant Professor, S.G.T.B Khalsa College, University of Delhi

ABSTRACT *Financial markets, transaction costs and financial intermediation are essential to the well-functioning of financial sector of an economy. They perform the role of channeling funds to parties that have profitable investment opportunities. However, asymmetric information can seriously impair this process when parties entering the financial contract are not fully aware of the risks involved .They are thus exposed to incomplete information sets that limit their coverage from possible losses. This severely hampers money supply and aggregate economic activity finally rendering the situation of financial crisis. This article addresses the problem of information asymmetry as a cause behind the contemporary economic crisis. The article emphasizes that the phenomenon of information asymmetry as explained by Adverse selection and Moral hazard is one of the most important concepts in explaining the existence of the current crisis, by analyzing financial structure of U.S. economy and other emerging market countries.*

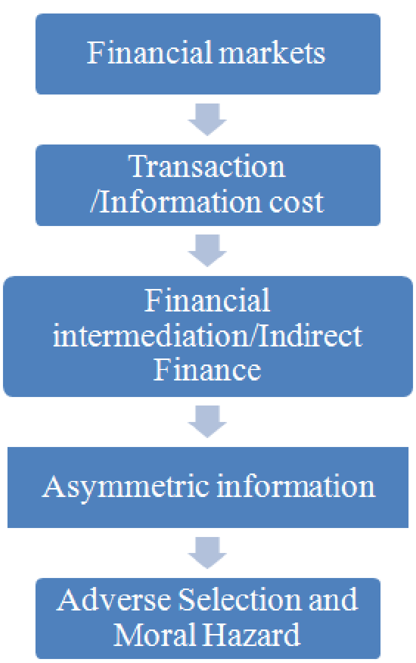
KEYWORDS : Financial markets, financial intermediation, asymmetric information, financial crisis, adverse selection and moral hazard

Introduction

Over the past 15 years, financial markets have become increasingly global. There have been financial innovations in the form of 'Derivative market' and 'Asset Securitization'. With these innovations and developments, the investor base has been exposed to various types of risks. An important reason why many developing /emerging and developed economies experience financial crisis is that their financial systems are either underdeveloped or developing or suffer from market failures. Such exposures and disruptions in financial markets lead to financial crisis which in turn shrinks the level of economic activity. Studying financial crisis is important since it has led to severe economic downturns in the past and has the potential for doing so in future.

This paper aims at understanding the nature and extent of financial crisis through asymmetric/incomplete information. The following diagram explains the flowchart for financial market working in an economy.

Fig 1: Working of a Financial market



Participants in any financial markets incur certain transaction or search cost. In order to mitigate such cost, there are financial intermediaries or the option of indirect finance at an investors' disposal. However such costs may lead to a situation where there is imperfect knowledge. In particular it occurs where one party has different information to another. The problems relating to financial markets that are caused due to information asymmetry are referred to as the agency problems.

Asymmetric information in Financial Markets

Throughout financial literature it is assumed that markets work with perfect information and wherever there is asymmetric information, markets fails to deliver the requisite efficient results. Asymmetric information is a problem in financial markets relating to the phenomenon of borrowing and lending. In these markets the borrower has much better information about his financial state than the lender so both the lender and the borrower does not face the same information set. The lender has difficulty knowing whether it is likely the borrower will default. To some extent the lender will try to overcome this by looking at past credit history and evidence of salary. However, this only gives partial information. There are two consequences of this:

The problem of Adverse selection: Occurs before the Transaction

The problems caused by adverse selection were first studied by economist George Akerlof,(as the Lemons problem) who shared the Nobel Prize in 2001 for his pioneering contributions. Akerlof showed how adverse selection can undermine the possibilities for trade in a used-car or second hand car market. Because sellers want to sell lemons and keep good cars, buyers of used cars must be wary of quality. This consideration drives the price of a used car down and reduces the number of good cars owners that are willing to sell. In some cases, adverse selection can away all drive good cars from the market completely.

The problem when applied to the financial or the banking sector suggests that banks with imperfection information about the 'not so creditworthy' borrower may end up incurring a default loss, so they charge a premium. In contrast if there was perfect information, banks wouldn't need to charge this risk premium. The general consequence is that lenders will charge higher rates to compensate for the risk.

The problem of Moral Hazard: Occurs after the Transaction

Moral hazard is generally seen for services such as insurance and warranties. In these cases, after the deal is done, one of the parties to the deal, the purchaser may be more careless because he/she has the insurance, and thus does not need to pay the full cost of damage. For instance, a person possessing insurance against theft may be less careful about closing the windows when leaving the house. Here, it is not the prior information that either party has (as in the case of adverse selection), but the inability of the insurance provider to control and monitor increased risk-taking behavior that creates the potential for market failure. Also, while in adverse selection, the seller is usually the one possessing more information, moral hazard usually has the buyer (of the insurance service) having too much control.

Moral hazard in equity contracts is referred to as the Principal Agent problem since the managers and stock owners have conflicting interests. The general consequence is that borrowers will charge higher rates to compensate for not defaulting.

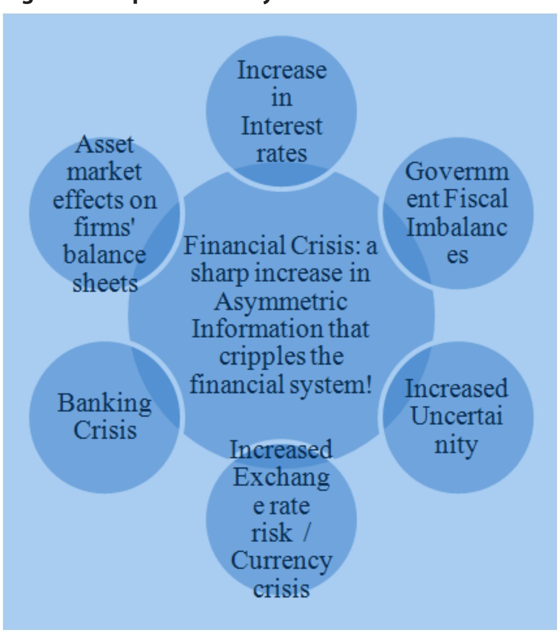
The Nature of Financial Crises: Two schools of thought!

Financial crisis are major disruptions in working of efficient markets. There are two polar views of the nature of financial crises in the literature as stated by Federic S.Mishkins (1991). The first being Monetarists beginning with Friedman and Schwartz (1963) who link financial crises with banking panics. They stress the importance of banking panics because they view them as a major source of contractions in the money supply which, in turn, had led to severe contractions in aggregate economic activity in the United States. Their view of financial crisis leads monetarists to advocate a lender-of-last-resort role for the central bank, so that banking panics and the subsequent monetary instability will be prevented.

Central bank intervention in such pseudo financial crises is viewed as unnecessary and, indeed, possibly harmful; that is, it may lead to a decrease in economic efficiency because firms that deserve to fail are bailed out or because it results in excessive money growth that stimulates inflation.

An opposite view of financial crises is put forward by Kindleberger (1978) and Minsky (1972), who have a much broader definition of what constitutes a real financial crisis than monetarists. They argue that financial crises involve either sharp declines in asset prices, failures of large financial and nonfinancial firms, deflations or disinflations, disruptions in foreign exchange markets, or some combination of all of these. Since they perceive any one of these disturbances as having potentially serious consequences for the aggregate economy, they advocate a much-expanded role for government intervention when a financial crisis, broadly defined, occurs.

Fig 2: Consequences of asymmetric information



Status of Financial Crisis: Origin till 2008

From the 1970s onwards, US and UK banks started selling off their own credit risk to third parties. Overtime they became reliant on computer-based systems for assessing that credit risk. Moreover relaxation of the rules regarding capital movements between countries, widespread de-regulation of financial markets during the 1980s, and a number of banking mergers also dramatically changed the global financial landscape by the end of the 20th Century.

During the 1970s and 1980s, progressively complex financial products were developed and traded, providing a speculative income for traders and a method of spreading the risks associated with financial trades. New financial products, such as 'derivatives', 'options', and 'swaps', joined more traditional products, like mortgages, hundis and bank loans, in an ever-widening array of financial goods and services. In addition, this period saw the increasing securitization of assets, most notably mortgages.

The financial meltdown 2008: US real estate bubble burst and asymmetric information

Most financial crisis in US have begun with the deterioration in banks' balance sheet, a sharp rise in interest rates, a steep stock market decline and increasing uncertainty due to failure of major financial or non-financial firms. During these crises all of the above problems increased the severity of adverse selection problems in credit markets and increased the cases of moral hazards with respect to debt contracts. The rise in such problems then made it less attractive for lenders to lend leading to decline in investment and aggregate economic activity.

Easy housing loans by banks initially pumped in liquidity creating an environment of excessive debt. Because of the worsening business conditions and uncertainty about their banks health, depositors began to withdraw their funds from banks. This lead to bank panics. This further increased interest rates and reduced the amount of financial intermediation by the banks.

Finally the economy saw sorting out of firms that were insolvent (negative net worth and hence bankrupt) from healthy firms. The same process occurred for banks. Once the sorting was complete uncertainty declined, asymmetries got reduced, stock market underwent a recovery and interest rates fell. The overall result was that adverse selection and moral hazards problems diminished and financial crisis subsided. Hence the stage was set for recovery of the economy.

Exceptional case: if however the economic downturn instead of sorting out led to sharp decline in prices the recovery process would not have been so easy. On the contrary it would have led to debt deflation in which a substantial decline in price level leads to further deterioration in firm's net worth because of increased indebtedness. When this occurs adverse selection and moral hazards problems continue to increase so that lending, investment, spending and aggregate economic activity remain depressed for a long time. The most significant financial crisis that included debt deflation was the Great Depression, the worst economic contraction in US history. Such are the consequences of prolonged asymmetric information.

Conclusion

In short there are six basic facts about the US economy

1. Role of financial intermediaries
2. Relative unimportance of securities markets for financing of corporations.
3. Financial markets as the most heavily regulated sectors of the economy
4. Collateral as an important feature of debt contracts
5. Only large, well established corporations have access to securities markets
6. Debt contracts treated as legal documents that place substantial restrictions on the behavior of the borrower.

All above peculiar features of US economy subject her to the problem of financial crisis in general and asymmetric information in particular. In order to prevent the worsening of such crisis, the economy needs to employ following tools to solve the problem of adverse selection in equity markets and moral hazards in debt contracts:

- Private production and sale of information
- Government regulation to increase information
- Financial intermediation
- Net worth/Collateral
- Covenants to discourage hiding of information

Apart from asymmetric information, there are other factors that may interfere with the efficient working of financial markets. However the paper attributes asymmetric information as the major reason behind the global financial crisis of 2008. The economic analysis of the problems of adverse selection and moral hazard help explain the basic features and functioning of financial system and thereby provide solutions

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