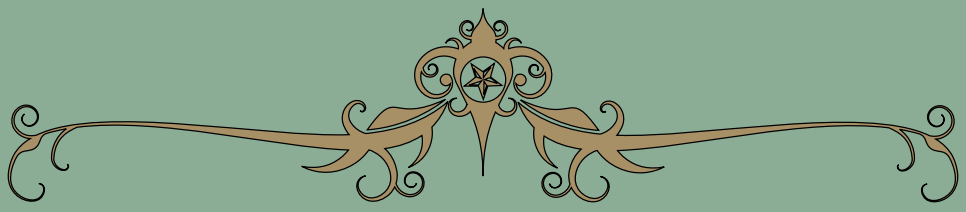
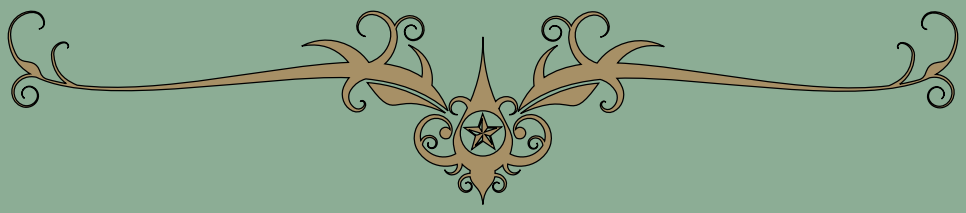


RISK AGGREGATION



Scope

In a financial system, risk can be mitigated either through diversification or transfer. The former involves a portfolio-based strategy designed to reduce overall risk by combining a variety of assets which are highly unlikely to behave in an identical manner. The latter involves the movement of risk to external counterparties (for instance, from the household to a firm, or from a domestic investor to an international investor).

Entities ultimately bearing such risks may be termed ''aggregators''. Any well-functioning financial system should have robust risk aggregation capacity with a range of institutions, such as commercial banks, insurance companies and mutual funds, having the appetite and the ability to play the role of aggregators.

Characterising the present state of Risk Aggregation in India

In discussing the current risk aggregation landscape in India, following features stand out:

a. The size of the Indian financial system is not adequate to meet the needs of the real economy. A comparison of the asset size of the top ten corporates and that of the top ten banks reveals that risk aggregators in India are unable to meet the scale or sophistication of the needs of large corporate India. India's largest bank, SBI, states in its annual report, that its credit to Reliance Industries Limited breached the single borrower exposure limit stipulated by the RBI on three occasions during the year 2010-11. It is amply clear that Indian banks need to be larger and more numerous to service the needs of the economy. Studies comparing the financial systems of India and China show that the financial depth in India's economy, measured by the ratio of the stock of financial assets to GDP was just 137% in 2003, far below China's 323%.[1] This reflects the degree of monetisation in an economy and its supply of intermediated capital.

b. The landscape is dominated by government owned institutions or directly by the government. This, in turn, has various worrying ramifications, including:

i. An implicit reliance on taxpayers' money in the event of failure. This is particularly true for the many aggregators that are also ''systemically important'' institutions (ex. Life Insurance Corporation, State Bank of India). This reduces the incentive for robust risk management practices within such aggregators. Although there have been no bankruptcies till date, it is not true that the Indian financial system has not experienced a credit crisis. Some examples include the agricultural loan waivers, mergers of weak banks with healthy banks and frequent recapitalisation of public sector banks and cooperative banks.

ii. Government dominance also ''crowds out'' market development. Financial markets and instruments to manage / transfer risk remain underdeveloped. As a result, the private sector does not rely upon existing formal risk aggregators for liquidity / financing requirements, choosing instead to rely upon retained earnings (for instance, the Indian corporate bond market remains practically non-existent at only 3.3% of GDP in 2010[2]).

[1] ''India's lagging financial system'', McKinsey Quarterly 2005

[2] OECD Economic Surveys India, June 2011

c. The regulatory regime governing aggregators is not consistent, and distorts the playing field

i. There exist multiple regulators governing the field (the risk aggregation field is divided amongst the Reserve Bank of India (RBI) for banking, Securities and Exchange Board of India (SEBI) for capital markets, Insurance Regulatory and Development Authority (IRDA) for insurance and Pension Fund Regulatory and Development Authority (PFRDA) for pensions) with absence of effective mechanisms for inter-regulatory exchange of information. This periodically results in inter-agency conflicts, frustrating the co-ordination necessary to regulate financial conglomerates.

ii. Different substantive rules lead to a skewed playing field for different types of risk aggregators (for instance, for government owned risk aggregators, while banks enjoy guaranteed spreads, priority in investment, and deposit insurance guarantees, other types of aggregators do not enjoy similar privileges)

iii. Moreover, political interference can lead to suboptimal risk management outcomes. A case in point is the Kisan Credit Card Scheme (KCC), which was introduced by the Government in 1998-99 as a step towards facilitating farmers' access to short term credit from formal financial institutions. It was further extended to include defaulters, oral lessees, tenant farmers and share croppers. As of March 2010, total amount sanctioned by commercial banks, cooperative banks and Regional Rural banks is Rs. 4,277.48 bn. KCC carries an interest rate of 7% (Interest rate of 9% of which 2% is received as interest subvention from NABARD), with an additional 1% rebate for prompt repayment. No security in the form of land collateral or personal guarantee is required for loans up to Rs. 1,00,000. Above this limit, agricultural land is accepted as the collateral for KCC, leading to high loss given default. Borrowers are allowed to withdraw any number of times within the sanctioned credit limit and settle the outstanding amount within a year of its withdrawal. Even those failing to repay during the tenure are allowed to continue with minimal penalty. KCC is evidently an example of excessive risk-taking and in such cases where credit allocation is largely driven by regulation or politics; there is clearly lack of incentives for effective risk management.

d. Senior management compensation structures dominated by stocks and options are potentially faulty as they do not incentivise risk management.

e. Mechanisms for dispute resolution are not sufficiently well developed. However there are a few good examples such as the National Securities Clearing Corporation Ltd (NSCCL), a clearing house that uses sophisticated risk monitoring tools to manage and mitigate counterparty risk. Proposals already exist as to measures that can be taken to make these existing entities become effective in dealing with, say, insolvent banks (for instance, Raghuram Rajan Committee[3] recommendations on how Deposit Insurance and Credit Guarantee Corporation (DICGC) can be armed to resolve impaired banks).

f. Positive regulatory developments are underway, including the setting up of the Financial Stability and Development Council to prevent inter-regulatory conflict, RBI guidelines permitting credit derivatives for corporate bonds, SEBI guidelines allowing exchanges to list securitised paper, and the setting up of a Financial Sector Legislative Reforms Commission to comprehensively rewrite the existing set of laws pertaining to the financial sector.

[3]Raghuram Rajan Committee Report on Financial Sector Reforms

Key Themes

Ideas emerging from participants' discussions were organised along the following themes:

1. Role of the government as a large risk aggregator
Two broad lines of thinking emerged:

The first line of thinking advocated a neutral role for the government in this space, with it not being involved in the capacities of owner, provider or interested party. The government's role is restricted to setting up the market infrastructure and policy-level interventions aimed at boosting back-end capabilities (for instance, clearing facility/ deposit insurance/ credit insurance) and laying down the rules of the game. The reasoning advanced was that government ownership (particularly in banks, as is the case presently) creates an uneven playing field, and that implicit government bailout guarantees for aggregators leads to higher systemic risk (on account of them not being penalised for taking disproportionately high risk).

The contrarian view took the stance that activities that have a ''public character'' can be achieved only if the government has ownership. For instance, participants wondered if a withdrawal of priority sector lending norms would possibly see immediate withdrawal in extension of financial services to under-served sections of the populace (rural areas, low-income groups, agriculture and so on).

Various ideas were formulated to arrive at a middle ground. Given that risk aggregators in the banking space in particular featured higher levels of government ownership, participants mulled over how such public sector banks' can continue to meet growth targets whilst not relying as heavily upon governmental funds.

For instance, various holding company structures may be explored to preserve government ownership indirectly while allowing these risk aggregators to raise funds. The hypothesis here was that the form of government ownership, i.e., direct ownership versus ownership through a holding company, might have a bearing in the nature of Government involvement and the resultant institutional incentives.

2. Regulation and management of systemically important risk aggregators
Participants highlighted the need for effective regulation and management to ensure that risk aggregators are able to deal with plausible stress events (for instance, significant liquidity shocks), especially for ''systemically important'' entities. The need for norms stressing levels of capital adequacy was particularly emphasised. While these norms already exist (Basel-based), participants felt that these are ''necessary, but not sufficient''.

Several points emerged from the deliberations:

a. In defining ''systemically important'', size remains the leading criterion

b. Disclosure levels / information shared by systemically important entities need to be enhanced.

c. No systemically important aggregator must be allowed to become ''too big to fail''. Preventive measures such as breaking up such large and growing aggregators into smaller entities may become necessary (as was done by the antitrust authorities in the 1980s in the US, breaking the Bell telephone company into ''baby Bells'').

d. Effective mechanisms need to be put in place not only to facilitate the breakups alluded to above but also to deal with the insolvency of aggregators – the legal infrastructure in India is decidedly deficient on this front.

e. The regulator must be neutral so that its own incentives are aligned to the objective of management of systemic risk. Additionally, regulators / officials staffing such bodies need to be suitably remunerated to attract talent capable of comprehending the complexity of these situations. Training requirements to build the capacity of regulators are important to ensure a holistic understanding of the risks in the financial system.

3. Risk management capability within the financial system

Certain aspects stood out regarding the present state of affairs. In the absence of markets, diversification is the primary risk management tool being used by risk aggregators in India today. The only aspect of risk that is being measured and provided for by banks is credit risk, especially since the adoption of Basel II where banks undertook a rating of their portfolios. The approach to risk management is led by compliance rather than a holistic evaluation of the different types of risk, for instance, important aspects of risk such as liquidity risk and interest rate risk are currently not even covered by regulation. While ensuring capital adequacy for aggregators is vital, Basel-type static capital requirements may not be adequate given that capital only acts as a buffer to deal with failures in risk management.

One option available to risk aggregators is to outsource risk management to third party experts like rating agencies. However, rating agencies could become a source of systemic risk in case the models used by them to evaluate risk turn out to be wrong. Therefore, this brings the need for rating agencies to be regulated and their incentive structures to be appropriately fleshed out to ensure good risk management outcomes. Additionally, there appears to be no alternative to building internal risk management capability. If no single aggregator was too big to fail, then it is possible to envisage a financial system in which there was a real threat of failure, thus incentivising aggregators to build internal risk management capabilities.

In order for this to happen, the following ideas were discussed:

i. Foremost, an environment of heightened risk perception must be created. Reliable, high quality data from risk aggregators must be available to monitor and manage counterparty risk, asset-liability mismatches and potential systemic risk to the financial system. Information should be made readily

available along a variety of parameters (for instance, mark to market, portfolio quality, net asset value and sensitivity, CDS spreads).

ii. Aggregators need to be evaluated based on the quality of their risk management. A single model to evaluate risk in itself can be a source of systemic risk; therefore it is useful to have a multiplicity of models for risk management.

iii. Incentives of risk managers could be tied to risk measures such as CDS spreads.

iv. Risk managers should receive remuneration comparable to the business origination teams. The Chief Risk Officer (CRO) must be independent and empowered; one of the suggestions was that the CRO should report directly to the board of directors.

v. Strong systems should be built for asset-liability and liquidity management so that risk aggregators can withstand sudden shocks in interest rates or liquidity.

Vision statement

Participants formulated the following vision statement for Aggregation:

''Our vision for risk aggregation in the Indian financial system is one where aggregators are numerous enough, large enough, and have the risk management capabilities to evaluate, price, hold and manage the diversity of risk originated from the real economy.''