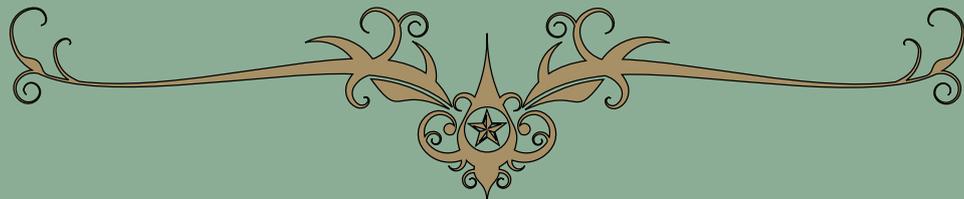


IFMR Financial Systems Design  
Conference, 2010 - 2011





## Preface

The first IFMR Financial Systems Design Conference was held in Chennai on August 5th and 6th, 2011. Hosted by IFMR and IFMR Finance Foundation, the conference aimed to provide a forum for stakeholders in the Indian financial system to discuss key design issues using a functional lens.

In this document, the conference discussions have been captured and presented in synthesised format. The first section provides a transcript of the introductory speech by Dr. Nachiket Mor. In the second section, the discussion in the context of the three core functional aspects of a financial system - Origination, Risk Transmission and Risk Aggregation - are documented and the summary vision statements are highlighted. The third section summarises the "take-aways" from both days of debates and discussion.

The objective of this document is not only to preserve a faithful record of the discussions which occurred amongst these leading thinkers in the field but to also serve two forward-looking purposes: (a) to serve as a reference document for individuals and groups engaged in strengthening the financial sector in India in various capacities, and (b) to provide some ideas for researchers working in the area of macro-finance and financial sector development in India.

I want to thank all the conference participants for their contributions to this rich dialogue. Our sincere thanks to Dr. Ajay Shah and Dr. Raghu Sundaram for anchoring the sessions on Risk Aggregation and Risk Transmission. Finally, I thank my colleagues Dave Wallack, Sucharita Mukherjee and Shankar R.L. for their valuable support in conceptualising and organising this conference.

Bindu Ananth  
Chair, IFMR Finance Foundation

# Introduction to the Conference

By

Nachiket Mor

Board Member, Institute for Financial Management and Research.



It gives me great pleasure to welcome you all to the first in what we expect will be a series of research conferences organized by the Institute for Financial Management and Research (IFMR) on Financial Systems Design. The fact that all of you have taken time out from your busy lives to be here is indicative of the importance of this topic for our country as well as the belief that a carefully thought through research programme will help us make sense of all the confusion and the to-be-or-not-to-be questions that are in front of us. The objective of the research programme is to empower our policy makers so that they can then take the necessary steps towards a financial systems design that is appropriate for us at this point in our history, with a lot more clarity and confidence.

As we had informed you in our invitation letter, the purpose of this conference is not to arrive at definitive answers or even to reach tentative conclusions. The principal goal is to end the two days with a set of clearly identified questions and issues of significant importance to the future of the Indian financial system that interested researchers in India as well as elsewhere can start to explore and present solutions for. In addition, through this conference and others like it, we hope to build a community of individuals who care about these issues and would be willing to be commentators, researchers and where appropriate, advocates for change. As a business-school focused on finance, IFMR hopes to continue to be closely involved in this research programme and, jointly with a group of like-minded institutions and individuals, expects to build capacity within the country to examine the issues that emerge from the conversations of these two days with a great deal of depth.

And, at this point, our belief is that it is not a good idea to be pragmatic or to begin by acknowledging the political or regulatory constraints that we see before us. The belief is that if we do this exercise with the starting point of a clean sheet of paper and eventually, through research, arrive at a design that is dramatically different from what we see around us currently, then we can put on the lens of pragmatism and weigh the costs and benefits and feasibility of bringing about that change. It is my view that many of the recent committees that looked at the future of finance were perhaps too pragmatic and set their sights to points of time no more than three or four years ahead. In this conference I am hoping we will think more grandly and set an agenda for the next two decades and not just the next two years. I have been associated with the work of most of these committees either directly or indirectly and have often felt hampered by the absence of good research to guide the work of these committees. Consequently we have often had to rely on the experiences and gut instincts of committee members to arrive at our conclusions. While, given the depth of experience that committee members bring to the table, this does produce very useful

outcomes, it necessarily falls short of the kinds of fundamental design changes that may perhaps be called for.

We are at a time when many of the historic imperatives which led to the current design of financial systems are perhaps no longer valid and that, as a uniquely advanced but also very poor country urgently in need of sustained and rapid growth and development, we have the opportunity to do things in a way that other countries do not. I also believe that the failure of several of our traditional strategies such as rural branching and the Development Finance Institute (DFI) model for project finance, may have inadvertently ended up creating an opportunity to build from scratch a new financial system that will be unfettered by legacy, should we eventually feel the need to do so.

## Purpose of Finance

The fact that we are all here and, even in our daily lives, are actively engaged in the business of finance in one form or another tells me that we do not need to be persuaded that financial services are important. However just so that we build a shared understanding on this, even at the risk of belabouring the issue, I want to take a few moments to outline to you why I think financial services are important and what role they play in improving well-being as understood generally. I feel that a shared perspective on the purpose of finance, while not in itself a topic of research that interests us, may help us think about financial systems design questions with a lot more clarity.

It is my belief that there are no definitive prescriptions for “making” nations grow at a certain rate or to “lift” large numbers of people out of poverty. These tasks, in my view, are best left to the decisions and choices that myriad firms and individuals make and the task of policy makers is really an environmental one, i.e., to identify and build the various pieces of “institutional infrastructure” that can allow these individuals, households and firms to make the best possible choices both from their personal points of view and in the aggregate, from a national point of view. There is considerable debate on what constitutes a full complement high quality “institutional infrastructure” that does this. For example, I recently saw a debate hosted on the World Bank’s blog on whether democracy hinders or helps. It was a classic arm wrestling match between supporters of China’s way of doing things and India’s. However, unlike perhaps on the question of democracy, there is broad agreement that finance and well-functioning financial markets are an essential part of the “institutional infrastructure” that enables growth to proceed smoothly and at a rapid pace.

As I understand it, well-functioning financial systems allow individuals, households, firms and entire nations to:

1. Think long-term and make investments both personal (e.g. advanced education) and financial (e.g. municipal finance) that have long horizons.
2. Assume risks that they are in the best position to beneficially manage (e.g. building hydro-electric power plants in the Himalayas) and shed the risks that they are unable to (e.g. credit exposure to vendors, wholesale price index).

3. Focus their attention on a few skill sets and activities (e.g. bio-medical engineering) and not be required to over-diversify physical skills to protect themselves against adverse shocks (e.g. shifts in the fortunes of the pharmaceutical industry).
4. To get resources at a “reasonable” price to build and grow high quality businesses (e.g. steel plants), should they have the skills and the desire to do so. If not, to have the ability to invest their resources in other businesses or in the larger economy at a level of risk that they are comfortable taking (e.g. participations in shipping insurance).
5. Ensure that day-to-day lives of individuals are smooth and risk free so that children can go to school, mothers can live lives without stress and the entire family can sit together and plan for a better future without being beset by unexpected shocks (e.g. cost of a home or a medical education).
6. Receive good guidance on how they might best live their financial lives from well-trained specialists who have the patience to understand their particular circumstances and their plans, dreams, and fears and have the competence to provide them with a sound set of financial tools that modern financial systems have the ability to provide and to be protected from deliberate or accidental mis-selling by their financial product providers and advisors (e.g. inappropriate sale of interest rate derivate products to companies).
7. Grow as far as their capacities and human and technological resources would allow them to without being bound by the limitations and size of financial systems (e.g. power plants, mining companies).

I am sure this is not an exhaustive list and all of you could add to this list many more aspects of well-functioning financial systems. However, there is no question in my mind that on most of these counts our financial system is failing quite dramatically. Please allow me to list a few examples:

1. **Size:** A number of our largest companies are unable to access an adequate amount of local currency finance even though much of their revenues are local currency denominated – two of the largest local banks have already breached exposure limits to one of the large business groups. The Committee on Urban Infrastructure and Services has estimated the total long-term investment requirements for urban infrastructure in India from 2012-13 to 2031-32 to be about Rs. 40 lakh crores (USD 800 bn). When compared with China, even after adjusting for the relative sizes of our economies, our financial system is much smaller. In order to realise our potential as an economy we need a significantly larger financial system with much larger financial institutions. It is my belief that the limited size of our financial system is one of key supply side bottlenecks contributing to the cost-push inflation that we are currently witnessing here in India. Interestingly, the argument of limited size is in fact also one that is given for the imposition of priority sector requirements – there are so many businesses that need financing that the very real fear is that our small sized financial system would not be able to provide for all of them.

2. **Spread:** Despite more than four decades since bank nationalization the financial system is barely able to reach even the urban population of the country leave alone the rural population. For example, one of the issues that constantly hinders electronic payments from Central and State Governments to panchayats, schools and hospitals is that it is not possible to guarantee that even all of them have bank accounts, leave alone individuals and households residing in those parts.

3. **Scope:** We have not finished the task of providing access to basic financial products. Insurance markets have reached a fraction of the country and equity markets, including mutual funds, I understand have active participation rates of merely a few 100,000 individuals.

4. **Innovation:** Farmers are unable to access electronic spot and futures markets in most parts of the country. Securitisation, credit derivatives and other modern financial instruments have barely made their presence felt.

5. **Integration:** Even though the target of all selling efforts is the household or the small company, the selling channels are highly fragmented with very weak accountability of those offering products to ensure that they are not being mis-sold.

6. **Quality of assets:** The rising tide of non-performing assets particularly from “priority” sectors and products like the Kisan Credit Card speak to a large bubble of non-performing assets with no sign that there is any resolution in sight. Cooperative banks and Regional Rural Banks, with a few notable exceptions, continue to flounder. I believe that it is not true that we have not had a sub-prime crisis in India or that we have not had to resort to tax payer financed injections of cash to keep our banking system afloat. The combination of the repeated failures of the cooperative banking system and regional rural banks, agricultural loan waivers, recapitalisation of government owned banks, repeated mergers of weak banks with stronger banks, and guaranteed profits from repressed savings and current account rates that are well below even treasury bill rates, to my mind are a few of the examples that support this point of view. What is perhaps most worrying is that largest quantum of these poor quality loans are sitting and growing on the books of systemically important financial institutions who are already struggling to raise the capital required to meet capital adequacy requirements.

In my view, on many dimensions our financial system has done well but overall I would like to suggest that there is a very long distance for it to go before it can become a full partner in the growth process of the country. Given this reality, it is possible that we could go on moving as we have done in the past with gradual moves backwards and forwards hoping to find an equilibrium that “works” for us or we could attempt a fundamental restructuring and begin again from scratch with a completely new design which meets our multiple objectives of systemic stability, economic growth and financial inclusion. One of the principal goals of the research agenda ahead of us, in my view, would be to help answer this question carefully. It is my personal view that while each step that we took may have been taken with the best of intentions, as a system we find ourselves locked into choices that we made in the past based on imperatives that no longer appear relevant. This may well therefore be an opportunity to make a sharp break from the past and begin afresh.

## Mega Trends

One of the reasons that I feel that now may be a perfect time to consider a fundamental restructuring is that many of the reasons that led us to the original designs are no longer relevant. That is not to say that several of the older concerns do not remain but merely to suggest that we may be able to address them in fresh way. I see two “mega trends” reaching their conclusion:

- 1. The complete and final digitisation of money in a manner very similar to what has happened to the share certificate.*
- 2. A unified understanding of risk and capital allocation techniques across insurance, banking and securities markets.*

However, several of the older problems of moral hazard, adverse selection, increasing levels of complexity and uncertainty in the real-economy, the pro-cyclical nature of most markets, increasing level of global tradability in the real sector, are very much here to stay and any financial systems design would have to be geared to address these challenges.

What are some of the implications of these mega-trends on financial systems design? Some of the institutional boundaries are starting to blur because of the convergence in rules regarding capital and capital allocation techniques. The separation of institutions such as banks and insurance companies and placing them under different regulatory regimes that looked sensible at some point may therefore need to be revisited. Even at the consumer level, there is a lot of functional overlap. A money market mutual fund provides the same utility as a savings bank account vis-à-vis liquidity but are dealt with and priced completely differently for no obvious reason other than legacy. These inconsistencies will need to get addressed and there will be pressure on product-based regulatory design for this very reason.

The digitisation of money will transform the payments architecture of our country and it is possible that a number of components of the financial architecture such as traditional bank branches, Automated Teller Machines, and Credit and Debit Cards may become obsolete. However, the quality of origination of financial assets such as loans and insurance will continue to be very relevant because of the adverse selection and moral hazard concerns that remain significant. New entrants to the financial system would need to bring significant expertise to bear on these issues, in addition to capital, but perhaps the barriers to entry may no longer be as onerous.

From the household’s perspective, there will be a bewildering range of financial services that start to be available across various providers which, if constructed well, have the potential to transform the financial wellbeing of the household but could also cause serious damage. Given this emerging scenario our approach to consumer protection that has until now relied on fairly naïve assumptions regarding the value of financial literacy and has thus attempted to shift the responsibility away from the regulator and the provider to the customer, may have to be revisited and there may be a need

to seriously explore the liability of the provider for a variety of mis-sale scenarios similar to what is available to corporate consumers, even in the case of retail consumers.

## The Conference Format

Given the 'blue-sky' nature of our discussion, we have tried to keep the format very loosely structured to get the most of your expertise and perspectives.

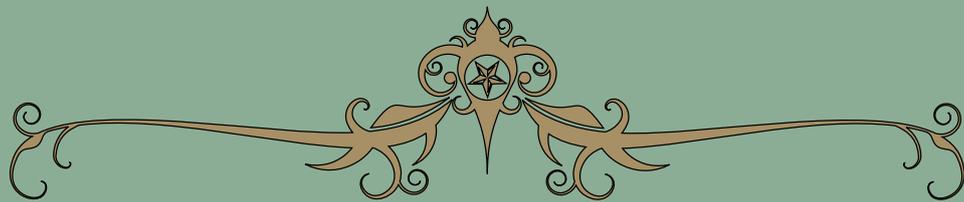
In order to get the discussion going we have, somewhat arbitrarily broken up the conference into three segments, Origination, Transmission and Aggregation as three broad buckets of questions and concerns - one involving customers and customer protection issues, the other involving markets and derivatives and the third involving large, nationally important financial institutions and systemic risk concerns. One might argue that conceptually, there are only two buckets - Origination and Transmission as represented by Markets. However, to my mind, there is a distinct role for large financial institutions representing pools of capital that we are calling Aggregators. Hence, the three buckets are being suggested.

For each of these segments, we will start with one overview presentation that lays out the scope of each of the three areas and also evaluates how the Indian financial system is faring on them. Each presentation will conclude by identifying 4-5 key themes. Each table will then draw out a variety of visions for the future which will then be shared across the room using collaborative technology that my colleagues will say more about. As I mentioned before, I would strongly encourage you to not limit yourself only to seemingly pragmatic goals, this is a thought exercise to draw out bold visions for our financial system. I would also urge you to think about more than one way of getting it done so that research can then evaluate which is the most optimal path. On Day 2, we will gather all the vision statements produced by the groups and get down to identifying specific pathways that will help realise these visions. The pathways can fall in one of four categories: 1. Research 2. Regulation 3. Public Infrastructure and 4. Innovation.

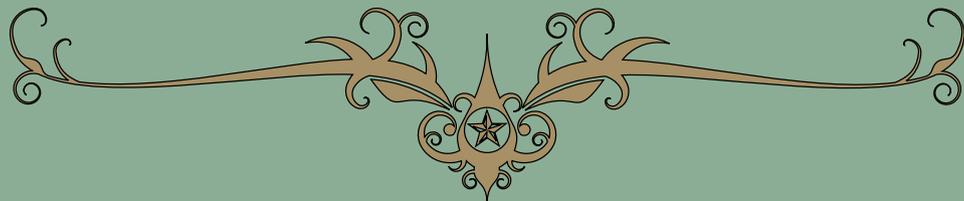
Participants are free to use the content from conference discussions, but neither the identity nor the affiliation of the speaker, nor that of any other participant, may be revealed. There will be no recording of the group discussions.

After the conference, we will circulate to all of you and those invitees who could not be here today, a synthesis of the visions and pathways that emerged from the two days of discussions. I expect this to spark off even more research projects and collaborations.

Thank you one again for being here and participating in this important conversation regarding the future of our financial system.



# ORIGINATION



## Scope

Origination may be defined as the design and delivery of financial services that provide households and firms the ability to manage liquidity (moving resources across time) and risk (moving resources across “states of the world”) in a smooth, convenient and affordable manner.

Origination spans the following activities/functions: design of products to overcome moral hazard and adverse selection, establishing the identity of the customer, underwriting of risk, disclosure of all product and contract features, financial advice, and product servicing on an on-going basis.

## Characterising the Present State of Origination in India

**Heterogeneity of Originators:** Originators in India comprise a vast and diverse array of institutions including banks, non-banking finance companies, post offices, insurance and asset management companies (and their agents), cooperative societies, self-help groups and business correspondents. This is a very heterogeneous set with respect to the degree of formality and the amount of capital they represent.

**Disaggregated delivery to the end-customer:** Due to the product-wise organisation of service delivery and multiple product regulators, it was noted that the same household has to deal with multiple Originators in order to meet its complete need for financial services. This creates several gaps. For example, each Originator currently has its own Know Your Customer (KYC) process and this would be repeated for each incremental service availed by the household.

**Dominance of manufacturer-led Origination:** In the context of Origination, the conference differentiated product manufacturers (banks, insurance companies and mutual funds) from pure distributors. The latter may not “own” the financial product but are responsible for the customer interface. It was noted that Origination in the Indian financial system is dominated by a few product manufacturers with proprietary distribution networks organised along product lines with some attempt at cross-selling (ex: bank branches selling insurance products). Their distribution networks are either their own branches (as in the case of banks) or agents supervised by the principal (as in the case of insurance and mutual fund agents). In the latter model, while the principal is responsible for under-writing, agents’ responsibilities are limited to sourcing clients.

**Prudential regulation according to institution-type, no formal customer protection regulation:** The regulatory environment for Origination entails prudential norms, largely along institutional types. Some types of product Origination (ex: microfinance, credit cards) have distinct regulatory requirements. In recent years, there has been regulatory overlap on account of functionally similar products having different regulators. The controversy regarding the Unit Linked Investment Plans (ULIP) was mentioned as a case in point. Customer protection regulation is largely non-existent, with reliance placed on internal mechanisms. There is no distinct regulator for consumer protection, with each prudential regulator framing their own guidelines vis-a-vis customer protection.

An emphasis on *ex-ante* financial literacy and not *ex-post* responsibility for the Originator: Product sale by manufacturers through agents is combined with financial literacy by manufacturers via advertising.

There are broad guidelines with respect to product level transparency and disclosure. It is largely a *caveat emptor* approach where the customer has to perform her own due diligence at the time of purchase and there is no recourse to either the manufacturer or the distributor for issues that emerge subsequent to purchase. Neither manufacturers nor distributors are held accountable for any outcome of financial services usage on an *ex-post* basis. An exception to this that was discussed at the conference is the liability on corporate bankers for sale of complex products, such as derivatives, to their institutional clients.

## The Report Card for Origination in India

The conference discussed Origination outcomes in terms of the two functions of liquidity management and risk management (for individuals and firms).

An important manner in which households manage liquidity is through the use of bank savings accounts and borrowings. However, roughly half of household savings are in physical assets. This is partly explained by the fact that less than 50% of India's population has a bank account. There is significant spatial variation in access to current services: not only are certain regions of the country particularly underserved (the entire North-East region has less than 1500 bank branches), but there is also significant disparity between urban and rural areas (for instance, the population per urban bank branch is approximately 13,000 while for a rural branch, that figure jumps to 16,000. Additionally, 81% of villages do not have a bank branch within a 2 km radius).

Informal Originators (moneylenders, pawnbrokers, trade creditors) dominate with respect to low income and rural households, and small firms. Such 'alternate sources' provide for more than 50% of SME financing. Even for large firms, much of their requirements are met from internal accruals and to a large extent, bank borrowings. The corporate bond market has not taken off despite repeated attempts. It stood at slightly less than 100 billion USD<sup>1</sup> in 2010. Almost 90% of the Indian public debt market is accounted for by government securities<sup>2</sup>, indicating the lack of debt issuance by financial and non-financial corporations.

Coming to risk management, the use of risk management instruments by individuals and firms is also far from ideal. Not more than 10% of the Indian population has life insurance and less than 1% has any form of general insurance. Without access to formal financial tools, majority of households face financial emergencies in the wake of events such as serious injury or illness, loss of crop or livestock, or loss of a regular job.

Firms have only lately had the opportunity to use derivatives such as currency futures (introduced in 2008), interest rate futures (re-introduced in 2009) and credit default swaps (introduced in 2011)

1 Care Ratings, BIS

2 BIS Quarterly Review, March 2008

for risk management purposes. However, there are limitations. For example, credit default swaps are available only on corporate bonds and not on loans.

## Mega Trends in Origination

Notwithstanding the unsatisfactory achievements in Origination, several nation-wide initiatives are now underway which have the potential to transform this landscape in India.

Foremost amongst these is the Unique Identification (UID) Project which aims to provide all residents of India a single identity verification tool (based on biometric authentication) that can be easily and securely verified against a national database. Simultaneously, product regulators are taking the view that possession of a UID is equivalent to KYC. This will then make the internal KYC mechanisms of Originators redundant and effectively render this as a public good. The UID project has so far collected biometric information for 36 million people.

Another important development, and one not peculiar to India alone, is the 'digitisation' of financial and cash-based transactions. Given that the value of bank notes and coins in circulation as a percentage of narrow money is very high (60.7% as compared to 18.83% for China<sup>3</sup>), it is clear that India has been relatively slow in 'digitisation'. However, the development of the Interbank Mobile Payment Service (IMPS) and Electronic Benefits Transfer (EBT) systems are expected to give a fillip to this. The former aims to make possible safe and instant interbank fund transfers through mobile phones, whereas the latter will help effectively channelise government benefits (such as NREGS or pensions) to beneficiaries through bank accounts in a timely and transparent manner. Digitisation can reduce the costs of Origination tremendously, particularly in remote parts of the country where cash handling is a significant barrier.

This is concurrent with other technological advances such as the increased penetration of broadband connectivity and shared platforms for core banking technology that will facilitate cost-effective Origination. With better technology, several traditional sources of economies of scale are disappearing and creating opportunities for the emergence of small but high-quality financial institutions.

## Key Themes

The conference identified four themes within Origination for detailed deliberations. Below is the summary of the discussions of each thematic group.

### 1. Increasing the outreach and goodness of fit of Originators

There are adequate indicators to suggest that the scale and scope of Origination in the Indian financial system needs to dramatically expand to ensure good outcomes for households and firms. There is a need for new approaches to achieve this while not compromising the stability of the

3 Statistics on payment and settlement systems in the CPSS countries - Figures for 2009, CPSS, BIS

financial system in any manner.

Participants noted the trend of non-financial distribution networks (such as mobile phone service points) expanding at a rapid pace in India and discussed ways in which Origination might leverage this network. While the obvious benefit of these distribution networks is low entry barriers, it was also noted that certain risks exist (not least that such agents bring no capability in risk under-writing and financial advice), and the manufacturer of products that involve risk-underwriting (credit and insurance) will have to completely depend on formal information (credit scores) to ensure quality.

Participants discussed the need for better information in general, both hard (credit scores) and soft (contextualised understanding of risk by local staff). It was felt that this is an important pre-requisite to expanding Origination, particularly where credit and insurance are involved. In light of the poor availability of hard information, Originators with models that leverage soft information have an edge vis-a-vis under-writing.

Participants also discussed expanding the pool of formal Originators in India by allowing for formally licensed customer-facing institutions with a reasonable amount of financial capital and deep technological capability, and offering multiple services from different product manufacturers. The integration of financial services to the household (through Originators capable of dealing with multiple financial services) was highlighted as an important dimension.

## 2. Threshold operational capability and financial strengths of Originators

Given the considerable diversity that exists within the set of Originators in India as noted earlier, the second group tried to explore the kind of threshold capabilities - operational as well as financial - required for an entity to be a 'high-quality Originator'. This links back to some of the discussions of the previous theme. Is a village kirana or a cell phone recharge point a good Originator? How can considerations such as proximity to the client and expertise in under-writing be balanced? This group attempted to draw out objective parameters to start evaluating these issues.

Good technology capability to minimise operations risk and an ability to commit capital were two important parameters that were discussed at length.

Improvements in technology now make it possible to do real-time transaction processing, thus eliminating redundancy at the Originator-end. The growing trend in digitisation of cash mentioned earlier would also bring about reductions in operations risk for Originators (given that various aspects of safeguards presently in force as part of the cash management process would become unnecessary). This ability to operate in an automated, straight-through processing environment is increasingly going to be a hallmark of a high-quality Originator.

Participants noted the need for mechanisms that ensure that Originators retain responsibility for quality of origination. Capital commitments by the Originator play an important role here. While there is a capital adequacy framework with regard to credit, there is a need to think through the

role of capital when it comes to Originators of other services like insurance and mutual funds on behalf of product manufacturers.

### 3. Enhancing risk underwriting capabilities of Originators

Risk is created at the point of Origination and the safety of the financial system is inextricably linked to the capacities and incentives of Originators to manage risk well. This is true both when the Originator is a large bank making unsecured loans and in the context of an insurance agent under-writing life risk.

In typical manufacturer-agent approaches to Origination such as seen in the Business Correspondent approach of the RBI where a Bank appoints village level agents to open savings accounts and facilitate transactions or the Mutual Fund distribution model where an agent sells products on behalf of an Asset Management Company, the manufacturer is completely responsible for risk management. The agents' responsibilities are limited to sourcing clients. It is important to have mechanisms both at the point of selection and for on-going monitoring to ensure that the interests of the principal and the agent are well-aligned.

It was discussed that some of the ways to achieve better under-writing at the agent level include: selection of agents who have good local understanding and soft information of clients, and financial stability and capital adequacy of agents so that they can provide the manufacturer some measure of protection against operational risks and credit risk. Participants again emphasised the importance of increasing the availability of hard information such as credit histories over a period of time so that in models where manufacturers are seeking to under-write directly without recourse to a local agent, they have the means to do so. That being said, participants felt that there was no good substitute to having good customer understanding, one way or the other.

Participants also felt that there were several valuable lessons to be learnt from informal and specialised Originators with respect to under-writing of supposedly high-risk segments such as low-income households and second-hand truck owners. Transmitting this learning systematically across all Originators might be important.

### 4. Ensuring good financial outcomes for customers

This group debated how to join the various dots in Origination to ensure that it creates an environment where there is a sustained focus on good financial outcomes for customers while preventing scenarios of conflicts of interest. Participants emphasised that integration of financial services is essential to ensuring good outcomes, instead of the current reality of fragmented service delivery.

The important source of conflict of interest today is the fact that the distribution channel facing the customer is often owned or significantly controlled by the manufacturer. Therefore, there is a very

strong orientation to sell certain kinds of products.

*How do we transition to a regime where the Originator is agnostic to manufacturer considerations and is entirely driven by ensuring good financial outcomes for the customer?*

This group proposed two potential blue-prints for further debate: the doctor-chemist blueprint and the medical malpractice blueprint.

The doctor-chemist blue-print would entail the following:

- a. Separate the product manufacturer and the distributor; no product commissions to be paid to the distributor by the product manufacturer.
- b. All sales to occur post the customer receiving independent financial advice.
- c. There are strong ex-ante governance mechanisms to address potential conflicts of interest and obfuscation. For example, manufacturers would be barred from advertising their products to the customer.

The medical malpractice blueprint would entail the following:

- a. The distributor could combine product sale and financial advice.
- b. The distributor would receive commissions from manufacturers and fees from customers.
- c. The source of accountability is ex-post liability in which the quality of the advice offered and the due process could be subject to legal review if there was a charge of malpractice.

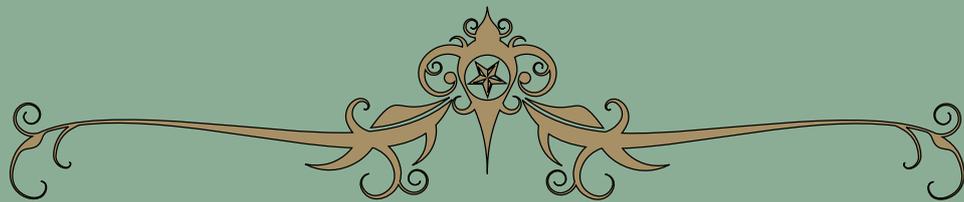
Both blue-prints have their relative strengths. The former might be easier to implement and addresses the source of the conflict of interest. It does not however have an ex-post element that aligns the interest of the distributor tightly with that of the customer. While the latter blue-print achieves that, its weakness is that it might end up focussing disproportionately on tail events of mis-sale and could be the victim of judicial caprice, given the underlying lack of precision on what constitutes good financial advice. Due to the stochastic nature of outcomes, it may be hard to attribute responsibility to the nature of advice. One way to solve this is to develop standardised protocols for advice and hold the distributor liable for adherence to the protocol, rather than having more abstract tests. Further debate on the relative merits is required here.

## Vision Statement for Origination

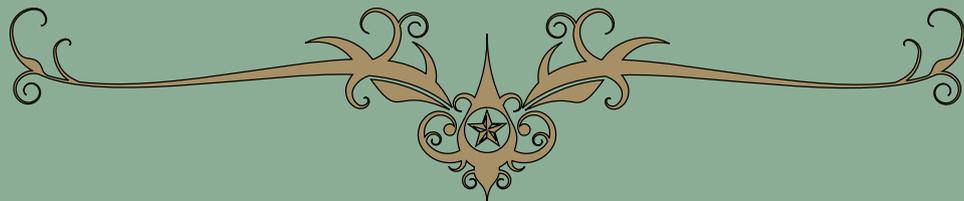
Following the discussions along the themes described above, the conference participants converged on a vision statement for Origination.

*“A financial system in which there are multiple and diverse Originators providing integrated financial services to individuals, households and firms, evaluating and pricing risks appropriately, and ultimately taking responsibility for good financial outcomes for customers.”*





# RISK TRANSMISSION



## Scope

Risk transmission in the financial system involves the movement/assignment of risk from one entity to another; in return for a compensatory payment at a market-determined rate. In a well-functioning financial system, risk moves in an orderly manner between those who are originating it and those who are best placed to manage it, thus improving the overall capability to manage risk.

The conference reviewed the existence and robustness of risk transfer mechanisms for individuals, firms and financial institutions in the Indian financial system.

Households are suppliers of risk when they are say, purchasing health insurance or borrowing, whereas they are demanding risk when they are buying equities and mutual funds. Households have to deal with significant shocks including bankruptcy if they don't manage these risks well, so the welfare implications are tremendous. Risk transmission is also critical at the level of institutions. A lender has to manage credit risk, operations risk and market risk. Credit risk, in turn, can arise from idiosyncratic factors like quality of under-writing and internal controls and systematic/external factors such as weather and business cycles. A life insurer has to manage actuarial risks and market risks.

Participants discussed in particular, the process in which risk transfers from originators (of financial services) to risk aggregators (financial institutions and capital markets). For instance, small financial institutions are vulnerable to weather risks that are unique to their area of operation and over which they have no control. In a well-functioning financial system, originators would be able to transfer such systemic risks to large, well-capitalised risk aggregators who by virtue of their diversification are much better placed to handle these types of risks. There was an important discussion around what types of risk must be retained and what must be transferred. It was noted that idiosyncratic risks that are internal to the originator (and very much in its control, such as credit risk arising from internal control and audit failures) must be retained by the originator in order to mitigate moral hazard. Systematic risks such as weather risks may be transferred (through insurance or derivatives) to entities with superior capabilities to manage the same. Orderly transmission of systematic risk is presumed to have a net welfare improvement for both counter-parties.

There are a number of obstacles in creating well-functioning risk transmission markets, such as the inability of counterparties to understand and price risks, flawed financial instrument design, information asymmetries between counter-parties (especially the issue of moral hazard) and legal/regulatory bottlenecks. Creating a well-functioning market in risk transmission will fundamentally hinge on:

- (a) Clearly understanding and identifying the risks to be transferred;
- (b) Developing appropriate instruments for transferring risks;
- (c) Creating capability to measure and price risks; and
- (d) Designing and implementing a legal and regulatory framework for contract enforceability and resolution.

## Characterising the Present State of Risk Transmission in India

Risk transmission markets in India remain under-developed particularly for individuals, although there have been several strong measures over the past few years.

Insurance is one of the best tools for household risk transmission. However, not more than 10% of the Indian population has life insurance and less than 1% has any form of general insurance. Without access to formal insurance, a majority of households face financial emergencies in the wake of insurable events such as serious injury or illness and loss of crop or livestock. There is also a parallel concern that households are perhaps not buying adequate risk. Given low retail participation in equity markets, participants debated implications in terms of retirement security for the vast majority of households.

At the level of firms, the risk transfer market is evolving. Derivatives trading started at the National Stock Exchange (NSE) in 2000 and the full set of equity derivatives products were available in 2001. Volumes in these trades are now significant. Exchange traded currency and interest rate futures were launched as recently as 2008. Currency forwards have always been significant and have been the mainstay for exporters/importers. Commodity spot and futures exchanges have been set up over the past decade and are growing, although commodity options are not permitted yet. As far as financial institutions are concerned, securitisation has grown from nothing at the beginning of the 1990s to approximately \$6 billion in 2011<sup>4</sup>. However, this market is very shallow, relative to the size of India's economy. Credit default swaps were not permitted at the time of the conference in August. The Reserve Bank of India has subsequently allowed CDS products for bonds beginning late October, 2011.

Participants acknowledged the fact that while risk transmission mechanisms in India had come a long way from the early nineties; several gaps continue to exist in the present infrastructure for risk transmission. These gaps are attributed to a variety of factors:

- a. For households, while risk transfer products exist, the key gap seems to be in high-quality distribution of those. Concerns with insurance and mutual fund selling processes and incentives have become severe in recent times. Absent this distribution infrastructure, households will continue to under-insure and under-invest.
- b. There continue to be barriers for broad-based participation in a number of these markets.
- c. Unavailability of certain risk transmission products on account of regulatory reasons (ex: Indian Treasury Bill Futures, inflation indexed bonds).
- d. Absence of enabling public infrastructure for designing some risk transmission products. For instance, India has not invested enough in high quality rainfall measurement stations and this has impacted the availability of good data for designing rainfall insurance contracts.
- e. Limited availability of certain risk transmission products on account of various environmental and infrastructural hurdles affecting accurate and efficient discovery of their prices. (ex: catastrophe insurance)

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4 ICRA, "Update on Indian Securitisation Market - April, 2011"

## Key Themes

Several ideas emerged during the course of participants' discussions on how best risk transmission mechanisms can be reinforced to function at an optimal level. These ideas can broadly be bracketed along the following themes.

### 1. Make transparent the quantum and nature of risks assumed by market participants

An important overall observation was that development of risk transfer mechanisms must be preceded by much more "paranoia" regarding risk management, particularly by government owned financial entities. There was a need to make transparent the embedded risks (ex: ALM mismatch) for large financial institutions, so that risk management and risk transfer are taken seriously. This was an important theme in the Risk Aggregation session as well in the context of the management of systemically important Financial Institutions.

Participants felt that current regulatory approaches (particularly for banks) use caps, limits and other such fiat-based measures disproportionately and do not adequately leverage market-based mechanisms to manage risk.

While rating agencies provide an important third-party view on risk, conference participants felt there was really no alternative to building robust internal risk management capabilities. Financial Institutions must focus on putting in place plans for dealing with reasonably expected failures ("known unknowns").

### 2. Manage moral hazard in credit risk transfer markets

Participants felt that it was important to keep in mind moral hazard while designing risk transfer products, particularly for credit risk. In the specific context of securitisation markets, conference participants felt there was a need to be cautious about pure "originate to distribute" models. The concern was that this would create excessive moral hazard for the originator. It was discussed that the originator must retain ownership of credit risk in some form, thereby ensuring that it has the incentive to monitor credit risk, thus rooting out an instance of moral hazard in risk transmission.

### 3. Continue to focus on addressing missing markets for risk transmission

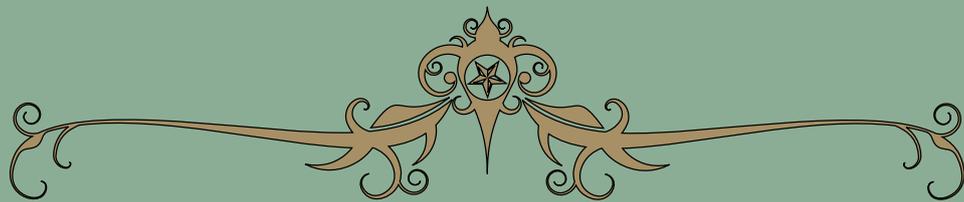
While important steps have been taken, participants felt that building risk transmission markets must continue to be an important financial policy objective. From a legal perspective, development of good resolution mechanisms is integral to the development of risk transfer markets. While the SARFAESI Act has been beneficial for banks vis-a-vis corporate lending, a lot more work is required on this front. Participants also noted the near total absence of thinking on the issue of household/personal bankruptcies. Overall, we need to increase accessibility of existing products at the household, firm and financial institution level by addressing existing barriers and simultaneously look into unaddressed risks, such as inflation.

## Vision Statement for Risk Transmission

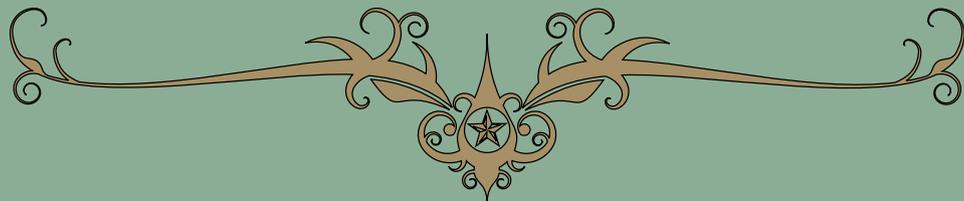
In developing a vision for risk transmission within the financial system, participants came up with the following vision statement:

*“To design, develop and sustain effective mechanisms that enable transfer of risk from households and originators to institutions that can better manage these risks.”*





# 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%.<sup>5</sup> 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<sup>6</sup>).

5 “India’s lagging financial system”, McKinsey Quarterly 2005

6 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<sup>7</sup> 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.

## 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. 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.

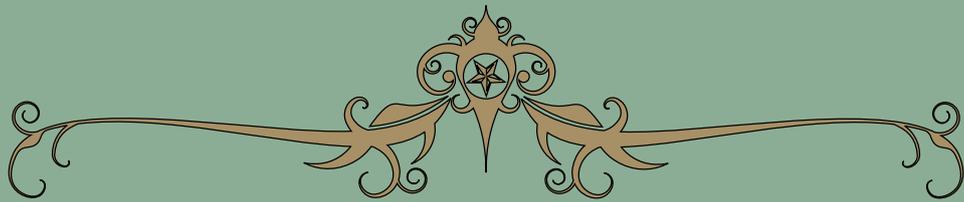
iv. Strong systems should be built for asset-liability and liquidity management so that risk aggregators can withstand sudden shocks in interest rates or liquidity.

## Vision Statement for Risk Aggregation

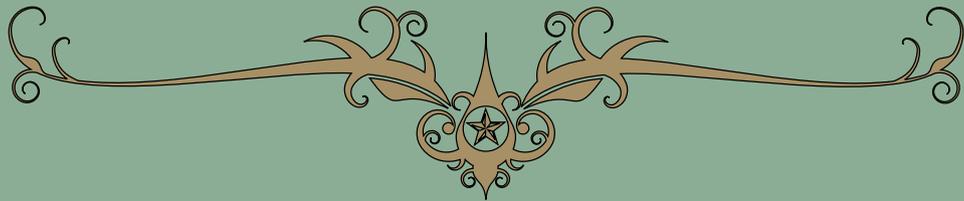
Participants formulated the following vision statement for Aggregation:

“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.”





# KEY TAKEAWAYS



In the second half of the conference, participants identified pathways to achieve the specific visions that were formulated across Origination, Risk Transmission and Risk Aggregation. The pathways identified have been categorised into Research, Regulation, Innovation and Public Infrastructure.

## I. Research

1. Conceptually, what are the trade-offs if any between financial inclusion and systemic risk? Are there particular models of financial inclusion that fare better than others as viewed from this perspective?
2. Are there market based instruments (ex: listed subordinate debt) that provide additional information regarding the health of systemically important financial institutions? Can these effectively supplement supervision-based information?
3. How critical is priority sector regulation to the flow of credit to sectors such as agriculture and SME? Does priority sector regulation cause allocative inefficiencies in the economy? Are there less distortionary measures to direct resources to some sectors that have a high perceived social return?
4. Does structuring Government ownership in financial institutions differently reduce distortionary effects? For ex: holding company structure to channel all Government investments into financial institutions versus direct Government investments into specific financial institutions.
5. How must the performance of Chief Risk Officers in financial institutions be measured? How should their compensation be structured?
6. Financial advice as a function of originators. How is this best structured? What liability must the originator have for advice provided to clients? How must financial advisors be compensated? What is the corresponding regulatory and legal framework for customer protection in India?
7. How different are customer outcomes in an environment characterised by: (a) Financial product access alone and (b) Financial product access combined with financial advice?
8. Why is the take-up for risk transmission products (principally insurance) low at a household level? Is the selling process and agent incentives creating barriers to take-up?
9. In markets like India, what is the inter-play of hard information and soft information for credit origination? Do regionally focussed originators have better soft information? Why are non-bank institutions much more successful in some segments (ex: used commercial vehicles finance, microfinance) than banks?

## II. Regulation

1. How should regulation of the financial system be structured given that the product level distinctions are blurring? Is there a need for distinct regulators for systemic risk and customer protection?
2. The conference highlighted that the roles of the regulator and the policy-maker are quite distinct? Is increasing financial access in an under-served market like India a policy objective or a regulatory objective? How should these be coordinated?
3. What are the inherent conflicts of interest in the way regulation is currently structured? How can they be addressed?
4. How should financial sector regulators be governed?
5. With increasing sophistication of markets and products, risk measurement capabilities of regulators will become important. What are the best ways to build regulator capacity?
6. What data and reporting standards aid transparency, particularly in the regulation of systemically important financial institutions?
7. Are there market based instruments (ex: listed subordinate debt) that provide additional information regarding the health of systemically important financial institutions? Can these effectively supplement supervision-based information?
8. Managing moral hazard is important while regulating credit risk transmission mechanisms. Conference emphasised the importance of adequate capital at risk for originators that participate in securitisation as an example of this.

## III. Public Infrastructure

1. Payment system innovations crucial to better origination. There are several important developments in India in this regard, including the Interbank Mobile Payment Service (IMPS) and UID-linked electronic transfer of benefits. These need to be further strengthened. Cash dematerialisation infrastructure is also an important element of this.
2. Well-defined frameworks for bankruptcy/resolution are important to orderly development of markets.
3. Need to develop electronic records for collateral and collateral transfers. This includes land, house titles and vehicles.

4. Development of cyber security and privacy laws an important complement to financial sector development.

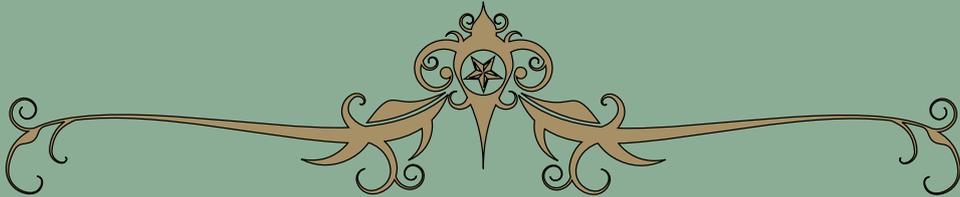
5. Expansion of broadband connectivity will have important implications for how originators are structured. Real-time data transfer has some off-set on originator-related risk.

## IV. Innovation

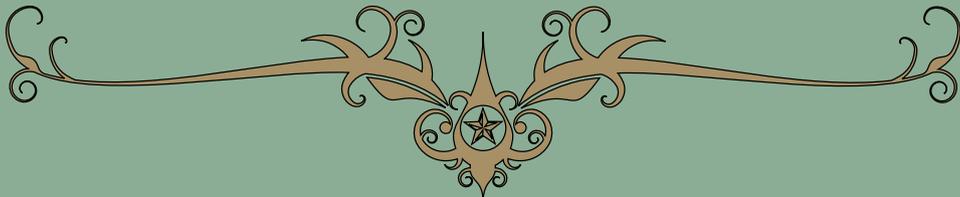
1. Can transactional information/behaviour available with utilities and telcos provide originators information about credit risk and substitute for soft information/collateral? This might enable newer kinds of originators and under-writing processes in the near future.

2. Technological development is gradually eliminating economies of scale in origination. It may be possible to have smaller sized but efficient originators going forward. As a related point, the justification for mega-sized financial institutions that pose serious systemic risk may get diminished.

3. The Conference noted the need for much more product innovation, both for origination as well as risk transmission. Examples include commodity options, inflation indexed bonds and corporate bonds.



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