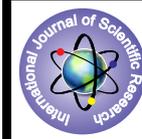


Structured Finance: Some Issues



Commerce

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ABSTRACT

This article reviews the principal features of structured finance instruments. It is argued that structured finance ratings, though useful, have intrinsic limitations in fully gauging the risk of these products, even as their complexity creates incentives to rely more heavily on ratings than for other rated securities. Market participants and public authorities need to take account of this in their assessments of structured finance instruments and their markets. The paper seeks to investigate the use and role of securitisation as main structured finance tool, and to assess the legal pitfalls, if any, that underlie the arrangement of this financing technique. This is done firstly by looking at the legal development of securitisation and at the regulatory incentives that have more recently shaped the originate and distribute mode. This study not only help the management, it also gives a clear -view to the owners, share holders, creditors and investors about structured finance

Introduction

Given the increasing sophistication of financial products, the diversity of financial institutions, as well as the growing interdependence of financial markets, sources of systemic vulnerabilities are likely to be found in areas of financial innovation, where market forces and participants are left to their own devices and when incentive structures encourage greater risk taking in a benign economic environment but entail more adverse economic consequences when stress occurs. One case in point is the development of the structured finance market, which has benefited from the attractive proposition of greater risk diversification. The essence of structured finance activities is the pooling of economic assets (e.g. loans, bonds, mortgages) and subsequent issuance of a prioritized capital structure of claims, known as tranches, against these collateral pools. As a result of the prioritization scheme used in structuring claims, many of the manufactured tranches are far safer than the average asset in the underlying pool. This ability of structured finance to repackage risks and create "safe" assets from otherwise risky collateral led to a dramatic expansion in the issuance of structured securities, most of which were viewed by investors to be virtually risk-free and certified as such by the rating agencies.

CONCEPT OF STRUCTURED FINANCE

Structured finance encompasses all advanced private and public financial arrangements that serve to efficiently refinance and hedge any profitable economic activity beyond the scope of conventional forms of on-balance sheet securities (debt, bonds, equity) at lower capital cost and agency costs from market impediments on liquidity. In particular, most structured investments

- (i) combine traditional asset classes with contingent claims, such as risk transfer derivatives and/or derivative claims on commodities, currencies or receivables from other reference assets, or
- (ii) Replicate traditional asset classes through synthetic or new financial instruments. Structured finance is invoked by financial and non-financial institutions in both banking and capital markets if established forms of external finance are either (i) unavailable (or depleted) for a particular financing need, or (ii) traditional sources of funds are too expensive for what would otherwise be an unattractive investment based on the issuer's desired cost of capital.

Structured finance offers issuers enormous flexibility to create securities with distinct risk-return profiles in terms of maturity structure, security design, and asset type, providing enhanced return at a customized degree of diversification commensurate to an individual investor's appetite for risk. Hence, structured finance contributes to a more complete capital market by offering any mean-variance trade-off along the efficient frontier of optimal diversification at lower transaction cost. However, the increasing complexity of the structured finance market, and the ever growing range of products being made available to investors, invariably create challenges in terms of efficient assembly, management and dissemination of information.

Investors in securitization have a wider choice of high-quality investments at their disposal, whose market valuation engenders greater overall efficiency and liquidity of capital markets. The tradability of securitized asset risk also facilitates the synthetic assembly and dynamic adjustment of asset portfolios via secondary markets according to investor preferences. As opposed to ordinary debt, a securitized contingent claim on a promised portfolio performance affords investors to quickly adjust their investment holdings at low transaction costs in response to changes in personal risk sensitivity, market sentiment and/or consumption preferences. However, securitization involves a complex structured finance technology, which commands

Significant initial investment of managerial and financial resources.

OBJECTIVES OF THE PAPER

- 1 To understand structure finance and conventional finance
- 2 To analyse challenges of structured finance
- 3 To study the complexities of Structured Finance
- 4 To study the risk of structured finance

STRUCTURED FINANCE VS. CONVENTIONAL FINANCE

- 1 The flexible nature of structured finance straddles the indistinct boundary between traditional fixed income products, debentures and equity on one hand and derivative transactions on the other hand.
- 2 Notwithstanding the ostensible difficulties of defining structured finance, a functional and substantive differentiation seems to be most instructive for guiding an informed demarcation between the most salient properties of structured and conventional forms of external finance.

The complexity of structured finance

- 1 Pooling and tranching, while being key sources of value in structured finance, are also the main factors behind what might be called the "complexity" of these instruments.
- 2 As far as pooling is concerned, evaluation of risk and return of a structured finance security necessitates modelling the loss distribution of the underlying asset pool, which may be complicated when the pool consists of a small number of heterogeneous assets.
- 3 tranching adds an extra layer of analytical complexity, the evaluation of a structured finance instrument (in other words, a tranche) cannot be confined to analysing asset pool loss.
- 4 It is also necessary to model the distribution of cash flows from the asset pool to the tranches; that is, to evaluate the deal's specific structural features.
- 5 the allocation of principal and interest payments received from the collateral pool and for the redirection of these cash flows in the case of stress situations, in addition to specifying the rights and duties of various third parties involved in the transaction.
- 6 Consequently, structured finance instruments give rise to

“non-default” risks – i.e. risks that are unrelated to defaults in the collateral pool, but which nevertheless affect the credit risk of issued tranches.

- 7 By implication, to the extent that equity investors can influence initial portfolio selection, they may be willing to sacrifice credit quality in exchange for enhanced yield payments, i.e. By including credits with wide spreads for given rating levels.

The risks of structured finance

Ratings, as indicators of the default risk embedded in debt instruments, are based on expected loss (EL) or probabilities of default (PDs).¹² The estimate of EL or PD for a structured finance tranche will critically depend on the size (ie “thickness”) and position of that tranche in the loss distribution of the underlying asset pool. To obtain this assessment, as highlighted above, an estimate of the asset pool’s loss distribution (the result of credit risk modelling) has to be combined with information about the structural specifics of the deal and its tranches (the result of structural analysis).

The main factors driving the loss distribution of any portfolio and, hence, the three main inputs into each agency’s structured finance rating methodology are estimates of: probabilities of default of the individual obligors in the pool; recovery rates; and default (time) correlations among the obligors within the pool. The choice of the approach used in conjunction with these inputs to model losses will depend on collateral pool specifics, such as the number and homogeneity of assets, obligor classes, and historical performance. In this regard, a key differentiation can be made between the approaches used to rate traditional ABS instruments and those applied to CDOs.

Ratings and the risk properties of structured finance products

Ratings are assessments of expected loss (EL) or probability of default (PD) and thus reflect an actuarial notion of credit risk that depends only on the first moment of the distribution of possible outcomes. Holding EL constant, however, an investment will tend to be riskier if its loss distribution is more dispersed. Risk profiles of financial instruments are, therefore, more fully described when estimates of EL or PD are combined with information on the ex ante uncertainty of losses as reflected, for example, in the variance and higher moments of the loss distribution. Ex ante credit

Loss uncertainty, in turn, has come to be commonly referred to as unexpected loss (UL). With regard to structured finance, two considerations merit mention in this context:

1. Risk comparisons among structured finance tranches

Due to the additivity of EL, the process of tranching will distribute the EL of the underlying portfolio across the various classes of securities issued against the pool. The equity tranche, although typically the smallest tranche in terms of notional size, will end up bearing much of the pool’s EL. In contrast, the senior tranche, being highly rated, will bear only a small portion of the EL, despite laying claim to most of the structure’s principal. Tranche UL will exhibit similar patterns across tranches: measured against tranche notionals, the UL of a tranche will tend to be higher for more junior tranches. The risk profile of a structured finance tranche, in fact, depends largely on two factors: its seniority (as determined by the lower boundary of the tranche) and its thickness (ie the distance between the upper and lower tranche boundaries; see Graph 2). The lower the seniority, the lower the level of loss protection and the higher the risk of a given tranche. The narrower the tranche, the more the loss distribution will tend to differ from the distribution for the entire portfolio in that it is likely to be more bimodal and, thus, riskier.

2. Risk comparisons with like-rated assets

Another aspect of structured finance is that tranching can lead to risk profiles that are substantially different from those of ordinary bond portfolios with the same (weighted average) rating. One factor behind this observation is the possibility of zero tranche recoveries for subordinated tranches. As a result, if defaults are severe enough, investors in all but the most senior tranches may lose the entire value of their investment even

in the case of non-zero recoveries. The narrower the tranche, the riskier it will be, as it takes fewer defaults for the tranche to be wiped out once its lower loss boundary has been breached. Subordinated tranches, therefore, have a wider distribution of outcomes than like-rated bond portfolios and will thus need to pay a higher spread than traditional debt instruments to compensate for the added risk.

Suggestions

- 1 In particular, the distinction of the various methods of credit risk transfer through credit derivatives in a wider and narrower sense as well as securitization transactions illustrates the need for more comprehensive and judicious regulatory considerations.
- 2 A good understanding of all these issues is incumbent on market participants as well as country officials charged with safeguarding financial stability and the sound operation of derivative markets. Given the increasing sophistication of financial products, the diversity of financial institutions, as well as the growing interdependence of financial markets, the sound regulatory oversight of this important segment of capital markets will depend on the expedient and tractable resolution of challenges arising from consistent credit risk management, risk mutualisation, and prudential standards that guarantee market stability in crisis situations.
- 3 During the credit crunch from late 2007 and into 2008, the buyers of highly rated structured finance products largely stopped buying. The initial cause for this change was that subprime-related securities were experiencing large losses, which created concerns about structured finance products more generally.
- 4 Some practitioners believe that the credit crunch of 2007 and 2008 will work itself out, as such episodes tend to do, and the market for structured credit will return as before.
- 6 Beginning in late 2007 and continuing well into 2008, it became increasingly clear to investors in highly-rated structured products that each of these three key assumptions were systematically biased against them.
- 7 Investors need to recognize the fundamental difference between singlename and structured securities, when it comes to exposure to systematic risk. Unlike traditional corporate bonds, whose fortunes are primarily driven by firm-specific considerations, the performance of securities created by tranching large asset pools is strongly affected by the performance of the economy as a whole.
- 8 While structured finance instruments can contribute to market completion and a better dispersion of credit risk, they also give rise to a number of questions with potential financial stability implications.
- 9 One of these is whether adding structured instruments to an institution’s portfolio might lead to unanticipated risk concentrations. A closely associated question is whether ratings-related investment mandates and similar constraints are effective in defining maximum levels of risk when structured finance is an eligible asset class.

CONCLUSION

The rapid evolution of structured finance markets implies that new structures and asset classes are continually being introduced. As a result, unfamiliar structures create new opportunities for unanticipated behaviour by note holders or third parties, while the scarcity of data on the historical performance of new asset classes generates additional model risk. Given the issues highlighted in this article and the fact that the structured finance market remains largely untested, policymakers and market participants alike have an interest in the developments in these markets and in attempting to understand the core challenges faced?

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