



Credit Risk Transfer in the Financial System

Some Financial Stability Issues

XVI Insurance and Securities International Seminar
Mexico City, November 25-26, 2004

Udaibir S. Das
Monetary and Financial Systems Department
International Monetary Fund



Outline

- ❑ A Global Policy Perspective
- ❑ Landscape
- ❑ Insurance and Reinsurance Sector
- ❑ CRT and Financial Stability
- ❑ Regulatory and Supervisory Issues
- ❑ Some Concluding Thoughts

The views and errors are mine and not of the institution I represent



Global Policy Perspectives



Monitoring Financial System Risks

The “tripod”: *Country authorities, the IMF, and the Market*

- ❑ Internationalization and integration of financial systems
- ❑ Financial system problems
- ❑ Established linkages between financial system soundness and macro economic stability



Global Policy Perspectives

□ CRT

- Has had a long history when viewed broadly as loan guarantees, securitizations

- Recent development

- transfer of credit risk between banking and non banking financial sectors



Global Policy Perspectives

Joint Forum (2001):

- ❑ “In response to the development of financial conglomerates, as well as the increasing globalization of financial markets, the development of new financial instruments and other trends, the Joint Forum...has been working to enhance mutual understanding of issues related to the supervision of firms operating in each of these sectors”



Global Policy Perspectives

Joint Forum (2001):

- “The complexity of cross-sectoral risk transfers and investment suggests there is a need to seek to ensure that firms in the various sectors are taking a prudent approach to the management of risk that they are taking on from other sectors”



Global Policy Perspectives

IMF Executive Board (2004):

- ❑ There are “...increasingly complex ways through which financial risks are being managed by banking, insurance, and securities firms”
- ❑ “Increasingly integrated financial systems, cross-sectoral and cross-country regulatory issues are becoming more important”



Global Policy Perspectives

IMF Executive Board (2004):

- Therefore, the IMF “emphasizes the importance of continued efforts by standard setters and financial regulators to improve the treatment of cross-sectoral and cross-border issues in regulation”



Impact So Far ?

- ❑ Providing benefits in terms of liquidity, efficiency
- ❑ But also....
 - Transferred risk to relatively less regulated markets
 - Highlighted the need for more robust risk management
 - Posed new challenges for regulators and supervisors



Questions Being Asked

- ❑ **Given the CRT phenomenon**
 - Where has the risk gone?
 - Has it been dispersed, concentrated?
 - Is there potential for regulatory arbitrage?
 - Has the CRT improved stability of the banking system?
 - What is the impact on overall financial stability evident?



CRT Landscape



CRT Landscape

Fitch (2004) and S&P (2003):

- ❑ Credit derivatives (CDs) market expanded to US\$ 2.8 trillion of gross protection sold in 2003
 - Annual increase of 71%
- ❑ Geographically:
 - 38% of gross protection sold and 46% bought in Europe and Asia
 - Balance in North America



CRT Landscape

- ❑ Globally, banks and dealers sold US 2.4 trillion, and bought US\$ 2.6 trillion in 2003
- ❑ Banks thus appear to be leading risk transfer to other sectors



CRT Landscape

□ Sellers

- US *insurers* and European *banks* are large sellers of protection
- European *insurers* and US *banks* have a smaller share for selling protection

□ Buyers

- European banks report *larger* amounts bought than US ones



CRT Landscape

- ❑ Banks that sell protection
 - ❑ smaller, regionally oriented
- ❑ Banks that buy
 - ❑ large, global
- ❑ Banks that sold protection
 - ❑ exposures taken via CRT are small (2% to 6% of total loans)



CRT Landscape

- ❑ On a *net* basis
 - ❑ European banks bought US\$ 135 billion of protection
 - ❑ North American banks bought US\$ 92 billion
 - ❑ Asian banks bought US\$ 33 billion
- ❑ As suggested by IMF (2004) in *gross* terms
 - ❑ banks have mainly conducted CRT with other banks



CRT Landscape

- ❑ Product mix in 2003
 - 64% single-name CDs
 - 25% portfolio products
 - 11% other
- ❑ In terms of concentration
 - few institutions account for the bulk of exposure:
 - top 10 institutions represent 69% of total counterparty exposure (similar to 2002)
 - a potential stability issue



CRT Landscape

- ❑ Largest notional growth year-over-year
 - ❑ single-named CDs which doubled in 2003 to US\$ 1.9 trillion of gross protection sold
- ❑ Growth has been spurred mainly by
 - ❑ greater standardization
 - ❑ increased acceptance as means to take positions
 - ❑ improved liquidity
 - ❑ continued product innovation



CRT Landscape

- Motivations for greater use of CDs
 - Capital management
 - Potential regulatory arbitrage
 - Credit risk portfolio management



CRT and the Insurance and Reinsurance Sectors



Financial Market Structure Matters

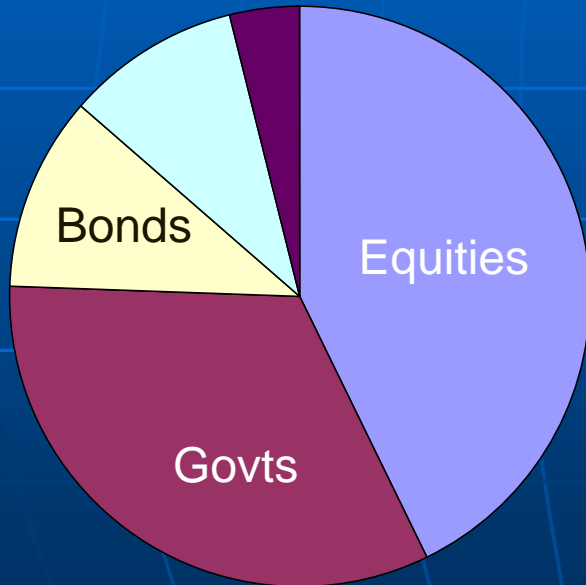
- ❑ In a market-oriented financial system (US) insurance business is credit
- ❑ In a bank-centered system (Europe) insurers' investment choices are more limited
- ❑ Where corporate bond markets are less developed, synthetic credit exposures may improve risk management



Financial Market Structures: USA, UK and Europe

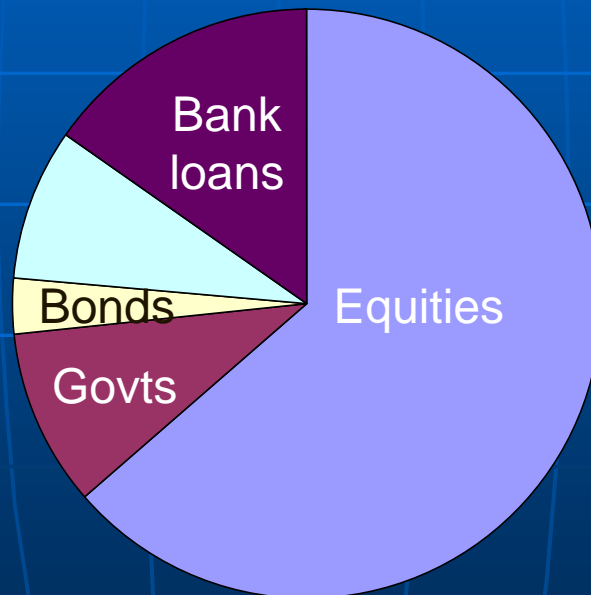
United States

United States
Bank loans



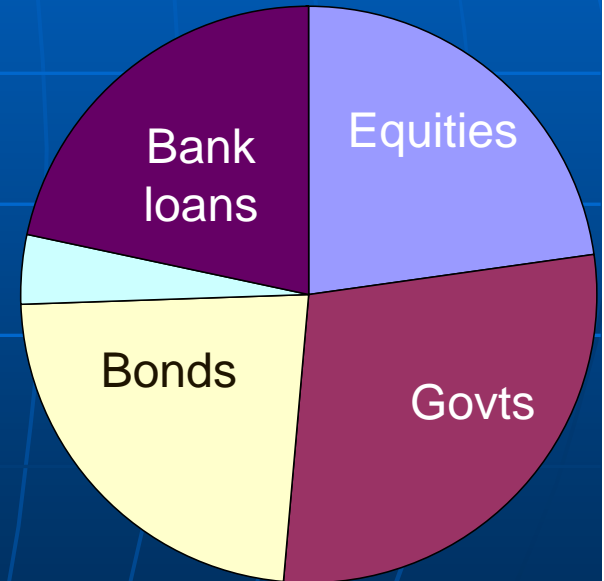
United Kingdom

United Kingdom



Europe

Europe





Thus, important to recognize that differences across sectors, and across regions also acts as a driver for the CRT



Insurance and Systemic Risk

- ❑ Insurers have not traditionally been viewed as systemically important
- ❑ Growing exposures to credit risk—including risk transferred from the banking system—have increased interest in systemic stability



Insurance Risk Exposures

Two key exposures:

- ❑ Guaranteed minimum returns
- ❑ Equity holdings



Recent European Experience

- ❑ Insurers offered products with guaranteed minimum returns
 - As inflation rates fell in the 1990s, nominal yields on sovereign debt declined
 - Some European insurers reached for yield by boosting equity holdings
 - Stock market decline led to a solvency crisis for many insurers



Europe contrasted with the USA

- ❑ US insurers had limited equity exposures and did not suffer a similar crisis
 - Due to solvency system imposed capital charge
 - Credit losses of 75 bps (an earnings event) versus equity losses of 35 percent or more (a solvency event)



CRT: Insurance/Reinsurance Sector

- ❑ Continue to be a major seller of protection
 - *gross sold position of US\$ 258 billion in 2003 (US\$ 174 billion in 2002)*
- ❑ So far, although a major net taker of credit risk, CDs are still a small part of their portfolio
 - *between 1% to 4%*
 - *CDs with their lower volatility and known cash flows have proven appropriate to match insurers long-term liabilities*



CRT: Insurance/Reinsurance Sector

- IMF (2004)
 - It appears that insurance sectors that have a larger exposure to instruments than equities (including CRT) have been more resilient during periods of financial stress, most notable during 2000-2003



CRT: Insurance/Reinsurance Sector

- Driven by this experience, insurers, mainly in Europe, have increased their exposure to fixed income and CDs
 - may help reduce balance sheet pressures encountered by the sector in recent years



CRT: Insurance/Reinsurance Sector

- IMF (2004):
 - “ This reduced pressure on the insurance/reinsurance sector coupled with the increased resiliency observed in the banking sector in recent years, means that the *relative relocation of credit risk between these two sectors appears to have enhanced global financial stability*”



Current Trends and Market Developments



Trends and Market Developments

- ❑ Two most important CD instruments:
 - ❑ Credit default swap (CDS)
 - ❑ Synthetic collateralized debt obligation (CDO)



Trends and Market Developments

- ❑ As suggested by Joint Forum (2004):
 - ❑ Despite growth, still concentrated on investment-grade entities
 - ❑ Globally trading occurs in about 1,200 references, although several tiers of liquidity exist
 - ❑ Five-year maturities are the most liquid
 - ❑ CDs with sovereign references continue to develop



Trends and Market Developments

S&P (2003) suggests that

- ❑ Banks holding large notional amounts of CDs
 - also the largest dealers in the CRT markets
- ❑ Banks typically report
 - dealers book make up 90-95% of CDs
 - while hedging 5-10%



Trends and Market Developments

S&P(2003) suggests that:

- ❑ Much of the notional amount of CDs outstanding reflects inter-dealer trading
- ❑ Dominant trend in banking system
 - use CDs primarily to manage exposures concentration to investment-grade corporate consumers



Trends and Market Developments

- Main innovations in the last years:
 - CDS indices with index-related products, and single-tranche synthetic CDO
 - Indices are now quoted in the US, Europe, Japan and some emerging markets



Trends and Market Developments

- Trend is characterized by
 - Development and growth of more complex instruments
 - More complex strategies and transaction structures

The rapid growth and complexity highlight a number of potential vulnerabilities that need to be addressed

- Consistent database of reference entities
- Need for developing services to support the matching, affirmation and confirmation of CDs transactions



Trends and Market Developments

- Need for developing standardized CDO documentation
- Need for developing voluntary standards to ensure that material non-public information is not inappropriately used by trading firms



Trends and Market Developments

- ❑ According to Fitch (2003, 2004) and S&P (2003), two fundamental aspects of CRT markets are underscored:
 - ❑ Aggregate amounts of risk transfer is still small relative to banks and insurers overall exposures
 - ❑ CRT is a key part of the ongoing transformation of credit markets



CRT and Issues in Risk Management and Financial Stability



CRT and Risk Management Issues

Joint Forum (2004) identifies *Credit Risk Itself*:

- ❑ Need to distinguish between underlying credit risk transferred and counterparty risk, and consider the linkages and correlations between the two
- ❑ Insurance companies can take risk on both sides, which increases the importance of taking an integrated management view of both asset-and-liabilities related risks
- ❑ Probably the most important risk associated with CRT activity:
 - assessment of correlation of portfolio products



CRT and Risk Management Issues

Counterparty Risk

- ❑ The biggest risk typically arises in relation to CDS transactions
 - ❑ Synthetic CDOs investors frequently need to fund their positions
 - ❑ Synthetic CDO issuer typically invests these funds in high quality collateral to back up the CDO's ability to repay principal
- ❑ To manage counterparty risks, firms generally use collateral support agreements (CSA)
- ❑ Potential correlation between underlying reference and protection seller



Risk Management Issues of CRT

Operational Risk

- ❑ Need to develop transactions processing and settlement mechanisms that reduce operational and settlement risks.
 - In CDS markets, unsigned confirmations have not been uncommon.
- ❑ Rapid growth may strain firms resources and infrastructure

Legal Risk

- ❑ Clean transfer and legal certainty are key for the development of CRT markets



Risk Management Issues of CRT

Liquidity Risk

- ❑ Within the CDS market there are tiers of liquidity
- ❑ Until now, liquidity in CDS market has been present even for nearing default references
- ❑ A severe market shock (such as a default of a major reference) could adversely affect CDS market liquidity, CDS has helped add liquidity and price discovery
- ❑ Secondary markets for CDO tranches are still underdeveloped



CRT: Financial Stability Implications

Benefits

- ❑ Financial market development:
 - A robust CRT market enables transfer of risk and allows a reduction in risk concentration
- ❑ Credit losses:
 - CRT activity might spread the costs of credit losses (as in the recent credit cycles in the US and Europe)



CRT: Financial Stability Implications

- ❑ Transparency and liquidity
 - ❑ CRT activities promote transparency and liquidity in other markets in which credit risk is high
 - ❑ Over the long-run, by fostering liquidity in markets, CRT activities should reduce financing costs for borrowers and help banks to manage their risks



CRT: Financial Stability Implications

- ❑ Participation by firms with insufficient record or understanding of credit risk may undermine CRT markets (in particular for insurers)
- ❑ Possibility of a build-up of significant concentration of risk either inside or outside the regulated sectors
 - ❑ Joint Forum (2004): the aggregate amount of risk transfer via CDs is still quite modest as a proportion of total credit risk in the financial system



CRT: Financial Stability Implications

- ❑ *Concentration of market-making activity*
 - ❑ Markets where market-making is concentrated tend to be vulnerable to a disruption in liquidity should a problem with a main player arise.
- ❑ *Linkages between CDs activities and other financial markets*
 - ❑ Markets are increasingly integrated, in part because of speculative capital ready to profit from arbitrage opportunities.
- ❑ *Simultaneous defaults by major references or large single dealers could pose stability concerns in CRT markets*



CRT and Regulatory and Supervisory Issues



Regulatory and Supervisory Issues

- Two main concerns:
 - *Regulatory Arbitrage.*
 - Can be reduced by an increased understanding of differences between regulatory regimes, and aligning them where possible and when needed
 - *Ability of Regulatory Tools to Monitor Risks resulting from CRTs.*
 - Tools can be enhanced with supervisors moving towards an increased focus on risk management systems and controls



Regulatory and Supervisory Issues

- IAIS (2003) suggests that standards and guidance material relating to CRT and CDs are generally in place
 - But constant updating and clarification is needed
- ICP 18 and 22
 - Require supervisors to check risk management practices, including derivatives and CRT type commitments



Is CRT regulatory arbitrage?

Does risk transfer *reduce* risks, or merely *shift* them to sectors that may not manage them as well?



The insurance sector must be able to manage these risks effectively in order for CRT to improve systemic stability.

IMF 2004 study focused not on the *transfer* of risks from banks to insurers, but on the insurance sector's *risk exposures of all types*.



Regulatory and Supervisory Issues

- ❑ Three key supervisory issues
 - Group transactions
 - Focus on investment activities
 - Accounting and disclosure: CRT disclosure practices need to be improved both to supervisors and market
- ❑ Further work needed on
 - Identifying and closing gaps in regulation of complex instruments
 - Regulation of reinsurance
 - Consolidated supervision



Regulatory and Supervisory Issues

- ❑ Supervisory Approaches vary across sectors and jurisdictions
 - For banks and investment firms the most binding regulations for the use of credit derivatives are capital requirements
 - For insurers it is regulatory restrictions
 - U.S.: insurers are subject to both capital requirements linked to the type of business undertaken and restrictions on the type of trading instruments
 - Europe: supervisors tend to rely on regulatory restrictions on the type of instruments and contracts firms can use



Strengthening Regulatory Frameworks

- ❑ Prescriptive regulatory frameworks (on policies, premiums, portfolio allocations) do not encourage improvements in risk management
- ❑ Risk based capital (RBC) approaches can align prudential requirements with insurance companies' risks, and encourage improvements in risk management



Conclusions

- ❑ Stability of insurance and of financial system may be improved if insurers reduce equity exposures and hold more credit
- ❑ But only with appropriate skills for credit analysis and regulatory framework (RBC)
- ❑ Development of a globally accepted standard for insurer capital adequacy
- ❑ Synthetic exposures require some additional attention but are not inherently inappropriate



Conclusions

- ❑ CRT activity is rapidly expanding, and product innovation is rapid
- ❑ A robust CRT market may help foster liquidity and efficiency
 - ❑ by diversifying risk and spreading costs of credit losses, CRT may enhance financial stability
- ❑ But a number of stability issues remain need to be addressed
- ❑ Work lies ahead for regulators and supervisors in all sectors