

**The recent financial turmoil:
a first assessment and some policy considerations for
the international financial architecture**

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I. The factual background

A. The “originate and distribute” banking model: securitization and beyond

1. New instruments in international credit markets for credit risk trading:
 - Securitization
 - Credit risk derivatives

2. Securitisation (the “originate and distribute” banking model): the basic structure
 - A bank or a finance company (originator) grants a loan to a borrower
 - The originator sells a pool of loans to a special purpose vehicle (SPV)
 - The SPV funds itself by issuing debt (asset-backed securities, ABSs)
 - The rating of the debt is conducted mainly by credit rating agencies (CRAs)
 - The interest payment to investors (bondholders) depends on timely interest income from ultimate borrowers – the investor cannot monitor the ultimate borrowers
 - ABSs are distributed by investment banks usually to institutional investor
 - Typically there is no secondary market for the trading of ABSs

I. The factual background

A. The “originate and distribute” banking model: securitization and beyond (con.)

3. Securitisation: the positive contribution

- Reduction of credit risk in bank portfolios – in the presence of capital adequacy regulations, relief of own funds to be allocated for other productive investments
- Higher liquidity in bank portfolios (loans are in general non-liquid, unless securitized)
- Reduction of maturity mismatches in bank portfolios
- Demand for ABSs by institutional investors seeking higher yields than government and some corporate bonds as well as portfolio diversification

I. The factual background

A. The “originate and distribute” banking model: securitization and beyond (con.)

4. The second wave of securitizations: the creation of “structured credit instruments”
 - The typical instrument: “collateralized debt obligations” (CDOs) – there exist also CDOs of CDOs (so called “CDO-square”)
 - The vehicle issuing CDOs (its liabilities side) is putting together (on its assets side) bonds from different securitized loan portfolios
 - The new portfolio is structured in different parts (“tranches”) with different credit risk exposures
 - Each part can be sold to investors with different degree of risk appetite (or risk aversion)
 - The incoming interest income is distributed according to the seniority of the tranches – investment in junior tranches is riskier, hence interest payment higher
 - At the bottom of the structure: an “equity tranche” usually held by originators

I. The factual background

A. The “originate and distribute” banking model: securitization and beyond (con.)

5. Disadvantages of CDOs

- Difficult to assess credit risk in the various tranches of the CDOs - investors rely almost entirely on the ratings provided by credit rating agencies (CRAs)
- CDOs are not listed
 - Irregular trading – low degree of liquidity
 - Valuation by using models created by CRAs

I. The factual background

B. The emergence of bank-owned “special investment companies”

1. Types of special investment companies

- Conduits
- Structured Investment Vehicles (SIVs) (highly leveraged)

2. Investment policy of special investment companies

- Holdings in CDOs (longer-term illiquid assets)
- Funding by issuing short-term Asset-Backed Commercial Papers (ABCPs)

3. The role of parent banks

- The motive: banks overcome stringent capital adequacy requirements
- The obligation: banks guarantee the ability of Conduits and SIVs to repay their debts to investors (holders of ABCPs), if the latter are unable to issue new papers in the market (liquidity guarantee, contingent liquidity facilities and lines)
- (Off-balance-sheet) holdings in Conduits and SIVs are not disclosed

I. The factual background

C. The weakest link in the chain: the US “sub-prime” mortgage credit market

1. Characteristics of US sub-prime mortgage loans

- Mortgage loans granted to households with particularly weak credit record and economic fundamentals
- “Short-reset” loans
- 13% of total mortgage loans in the US

2. The problems that have arisen out of the US sub-prime mortgage loans

- Necessary to conduct proper credit assessments on borrowers in order to differentiate the interest rates charges – this did not happen
- When interest rates started rising, many borrowers started defaulting on their loans sometimes even before the reset

I. The factual background

D. The triggers of the financial turmoil

1. The initial events:

- In summer 2007 it became evident that defaults on US sub-prime mortgage loans would be higher than expected
- Hedge funds tied to Bear Stearns went bankrupt because they could not dispose of CDOs containing sub-prime mortgage loans in order to meet investor demand for liquidity
- CRAs downgraded CDOs containing sub-prime mortgage loans – confidence in the market for the securitisation of mortgage credit, in general, was shaken

2. Impact on banks:

- Investors in ABCPs lost their confidence, as well, and the demand for these debt instruments fell (flight to quality)
- Parent banks of Conduits and SIVs were forced to fulfil their obligations from liquidity guarantees – in most cases the extent of the true exposure to the risk was unexpected
- Two German banks (IKB and Sachsen Landesbank) announced to have suffered substantial losses from their holdings in Conduits

I. The factual background

D. The triggers of the financial turmoil (con.)

3. The reaction of banks and the impact on the interbank market:

- Those with holdings in Conduits and SIVs needed liquidity in order:
 - to meet obligations from liquidity guarantees, and/or
 - transfer the underlying assets in their balance sheet (affecting also their capital adequacy ratios)
- Those without holdings were reluctant to lend in the interbank market due to the lack of transparency with regard to other banks' exposure to liquidity risk
- The cumulative effect: interest rates in the unsecured interbank market rose sharply
- Banks depending on longer-term market financing suffered losses: Northern Rock witnessed the first “bank run” in decades in a country with an explicit deposit guarantee scheme

I. The factual background

D. The triggers of the financial turmoil (con.)

4. The reaction of central banks:

- Central banks intervened, in a concerted way, in order to provide liquidity and reduce the volatility in short-term interest rates
- Some central banks (U.S. Federal Reserve) even reduced the rate in their main refinancing operations, while other (ECB) did not raise this rate as anticipated

5. “Crisis of confidence” on CRAs as to their ability to properly grade structured products

II. Lessons from the turmoil

A. A general assessment

1. Through the current “originate and distribute” banking model, we have moved to a market-based financial system (positive development)
2. A new transmission channel for systemic financial spillovers with potential international dimensions:
 - Adverse market conditions in the market for the securitisation of mortgage credit may adversely affect interest rates in the interbank market
 - From mis-selling of mortgage loans in the US to the closing of Northern Rock in the U.K.
3. “Internet” bank runs: the experience from Northern Rock

II. Lessons from the turmoil

A. A general assessment (con.)

4. The significant role of institutional investors' behaviour:
 - Liquidity-driven demand for high yields affected the supply of new products (since 2003 due to low T-bills interest rates and credit expansion)
 - Changes in market expectations and confidence triggered the turmoil

5. The role of central banks in preserving financial stability
 - Monitoring and assessing the outlook for financial stability (the reason why monetary authorities were not kept by surprise)
 - Providing liquidity to financial markets and financial intermediaries (without “bailing them out”) in order to prevent the spillover and generalization of financial shocks, with negative systemic implications:
 - Fine-tuning operations (rare use by the ECB)
 - Main refinancing operations
 - Supplementary longer-term refinancing operations

II. Lessons from the turmoil

A. A general assessment (con.)

6. The important role of concerted actions of market participants in containing the extent of turmoils (“Master Liquidity Enhancement Conduit” – M-Lec)
7. The interaction between real economy, monetary policy and the stability of the financial sector:
 - Increase of nominal interest rates – due to economic growth – *may* under circumstances impair the ability of borrowers to repay debts (increase in default rates)
 - Financial instability *may* have an impact on economic growth and *may* direct the stance of monetary policy conducted by central banks

II. Lessons from the turmoil

A. A general assessment (con.)

8. The impact on the European banking sector:

- The problems were mainly propagated from a sub-set of borrowers: other market segments and sectors of the economy have broadly strong fundamentals
- The shock-absorbing capacity of European banks is solid due to strong capital adequacy ratios – to be enhanced further by the implementation of the Capital Requirements Directive (the European equivalent of “Basel II”)
- The Greek banking sector has been affected only to a limited scale by the turmoil:
 - Greek banks had not invested in CDOs
 - Greek banks did not own Conduits or SIVs
 - Negative secondary effects through the interbank market

II. Lessons from the turmoil

B. Weaknesses in the “originate and distribute” banking model

1. In the current “originate and distribute” banking model, there is a clear distance between the originator and the ultimate investor
2. Mis-assessment of credit risk:
 - Inappropriate ratings due to the complexity of many types of CDOs
 - Heavy reliance on Credit Rating Agencies
 - Reduced monitoring of borrowers by originators
 - Crisis of confidence in the rating of CDOs

II. Lessons from the turmoil

- B. Weaknesses in the “originate and distribute” banking model (con.)**
3. The complexity of many types of CDOs made them difficult to value and trade under adverse market conditions:
 - CDOs are not traded in secondary markets
 - Liquidity is poor (especially under adverse market conditions)
 - Valuations are model-determined
 - As these models require market prices for ABS indices, if such prices are unavailable or unreliable, models do not work
 4. Selling the “equity tranche” of CDOs to investors removes the last incentive for originators to exert market discipline on borrowers

II. Lessons from the turmoil

- C. Weaknesses in the operation of “special investment companies”**
1. Regulatory arbitrage in order to avoid capital requirements
 2. Maturity mismatch on the balance sheet of Conduits and SIVs
 3. Lack of contingency plans of some banks to deal with unexpected funding liquidity risks arising from the contingent liquidity facilities:
 - Exposure to liquidity risk – first reason of negative impact on interest rates in the interbank market
 - De-leveraging by banks – less capital available for productive investments

II. Lessons from the turmoil

- C. Weaknesses in the operation of “special investment companies” (con.)**
4. Some banks had underestimated their true exposure to the credit risks in the portfolios of Conduits and SIVs – hence, they underpriced the contingent liquidity lines
 5. Inadequate transparency about the final location of risk exposures:
 - Adverse selection
 - Widespread counterparty risk – second reason of negative impact on interest rates in the interbank market

II. Lessons from the turmoil

D. In particular: the need for international monetary and financial cooperation

1. International monetary cooperation

- The easier exercise: *concerted* conduct of short-term oriented monetary policy to enhance finance stability
- The more difficult part: *coordinated* conduct of medium-term oriented monetary policy to safeguard price stability

II. Lessons from the turmoil

D. In particular: the need for international monetary and financial cooperation

2. International financial cooperation

- Information exchange between financial sector supervisory authorities on the supervision of individual institutions and groups
- Appropriate division of responsibilities between supervisory authorities with regard to the supervision of internationally active financial firms and financial groups
- International harmonisation of regulatory measures in order to avoid regulatory arbitrage among jurisdictions

II. Lessons from the turmoil

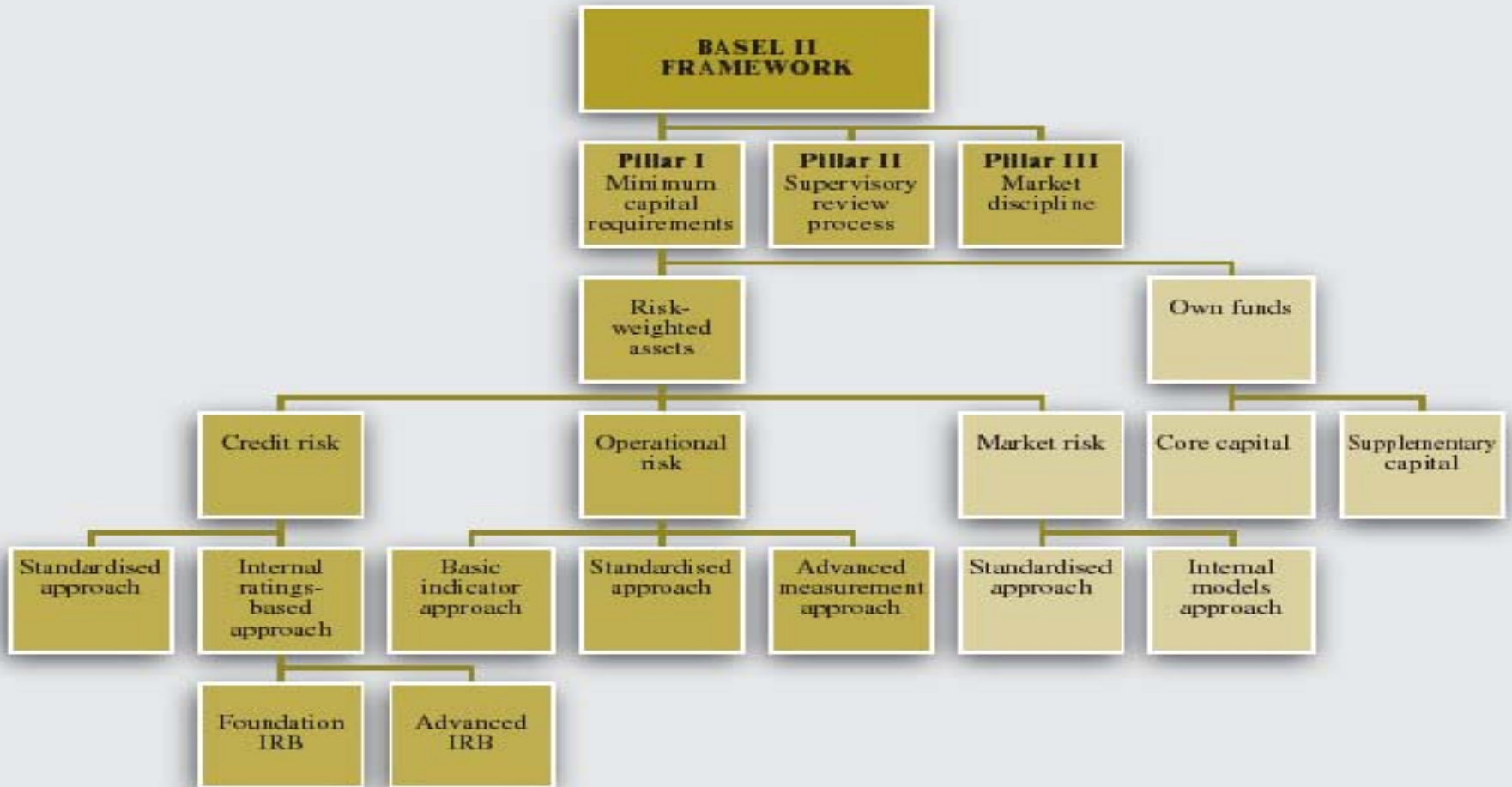
D. In particular: the need for international monetary and financial cooperation

2. International financial cooperation (con.)

- Existence of international rules within the framework of the “New International Financial Architecture”:
 - Soft-law instruments
 - International institutions and *fora* (Basel Committee, IOSCO, Financial Stability Forum, International Monetary Fund)
 - In particular: the new “Capital Adequacy Framework” (Basel II) – applying in Europe since January 1, 2008

II. Lessons from the turmoil

Basel II



III. Some policy considerations

A. The current discussion

1. Reactions at the international level
 - Basel Committee on Banking Supervision
 - IOSCO
 - International Accounting Standards Board
 - Financial Stability Forum
2. Reactions at the European level
 - Ecofin Council
 - European Parliament
 - European Commission
 - European Central Bank
 - CEBS – CESR – CEIOPS
3. Reaction of the industry
 - Institute of International Finance
 - European Banking Federation
 - National banking associations

III. Some policy considerations

B. Proposals addressing weaknesses in the “originate and distribute” banking model

1. Examine rules applying to the origination and mis-selling of mortgage credit
2. Enhance market transparency
 - Transparency of underwriting standards for underlying assets
 - Transparency of risk characteristics of CDOs
 - Compilation of frequent statistical data on credit markets and asset quality
3. Improve valuation standards for CDOs
4. Address the role of CRAs
5. Risk management practices for institutional investors
6. Examine the organization of non-regulated debt markets
7. Address potential “incentive measures” in the model

III. Some policy considerations

- C. **Proposals addressing weaknesses in the operation of “special investment companies”**
 - 1. Enhance transparency on banks’ investments in Conduits and SIVs
 - 2. Enhance transparency of risk characteristics of ABCPs
 - 3. Towards an international framework for banks’ liquidity management supervision
 - 4. Risk management standards for banks with regard to investments in CDOs and holdings in Conduits and SIVs
 - 5. Review of the new “Capital Adequacy Framework”
 - Pillar 1
 - Off-balance-sheet activities
 - Securitization rules
 - Capital requirements for illiquid assets held in the trading book
 - Pillar 2
 - Pillar 3

III. Some policy considerations

D. Other proposals

1. Optimal allocation of responsibilities between central banks (if they are not supervisory authorities) – Treasuries – supervisory authorities in the resolution of banking crises
 - Responsibility of supervisory authorities: reorganization and winding-up (depending on national legislation)
 - Responsibility of central banks: last resort lending (based on information by supervisory authorities with regard to the solvency of affected banks)
 - Responsibility of Treasuries: “bail out” with taxpayers’ money (in cases of banks which are considered “to big to be left to fail”)
2. Possible enhancements in deposit guarantee schemes
3. Containing “internet bank runs”

III. Some policy considerations

- E. Concluding remarks and personal proposals:**
Maintain the model and keep the appropriate balance between market-led and rules-based corrective solutions
1. The primary goal of the policy agenda should be to contain the positive impact of the “originate and distribute” banking model, and consequent market developments, while fixing their deficiencies
 2. Policymakers, central banks and supervisory authorities should avoid reactions leading to a wave of “over-regulation” that would adversely affect financial markets and intermediaries
 3. In the course of undertaking corrective solutions, a balance should be kept between market-led initiatives and regulatory intervention