
EE431: Lecture 7 (Spring 2012)

Risk Management in Banking (2):

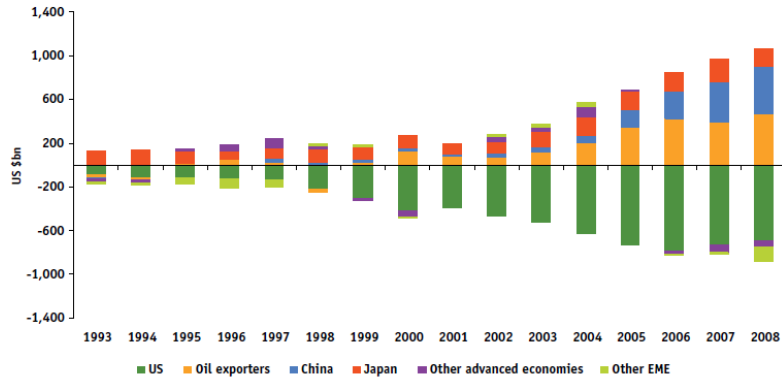
Basel III & Macroprudential Policy

(& interest rate risk management)

Subprime Financial Crisis (1)

Macro Imbalances:

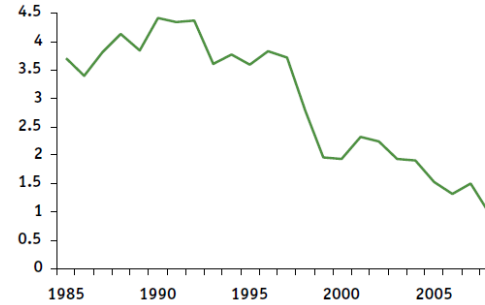
Exhibit 1.1: Global current account balances



Source: IMF, FSA calculations

Reduction in Interest Rates:

Exhibit 1.3: UK real interest rates (20 year bonds, yield at May 25 or nearest week day)

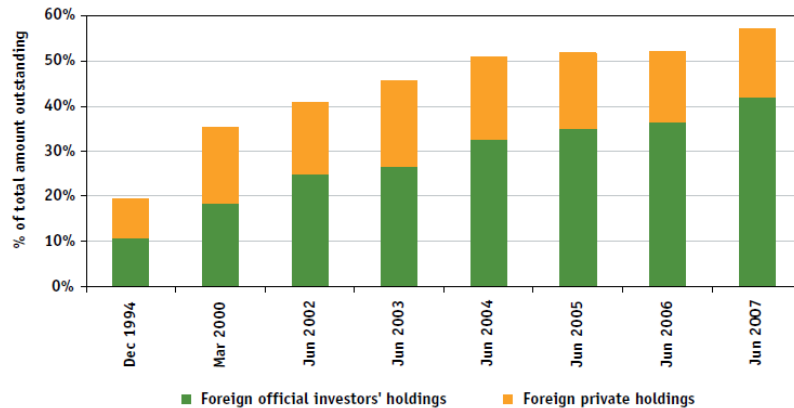


Note: For the years 1985, 86, 89, 90 and 91 no 20-year-yield is precisely available; the longest available yield (in range 16-19 years) is shown

Source: Bank of England Real Yield curve calculations

Foreign Investment:

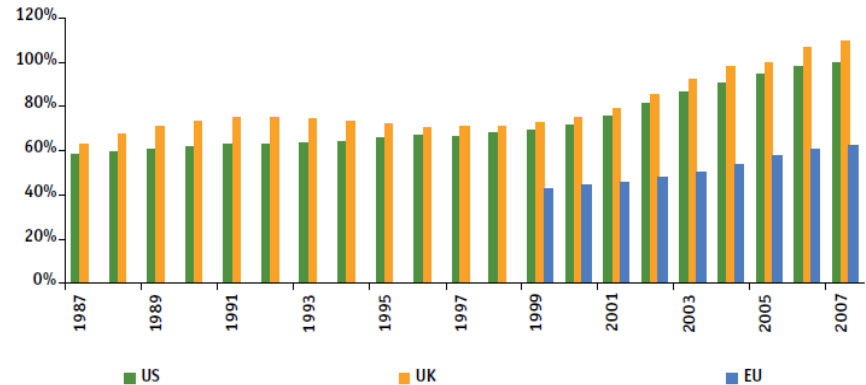
Exhibit 1.2: Foreign-ownership of marketable US Treasury bonds as percentage of total amounts outstanding



Source: IMF, US Treasury

Increase in Household Debt:

Exhibit 1.4: Household debt as proportion of the GDP

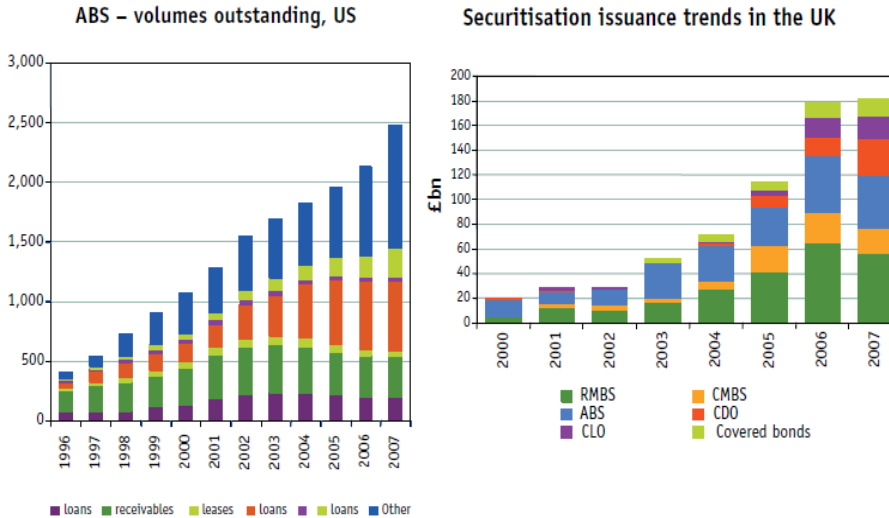


Source: ONS, Federal Reserve, Eurodata, Bureau of Economic Analysis, FSA calculations

Subprime Financial Crisis (2)

Market Innovation:

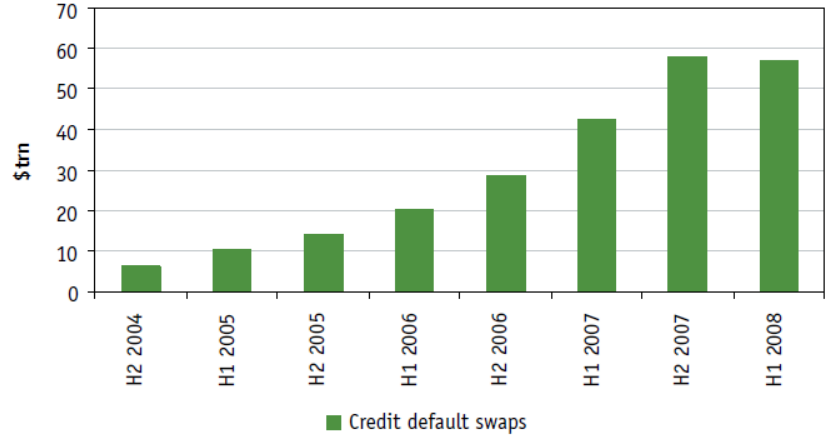
Exhibit 1.5: The growth of securitised credit



Source: SIFMA

Source: Oliver Wyman

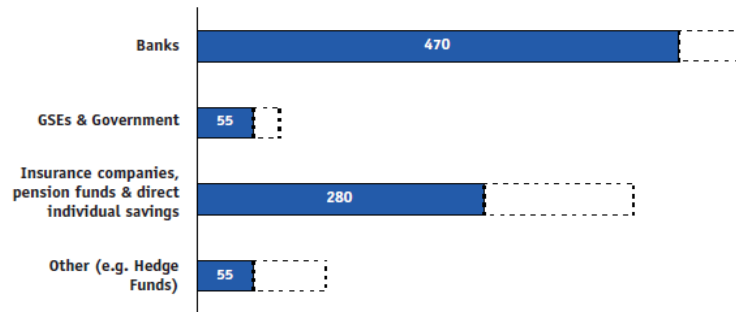
Exhibit 1.6: Growth in outstanding credit default swaps



Source: BIS Quarterly Review, December 2008

Result: Massive exposures to risks that were not understood and hence capitalized properly

Exhibit 1.8: Estimates of mark to market losses on US credit securities: at April 2008



Source: IMF Global Financial Stability Report, October 2008

Subprime Financial Crisis (3)

- **There was heavy reliance on short term wholesale funding**
- **Unsustainable maturity mismatch**
- **Insufficient liquidity assets to raise finance during stressed period**

- **Summary of issues seen**
 - Growth of Financial Sector
 - Increased Leverage
 - Misplaced Reliance on Sophisticated Maths
 - Hard-wired procyclicality (Basel II deficiency)
 - Mistrust in the Financial Sector

Crisis & Failure of Basel II: Reliance on Fuzzy Maths

- David Viniar (CFO Goldmans) in 8/2007 said „we are seeing 25 stddev moves, several days in a row
 - * A 7.26 sigma daily loss expected to occur 1/13.7bn years
 - * means 25 sigma event 1/6x10¹²⁴ lives of universe (for a single day loss)
 - * Probability of this happening for several days in a row?
- Models were wrong
 - * All models wrong, but failed keyens test: roughly right, not precisely wrong
- 92% of risk managers intended to review their practices at the end of 2008
 - * Between 1987 and 2007 a book a month on VAR
 - * Between 1997 and 2007 an article every 2 weeks on stress testing
- Why did the banks fail?
 - * In part due to the false sense of security models / risk advances presented
 - * Failed to adopt BII as a new way of doing business
 - * Over-reliance on exact numerical output

Subprime Financial Crisis (4): Failing Big Banks

- **The global financial crisis mostly happened in the areas of trading book /off balance sheet derivatives / market risk *and inadequate liquidity risk* management**
- **Banks suffered heavy losses in their trading book**
- **Banks did not have adequate capital to cover the losses**

Introducing Basel III

- **Basel III refers to a new update to the Basel Accords I & II that is under development.**
- **The term appeared in the literature as early as 2005.**
- **The Bank for International Settlements (BIS) itself began referring to this new international regulatory framework for banks as Basel III in September 2010.**

- *"We endorsed the landmark agreement reached by the Basel Committee on the new bank capital and liquidity framework, which increases the resilience of the global banking system by raising the quality, quantity and international consistency of bank capital and liquidity, constrains the build-up of leverage and maturity mismatches, and introduces capital buffers above the minimum requirements that can be drawn upon in bad times.*
- *The framework includes an internationally harmonized leverage ratio to serve as a backstop to the risk-based capital measures.*

- *With this, we have achieved far-reaching reform of the global banking system.*
- *The new standards will markedly reduce banks' incentive to take excessive risks, lower the likelihood and severity of future crises, and enable banks to withstand - without extraordinary government support - stresses of a magnitude associated with the recent financial crisis.*
- *This will result in a banking system that can better support stable economic growth.*

- *We are committed to adopt and implement fully these standards within the agreed timeframe that is consistent with economic recovery and financial stability.*
- *The new framework will be translated into our national laws and regulations, and will be implemented starting on January 1, 2013 and fully phased in by January 1, 2019."*
- **...Advent of Basel III**

MAJOR CHANGES PROPOSED IN BASEL III (1)

- **The quality, consistency, and transparency of the capital base will be raised.**
- **The risk coverage of the capital framework will be strengthened.**
- **A leverage ratio is introduced as a supplementary measure to the Basel II risk-based framework.**
- **A series of measures are introduced to promote the build up of capital buffers in good times that can be drawn upon in periods of stress ("Reducing procyclicality and promoting countercyclical buffers").**

- **The risk coverage of the capital framework will be strengthened.**
 - Raise the capital buffers backing these exposures
 - Strengthen the capital requirements for counterparty credit exposures arising from banks' derivatives, repo and securities financing transactions
 - Reduce procyclicality
 - Provide additional incentives to move OTC derivative contracts to central counterparties (such as clearing houses)
 - Provide incentives to strengthen the risk management of counterparty credit exposures

MAJOR CHANGES PROPOSED IN BASEL III (2)

- **A leverage ratio is introduced as a supplementary measure to the Basel II risk-based framework to achieve the following objectives.**
 - o Put a floor under the build-up of leverage in the banking sector
 - o Introduce additional safeguards against model risk and measurement error by supplementing the risk based measure with a simpler measure that is based on gross exposures.

MAJOR CHANGES PROPOSED IN BASEL III (3)

- **A series of measures introduced to promote the build up of capital buffers in good times that can be drawn upon in periods of stress ("Reducing procyclicality and promoting countercyclical buffers").**
 - Measures that address procyclicality:
 - Dampen any excess cyclicality of the minimum capital requirement;
 - Promote more forward looking provisions;
 - Conserve capital to build buffers at individual banks and the banking sector that can be used in stress; and
 - Measures to achieve the broader macroprudential goal of protecting the banking sector from periods of excess credit growth.
 - Requirement to use long term data horizons to estimate probabilities of default,
 - Improved calibration of the risk functions, which convert loss estimates into regulatory capital requirements.
 - Banks must conduct stress tests that include widening credit spreads in recessionary scenarios.
 - Promoting stronger provisioning practices (forward looking provisioning):

MAJOR CHANGES PROPOSED IN BASEL III (3)

- A global minimum liquidity standard is introduced for internationally active banks that includes a 30-day liquidity coverage ratio requirement underpinned by a longer-term structural liquidity ratio called the *Net Stable Funding Ratio*.
- The need for additional capital, liquidity or other supervisory measures to reduce the externalities created by systemically important institutions.

Basel III : Liquidity Risk Metric

Basel III liquidity metrics

- **BCBS issued two regulatory standards for liquidity risk designed to achieve separate but complementary objectives:**
 1. Promote short-term resilience of a bank's liquidity risk profile by ensuring that it has sufficient high-quality liquid assets to survive a significant stress scenario lasting for one month
 - Liquidity Coverage Ratio (LCR)
 2. Promote resilience over a longer time horizon by creating additional incentives for banks to fund their activities with more stable sources of funding on an ongoing basis
 - Net Stable Funding Ratio (NSFR) – time horizon of one year and developed to provide a sustainable maturity structure of assets and liabilities
- **BCBS also outlines additional liquidity monitoring tools**

Liquidity Coverage Ratio – Objectives

- “...aims to ensure that a bank maintains an adequate level of unencumbered, high-quality liquid assets that can be converted into cash to meet its liquidity needs for a 30 calendar day time horizon under a significantly severe liquidity stress scenario specified by supervisors”
- “Banks are expected to meet this requirement continuously...”

$\frac{\text{Stock of high-quality liquid assets}}{\text{Total net cash outflows over the next 30 calendar days}} \geq 100\%$

LCR – Stock of high-quality liquid assets

- **Assets should be liquid in markets during a time of stress and, ideally, be central bank eligible**
- **Operational requirements**
 - not co-mingled with or used as hedges on trading positions
 - not designated as collateral
 - managed with the clear and sole intent for use as source of contingent funding
 - should be under the control of the specific function(s) charged with managing the liquidity risk of the bank (typically the treasurer)

LCR – Net cash outflows

- **Defined as the total expected cash outflows minus total expected cash inflows in the specified stress scenario for the subsequent 30 calendar days**
 - Total expected cash outflows are calculated by multiplying the outstanding balances of various types of liabilities and OBS commitments by the rates at which they are expected to run off or be drawn down
 - Total expected cash inflows are calculated by multiplying the outstanding balances of various categories of contractual receivables by the rates at which they are expected to flow in, up to a cap of 75% of outflows

Total net cash outflows over the next 30 calendar days = outflows – Min {inflows; 75% of outflows}

- Most 'factors' harmonised across jurisdictions but some parameters are subject to national discretion

Net Stable Funding Ratio – Objectives

- “...promote more medium and long-term funding of the assets and activities of banking organisations...”
- “...establishes a minimum acceptable amount of stable funding based on the liquidity characteristics of an institution’s assets and activities over a one year horizon”
- “...promoting structural changes in the liquidity risk profiles...away from short-term funding mismatches and toward more stable, longer-term funding of assets...”

$$\frac{\text{Available amount of stable funding}}{\text{Required amount of stable funding}} > 100\%$$

- **“Stable funding”** – the portion of those types and amounts of equity and liability financing expected to be reliable sources of funds over a one-year time horizon under conditions of extended stress
- Amount of such funding *required* of an institution is a function of the liquidity characteristics of various types of assets held, OBS contingent exposures incurred and/or activities pursued by the institution

NSFR – ASF and RSF factors

- **Available stable funding (ASF) factors, e.g.:**
 - 100% – e.g. capital, secured and unsecured borrowings and liabilities with maturities > 1 year
 - 90% – stable retail and small business demand and term deposits with maturities < 1 year
 - 50% – unsecured w/s funding, non-maturity and term deposits with maturities < 1 year provided by non-FI corporates, sovereigns, PSEs
 - 0% – liabilities (including FIs) and equities not addressed explicitly
- **Required stable funding (RSF) factors, e.g.:**
 - 0% – e.g. cash, securities with maturity < 1 year
 - 5% – debt issued/guaranteed by sovereigns with 0% RW, undrawn amount of committed credit and liquidity facilities
 - 50% – loans to non-FI corporates, sovereigns, PSEs with maturities < 1 year
 - 65% – unencumbered residential mortgages with 35% RW with maturities < 1 year
 - 85% – other loans to retail and small business with maturities < 1 year
 - 100% – all other assets not explicitly noted
 - National discretion – other contingent funding obligations

Basel III: Regulatory Capital Ratio (Basel II v.s. Basel III)

DEFINITION OF TOTAL REGULATORY CAPITAL RATIO IN BASEL III

**Total Regulatory Capital Ratio= [Tier 1 Capital Ratio]
+ [Capital Conservation Buffer]
+ [Countercyclical Capital Buffer]
+ [Capital for Systemically Important Banks]**

TIER 1 CAPITAL

BASEL II: Tier 1 capital ratio = 4% & Core Tier 1 capital ratio = 2%

The difference between the total capital requirement of 8.0% and the Tier 1 requirement can be met with Tier 2 capital.

BASEL III: Tier 1 Capital Ratio = 6% & Core Tier 1 Capital Ratio (Common Equity after deductions) = 4.5%

Core Tier 1 Capital Ratio before 2013 = 2%, 1st January 2013 = 3.5%, 1st January 2014 = 4%, 1st January 2015 = 4.5%

The difference between the total capital requirement of 8.0% and the Tier 1 requirement can be met with Tier 2 capital.

CAPITAL CONSERVATION BUFFER

BASEL II: There is no capital conservation buffer.

BASEL III: Banks will be required to hold a capital conservation buffer of 2.5% to withstand future periods of stress bringing the total common equity requirements to 7%. Capital Conservation Buffer of 2.5 percent, on top of Tier 1 capital, will be met with common equity, after the application of deductions.

Capital Conservation Buffer before 2016 = 0%, 1st January 2016 = 0.625%, 1st January 2017 = 1.25%, 1st January 2018 = 1.875%, 1st January 2019 = 2.5%

The purpose of the conservation buffer is to ensure that banks maintain a buffer of capital that can be used to absorb losses during periods of financial and economic stress. While banks are allowed to draw on the buffer during such periods of stress, the closer their regulatory capital ratios approach the minimum requirement, the greater the constraints on earnings distributions.

COUNTERCYCLICAL CAPITAL BUFFER

BASEL II: There is no Countercyclical Capital Buffer

BASEL III: A countercyclical buffer within a range of 0% – 2.5% of common equity or other fully loss absorbing capital will be implemented according to national circumstances. Banks that have a capital ratio that is less than 2.5%, will face restrictions on payouts of dividends, share buybacks and bonuses.

The buffer will be phased in from January 2016 and will be fully effective in January 2019. Countercyclical Capital Buffer before 2016 = 0%, 1st January 2016 = 0.625%, 1st January 2017 = 1.25%, 1st January 2018 = 1.875%, 1st January 2019 = 2.5%

CAPITAL FOR SYSTEMATICALLY IMPORTANT BANKS ONLY

BASEL II: There is no Capital for Systemically Important Banks.

BASEL III: Systemically important banks should have loss absorbing capacity beyond the standards announced today and work continues on this issue in the Financial Stability Board and relevant Basel Committee work streams.

The Basel Committee and the FSB are developing a well integrated approach to systemically important financial institutions which could include combinations of capital surcharges, contingent capital and bail-in debt.

CAPITAL RATIOS IN BASEL III

➤ **As on Sept 2010, Proposed Basel III norms ask for ratios as:**

7-9.5% [4.5% +2.5%(conservation buffer) + 0-2.5%(seasonal buffer)] for Common Equity

and

8.5-11% for Tier 1 Capital

and

10.5 -13% for Total Capital

Calibration of the Capital Framework

Capital requirements and buffers (all numbers in percent)

	Common Equity (after deductions)	Tier 1 Capital	Total Capital
Minimum	4.5	6.0	8.0
Conservation buffer	2.5		
Minimum plus conservation buffer	7.0	8.5	10.5
Countercyclical buffer range*	0 – 2.5		

Basel III: Procyclicality of Finance & Countercyclical Measures

PROCYCLICALITY

- **How do the cyclical patterns in finance and other economic activity pose systemic risks?**
- **Financial activity appears especially prone to virtuous and vicious cycles.**
- **The interaction between financial and economic activity can be mutually reinforcing, leading to unsustainable booms and busts.**

PROCYCLICALITY-BOOM

- In a boom, investor complacency lowers market risk premia, boosting spending and profits that reinforce financial euphoria.
- Rising asset prices boost wealth and raise the value of collateral, making it easier for lenders to overcome the information asymmetries that lead to adverse selection and moral hazard.
- Both the value of bank capital and the willingness to leverage that capital rise, increasing credit supply and spurring new economic activity that contributes to financial euphoria. Rising asset prices also lower the cost of making markets, adding to liquidity (and to complacency).

PROCYCLICALITY-BUST

- **Busts reverse this process. Falling asset prices depress wealth, collateral, bank capital, credit supply and liquidity.**
- **Leveraged intermediaries scramble to deleverage (to reduce risk-taking), but the financial system cannot deleverage all at once in a safe fashion. The liquidity and deleveraging spirals reinforce the vicious cycle both in finance and in economic activity.**
- **The depletion of capital makes the financial system vulnerable even to a modest shock. Someone (government) outside the financial system must supply the liquidity to counter a systemic crisis. Similarly, someone (government) outside the system may have to recapitalize damaged intermediaries.**

BOOM TO BUST (1)

- In the up-phase of the economic cycle, price-based measures of asset values rise, price-based measures of risk fall and competition to grow bank profits increases.
- Most financial institutions spontaneously respond by
 - (i) expanding their balance sheets to take advantage of the fixed costs of banking franchises and regulation;
 - (ii) trying to lower the cost of funding by using short-term funding from the money markets; and
 - (iii) increasing leverage.
- Those that do not do so are seen as underutilising their equity and are punished by the stock markets.

BOOM TO BUST (2)

- **When the boom ends, asset prices fall and short-term funding to institutions with impaired and uncertain assets or high leverage dries up. Forced sales of assets drives up their measured risk and, invariably, the boom turns to bust.**

PROCYCLICAL RESPONSE OF THE FINANCIAL SECTOR

- **With greater deepening of financial markets and rapid growth of financial wealth, business cycles in both developed and developing countries are increasingly dominated by developments in the financial sector.**
- **The growing tendency of the financial system, to respond pro-cyclically to impulses emanating from the real economy reinforces expansionary and contractionary forces, thereby amplifying swings in investment, output and employment.**

PROCYCLICAL EFFECT OF FINANCE ON REAL SECTOR

- **The financial system is also capable of generating autonomous influences that can result in twists in real economic activity.**
- **Procyclical effects of finance on real economic activity derive mainly from the procyclical behavior of risk assessments by lenders and investors: that is, risks are underestimated at times of expansion and overestimated during contractions.**
- **Increased optimism and sense of security generated by an economic expansion often results in declines in risk spreads and provisions and improves credit ratings.**

A CUMULATIVE PROCESS

- **Given the “herd behavior” intrinsic in modern capital markets and “mark-to-market” practices in the valuation of asset and liabilities, these tend to produce a cumulative process of credit expansion, asset-price bubbles and over-indebtedness which, in turn, add to spending and growth momentum.**
- **Asset prices at such times are driven not so much by improved prospects of income streams as expectations of further price increases.**

TWO DEFINITIONS

- **Herd behavior describes how individuals in a group can act together without planned direction. The term pertains to the behavior of animals in herds, flocks and to human conduct during activities such as stock market bubbles and crashes, etc.**
- **Mark-to-market or fair value accounting refers to accounting for the fair value of an asset or liability based on the current market price of the asset or liability, or for similar assets and liabilities, or based on another objectively assessed "fair" value..**

THE ROLE OF CREDIT MARKETS

- **These cycles are accentuated by mutually reinforcing feedbacks between credit and capital markets and “mark-to-market” practices.**
- **Stock and property booms give rise to credit expansion by raising collateral values and reducing loan-loss provisions. Faster growth in lending, in turn, adds fuel to increases in the market valuation of assets, making investment even more attractive.**

CYCLICAL DOWNTURN

- However, as balance sheets adopt smaller margins of safety, the system develops endogenous fragility *à la Minsky*, and with a cyclical downturn in economic activity and/or increased cost of borrowing, incomes on assets acquired can no longer service the debt incurred.
- Increased loan delinquency leads to a widening of risk spreads and falling asset prices and collateral values, producing a credit crunch.
- As risks are overestimated, even the borrowers that normally qualify for credit become unable to borrow. This in turn increases the pressure on debtors to liquidate assets and can set off a process of *debt deflation*, which amplifies the contraction in economic activity.

DEBT DEFLATION: DEFINITION

- **Debt Deflation is a theory of economic cycles, which holds that recessions and depressions are due to the overall level of debt shrinking (deflating): the credit cycle is the cause of the economic cycle.**
- **This theory was developed by Irving Fisher.**

COUNTERCYCLICAL MEASURES

- A measure is called 'countercyclical' if it works against the cyclical tendencies in the economy. That is, countercyclical measures are ones that cool down the agents economy when the economy is in an upswing, and stimulate them when it is in a downturn.

“CYCLICALITY” IN CAPITAL REQUIREMENTS

- To counter the systemic risks from boom/bust finance, regulators also could make capital requirements “cyclical”.
- In good times, capital requirements would rise to create a capital buffer against adverse shocks and to discourage euphoria.
- When leaner times arrive, receding capital requirements would allow intermediaries to meet the credit needs of healthy borrowers.
- Overall, the effect would be to dampen the cyclicity of credit supply that can be an important source of economic instability.

Basel III: MICROPRUDENTIAL VERSUS MACROPRUDENTIAL REGULATION

MICROPRUDENTIAL REGULATION

- **Microprudential regulation concerns itself with the stability of individual institutions. Microprudential regulation examines the responses of an individual bank to exogenous risks. (Basel II)**
- **By construction it does not incorporate endogenous risk. It also ignores the systemic importance of individual institutions such as size, degree of leverage and interconnectedness with the rest of the system.**

THE SYSTEM CAN NOT BE MADE SAFE BY MAKING EACH BANK SAFE

- In trying to make themselves safer, banks, and other highly leveraged financial intermediaries, can behave in a way that collectively undermines the system. (Fallacy of Composition)
- Selling an asset when it appears to be risky may be considered a prudent response for an individual bank and is supported by much current regulation.
- But if many banks do this, the asset price will collapse, forcing risk-averse institutions to sell more and leading to general declines in asset prices, higher correlations and volatility across markets, spiraling losses, and collapsing liquidity. Micro-prudential behavior can cause or worsen systemic risks. As a result, *risk is endogenous*.

MACROPRUDENTIAL REGULATION

- **The macroprudential approach to an increase in risk is to consider systemic behavior in the management of that risk: who should hold it, and do they have the incentive to do so?**
- **Macro-prudential regulation concerns itself with the stability of the financial system as a whole.**
- **The purpose of macro-regulation is to act as a countervailing force to the natural decline in measured risks in a boom and the subsequent rise in measured risks in the subsequent collapse.**

COSTLY SPILLOVERS

- How, then, can regulators limit *systemic risks* in the future? One approach is to concentrate on the costly spillovers – the *externalities* – that the actions of one financial institution impose on other institutions and markets.
- These *externalities* can lead to systemic threats that authorities address using macroprudential regulatory tools. There are two types of externalities that pose systemic risks requiring regulatory intervention: (1) *common exposure* and; (2) the boom and bust cycles linking financial and economic activity – also known as *procyclicality*.

SYSTEMIC RISK: DEFINITION

Systemic risk can be defined as the risk that financial instability becomes so widespread that it impairs the functioning of a financial system to the point where economic growth and welfare suffer materially.

(Taken from the speech by *Jean-Claude Trichet*, President of the ECB, at the 13th conference of the ECB-CFS Research Network, Frankfurt am Main, 27 September 2010)

COMMON EXPOSURE

- When many institutions, even small ones, have a common exposure to a specific risk, it can make the system vulnerable to even a small shock.
- In finance, common exposures can arise *directly* or *indirectly*. Intermediaries may be directly exposed through financial contracts to one large, but frail, institution. They also may be exposed through any counterparties who are themselves directly exposed. Or, they may simply be exposed to the same underlying risks.

MACROPRUDENTIAL POLICY-THE AIM

- Relying on someone outside the financial system to bear the costs of risky behavior encourages risk taking that can lead to a systemic crisis.
- Macroprudential regulation aims to make intermediaries bear – or *internalize* – the costs of their behavior, including the externalities (spillover costs) that fall on others.

MACROPRUDENTIAL POLICY: TOOLS

- The regulatory tools may be familiar, but macroprudential policy applies them differently.
- For example, regulatory capital requirements would rise with an institution's contribution to systemic risk. That contribution depends on an intermediary's interconnectedness and the riskiness of its balance sheet, and is often correlated with its size.
- To be effective in limiting systemic threats, a *regulatory capital surcharge* probably would rise more than proportionally to a firm's systemic risk contribution.

REGULATORY AUTHORITY'S PROBLEM

- **Suppose that the regulatory authority considers the systemic risk level thus achieved as excessive.**
- **In order to reduce the implied systemic risk, the regulatory authority should introduce measures either to reduce the use of financial instruments or to induce financial innovations to reduce their contribution to systemic risk.**
- **In both cases the measures that will be taken, inevitably, target financial institutions.**

REGULATORY AUTHORITY'S PROGRAM

- **i) Aggregate micro data,**
- **ii) Examine the relations between macro financial and macro real variables,**
- **iii) Forecast the future values of the relevant macroeconomic variables, after taking into account the interactions among them,**
- **iv) Estimate and evaluate the systemic risk,**
- **v) Define policy decisions, at the macro level, to reduce systemic risk to the socially acceptable level,**
- **vi) Design regulations that translate macro policy decisions into signals (instructions/recommendations etc.) at the micro level.**

DIFFICULTIES THAT THE REGULATORY AUTHORITY FACES (1)

- Under macroprudential regulation, financial institutions, in addition to ones imposed under microprudential supervision regime, are asked to comply with a new set of constraints derived from macroeconomic considerations which are expected to be counter cyclical.
- Financial institutions have little, if at all, access to the informational base of such constraints (The systemic risk implied by macroeconomic forecasts and its evaluation, cyclicity of economic activity etc.)

DIFFICULTIES THAT THE REGULATORY AUTHORITY FACES (2)

- **Financial institutions may find it difficult to accept the notion that despite the fact that they comply with the requirements of the microprudential regulation (which can be endogenized) they are still asked to abide by another set of –exogenously imposed– constraints imposed by the regulatory authority**