

**FINANCIAL INNOVATIONS CONFERENCE
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Beyond Basel 2

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GFS main components



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Lessons of 2007/09

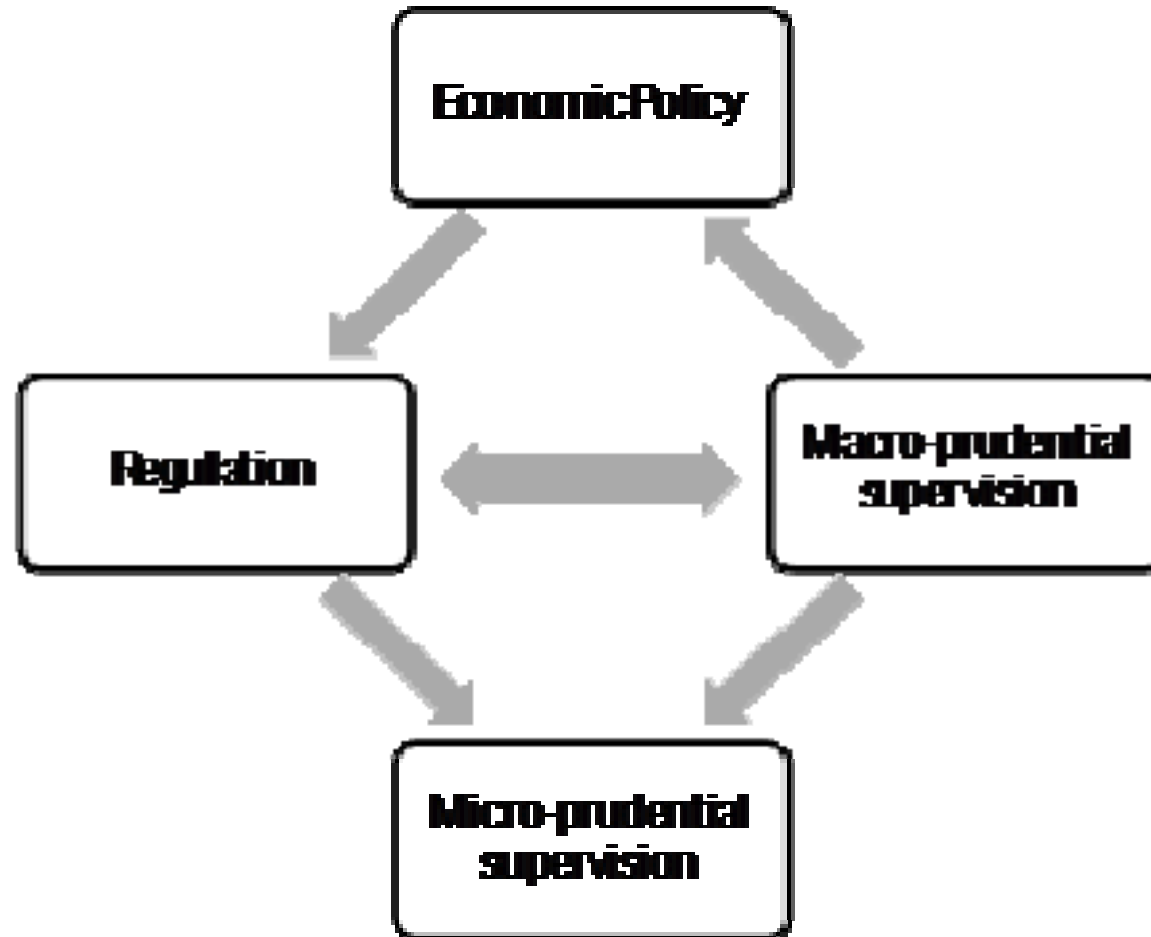
- markets are not self regulating
- the advances in risk management were flawed
- flawed corporate governance models
- GFS requires good regulation and effective supervision (Basel 2, accounting standard and credit rating agency affected by their pro-cyclicality);

Lessons of 2007/09 (ctd.)

- Basel 2 allowed systemically important global financial groups to take advantage of apparent diversification of risk.
- beyond regulation and supervision, sound and sustainable economic policies are required to contain market failures
- consistent supervisory, regulatory and economic policy frameworks (and hence strong cooperative arrangements) among major countries are required ;
- price stability does not lead automatically to financial stability.

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The new “Diamond” de Larosière Approach







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Need for a reform of the Basel approach

- gradually increase minimum capital requirements;
- reduce pro-cyclicality, by e.g. encouraging dynamic provisioning or capital buffers;
- introduce stricter rules for off-balance sheet items;
- tighten norms on liquidity, maturity transformation and leverage management;
- strengthen the rules for bank's internal control and risk management, notably by reinforcing the "fit and proper" criteria for management and board members.
- Develop an appropriate framework to deal with negative externalities of systemically important banks

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Crisis management: enhancing regulation and supervisory coordination

Financial Industry – Technical issues	FSF (today FSB)	<ul style="list-style-type: none"> Strengthened prudential oversight of capital, liquidity and risk management, Enhanced transparency and valuation (particularly for <i>fair value accounting</i>), Changes in the role and uses of credit ratings, Strengthening the authorities’ responsiveness to risks, particularly to systemic risks Robust arrangements for dealing with stress in the financial system 	<p>Senior Supervisors Group, March 6, 2008</p> <hr/> <p>G 30, Financial Reform, A Framework for Financial Stability, January 15, 2009</p> <hr/> <p>The Delorsiere Group Report, February 24, 2009</p>
 <u>Tasks attributed to</u> : BCBS, IOSCO, IAIS, Joint Forum, IASB, IMF, BIS			
 NEED FOR HARMONIZATION 			
 <u>Recommendations and coordination for</u> : governments and public authorities, Central Banks, IMF and supranational institutions			
Political aspects of public and institutional actions, economy’s control and recovery	G 20	<ul style="list-style-type: none"> Strengthening Transparency and Accountability Enhancing Sound Regulation Promoting Integrity in Financial Markets Reinforcing International Cooperation Reforming International Financial Institutions (new “Bretton Woods”) <p>Specifically, on financial aspects:</p> <ul style="list-style-type: none"> Mitigating regulation’s inherent “pro-cyclicality”; Revising and improve “<i>global accounting standards</i>”, with particular reference to complex products and market disruption situations; Enhancing transparency and market resilience of credit derivative to reduce systemic risk, including the operational platform of <i>over-the-counter</i> markets; Revising compensation and incentives systems in <i>risk taking</i> activities and in financial innovation areas; Improving mandates, <i>governance</i> and skill requisites for the le IFIs; and Defining the regulatory environment for “systemically important institutions”, establishing the right level of rules and supervision. 	<p>Declaration of the Summit, Washington, November 15, 2008</p> <hr/> <p>Declaration on Strengthening the Financial System – London, April 2nd, 2009</p>

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The BCBS role in regulatory repair

- strengthening the **risk capture of the Basel II framework** (in particular for trading book and off-balance sheet exposures);
- enhancing the quality of Tier 1 capital;
- building **additional shock absorbers into the capital framework** that can be drawn upon during periods of stress and dampen pro-cyclicality;
- evaluating the need to supplement risk-based measures with **simple gross measures of exposure in both prudential and risk management frameworks** to help contain leverage in the banking system;

BCBS role in regulatory repair (ctd)

- strengthening supervisory frameworks to assess funding liquidity at cross-border banks;
- leveraging Basel II to strengthen risk management and governance practices at banks;
- strengthening counterparty credit risk capital, risk management and disclosure at banks;
- promoting globally coordinated supervisory follow-up exercises to ensure **implementation of supervisory and industry sound principles.**

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The BCBS proposals

- Supervisory guidance for assessing banks' financial instrument fair value practices; issued for consultation until last February 6th,
- Principles for sound stress testing practices and supervision, issued for consultation until last March 13th,
- Revisions to the Basel II market risk framework and Guidelines for computing capital for incremental risk in the trading book, issued they too for consultation until last March 13th,
- Proposed enhancements to the Basel II framework, issued for consultation until last April 17th.

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The G20 proposals

- ***The bank capital framework*** (to mitigate the risk that the regulatory capital framework amplifies the transmission of shocks between the financial and real sectors).
- ***Bank loan loss provisions*** (earlier recognition of loan losses could have dampened cyclical moves in the current crisis)
- ***Leverage and valuation*** (to reduce procyclicality that has arisen from the interaction of leverage, funding mismatches and fair value accounting)

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Basel 2 and trade finance

ICC called on the G20 summit to coordinate measures to allow private banks to ramp-up their provision of trade finance as global trade is expected to register a very large decline.

According to the ICC Banking Commission, a recent survey of major international banks found that the Basel II charter “has eroded the incentive of banks” to provide trade finance.

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Idiosyncratic and systemic risk

- **(micro level)**
 - Business as usual situation
 - P&L impact only
 - P&L and tension on pricing/funding situations
 - Threat to Payment continuity
 - Mis-payment or failure to pay circumstances
- **(macro level)**
 - Normal market conditions
 - Flight to quality situations (market disturbances)
 - Liquidity crunch (market turbulences)
 - Serious liquidity shortage (market crisis)
 - Liquidity collapse (market disruption)

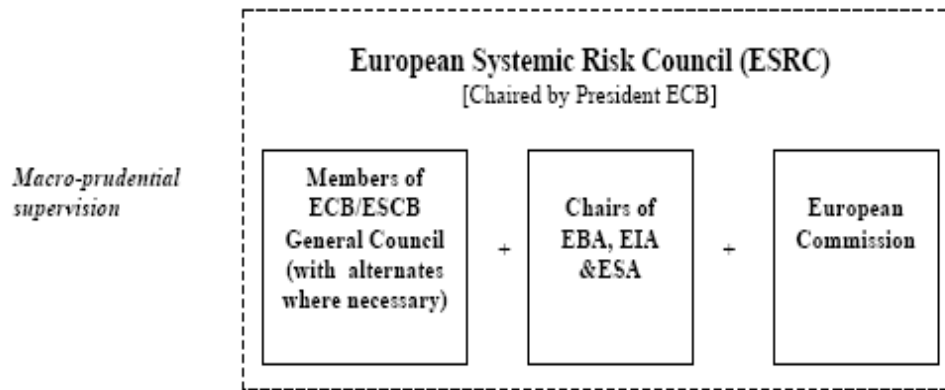
Idiosyncratic and systemic risk (ctd.)

Different states of banking business, market turbulence and supervisory/government duties

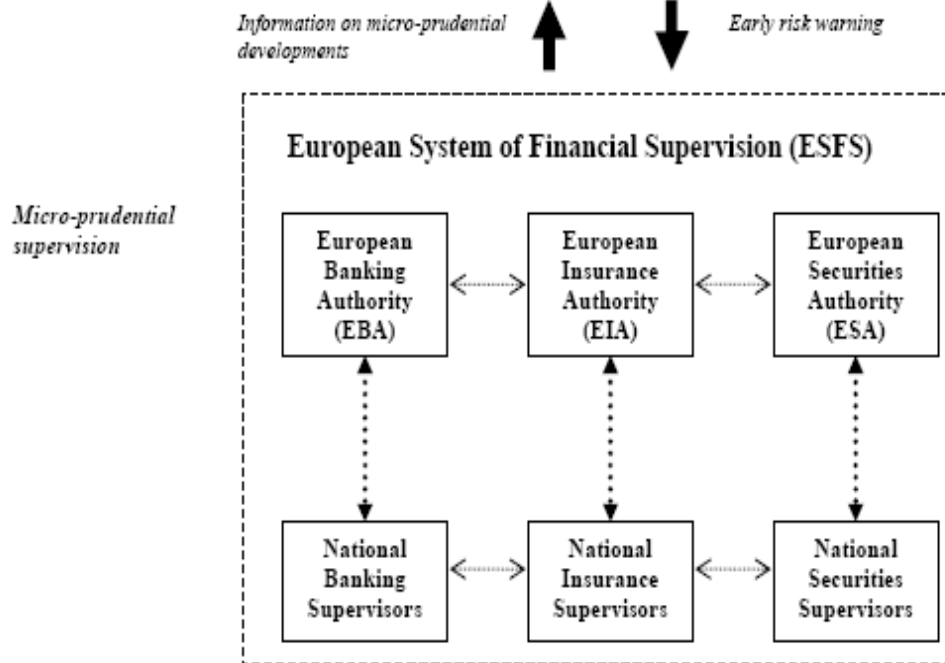
		(micro level) The severity of the liquidity event at the individual Bank's level				
		<i>Business as usual</i>	P&L impact only	Tension on pricing/funding	Threat to Payment continuity	Mis-payment or failure to pay
(macro level) Market/System situation	Normal market conditions	Economic capital + internal risk metrics + capital buffer	Economic capital + capital buffer + contingent strategies + tightening on procedures & control	Contingent policy + procedures & control + internal crisis management	↑ Idiosyncratic Risk Systemic Risk ↓	
	Fly to quality					
	Liquidity crunch	Stress testing + capital buffer + contingent capital	Area in which EU proposes a macro-supervision in order to prevent new market disorder and instability. Vision shared also by FDIC in USA	Supervisory crisis management for specific circumstances		
	Serious liquidity shortage	Area that proved to be not likely to happen				Public/government action plans
	Liquidity / market collapse					
Read Colours as:		<i>Public/government actions area</i>				
		<i>Innovative Delarosiere Report proposal for macro supervision</i>				

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Proposed (dLR Group) EU new supervisory architecture



Main tasks of the European Systemic Risk Council: decide on macro-prudential policy, provide early risk warning to EU supervisors, compare observations on macro-economic and prudential developments and give direction on these issues.



Main tasks of the Authorities: in addition to the competences of the existing level 3 committees, the Authorities would have the following key-competences: (i) legally binding mediation between national supervisors, (ii) adoption of binding supervisory standards, (iii) adoption of binding technical decisions applicable to individual institutions, (iv) oversight and coordination of colleges of supervisors, (v) licensing and supervision of specific EU-wide institutions (e.g., Credit Rating Agencies and post-trading infrastructures), (vi) binding cooperation with the ESRC to ensure adequate macro-prudential supervision, and (vii) strong coordinating role in crisis situations.

Main tasks of national supervisors: continue to be fully responsible for day-to-day supervision of firms.

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More evolutionary (revolutionary) approaches to Basel II, predicated upon the cooperation of micro and macro prudential oversight

Under the stimulus of economic capital measurement and of supervisory capital requirements:

- **Credit risk models built up substantial databases and datawarehouses covering each loan with details of PD, LGD, EAD, with estimates of levels of correlations between the individual exposures, and the degree of concentration Traditionally, using actuarial techniques, the overall portfolio distribution shape was estimated through the use of a priori selected statistical curves (such as the beta or the inverse normal distributions) and a careful calibration procedure aimed at establishing the necessary input parameters**
- **Gaussian Value at Risk models were widely used for market risks**

ALL THESE MODELS SUFFER MAJOR WEAKNESS

More evolutionary (revolutionary) approaches to Basel II, predicated upon the cooperation of micro and macro prudential oversight (ctd.)

- a) credit risk models used by the industry make the wrong assumption that credit risk does not carry a premium. Investors are then supposed to behave toward credit risk events as if they were risk neutral, using objective probabilities to price these claims. This assumption contradicts all the literature on state price and price kernel estimation (Barone-Adesi, 2009). risk cannot be related simply to default frequency, omitting the specification of states in which events are most likely to occur.**

- b) coherent risk measurement, pioneered by Artzner et al. (1999), pointed out the limits of the VaR methodologies by showing that this measure is a problematic (non-coherent) risk indicator. The two main drawbacks highlighted are its “non smoothness” (i.e. events with probability below the chosen confidence quantile are not considered at all) and its “non subadditivity” (i.e. VaR of a diversified portfolio could be higher than the sum of idiosyncratic VaR computed for each risk factor). Intuitively, it can therefore be said that VaR does not take into account the entire lower tail of the P&L distribution, by just picking out one point (the quantile chosen). Expected Shortfall (ES) is a new metric that can solve these weakness by measuring the expected loss conditional on VaR being violated (Masera, 2005).**

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A more radical tripartite approach

Following these criticisms a new tripartite scheme can be conceived to complement the current framework:

- **Interest varying reserve requirements related to the idiosyncratic risk of the firm (which should integrate deposits' reserves)**
- **Risk related insurance fees to account for both idiosyncratic risk and marginal contribution to systemic risk (decided by the microsupervisor)**
- **Insurance fees covering systemic risk (decided by the macrosupervisor)**

Bair (2009)

Barone Adesi (2009)

Posen and Veron (2009)

Rosengren (2009)

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Interest varying reserve requirements

- **Institutions should keep large interest-bearing deposits with the central bank.**
- **The amount of these reserves should be calibrated on the amount of risk institutions take (ES).**
- **To prevent pro-cyclical increases, risk in this context must be based on risk weightings, as currently done under the first pillar.**
- **In case a bailout becomes necessary, its cost should be the senior claim against these funds.**

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Risk related insurance fees (microsupervisor)

- **To align regulation to market realities and smooth bank response to regulation through time, it is necessary to introduce a risk fee.**
- **Banks should pay a fee based on their expected shortfall over a given horizon**
- **This fee should be reviewed monthly or quarterly to calibrate it to changing risk and discourage gaming behavior.**
- **Surcharges and discounts related to size, or other relevant variables, may be announced in advance to ensure that large banks adjust their investment policies.**

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Insurance fees covering systemic risk (macro-supervisor)

Macro-prudential supervisor to limit the distress of the financial system as a whole in order to protect the overall economy from significant losses in real output should be able to impose an insurance fee covering these risks.

While risks to the financial system can in principle arise from the failure of one financial institution alone if it is large enough in relation to the country concerned and/or with multiple branches/subsidiaries in other countries, the much more important global systemic risk arises from a common exposure of many financial institutions to the same risk factors.

Macro-prudential insurance fee therefore should cover risks deriving from common or correlated shocks and to shocks to those parts of the financial system that trigger contagious knock-on or feedback effects.

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Corporate governance failures and repairs

The crisis has launched a debate on incentives and remuneration in the financial services industry.

There are two dimensions to this problem: one is the often excessive level of remuneration in the financial sector; the other one is the structure of this remuneration, notably the fact that they induce too high risk-taking and encourage short-termism to the detriment of long-term performance.

It is primarily the latter issue which has had an adverse impact on risk management and has thereby contributed to the crisis.

Corporate governance failures and repairs (ctd.)

compensation incentives must be better aligned with shareholder interests and long-term firm-wide profitability by basing the structure of financial sector compensation schemes on the following principles (Maserà 2006, 2009) :

- the assessment of bonuses should be set in a multi-year framework, spreading bonus payments over the cycle;***
- the same principles should apply to proprietary traders and asset managers;***
- bonuses should reflect actual performance and not be guaranteed in advance.***

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Corporate governance and long-term value creation

Jensen (2001) introduced the concepts of “enlightened value maximization” and “enlightened stakeholders theory”, recognizing the importance of the different constituencies for the maximization of the firm’s market value. Maserà and Mazzoni (2007) developed a “a quantitative synthesis of the enlightened stakeholders theory”, supporting the idea that the total value of the firm is maximized when the management maximize both the remuneration of the shareholders and the efficiency and the satisfaction of the all the other stakeholders in the long-term.

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Systemic risk and derivatives markets

- Derivatives markets allow important risk mitigation functions, but in a crisis situation market participants can demand more and more collateral to protect their claims.
- During the crisis the exercise of these netting and collateral rights can increase systemic risks. At such times, the resulting fire sale of collateral can depress prices, freeze market liquidity as investors pull back, and create risks of collapse for many other firms.
- Bair (2009) and Rosengren (2009) suggested to addressing these risks by establishing a given haircut (15 or 20 percent) of the secured claim for companies with derivatives claims against the failed firm if the taxpayer or a resolution fund is expected to suffer losses.

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The role played by the Large Complex Financial Institutions (LCFI)

- Are there economic benefits to having institutions that are so large and complex that their failure can result in systemic issues for the economy?
- Unless there are clear benefits to the financial system that offset the risks created by systemically important institutions, taxpayers have a right to question how extensive their exposure should be to such entities.

The role played by the Large Complex Financial Institutions (LCFI) (ctd.)

- **LCFI pros:**

- *take advantage of economies of scale and scope,*
- *diversifying risk across a broad range of markets and products,*
- *gaining access to global capital markets,*
- *new innovations in quantitative risk management techniques could manage these new risks, by allowing to operate with lower capital buffers than were necessary in smaller, less-sophisticated institutions.*

- **LCFI cons:**

- economies of scale are exhausted at levels far below the size of today's largest financial institutions
- studies that assess the benefits produced by increased scale and scope find that most banks could improve their cost efficiency more by concentrating their efforts on improving core operational efficiency.

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Regulation and resolution of LCFI

Many challenges

- The wind-down of a large cross border institution is complex (national birth → global operation → national death)
- Legal form does not follow function
- Asymmetries of exposures across jurisdictions
- Multiple (conflicting) proceedings and competencies
- Asset grab
- Existing resolution tools do not work when markets are not functioning
- Practical constraints (need for speed, time zones)

Regulation and resolution of LCFI (ctd.)

State of the art

- Existing resolution arrangements are not designed to resolve cross-border failures of complex financial institutions.
- Existing resolution arrangements do not provide for a coordinated resolution of financial
- groups, not even on a national level.
- Measures focused on the preservation of domestic interests impede effective
- cross-border solutions.

Regulation and resolution of LCFI (ctd.)

Inadequacy of existing tools

- Need for “bridge bank”; “purchase and assumption”? operations do not work crossborder
- Policy and legal obstacles hinder cross-border mergers and acquisitions
- Close-out practices may disrupt public/private restructuring.
- Differences in setoff rules and treatment of financial contracts in insolvency

Regulation and resolution of LCFI (ctd.)

No framework for financial groups

- Misalignment of supervisory and crisis resolution frameworks
- National frameworks are entity-centric and sector specific
- Diversity of national crisis arrangements (intervention tools, priorities)
- Constrained access to information in a crisis

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Regulation and resolution of LCFI: Possible solutions at EU level

- In Europe there is no “European” fiscal authority
- Need to strengthen resolution capabilities
- A centralized solution (“European FDIC”) or a decentralized solution (convergence of intervention powers)?
- Powers to preserve critical functions (bridge banks, etc.)
- Need to strengthen risk mitigants (set-off, netting, CCPs, etc.)

Regulation and resolution of LCFI in Europe (ctd.)

Need for a better understanding of the dynamics of burden sharing

- In the absence of an ex ante burden there is a de facto allocation of the burden
- (group structure, priorities in solvency, location of claims, national propensity to bail out systemic banks)
- Impact of group structures and business operations on burden allocation