SUERF, CEPS and
Belgian Financial Forum Conference

Crisis Management at Cross-Roads

16 November, 2009
Auditorium, National Bank of Belgium
Rue Montagne aux Herbes Potagères, 61
B-1000 Brussels

Conference documents

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Programme

Brussels, 16 November, 2009 – Auditorium, National Bank of Belgium

8.30-9.00	*Registration and coffee*
9.00-9.15	**Opening**
	Jan Smets, Belgian Financial Forum & National Bank of Belgium **Onno Ruding**, CEPS **Catherine Lubochinsky**, SUERF & University of Paris II
9.15-9.45	**Keynote Address**
	The Crisis Management Menu **Paul Tucker**, Deputy Governor, Financial Stability, Bank of England
9.45-11.15	**Session 1: Provision of Liquidity and Lender of Last Resort Operations: effectiveness, governance, cross-border and cross-currency issues**
	Chairman: **Frank Lierman**, SUERF and Dexia Bank
	Johan Evenepoel, Dexia Group **Francesco Papadia**, European Central Bank **Garry Schinasi**, International Monetary Fund
11.15-11.30	*Coffee break*

11.30-13.00	**Session 2: Cross-border bank resolution** **Moderator: Karel Lannoo**, CEPS **Daniel Gros,** CEPS **Ingimundur Fridriksson,** formerly Central Bank of Iceland **Peter Praet**, National Bank of Belgium **Freddy Van den Spiegel**, BNP Paribas Fortis Bank
13.00-14.00	*Walking sandwich lunch*
14.00-15.30	**Session 3: Limits of the "Lender of Last Resort", "Too big to fail" and "Too big to save" theses** **Moderator: David T. Llewellyn**, SUERF and Loughborough University **Charles Goodhart**, London School of Economics **Philipp Hartmann**, SUERF and European Central Bank **Rosa Maria Lastra**, Queen Mary University of London **Dirk Schoenmaker**, Duisenberg School of Finance
15.30-15.45	*Coffee break*
15.45-17.15	**Session 4: Deposit guarantee schemes: How to re-establish clients' confidence** **Moderator: Rym Ayadi**, CEPS **Dirk Cupei**, European Forum of Deposit Insurers **Hans Groeneveld,** Rabobank Nederland **Doris Kolassa**, European Commission **Maria J. Nieto**, Banco de España **Robert Priester**, European Banking Federation
17.15-17.45	**Concluding Session** *Closing Speech* **Guy Quaden**, Governor, National Bank of Belgium *Concluding remarks* **Ernest Gnan**, SUERF and Oesterreichische Nationalbank

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17.45-18.00	**Welcome to participants at the SUERF Annual Lecture**
18.00-19.15	**2009 SUERF Annual Lecture** *Unconventional Monetary Policies and Crisis Management* **Jaime Caruana**, General Manager, Bank for International Settlements
19.15-20.00	*Reception*

CRISIS MANAGEMENT AT CROSS-ROADS

SUERF, CEPS & BELGIUM FINANCIAL FORUM CONFERENCE

Johan Evenepoel
Global Head of Treasury
Dexia Group

16 November 2009

DEXIA

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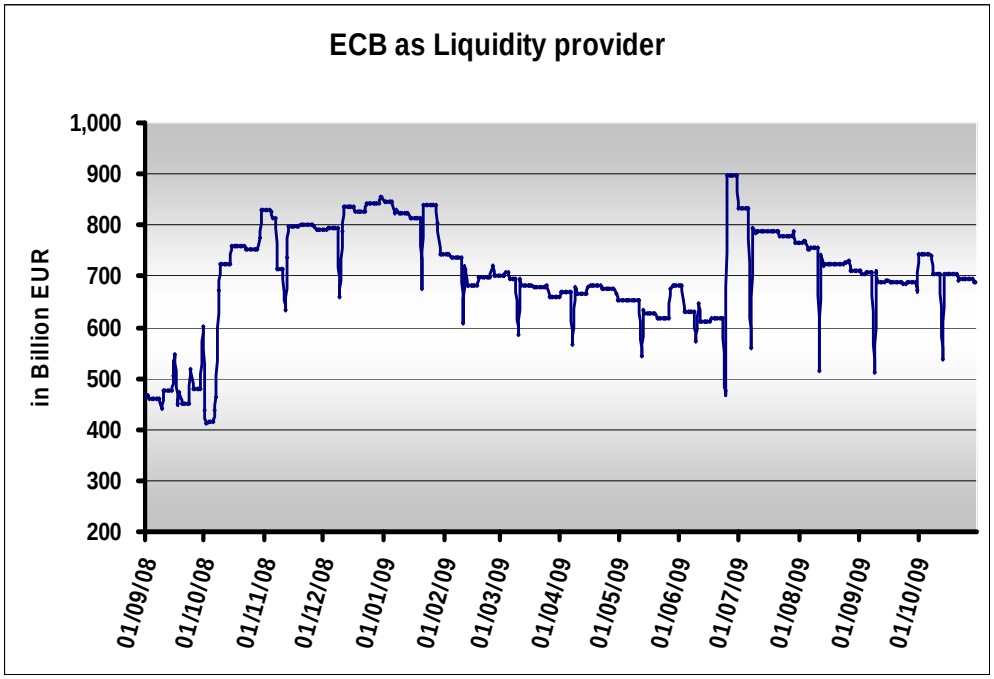
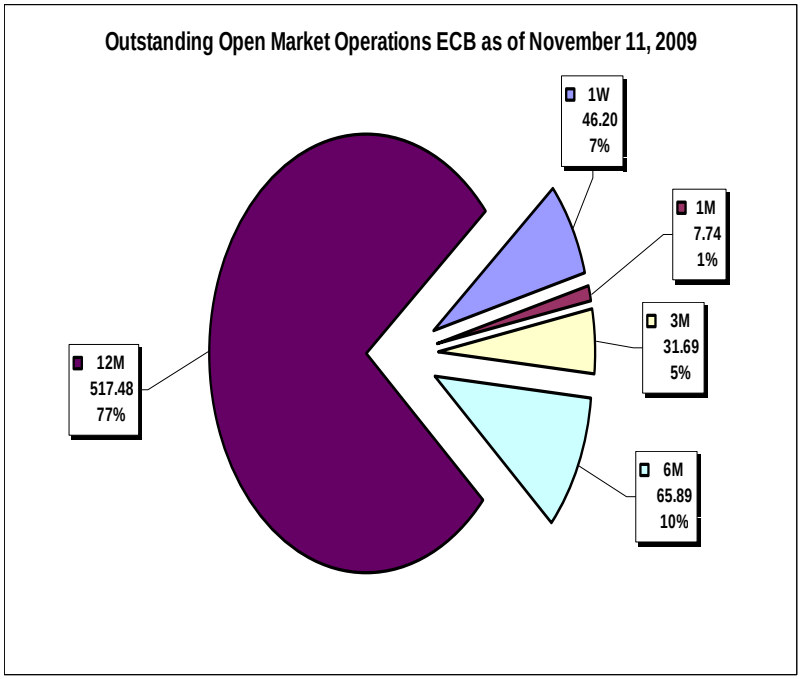
1. Liquidity crisis

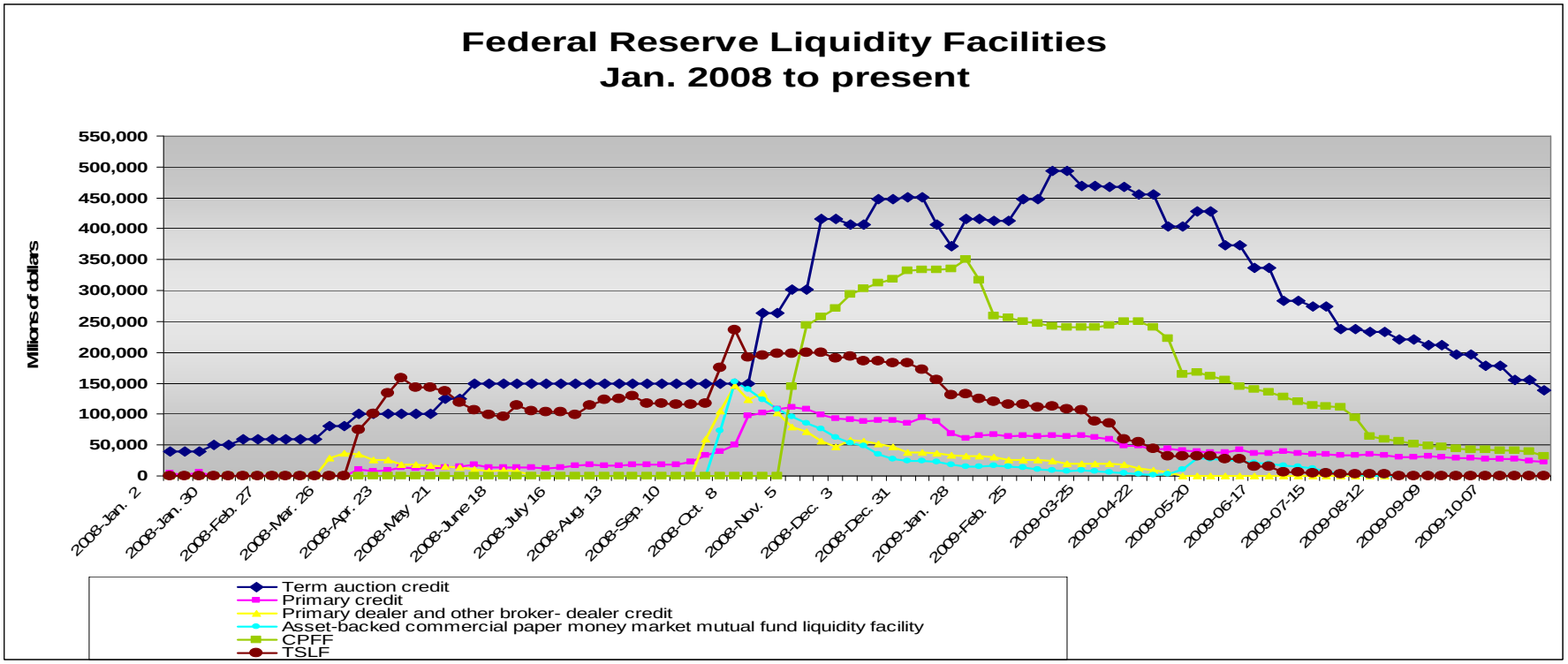
…financial sector saved by Central Banks…





1. Liquidity crisis

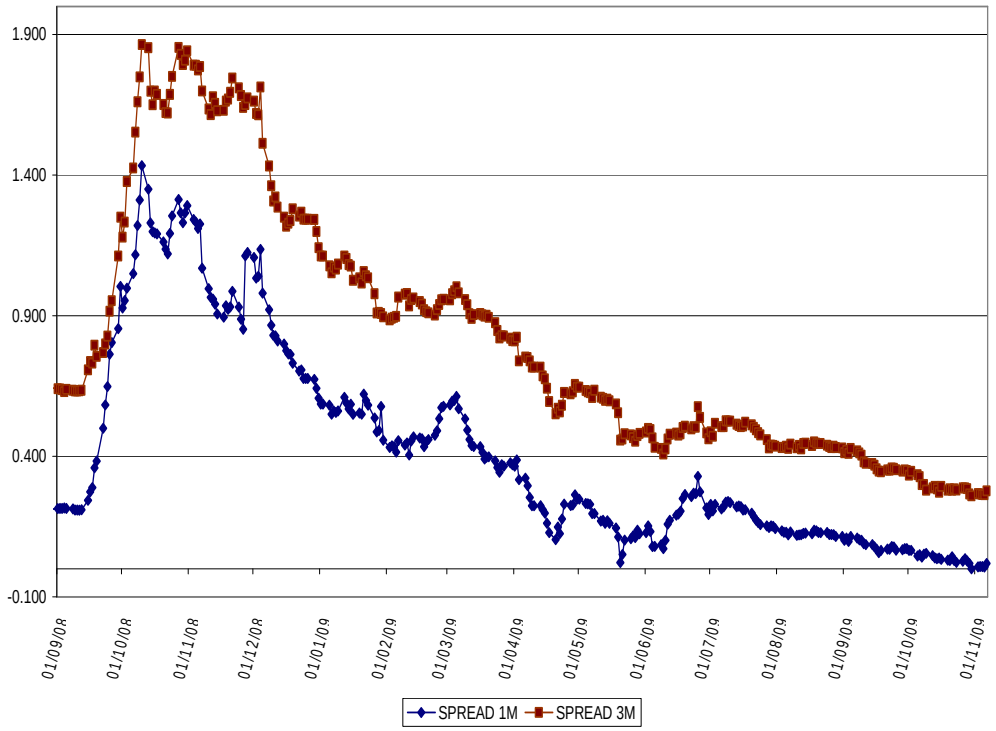
…financial sector saved by Central Banks…



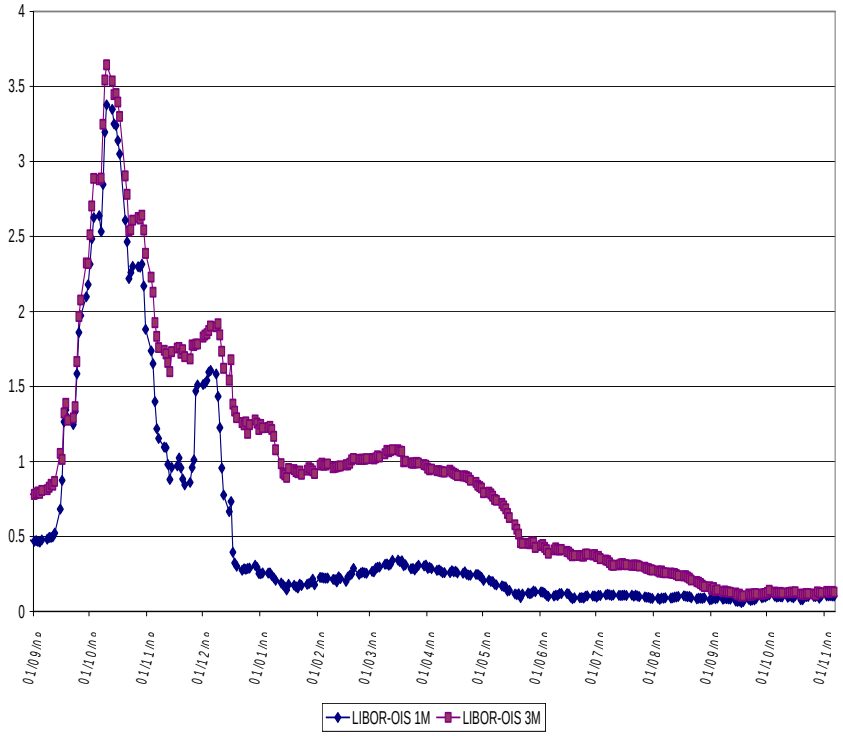
1. Liquidity crisis

...is the crisis over...

SPREAD EURIBOR-EONIA 1 AND 3 MONTHS



SPREAD LIBOR-OIS 1-3M



2. Liquidity Management at Dexia BEFORE the liquidity crisis

Decentralized management but with a centralized follow up at Group level (Dexia SA)

DEXIA SA

EUROPE	**Belgium**	**France**	**Luxembourg**	**Italy**	**Spain**	**Germany**	**Austria**	**Slovakia**	**UK**	**Ireland**	**Turkey**
	Dexia Bank	*Dexia Credit Local*	*Dexia BIL*	*Dexia Crediop*	*Dexia Sabadell*	*DKD*	*DKB*	*DBS*	*Dexia Bank*	*Dexia Bank+ Dexia Credit Local*	*Deniz*
USA	**USA**										
	Dexia Credit Local										
LATIN AMERICA	**Mexico**										
	Dexia Credit Local										
ASIA	**Japan**	**Singapore**									
	Dexia Credit Local	*Dexia BIL*									

2. Liquidity Management at Dexia BEFORE the liquidity crisis

…in practice…during the crisis it became clear that the Treasury had to be re-organized completely:

- Too many different IT systems to follow up the different liquidity positions within the Group and the collateral available for secured transactions (bilateral repo, tri-party repo, Central Bank tenders, …);
- No clearly defined market access principles;
- No real governance concerning distribution of liquidity within the Group;
- Insufficient operational framework and lack of adequate reporting tools.

3. Examples of specific issues DURING the liquidity crisis

(phase 1: 09/08/2007; phase 2: 15/09/2009)

1 Disruption interbank market

total collapse of the unsecured interbank market +

strong reduction of the secured market due to the "Lehman" experience in the repo market

- ✓ Bilateral repos even referenced to government bonds not always possible;
- ✓ Issues with haircuts, quotation age, "liquidity" versus rating, hedging of interest rate & credit risk, …

CONSEQUENCES:

over-estimation of liquidity buffers

3. Examples of specific liquidity issues DURING the liquidity crisis

1 Disruption interbank market

MEASURES TAKEN:

- ✓ Complete new classification of available securities function of the use during stress situations:
  - Prime bilateral repo (B1)
  - Central Bank operations (B2)
  - Tri-party repo (B3)
  - …
- ✓ Bilateral repos via a repo Central Counterpart (LCH, Clearnet, …);
- ✓ Calculation of liquidity ratios has to be only based on highest liquidity classes (B1 and B2);
- ✓ New “eligibility criteria” for tri-party repo

3. Examples of specific liquidity issues DURING the liquidity crisis

2 Lack of adequate reporting on available Central Bank eligible securities within the Group

CONSEQUENCES:

- ✓ Available CB eligible collateral is over-estimated/under-estimated due to:
  - Fiscal constraints of collateral use;
  - Off balance sheet obligations;
  - Withholding tax issues;
  - …
- ✓ No optimal use of our access to specific central banks (USD from the FED only via DCL New York, GBP from BOE only via DBB London)

3. Examples of specific liquidity issues DURING the liquidity crisis

2 Lack of adequate reporting on available Central Bank eligible securities within the Group

MEASURES TAKEN:

- ✓ Common database of <u>all</u> securities within the Group;
- ✓ Implementation of Competence Centers concerning CB eligibility criteria;
- ✓ Modeling of CB eligible securities “at risk” (downgrade, …)

Dexia was not confronted with operational problems due to transfer of securities from one country to another in order to use them in the domestic market (repo, CB tenders, …)

3. Examples of specific liquidity issues DURING the liquidity crisis

3 Lack of adequate tools to follow up consolidated liquidity positions intra-day and to realize liquidity projections

CONSEQUENCES:

- ✓ Negative impact on management of liquidity risk during stress situations due to the lack of a clear view on the liquidity positions of each entity;
- ✓ Inefficient use of available means (counterparty limits on Dexia name)

3. Examples of specific liquidity issues DURING the liquidity crisis

3 Lack of adequate tools to follow up consolidated liquidity positions intra-day and to realize liquidity projections

MEASURES TAKEN:

- ✓ During the crisis: up to 6 conference calls a day;
- ✓ Implementation of ALERI, a multi-company tool containing all the liquidity positions of the Group, enabling both a *real time intra-day follow up* and *projections* of the *consolidated liquidity position*

3. Examples of specific liquidity issues DURING the liquidity crisis

(phase 1: 09/08/2007; phase 2: 15/09/2009)

4 Disruption FX market

Before the crisis, liquidity ratios by currency were calculated but there was only one key liquidity ratio (as limit), compounded by all major currencies and calculated on a consolidated basis, that had to be respected.

During the crisis the FX market was some days completely inaccessible.

CONSEQUENCES:

problems to finance liquidity positions in particular currencies

3. Examples of specific liquidity issues DURING the liquidity crisis

(phase 1: 09/08/2007; phase 2: 15/09/2009)

4 Disruption FX market

MEASURES TAKEN:

- ✓ Implementation of limits on individual currencies/time zones and on consolidated level;
- ✓ Run-down of activity in countries where there is no access to domestic funding (e.g. MXN)

A liquid FX market is not enough: one need to take into account the restrictions imposed by the systems in force (e.g. deal with substantial volumes within CLS)

4. New organization of Treasury

1 **Organization**

☐ **Implementation of the target Treasury organization**

- Evolving towards a more centralized and integrated organization
- Redefined market access and price setting principles
- Progressive integration of entities previously outside CLM scope

2 **Governance**

☐ **Establishment of guidelines**, to formalize the new CLM governance structure:

- Mission and Strategy
- Organization structure
- Committee / Managerial / Business oversight
- Proposed legal structure

3 **Support & Reporting tools**

☐ **On-going actions** to rapidly implement **optimized support and reporting tools dedicated to Front Office**:

- Objective: Facilitate the follow-up of liquidity positions, available collateral and interest rate positions

4. New organization of Treasury

1 Treasury organization: Central management from TMC, with the support of the Competence Centers

Treasury management center (TMC)

DSA

- Decide on **market access principles, pricing and IR positions for all currencies**, in all entities
- Advise on the VAR limits and maximum liquidity gaps of each entity, in coordination with BSM and Risk; in charge of intraday funding (end-of-day squaring of positions via intra group transactions), CB tenders and standing facilities
- In charge of respect of VaR sensitivity limits & liquidity ratios

Competence centers (CC)

DBB BRX | DBB UK | DCL NY | DBL Lux

DCL Tokyo | DBL SGP | Instanbul

- Follow-up of market access principles, pricing, VaR limits and maximum liquidity gaps of each entity in their competence currency
- **Management of IR positions, liquidity gaps and end-of-day squaring of positions for their competence currency**, for all entities, under supervision of the Treasury management center
- Ensure and control implementation of CLM guidelines for their competence currency

Local treasuries

Crediop | DCL Madrid | DKD | DCL Paris

+ Slovensko, DKB Austria, DKB Polska, Dexia Israel, DIB

- In charge of **local funding and local client management**
- In charge of daily reporting to Treasury Management Center / Competence Centers
- Follow prices set by competence centers
- Limited market access, including repos

Captive treasuries

DBB Dublin, DIC, DII, DRECM US, Parfipar, **DCL Dublin**, DCL Asia Pasific , DCL London, DCL Mexico, **Dexia CLF Banque**, Crediop Ireland, DMA, DMA Dublin, Dexia Denmark, Dexia LdG Bank, Dexia Jersey, Dexia Switzerland, DSF, Dexia SA

- Need to receive funding from competence centers **(99% via matched funding)**

CLM teams | Local booking

4. New organization of Treasury

1 Treasury organization: Redefined market access principles

Type of client	Target Model
Secured deposits	
Bilateral Repos	Brussels with further restraints for Rome, Berlin, Luxembourg
Tri-party Repos	Brussels with further restraints for Luxembourg[2]
Central bank tenders	Local access
Unsecured deposits	
Fiduciary deposits	Luxembourg
CD/CP: Certificate of Deposits/Commercial Papers	Local access
Non bank client deposits	Local access
Interbank deposits	Local access
Central bank/ Supranational deposits	Brussels with further restraints for New York, London, Paris, Luxembourg[2]
Derivatives	
FX Swaps	▪ All competence centers can conclude FX swaps shorter than 1 month for all currencies ▪ Competence centers conclude FX swaps longer than 1 month in their competence currency
Others	Local access

4. New organization of Treasury

2 Treasury Governance: Definition of guidelines

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4. New organization of Treasury

3 Support & Reporting tools

Liquidity management	
Cash positions	*Liquidity reserves*

Interest rate management

- **Implementation of a bank-wide tool** (Aleri), permitting interfacing between entities to follow up on cash positions
- Provide a **consolidated view at Group level** of Dexia cash positions, as well as a detailed view per entity and per currency
- Creation of a **common tool for all Dexia entities**, permitting the production of a consolidated view on **Dexia available / pledged liquidity reserves**
- Creation of a centralized tool to provide CLM with a daily **consolidated view on interest rate positions**, by currency

Tools to be used and managed by CLM Servicing center (central database), to provide CLM Front Office with the adequate daily reporting

5. New challenges for integrated liquidity management

A complete new organization concerning liquidity management will be implemented to cope with operational, organizational and governance issues. As such, we can optimize cross border use of liquidity within the Group.

However, we are facing new challenges:

- ✓ *implementation of different liquidity ratio calculations in the Euro zone (different time horizons, definition of liquidity reserves, ...)*
- ✓ *Strong limitations of intra-group transactions by regulators*

The collapse of Icelandic banks and cross-border collaboration

SUERF, CEPS and Belgian Financial Forum Conference

Brüssel, November 16, 2009

Ingimundur Fridriksson

Background

- Privatization
- Rapid growth, particularly abroad
- Helped by EEA membership and Iceland's participation in the *single market* of the EU
- The banks had the same rights and responsibilities as banks in all of the EEA
- Supervision based on European laws, regulations and procedures

Expansion of the Icelandic banks

- Abundant liquidity
- Historically low interest rates
- Favourable credit ratings
- Easy access to bond markets
- Enjoyed wide political support – up to the highest echelons
- End 2007: Combined balance sheet total of three largest banks = 10 times GDP

Jännäri report

When judging the reasons for the Icelandic banking crisis and the events leading to it, one should not forget the international setting in which it happened and which made it possible. It would not have been possible without the overall laxity in the global financial markets and the bubbles it produced, which were bound to burst at some point in time.

2006

- Critical international scrutiny of the three large Icelandic banks in the first half of 2006
- Urged by rating agencies and others to raise the share of deposits on their funding side **=>** embarked upon aggressive retail deposit collection in other countries, particularly the United Kingdom

2007

- Swift turnaround in markets in mid-2007
- Sharp rise in CDS spreads on Icelandic banks
- Sharply tighter access to market funding
- Deposits increased
- Like other banks, the Icelandic banks increasingly resorted to central bank financing, at home and abroad

After mid 2008

- Growing doubts in markets about the viability of the banks (high CDS spreads)
- Subsidiarisation of branches under way
- International equity investors being groomed
- Asset sales in the pipeline
- Transfer of headquarters to another country under consideration in at least one bank

September - October 2008

- Lehman Brothers collapse an absolute watershed in global financial markets
- Followed by a failed asset sale by an Icelandic bank => liquidity shortfall
- Government decided to become a majority shareholder in that bank
- Ratings downgrades in early October
- Contagion, liquidity difficulties => all three banks collapsed in October

Authorities' immediate concerns

- Ensure uninterrupted payments flows; successful domestically but bottlenecks in international payments
- Ensure uninterrupted domestic banking services - alleviate the sharp erosion of confidence
- International bottlenecks required extraordinary effort in the wake of the UK Authorities' freezing order under provisions of an Anti-Terrorism, Crime and Security Act

Had Lehman not collapsed

- The collapse of the Icelandic banks would at least have been delayed
- If successful - would their measures that were under preparation have given them a lease on life - would more have been required?
- How long might they have survived without them?

Retrospect

- Banks expanded within the EU framework for financial services which encouraged cross-border activities –
- Entailed rights and obligations
- Extraordinary market conditions
- As markets developed – the banks had become too large; too small home base
- Their growth and size made them more sensitive than many others to adverse developments in financial markets

Cross-border collaboration

- EEA membership – single market of the EU
- Participation in various EU committees and crisis prevention and resolution work – CEBS, BSC, …
- Followed EU cross-border crisis management preparatory work
- Had announced its intention to join the EU MoU on cross-border financial crisis situations

Nordic central banks

- Wide ranging cooperation
- Intensive cooperation on financial stability issues
- 2003 MoU on the *management of a financial crisis in banks with cross border establishments*
- Nordic-Baltic crisis management exercise in September 2007 (8 countries, 18 institutions)

Cooperation of supervisory authorities

- The Icelandic supervisory authority participated in the international cooperation of such authorities
- Had wide ranging cooperation with sister institutions in other countries (MoUs in place; supervisory colleges under preparation,...)

Collaboration efforts

- Central Bank sought cooperation with other central banks in early 2008 – swap arrangements
- Motivated i.a. by the banks' growing significance in other countries; collaboration thus not just in Iceland's interest
- Positive initial responses
- IMF assessment in April
- Swedish financial stability experts April/September
- IMF FSAP follow-up requested - conducted June 2009

Swap arrangements

- In the end, only cooperation and swap arrangements with the Nordic central banks. Renewed after the adoption of the IMF program
- Apparent collaboration among other central banks on responses to Iceland
- IMF program a condition for possible support by some - did not materialize in the end

Other financial support

- Loan commitments from the Nordic Countries in conjunction with the IMF program
- Loans from Poland and the Faeroe Islands

Other and subsequent repsonses

- Freezing order under UK Anti-terrorism and Crime Act – also referred initially to the Icelandic government, central bank and supervisor
- Serious consequences
- Extraordinary effort required to release bottlenecks in payment transfers

Icelandic Central Bank Governor

- "…international support was not forthcoming, even though it could be argued that the three banks concerned were systemically important because of the possibility of a domino effect throughout Northern Europe in the event of their collapse. On the contrary: The response to Iceland's crisis was characterised by ring-fencing and hostility, yet it is well known that such an approach creates a worse outcome in the aggregate."

  (Már Guðmundsson: Foreword to Financial Stability Report October 26, 2009)

Resolution of Icelandic banks in other countries

- Little thought given to Iceland's interests
- Assets in many cases sold at fire sale prices
- Examples of windfall profits of those who bought Icelandic bank assets in the immediate aftermath of the collapse
- Protection of depositors an overriding objective by the authorities in other countries

Actions in other countries – cont'd

- Ring-fencing
- Little cooperation with Icelandic resolution processes
- Experience of crisis management exercise: MoUs not remembered

Flaws in European regulatory system

- Unveiled by global developments and notably by the collapse of the Icelandic banks (de Larosière, Turner,...)
- Deposit guarantee arrangements a notable example

Settlement of deposit claims

- Particularly thorny issue
- Agreements (Icesave) with the Dutch and UK authorities with Icelandic government guarantee of settlement; entails the interpretation that there is a government guarantee on deposits, even in systemic crisis
- Resolution of this issue held up virtually all external financing for Iceland for almost a year

Conclusion

- Insufficient cross-border collaboration before and after the collapse of the banks
- Iceland found it difficult to forge alliances before the collapse
- Insufficient cross border collaboration on resolution after the collapse.
- Might not have been possible to save the Icelandic banks, but the end result may entail greater overall loss for Iceland and many others than was necessary.

Limits of the Lender of Last Resort

By Charles Goodhart
Financial Markets Group
London School of Economics

A change of paradigms? From the banking (Bagehot) paradigm to the insurance paradigm.

Size (enhanced by the crisis) and moral hazard.

Attempts to reverse

(1) Narrow banking (J. Kay, CSFI)

But Lehman was a casino, centrality of credit flows, boundary problems, small is not safe (similarity or diversity; regulation and diversity).

(2) Size

How measured (over which markets? Contestability?)
Cross-border problems?

How respond? Legal measures, or what basis?
Increased tax?
N.B. When crisis hits, response is to increase size.

Attempts to control

Differences in conversations, USA and Europe.

USA: conflict between fresh-water and salt-water economists. Compromise on insurance. How done?

Europe: macro-prudential regulation.

Future outcomes?

(1) The regulated (the banks) will generally win any contest with the regulators. Implications thereof.

(2) Europeans will adopt leverage ratio, adjustable by discretion.

(3) Otherwise insurance/counter-cyclical, or both, uncertain.

(4) Discussion of what to do is being deflected into 'turf wars' of who does what.

(5) International agreement further complicated by battles over responsibilities of home/host regulators.

(6) Nevertheless tighter requirements
- → Higher costs
- → Larger spreads between deposit and loan rates
- → Cost of bank intermediation
- → Diversion of finance via other channels (Securitisation revives?)

"The Lender of Last Resort, its Limits and 2X2 Fail Issues"

Philipp Hartmann

European Central Bank and SUERF

SUERF, CEPS and BFF Conference on "Crisis Management at Cross-Roads", hosted by the National Bank of Belgium, Brussels, 16 November 2009

Different notions of LLR

- Private bodies (Liko Bank, clearing houses etc.)
- Central banks
  - Emergency liquidity assistance to individual institutions (ELA)
  - Lending to the market
  - Monetary/interest rate policy
- Treasuries
  - Direct ownership
  - (Partly) public investment vehicles for impaired assets ("bad banks")
- International LLR
  - Central bank swap lines
  - IMF facilities
  - Interest rate policy of centre country

Limits to central bank LLR

- Central bank ELA
  - Theoretically almost unlimited
  - Credit risk: Fiscal guarantee/CB independence
  - Level playing field
  - Moral hazard
- Central bank lending to market
  - Theoretically almost unlimited
  - Credit risk: Fiscal guarantee/CB independence
  - Potential replacement of private money market
  - Interference with monetary policy/inflation risk
  - Moral hazard

Limits to fiscal LLR

- <u>Treasury bailouts</u>
  - Theoretically very large
  - Speed may require CB liquidity "bridges"
  - Burden on future generations
  - Can cause a sovereign crisis (e.g. small countries with large banking operations)
  - Level playing field
  - Moral hazard
- In many respects the issue is
  - less whether there are technical limits to LLR but
  - how its use can be avoided or contained and adverse side effects limited
- General problem of crisis management

National stabilisation programs: Ceilings

(bn. EUR)	Ceilings				(28 April 2009)
	Capital injections	Guarantees	Asset purchase/swaps	Total commitment	Ceilings Commitment (% of GDP)
Belgium[1)]	0	99	0	99	5%
Germany	80	400	0	480 *	21%
Ireland[2)]	10	485	90	585 *	307%
Greece	5	15	8	28	12%
Spain[3)]	0	100	50	150	14%
France	22	320	0	342	18%
Italy	20	0	50	70	5%
Cyprus	0	0	0	0	
Luxemburg	0	0	0	0	
Malta	0	0	0	0	
Netherlands[4)]	20	200	0	220	46%
Austria	15	75	0	90 *	33%
Portugal	4	20	0	24	15%
Slovakia	0	0	0	0 *	
Slovenia	0	12	0	12 *	35%
Finland	4	50	0	54	30%
Euro area	**180**	**1,776**	**198**	**2,154**	**24%**
Other Europe	18	44	41	103	n.a.
Sweden	6	142	0	148	51%
United Kingdom	55	273	55	383	56%
Europe total	**259**	**2,235**	**294**	**2,788**	**23%**
Australia	0	602	0	602 *	106%
USA	191	1,767	1,062	3,020	30%
Grand Total	**450**	**4,604**	**1,356**	**6,410**	**27%**

Source: Public information by national authorities

* Unlimited deposit insurance, not included in guarantees except for Ireland

National stabilisation programs: Effective

(bn. EUR)	Issued or injected				(28 April 2009)
	Capital injections	Guarantees	Asset purchase/swaps	% of the Total commitment	Issued or injected Commitment (% of GDP)
Belgium[1)]	18	142	0	162%	8%
Germany	32	170	5	43%	9%
Ireland[2)]	9	12	0	3%	11%
Greece	4	1	4	31%	4%
Spain[3)]	0	22	19	27%	4%
France	14	78	0	27%	5%
Italy	0	0	0	0%	0%
Cyprus	0	0	0		
Luxemburg	3	7	0		8%
Malta	0	0	0		
Netherlands[4)]	31	84	21	62%	28%
Austria	4	14	0	20%	7%
Portugal	0	4	0	18%	3%
Slovakia	0	2	0		
Slovenia	0	0	0	0%	0%
Finland	0	0	0	0%	0%
Euro area	**113**	**535**	**50**	**32%**	**8%**
Other Europe	5	10	41.2	55%	n.a.
Sweden	0	15	0	10%	5%
United Kingdom	85	89	521	181%	102%
Europe total	**203**	**650**	**612**	**53%**	**12%**
Australia	0	60	0	10%	11%
USA	267	216	294	26%	8%
Grand Total	**470**	**926**	**906**	**36%**	**10%**

Source: Public information by national authorities

Standard answers

- Public support in crises is fact of life, go on as before
- Stricter regulation (more capital and liquidity buffers)
- Stricter supervision (governance, risk management, stress testing etc.)
- Ring-fencing of risky activities (subsidiaries) or prohibition, narrow banking
- We should try to do better than this!
- Focus of the discussion on 2X2 fail issues
  - X=big
  - X=complex
  - X= interconnected
  - Xs are related but not identical

Innovative ideas to solve 2X2 fail problem

- Make capital/liquidity dependent on X (Geneva Report, US treasury)
- Private capital insurance (Kashyap, Rajan and Stein)
- Access to pool of funds against Pigou or Tobin tax (Perrotti and Suarez, UK)
- Compulsory contingent capital (Flannery, Dudley)
- Compulsory equity issuance in response to CDS spreads (Hart and Zingales)
- Living wills (Squam Lake Working Group on Financial Regulation)
- Strengthen competition policy in banking (Perrotti and Suarez; Carletti, Hartmann and Ongena)
- Break large banks up

Work plan Financial Stability Board

- FSB plans proposals how to reduce risks posed by systemically important institutions by October 2010 (Draghi)
- 3 broad work streams
  - Prudential measures: contingent capital, limiting high risk activities, constraints on size and interconnectedness etc.
  - Failure resolution: ex ante contingency planning (could include "living wills"), improve national and international crisis resolution frameworks etc.
  - Resilience of infrastructures to failure: central counterparties, over-the-counter contract design, collateralisation practices etc.

"The Lender of Last Resort, its Limits and 2X2 Fail Issues"

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Duisenberg school of finance

Too big to save: small banks?

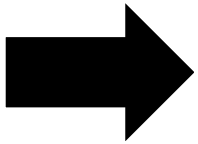
Dirk Schoenmaker

SUERF/CEPS/BFF Conference on
'Crisis Management at Cross-Roads'

16 November 2009

Too big to save

Too big to save -> small banks?



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Too big to save

Small banks?

- Calls for capping the size of banks
- Crisis hit countries with large and small banks
- Loss of credit risk diversification

Alternative routes to reduce size of bailout costs

Evidence: costs of bail-out

Country	GDP (bln, 2007)	Bank name	Equity (bln, 2007)	Equity/GDP
Austria	272	**Erste**	11	4.1%
Belgium	335	**Fortis**	35	10.5% (3.9%)[1]
		KBC	18	5.4%
		Dexia	16	4.8% (0.7%)[2]
Denmark	1687	**Danske**	104	6.2%
France	1892	**BNP-Paribas**	60	3.2%
		SocGen	31	1.6%
Germany	2422	**Deutsche Bank**	39	1.6%
		Commerzbank	16	0.7%
Greece	228	**NBG**	7.6	3.3%
		Alpha	3.4	1.5%
Ireland	191	**AIB**	12	6.3%
		BofIr	7	3.7%
Italy	1544	**Unicredit**	62	4.0%
		IntesaSanPaolo	52	3.4%

Evidence: costs of bail-out

Country	GDP (bln, 2007)	Bank name	Equity (bln, 2007)	Equity/GDP
Netherlands	567	**ABN**	31	5.5%
		ING	35	6.2%
Spain	1050	**Santander**	56	5.3%
		BBVA	28	1.9%
Sweden	3064	**Nordea**	162	5.3%
		Svenska H.	75	2.5%
Switzerland	512	**UBS**	42	8.2%
		CS	60	11.7%
UK	1400	**RBS**	91	6.5%
		Barclays	32	2.3%
		HSBC	68	4.9%
		Lloyd TSB	12	0.9%
USA	13807	**Citigroup**	114	0.8%
		BofA	147	1.1%

Large vs small banking systems (June 2009 figures)

Countries with large banks (Equity/GDP > 4%)	Bailout cost (% of GDP)	Countries with small banks (Equity/GDP ≤ 4%)	Bailout cost (% of GDP)
Austria	8.9%	France	1.6%
Belgium	4.8%	Germany	3.7%
Denmark	5.9%	Greece	5.4%
Ireland	5.9%	Italy	0.7%
Netherlands	13.6%	USA	6.7%
Spain	3.9%		
Sweden	5.2%		
Switzerland	1.1%		
United Kingdom	20.0%		

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Evidence

Capping size does not necessarily reduce size of bail out costs

- Yes, it does reduce idiosyncratic risk
- But not correlated risk / common exposures
  - USA: correlated exposures to mortgages
  - Greece: common exposures to Balkan and shipping

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Reducing size: small banks

- Hamper scale and scope economies
  - Public/politicians care less about efficiency after crisis
- Lack of credit risk diversification
  - Due to move from international to domestic
  - Particular concern in euro area
  - Downside risk dependence higher within country than across countries (Slijkerman, 2007)

But finance theory does not care

Finance theory: shareholders can do diversification, so no need for firm to do

False, as inhouse diversification avoids costs of distress

- Bank runs (systemic risk)
- Increasing regulatory capital may cause fire sale of assets
- If no private capital -> Government -> downsizing bank

Trading credit risk?

- Securitisation does not work -> back on balance sheet
- Credit derivatives do not help -> counterparty risk

Public policy options for countries with large banks

- Independence and accountability of supervisors
  - Develop measures of performance
  - Public statement from supervisors
- Prompt and corrective action
  - Yes, but depends on timely spotting of problems ….
- Burden sharing among countries
- End to too-big-to-fail doctrine

Fortis (2007)		**Nordea (2007)**	
Countries	**Geographical distribution of assets**	**Countries**	**Geographical distribution of assets**
Benelux	81%	Nordic countries	99%
• Belgium	54%	• Denmark	26%
• Netherlands	20%	• Finland	32%
• Luxembourg	7%	• Norway	13%
		• Sweden	28%
Rest of Europe	11%	Rest of Europe	1%
Rest of the World	8%	Rest of the World	-
Total	100%	Total	100%
Santander (2007)		**Unicredit (2007)**	
Countries	**Geographical distribution of assets**	**Countries**	**Geographical distribution of assets**
Main countries	75%	Western-Europe	79%
• Spain	49%	• Italy	42%
• UK	22%	• Germany	25%
• Portugal	4%	• Austria	12%
Rest of Europe	8%	Rest of Europe	18%
Rest of the World	17%	Rest of the World	3%
Total	100%	Total	100%

Burden sharing

Helps to share the costs of bailing out large banks

Example - Unicredit

- On its own for Italy: 4% (equity/GDP)
- With burden sharing
  - Italy 42% share -> 1.7%
  - Germany 25% share
  - Austria 12% share
  - Others (mostly NMS) 21% share

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Conclusions

- Small banks are not the solution for too-big-to-safe
- Cross-country credit risk diversification important
- But how to deal with large banks?
  - Increase accountability of supervisors
  - Burden sharing among countries
  - End to too-big-to-fail

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Crisis Management at Cross-Roads

Brussels - 16 November 2009

Deposit guarantee schemes: How to re-establish clients´confidence

Dirk Cupei

Director Deposit Protection
Association of German Banks

Vice Chairman
European Forum of Deposit Insurers (EFDI)

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European Forum of Deposit Insurers

S T R U C T U R I N G

1. What has happened
2. What has allready been done
3. How can DGS contribute to re-establish depositors confidence?
4. Work in progress

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„Re-establish“? clients confidence

Did depositors
loose their confidence – íf so, in whom?

Banks

Financial Markets

Supervisors

Governments

Deposit Guarantee Schemes?

What has happened?

Deposit Guarantee Schemes

1. Northern Rock
   Awareness of the existence of the DGS (FSCS)?
   Speed
   Co-Insurance

2. Iceland
   Speed
   Insufficiency

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What has allready been done

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What has allready been done

Amendments of the Directive 94/19

1. Abolition of co-insurance

2. Decrease timeframe for pay-out from 3 months (+3 months +3 months) to 20 working days (plus 10)
   to be transposed by the end of 2010
3. Increase the minimum level of protection from 20.000,- Euro to 50.000,- from the 30.june 2009 latest and to 100.000,- Euro by the end of 2010 (Maximum level / Impact Assessment)

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What has allready been done

- Temporarly Increase of Coverage Levels nationally
- Amendments of several national schemes (UK-case)
- Increase of the level of protection to 100.000,- Euro or more (state guarantees) by 14 / 27 member states
- Core Principles on Deposit Insurance by the Basel Committee

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How can DGS contribute to re-establish depositors confidence?

- Public Awareness
- Timeframe for compensation – (No „payout-Delay)
- Speed

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How can DGS contribute to re-establish depositors confidence?

- Adequate Financing
- Refinancing Facilities
- Access to Liquidity

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How can DGS contribute to re-establish depositors confidence?

- Level of Coverage (amount)
- Scope of coverage
  (protected deposits and depositors)
- Abolition of Co-Insurance

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Work in Progress

Commission works on:

- Further reducing timeframe for pay-out
- Emergency pay-outs
- Harmonization and standardization of information of depositors
- Impact assessment on the further increase of the coverage level
- Harmonization of scope of protection
- Harmonization of financing

Work in Progress

Commission works on (further issues „not relevant“ for re-establishing clients confidence):

Risk adjusted premiums

Mandate

Pan EU-DGS

Set-off / Deduction of Couterclaims

Cross-Border Cooperation / Single Point of Contact

De-Minimis Rule

(Topping-up)

Interaction between DGS and ICS

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Work in Progress

Revision of national DGS by national Governments and DGS themselves (especially mandate, financing and access to liquidity)

Elaboration of a methodology for the Core Principles on Deposit Insurance

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Many thanks for your attention!

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Deposit Guarantee Schemes

How to re-establish clients' confidence

Hans Groeneveld
Conference "Crisis Management at Cross-Roads", 16 November 2009

Content

- Background
  - Panic among depositors
  - Revision of DGS
- Basic principles of every DGS
- DGS-aspects
  - Incentives and risks
  - Supervision
- Conclusions

Background: panic among savers…

Rabobank

iamsaved
BY THE DUTCH GOVERNMENT

Background: revision DGS

Measure	Objective
• Liquidity support	➔ Safeguards sufficient liquidity
• Buying bad loans (original plan US)	➔ Eliminates uncertainties from the system
• Recapitalisation and nationalisation of banks	➔ Stengthens solvency
• **Increasing guarantees for deposits**	➔ **Prevents bank runs**
• Guaranteeing interbank loans (ECB)	➔ Repairs interbank market
• Lowering official interest rates by central banks	➔ Makes credit cheaper, and stimulates investments
• Increasing export guarantees	➔ Extra support for the real economy
• Advancing investments in infrastructure	
• Allowing quickened depreciations	

Basic principles of every DGS

- Main objective:
  - Financial stability: safeguarding the confidence of small savers in stability of financial system
  - Protection of retail depositors from incurring large losses due to bank failures: they are unable to monitor and assess the riskiness of institutions that are holding their deposits

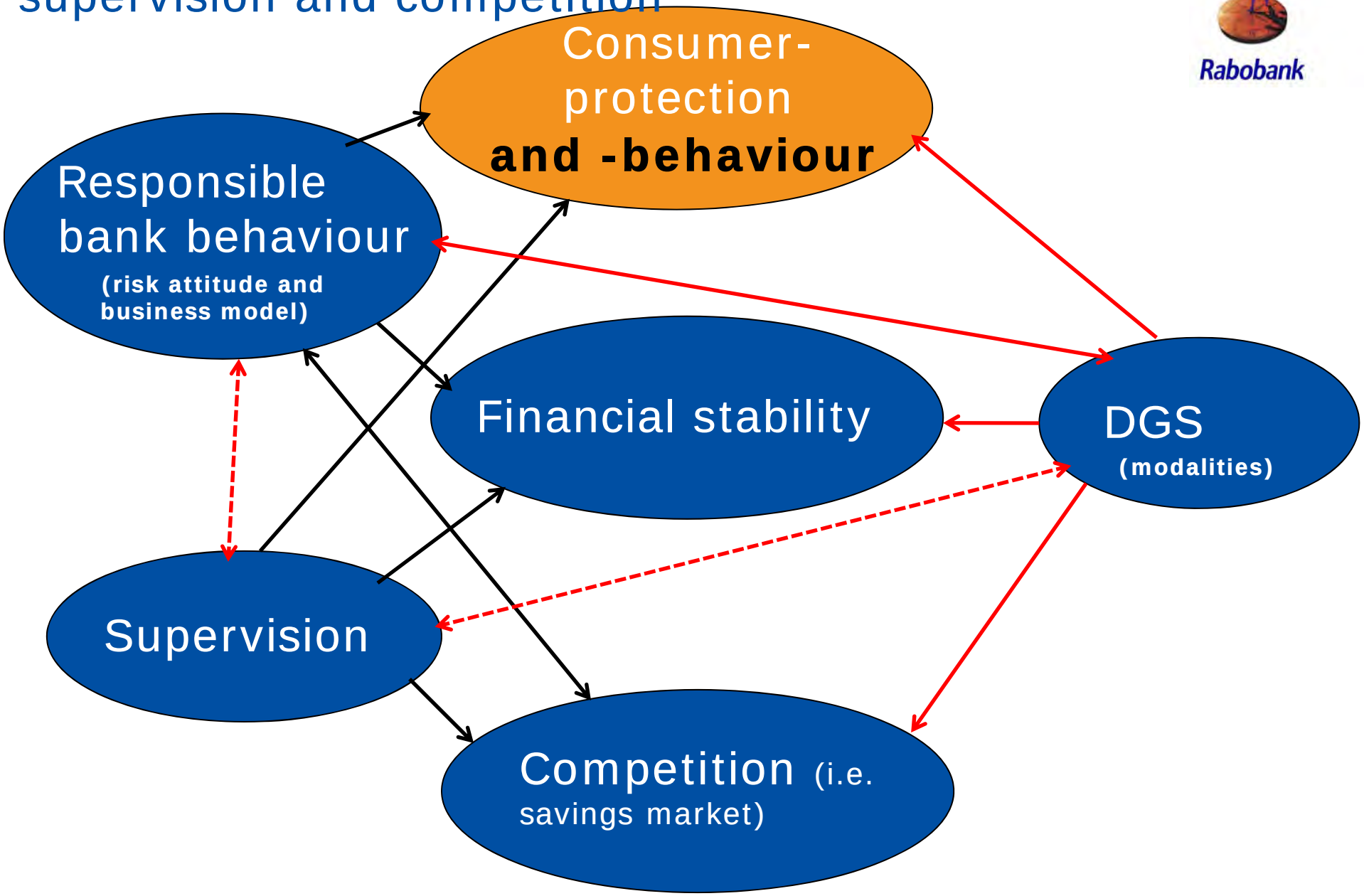
- DGS can never replace responsible behaviour of banks and adequate banking supervision

- DGS is no crisis instrument, but a financial safety net for incidental, small bank insolvencies

- DGS should be clear and transparent for the public

- DGS should contain right incentives for depositors and banks to discourage moral hazard and abuse (“EU-proof”)

DGS-aspects: bank behaviour, financial stability, supervision and competition



DGS-aspects: wrong and dangerous incentives

- Moral hazard problems for depositors due to:
  - Full or high coverage
  - Absence of co-insurance
  - Quick payout

- Moral hazard problems for banks, e.g.:
  - High coverage supports risky banks that have to pay a high risk premium for capital market funding
  - Risky banks are prepared to pay higher interest rates to attract funding and push up market rates for less risky banks
  - Can be limited by introducing a risk-dependent contribution to the DGS for banks

- Risks for national governments (credit ratings)

DGS-aspects: supervision

- Differences in national DG systems

- Adjusting supervision, for example:
  - Supervision on ‘use’ of attracted national savings by foreign banks
  - Focus on business models of DGS-participants: risky or one-sided
  - Adjustable membership criteria of DGS
  - If necessary, imposing limitations on activities in deposit markets

- Host supervisor (DNB and Icesave)

- Cooperation between supervisors

Conclusions

- Necessary adjustments of DGS:
  - Politically not feasible
  - Politically not feasible
  - Politically not feasible
  - Harmonisation of limit is needed: no topping up

So, consumer protection pushes aside financial stability objective of DGS… What is feasible?

- Regulators and supervisors:
  - Means to impose limitations on banks with risky or one-sided business models
  - Limitations on the use of attracted national savings by foreign banks
- Capping of funding contribution for individual participants in DGS
- Risk weighted contribution with significant differences

Thank you for your attention

Deposit insurance: The neglected dimension of the EU safety net

María J. Nieto

Banco de España

SUERF, CEPS and Belgian Financial Forum Conference
Crisis Management at Cross Roads
16 November, 2009

The views expressed here do not necessarily represent those of Banco de España

- Is prudential supervisors´explicit objective to minimize the cost of bank failure?
- Is prudential supervisors´discretion to exercise foreberance limited?
- Can banks be closed with positive regulatory capital?
- Does the EU regulation on supervision and deposit insurance take into consideration potential negative externalities?

Is prudential supervisors´objective to minimize the cost of bank failure?

- The rational for focusing on limiting losses is twofold:
  - Bank failures have imposed large losses on tax payers
  - Misallocation of resources that arises from banks whose managers and owners have distorted incentives

Is prudential supervisors´objective to minimize the cost of bank failure?

- Supervisors´objectives in the EU (often multiple goals)
  - Ensure Compliance with Relevant Laws and Regulations
  - Promote Financial Stability
  - Achieve the Orderly and Safe Functioning of the Financial System
  - Promote Confidence in the Banking System
  - Encourage Efficiency in the Banking System
  - Promote Banks' Ability to Compete
  - Protect Consumers and or Depositors
- ... Objectives that could be pursued in ways that do not significantly raise expected losses of banking crisis ...

Is prudential supervisors´discretion to exercise forberance limited?

- The rational for limiting supervisors´ forbearance:
  - The risk of bank failure is not independent of bank supervisory policy
  - Allowing insolvent banks to continue in operation risks an accumulation of even greater losses → negative consequences for the DI
  - Incentives to forbear are even stronger in supervision of cross-border banks (principal-agent)

Is prudential supervisors´discretion to exercise foreberance limited?

- The CRD requires supervisors´review and evaluation of the banks´risk profile and management system and calls for prudential measures to be applied promptly
- ...The principle of early intervention is established but it does not significantly reduce supervisory discretion as to when to intervene or establish minimum supervisory actions

Is prudential supervisors´discretion to exercise foreberance limited?

Supervisor's Remedial Powers Actions as the Situation Deteriorates (Number of EU Countries)

	The Supervisor Can	Needs Government or Court Approval	The Supervisor Does Not	No Information Available
Issue Cease and Desist Orders	27			
Levy Fines and/or Penalties	24 (fines are inconsequential in 3)		3	
Remove Managers	21		6	
Demand stricter capital requirements	25		2	
Require a Remedial Plan	24		3	
Appoint a Special Inspector	20		7	
Prevent Asset Transfers	27*			
Power to Require Shareholders to Support the Institution if Needed with Cash	15	1	12	
Impose Conditions on License	22	3	1	
Restrict Activities/Lending	25		2	
Restrict, Place Conditions on Business	27 (4 only when a breach of legal provisions occurs)			
Restrict Voting Rights	22		5	
Initiate Reorganization /Winding Up	18	1	9	
Appoint Conservator	14	6	5	2
Revoke the License	23	8	3	

Source: Garcia Lastra and Nieto (2009)

Can banks be closed with positive regulatory capital?

- Timely resolution provides two important benefits (Nieto and Wall, 2007)
  - It truncates if not eliminates the value of the deposit insurance put option
  - It is critical to limiting deposit insurance losses
- Key argument against the claim that timely resolution involves government taking private property:
  - Shareholders need to have the opportunity to recapitalize the bank and to test their own assessment about the financial viability of the bank before it is forced into resolution

Can banks be closed with positive regulatory capital?

- The Second Company Law Directive requires the approval of the shareholders´general meeting for any reduction (also increase) of issued share capital and confers pre-emption right for existing shareholders
- The Shareholder Rights Directive sets out requirements relating to the general meeting of shareholders, and in particular specifies the convocation periods and the form of the convocation

Does the EU regulation on supervision and deposit insurance take into consideration potential negative externalities?

Approach Safety Net	Centralized	Explicit cross country coordination arrangements	Decentralized
Prudential Regulation	-	o Lamfalussy architecture o More homogeneous secondary legislation	o National legislation subject to the restriction of minimum harmonization
Prudential Supervision	-	o European System of Financial Supervisors o Coordination via MoU (PS+LOLR); (PS+LOLR+MF)	o National on site and off site supervision
LOLR (Emergency Liquidity)	-	o Explicit coordination via MoU (PS+LOLR); (PS+LOLR+MF) o ECB Governing Council	o Implicitly decentralized NCBs
Deposit Insurance	-		o National DIs o Towards more harmonization (implicit coordination)
Reorganization and Winding-Up	-		o National Resolution Authorities o Resolution procedures are partially harmonized

Conclusion

- EU policy makers have largely neglected the interrelation between:
  - deposit insurance and prudential supervision
  - deposit insurance and reorganization and winding up
- Coordination failure in a multicountry environment may cause negative externalities

European Banking Federation

"Crisis management at Cross-Roads"

- Brussels, 16th November 2009 -

DEPOSIT GUARANTEE SCHEMES:

HOW TO RE-ESTABLISH CLIENTS'CONFIDENCE?

Robert PRIESTER, Head of the Financial Markets & Banking Supervision Department

- Efficiency, stability, credibility go hand in hand
- A level-playing field environment
- A common approach to cross-border supervision
- An EU framework for cross-border bank resolution

- Need to restore public confidence
- The role of deposit guarantee schemes: act against contagion
- Enhancing consumers' awareness
- Ensure equal level of depositors' protection across Europe

- Crisis prevention, Crisis management, Crisis resolution are now on the reform agenda

- Key that the reforms meet their objectives

- Thank you for your attention -

Brussels,16 November 2009.

Joint SUERF, CEPS and Belgian Financial Forum Conference on

Crisis Management at Cross-Roads

Closing Speech by Governor Quaden

Ladies and Gentlemen,

More than two years after the US subprime crisis triggered world-wide financial turbulence and one year after the collapse of Lehman Brothers exacerbated the crisis dramatically, the title of this conference rightly suggests that crisis management is at a crossroads. Indeed, the exceptional measures taken by central banks and governments do appear to be achieving their objectives. It seems now that the most severe financial crisis since the 1930s, which provoked a free fall in world trade and industrial production over two quarters, will not develop into another Great Depression, even if its toll in terms of subdued economic activity and higher unemployment is not yet over. Crisis prevention will soon have to take over from crisis management. This will require both a timely exit from the exceptional measures taken to stabilise the financial system and the economy, and the implementation of fundamental reforms to remedy the structural defects exposed by the crisis.

1. Timely exit

Let me turn firstly to the issue of a timely exit. The policy reaction to the financial crisis was very decisive. Central banks were the first to react in August 2007, by providing ample liquidity. After the sudden aggravation of the crisis in September 2008, they reduced interest rates to unprecedentedly low levels and took some non-conventional measures to support bank lending and the financial markets. Governments rescued systemically important financial institutions, through capital injections and asset purchases, and supported bank funding, through guarantees. They also

launched fiscal stimulus packages. In order to consolidate the recovery, to avoid nurturing the seeds of future crises and to promote sustainable development, these short-term measures have to be unwound at the right time and pace.

The effectiveness of fiscal policy depends on the confidence in its sustainability, and it is important to avoid the private debt crisis being followed by a public debt crisis. The burden of fiscal consolidation should not be passed on to the next generations. Credible fiscal consolidation programmes have to be set up, and the current outlook should allow the first steps to be taken next year.

But let me focus on the Eurosystem's monetary policy. Too early an exit from the current very accommodative monetary policy stance would entail the risk of a relapse: renewed negative interactions between financial sector problems and the real economy, along with a possible threat of deflation. Too late an exit would sow the seeds for new financial excesses, with a risk of inflation. Obviously, the assessment of risks to medium-term price stability must remain the fundamental criterion. Moreover, I expect gradualism to be a key feature of the exit. Certainly, our toolkit would allow us to react swiftly to any abrupt change in inflation expectations. However, economic and financial conditions are likely to gradually return to normal and, consequently, the upward shift in the balance of risks to price stability will probably be gradual. In fact, gradualism is most appropriate in uncertain times as it dampens the risk of disruptions in financial markets. The sequencing of the exit is not pre-defined, nor is its end point, and will depend on developments in financial markets and in the real economy. For

example, the Governing Council of the ECB could change interest rates while keeping some non-standard measures in place, if required by a dysfunctioning of the money market - and you may remember that this kind of separation of monetary policy and liquidity management measures was quite common in the first phase of the crisis, from August 2007 to September 2008. Conversely, and this is may be more obvious, some non-standard monetary policy measures are likely to be withdrawn before raising interest rates.

So, where do we stand now? Even though they are not yet back up to their pre-crisis levels, most financial market indicators have improved considerably. Since the spring of this year, there have been signs of a nascent recovery, the "green shoots", mainly thanks to the policy reactions around the world and especially to a rebound in Asia. However, the economic recovery is still fragile and reliant, in no small measures, on expansionary monetary and fiscal policies. Moreover, commercial banks still have to repair their balance sheets and reinforce their capital base. The current slack in the economy is dampening price developments, an assessment which is confirmed by the monetary analysis. Consequently, the Governing Council believes that current interest rates remain appropriate.

At the same time, the situation is not quite as dire as it was a few months ago, especially in terms of financial market functioning. Therefore, the first steps of a gradual phasing-out of non-standard measures can be envisaged, like a discontinuation of 1-year refinancing operations or a lower frequency for 3-month and 6-month refinancing operations. They should not be seen as the start of a tightening cycle, but rather as an incentive for banks to

restructure their portfolios and to resume their market-based funding activities, as a long period of cocooning in the banking sector has microeconomic drawbacks too.

Looking further ahead, the Governing Council will continue to set the monetary policy stance by assessing the appropriateness of monetary and financial conditions in view of the risks to price stability. One of the lessons of this crisis is that central bankers should not be guided by excessively narrow inflation targeting but should pay attention to the build-up of financial imbalances, which may not immediately exert pressure on prices, but an abrupt correction of which may put price stability at risk. The Governing Council can claim that the medium-term orientation of its strategy and its monetary analysis are assets in this respect. A few years ago, at a previous SUERF conference, I announced that M3 might abandon us. And indeed, the long-run relationship between M3 and prices proved to show signs of instability. At the same time, I pointed out that monetary analysis was much richer than monitoring M3 only. We now monitor credit developments closely. Research at the BIS, the IMF and within the Eurosystem is exploring the leading indicator properties of money and credit aggregates which may be useful in the identification of detrimental asset price bubbles. Further research is still needed in order to reach definite conclusions. While monetary policy should play a role in “leaning against the wind” of over-optimism in financial markets, it should however not be over-burdened. Interest rate policy on its own cannot guarantee both price stability and financial stability, and should therefore be backed up by prudential policies.

2. Fundamental reforms

This leads me to the second issue, the fundamental reforms which are badly needed. There is a long list of work in the pipeline of international fora. The Financial Stability Board at G20 level as well as Ecofin at EU level have drawn up detailed roadmaps to pave the way for extensive reforms.

The authorities must be determined in their drive for better regulation and supervision. As explicitly noted by the Basel Committee, *"the banking sector entered the crisis with an insufficient level and quality of capital, inadequate provisions, imprudent valuations, insufficient liquidity buffers, compensation polices that encouraged excessive leverage and risk taking and excessive concentration of exposures among major financial institutions".* The insistence on the words 'insufficient', 'inadequate' and 'excessive' shows that, in particular, more and better buffers are expected.

The crisis has given rise to a unique momentum for profound reform of the financial sector. We should not let this momentum slip away. I know full well that the return to more simplicity will be anything but simple. Of course, I realise that a lot of technical issues have still to be resolved. And I admit that it will be important to introduce the new regulations in a timely manner so as not to repress the smooth flow of credit which will be required to support the nascent recovery. In fact, while there is much discussion at the moment on the design of the exit strategy from the public support measures, we should be equally aware of the need for an entry strategy for moving over to more comprehensive regulatory requirements.

But all these considerations should not be an excuse for prevarication and delaying the essential decisions to take for the design of a more comprehensive framework.

The crisis has seriously dented belief in the ability of the markets to regulate themselves. While it would be illusory to dispense with the assistance of the market in designing new supervisory and regulatory arrangements, these market consultations have more often that not been used by many financial institutions as a channel to lobby for softer regulation, certainly in the past and probably still today.

The rapid spread of the financial crisis has also served as a lesson for supervisors. It has shown that the root of the problems was not linked to any specific difficulties faced by individual institutions but, rather, to the gradual build-up of common risks within the system. It is now widely acknowledged that such crystallisation of risk, linked to major shifts in the correlation between financial products and markets, requires more systemically-focused oversight and regulation. To use the professional jargon, micro-prudential control, the preserve of the supervisory authorities, must be complemented by macro-prudential oversight, resorting to the expertise of central banks. To improve the symbiosis between these two approaches, a growing number of countries are adopting the so-called "twin peaks model" where the central bank is in charge of the full range of prudential supervision, in both its micro- and macro dimension, leaving the oversight of market integrity and investor protection to a separate institution. Just a few weeks ago, the Belgian authorities, too, decided to introduce this "twin peaks model" here as quickly and smoothly as possible.

Needless to say, I am well aware that the macrodimension does not stop at our country's frontiers, while the micro-supervision of cross-border groups also requires close multinational coordination. So, I strongly support the recent proposal to set up, at EU level, a European Systemic Risk Board (ESRB) and European System of Financial Supervisors (ESFS), which are called on to cooperate closely in order to bring more comprehensiveness and consistency to national and international supervision.

Macro-prudential analysis must rely on rapid, direct and comprehensive access to data on individual developments liable to affect global financial stability while, in turn, this analysis must feed the micro-prudential control. It would be a pity if our efforts to improve this flow of information in our respective countries were to be impeded by hurdles at the international level.

Ladies and Gentlemen,

Crisis management has been effective: many banks have been rescued, the abrupt rise in risk aversion has been countered and it seems that financial markets are returning to normal and that the fall in trade and output has come to an end. For the emergency measures not to nurture renewed financial excesses, they have to be withdrawn in a timely and gradual way and, above all, backed up by structural reforms. Better regulation and supervision are needed. Great haste in regulating complex matters would

probably not be wise, but the political resolve for reforms should not lose momentum.

Thank you for your attention.

"Unconventional monetary policies in time of crisis"

SUERF Annual Lecture, Brussels, 16 November 2009
Delivered by Jaime Caruana,
General Manager, Bank for International Settlements

1. Introduction

It is a great honour for me to deliver the SUERF Annual Lecture this year, following in the footsteps of such prestigious speakers.

Thankfully, this year has been a bit less eventful than the previous one. These calmer times have allowed deeper reflections among policymakers and academics about a number of fundamental issues, including the appropriate framework for monetary policy.

A key question that has re-emerged is whether it is sufficient for central banks to focus on price stability. Given that the current crisis took place against a backdrop of subdued inflation and well anchored inflation expectations, the answer appears to be "no". And if price stability is not sufficient to ensure financial stability, it is not enough to deliver economic stability either.

This leads to another set of questions. Should central banks better integrate concerns about financial imbalances into policy? At what point do credit growth and asset price booms become excessive and warrant policy action? What additional tools would help central banks in dealing with these developments? Would an explicit financial stability mandate help, particularly in managing the political economy pressures? These are open questions that will be hotly debated.

In light of the theme of this year's conference, however, I would like to concentrate my remarks today on the broad range of responses that central banks have implemented to deal with the current crisis. These have been referred to as unconventional monetary policy, and I have three points to make. First, I will outline how unconventional policies can be viewed as a crisis management tool. Second, I will argue that more attention should be given to the asset side of the central bank balance sheet than the liability side in discussions of unconventional monetary policies. I will question the importance of bank reserves and their relationship to bank lending and inflation. Finally, I will highlight some key practical challenges in implementing such policies, including exiting from them. One conclusion that follows from this discussion is that unconventional monetary policies appear more suited for exceptional circumstances and are unlikely to represent an additional set of tools that central banks can use more generally in their normal day-to-day conduct of policy.

2. Unconventional monetary policies and crisis management

Let me begin by defining unconventional monetary policies as the elevation of liquidity management operations from a *passive* role in the background, undertaken simply to ensure the attainment of the interest rate target in normal times, to an *active* role to influence

broader financial conditions. Given this definition, I would like to offer some thoughts on unconventional monetary policy from the point of view of crisis management. In particular, I wish to highlight two perspectives from which unconventional monetary policy, as a crisis management tool, can be viewed. From the first perspective, such policies complement the central bank's role as lender of last resort; from the second, they become an extension of monetary policy. Let me discuss each of these in turn.

Apart from conducting monetary policy, a vital responsibility of central banks is to act as lender of last resort. The core objective of this function is to prevent, or at least mitigate, financial instability through the provision of liquidity support either to individual financial institutions or to financial markets.

Traditionally, the lender of last resort function is associated with acute institution-specific shortages of funding liquidity. By funding liquidity, I mean the ability to raise cash or its equivalent in reasonably large quantities, either via asset sales or by borrowing. Typically in such instances, an institution finds itself unable to pay or roll over obligations. Given the institution-specific nature of the intervention, such emergency liquidity assistance can generally be clearly separated from setting the policy interest rate.

In other cases, the situation confronting the central bank is something that can be termed a systemic shortage of both funding and market liquidity. By market liquidity I mean the ability to buy and sell assets in reasonably large quantities and at short notice without significantly affecting their price. Here, the problem involves a breakdown of key financial markets owing to a loss of confidence and coordination failures among market participants. As starkly demonstrated by the current crisis, markets, just like intermediaries, may be subject to "runs". And these runs are driven by fundamentally similar forces. The result is a sudden and prolonged evaporation of both market and funding liquidity, with serious consequences for the stability of both the financial system and the real economy.

From a financial stability perspective, unconventional monetary policy measures can be seen as a lender of last resort response to this second type of crisis. The underlying aim of intervention is to support market functioning by restoring both funding and market liquidity and thereby to shore up confidence in the financial system as a whole. Typically, this will require a broadening of the central bank's provision of liquidity, in terms of both accessibility and structure. From such a viewpoint, targeted interventions in specific market segments are primarily geared to improving market functioning. And while they may exert a beneficial influence on broader economic conditions, such an effect is not viewed as the main objective.

Nonetheless, precisely because these actions typically affect overall financial conditions, it can be difficult to distinguish them from the stance of monetary policy per se. This leads me to the alternative perspective from which unconventional monetary policy can be viewed: namely, as an *extension* of monetary policy that can be used when interest rate policy alone may not achieve the desired policy objective, perhaps because particular segments of the transmission mechanism fail to work or because of the zero lower bound. Here, central bank operations are aimed at directly affecting broader financial conditions, such as asset prices, yields and funding conditions, *over and above* the impact of the policy rate.

While the lender of last resort and the monetary policy perspectives are usually distinct from one another, with the former focused on financial stability and the latter on macroeconomic stability, they can become closely intertwined in a crisis. Ensuring continued market functioning as a lender of last resort generally entails interventions that reduce liquidity premia on certain assets. To the extent that the reduction in risk premia translates into easier funding conditions, this adds monetary stimulus. Conversely, insofar as concerted monetary policy interventions to lower risk spreads and ease funding conditions serve to bolster market confidence, they may improve market functioning.

The current episode can be viewed from both perspectives. When the crisis first erupted in August 2007, central bank interventions focused on maintaining liquidity in key markets primarily by supplying central bank liquidity and government securities more flexibly. In this phase, the lender of last resort perspective was clearly dominant. It was reflected in the introduction of various emergence liquidity facilities such as the Term Auction Facility by the Federal Reserve and the Special Liquidity Scheme by the Bank of England.

As the crisis deepened following the failure of Lehman Brothers and spillovers to the real economy intensified, the monetary policy perspective became more important. Interventions were undertaken with the explicit aim of steering broader financial conditions to support central banks' macroeconomic goals. Prominent examples include purchases of government bonds to lower benchmark yields and purchases of mortgage-backed securities to lower mortgage rates.

The defining element that is common to both perspectives is that they involve operations that result in substantial changes in central bank balance sheets – in terms of size, composition and risk profile. On the asset side, the extension of term funding to banks, the purchase of short-term claims on businesses and the purchase of mortgage and government bonds have been termed "credit easing", to highlight the intention to maintain the supply of private credit at reasonable cost. On the liability side, "quantitative easing" refers to policies that emphasise the supply of bank reserves.

To begin with, let me note two important features of such "balance sheet policies".

First, balance sheet policy is not that new or unconventional in its essence. The most familiar form is foreign exchange intervention, whereby the central bank seeks to influence the exchange rate *separately* from the policy rate. What makes its use in the current crisis novel is the market segments targeted: for example, the long end of the interbank market, long-term government bond yields, private sector risk spreads and the like. The recognition that such interventions do not represent something entirely new facilitates their assessment. Indeed, bearing in mind the parallels with foreign exchange rate intervention helps to provide useful clues about the efficacy and limitations of this broad approach to policy.

The second key feature of balance sheet policies is that they can be decoupled from the level of policy rates. Technically, all that is needed is for the central bank to neutralise the impact that any induced expansion of bank reserves might have on the overnight interest rate.

Let me give an example. Suppose the central bank purchases an asset outright from commercial banks. In the first instance, it pays for this by crediting banks' deposits at the central bank. That is, it creates bank reserves. Now, if the rate of remuneration that the central bank sets on bank reserves is below the market rate, as is typically the case, their expansion will lead to downward pressure on overnight interest rates. This follows because the opportunity cost of holding reserves means that banks will try to lend them out in the interbank market, and in so doing depress the overnight rate. Thus, one way of shielding the overnight rate from the effects of asset purchases is for the central bank to conduct offsetting or sterilising operations, so as to leave the amount of reserves unchanged. There are many ways of doing this, including asset sales, repos, or the issuance of central bank bills. And as clearly demonstrated by many Asian central banks, the scope for this approach is quite large.

Alternatively, if the central bank does not wish to offset the expansion in reserves, perhaps because of limitations in the availability of offsetting instruments, it can still shield overnight rates by paying interest on reserves at the policy rate. This eliminates the opportunity cost of holding reserves, making them, in effect, a close substitute for other short-term liquid assets in banks' portfolios. This is essentially the approach that the Federal Reserve and the Bank of England have followed. Of course, the opportunity cost is also eliminated automatically

even if reserves are not remunerated when the policy rate reaches or comes very close to the zero lower bound.

Thus, so long as central banks have sufficient instruments, the size and structure of their balance sheets can be managed separately from the policy rate. One implication of this "decoupling principle" is that exiting from the current very low, or zero, interest rate policies can, at least in principle, be done *independently* of balance sheet policies. In practice, however, the distinction is unlikely to be as clear cut, especially insofar as the impact on overall financial conditions is concerned. I will return to these issues later. But before I do so, I would like to address the effectiveness of unconventional policies and its relationship to the substantial increases in bank reserves that have taken place.

3. Assessing the effectiveness of unconventional policies

In principle, the effects of balance sheet policy may be transmitted through two main channels. The first is the "signalling channel", whereby central bank actions or their communication influence public expectations about some of the key factors that underpin the market valuation of an asset. These include expectations regarding the future course of policy, inflation, the relative scarcity of different assets or their risk and liquidity profiles. For example, the announcement that the central bank is prepared to engage in operations involving illiquid assets may, by itself, boost investor confidence in them, thereby reducing liquidity premia, stimulating trading activity and improving market functioning.

The second channel of influence is commonly known as the "portfolio balance channel". Here, imperfect substitutability among assets leads to changes in relative yields when central bank operations alter the composition of private sector portfolios. Insofar as shifts in private sector portfolios lead to stronger balance sheets, greater collateral values and higher net worth, they may also help loosen credit constraints, lower external finance premia, and hence boost credit growth. For example, by purchasing risky private securities from banks in exchange for risk-free claims on the public sector, the resultant improvement in the overall risk profile of bank balance sheets may not only enhance their risk appetite but may also increase investors' willingness to lend to them.

The effectiveness of credit easing policies can be seen in credit spreads. Central bank lending and purchases narrowed the spread of term bank funding over expected monetary policy rates, and the spread of mortgage bond over government bond yields. Whether the purchase of government bonds by central banks has had a similarly sustained effect on government bond yields will be debated. In the case of the relatively largest programme of purchases, that of the Bank of England, bond yields responded to surprises in the series of announcements about the initiation and expansion of purchases.

Turning to the liability side, while the central bank has a number of choices in how such operations are funded, a prominent one is to expand bank reserves. Two aspects of the role of bank reserves deserve to be reconsidered. The first is the relationship between reserves and bank lending; the second is the link between reserves and inflation.

Starting with the former, discussions of balance sheet policies often presume a close link between the expansion of reserves and credit creation. The implicit premise is that excess bank reserves induce banks to make loans. Either bank lending is constrained by insufficient access to reserves or more reserves can somehow boost banks' willingness to lend. An extreme version of this view is the notion of a stable money multiplier.

In fact, bank lending is determined by banks' willingness to grant loans, based on perceived risk-return trade-offs, and by the demand for those loans. An expansion of reserves over and above the level demanded for precautionary purposes, and/or to satisfy any reserve

requirement, need not give banks more resources to expand lending. Financing the change in the asset side of the central bank balance sheet through reserves rather than some other short-term instrument like central bank or Treasury bills only alters the composition of the liquid assets of the banking system. As noted, the two are very close substitutes. As a result, the impact of variations in this composition on bank behaviour may not be substantial.

This can be seen another way. Recall that in order to finance balance sheet policy through an expansion of reserves the central bank has to eliminate the opportunity cost of holding them. In other words, it must either pay interest on reserves at the positive overnight rate that it wishes to target, or the overnight rate must fall to the deposit facility floor (or zero). In effect, the central bank has to make bank reserves sufficiently attractive compared with other liquid assets. This makes them almost perfect substitutes, in particular for other short-term government paper. Reserves become just another type of liquid asset among many. And because they earn the market return, reserves represent resources that are no more idle than holdings of Treasury bills.

To be clear: this is not to say that central banks are powerless to influence bank lending. If lending is held back by significant funding constraints – because banks are unable to sell illiquid assets or to borrow – interventions that alleviate these constraints will encourage lending. Thus, for example, if banks' access to future funding becomes highly uncertain, central bank operations that supply term funding may allow banks to keep lending. Bank lending may also be encouraged by the financing of such operations with excess reserves or short-term paper that satisfy a demand to hold larger precautionary liquid balances. But the underlying mechanism involves supplying banks with a liquid asset at a time when the access to funding is difficult or becomes uncertain. Reserves simply constitute one possible asset among others that can serve this purpose. Whether a bank holds liquid assets in the form of, say, reserves, one-week Treasury bills or one-month central bank bills will not make a material difference to its willingness and ability to lend. Typically, the main constraint on credit creation, if the demand for credit is there, is bank capital relative to regulatory minimum or market requirements.

What about the concern that large expansions in bank reserves will lead to inflation – the second issue? No doubt more accommodative financial conditions resulting from central bank lending and asset purchases, insofar as they stimulate aggregate demand, can generate inflationary pressures. But the point I would like to make here is that there is no *additional* inflationary effect coming from an increase in reserves per se. When bank reserves are expanded as part of balance sheet policies, they should be viewed as simply another form of liquid asset that is comparable to short-term government paper. Thus funding balance sheet policies with reserves should be no more inflationary than, for instance, the issuance of short-term central bank bills.

This also suggests that the justification for inflationary fears associated with the notion of "debt monetisation" needs to be qualified. Here, the concern is that purchases of government debt and the associated expansion in bank reserves would lead to inflation. In addressing this issue, it is essential to distinguish the effects that operate through interest rate policy and those that operate through the financing structure of government debt.

If excess reserves are remunerated at a below market rate, their injection would push overnight rates down to the floor established by the remuneration rate (or the deposit facility rate). This is tantamount to an easing of interest rate policy. Any ensuing inflationary pressure can hence be largely attributed to the usual expansion of aggregate demand that accompanies such a move.

In the case where the opportunity cost of reserves has been eliminated, such as by paying interest at the policy rate, their expansion would not affect overnight rates. To the extent that any additional impact on inflation existed, it would result mainly from the effect on aggregate demand of the flatter yield curve that these operations may induce. For example, if the

central bank were to inject reserves through the acquisition of long-term government bonds, the net impact on yields and inflation would not be dissimilar to the rebalancing of government financing from long to very short maturities. In fact, such an "operation twist" can be achieved by the fiscal authorities themselves through altered debt management.

Ultimately, any inflationary concerns associated with monetisation should be mainly attributed to the monetary authorities' accommodating fiscal deficits by refraining from raising rates. In other words, it is not so much the financing of government spending per se – be it in the form of bank reserves or short-term sovereign paper – that is inflationary, but its accommodation at inappropriately low interest rates for too long a time. Critically, these two aspects are generally lumped together in policy debates because the prevailing paradigm has failed to distinguish changes in interest rate from changes in the amount of bank reserves in the system. One is seen as the dual of the other: more reserves imply lower interest rates. As I explained earlier, this is not the case. While both the central bank's balance sheet size and the level of reserves will reflect an accommodating policy, neither serves as a summary measure of the stance of policy.

To recap, the focus in assessing the impact on bank lending and inflation should be on how assets taken on by the central bank affect relative yields, and hence aggregate demand, or how they affect market liquidity and access to credit. Balance sheet policies work primarily by changing the composition of private sector balance sheets. Their impact will be greatest when the assets exchanged are imperfect substitutes for each other. Invariably, in such an exchange, the central bank will be providing the private sector with some form of highly liquid, low-risk asset. Such liquid assets tend to be highly substitutable for one another, especially at very low interest rates. Therefore, the specific form chosen, as determined by the central bank's method of funding, will generally be of much less significance than the choice of asset that has been acquired.

4. Practical challenges in implementing balance sheet policy

Let me now move to my next point and highlight some important practical challenges that central banks face in implementing balance sheet policy.

The first challenge is calibrating and communicating the interventions effectively. With little previous experience, with the relevant transmission channels unclear, and in the absence of a shared framework to quantify the various effects, it is very hard to judge the impact of these unconventional policies and hence determine the appropriate amount of intervention. At the same time, central banks have to tread a fine line between acting as a catalyst for private sector activity, on the one hand, and substituting for it, on the other. Moreover, they have to be wary of potential distortions to the level playing field between those receiving and not receiving the support. Finally, they need to take into account what is done in other jurisdictions. Coordination with other central banks can enhance the effectiveness of unconventional policy measures.

Even when policy can be appropriately calibrated, its impact and effectiveness are influenced heavily by how it is communicated. With liquidity management operations being used to affect monetary conditions directly, the official policy stance is no longer summarised by the policy rate. The resulting multidimensionality of policy carries with it the potential for diminished clarity of the policy signal. Communicating the rationale, nature, magnitude and time dimension of unconventional policies can steer expectations effectively, can avoid central bank credibility problems and can mitigate financial market volatility. Indeed, central banks have taken care to explain their unconventional policies with very welcome results.

The second set of practical challenges lies in the effective management of the central bank's relationship with fiscal policy. Balance sheet policy has a large potential overlap with fiscal policy. The clearest example is when central bank purchases of long-term bonds aimed at lowering their yield are counterbalanced by actions of the government's debt management to lock in low yields by issuing more long-term bonds. This hints at a broader point. In principle, almost any balance sheet policy can be undertaken by the government. While the central bank has a monopoly over interest rate policy, the same cannot be said with respect to balance sheet policy.

Moreover, balance sheet policy exposes the central bank to financial risk. Should substantial losses materialise, the central bank's operational autonomy may be threatened in the absence of an explicit or implicit understanding with the fiscal authorities regarding how losses are dealt with. Up to a point, some of the financial risks can be managed, for example, through the restriction of eligible collateral and the use of conservative haircuts. In the end, however, financial risks are part and parcel of balance sheet policy. Therefore, the real issue is how far institutional factors related to the treatment of losses may constrain the willingness and ability of the central bank to engage in such policies.

In this context, perhaps the greatest challenge to sustained utilisation of such policies is of a political economy nature. The more the central bank relies on unconventional policies, the more tricky questions are raised about coordination, operational independence and the division of responsibilities. A case can thus be made for the establishment of clear institutional guidelines to resolve potential conflicts and to enhance clarity in areas where central bank actions may have a large overlap with the fiscal authority, and thereby to preserve the autonomy of monetary policy These include accounting arrangements, rules for the distribution of profits and losses, and also mandates for the scope of actions.

This brings me to the issue of exit strategies.

Since, as I argued earlier, interest rate and balance sheet policies can be decoupled from each other, it is then possible, in principle, to delineate discussions of exit strategies along two separate dimensions: the appropriate level of interest rates, on the one hand, and the desired central bank balance sheet structure, on the other. The former will most likely be dictated by traditional output-inflation considerations; the latter will also be influenced by considerations about market functioning and avoiding financial market stress. In practice, however, this separation may not be so obvious. Since balance sheet policies exert an impact on broader financial conditions, in terms of the overall macroeconomic implications their withdrawal will not be easily distinguishable from a tightening of interest rates. This is part of the broader communication challenges of exit to which I will come back in a minute.

The main challenge is how to properly judge the timing and pace of the exit. This concern is a familiar one, being largely the same as that which applies to interest rate policy. One possibility is that exit occurs too early, hampering an incipient recovery. However, historical experience suggests that the balance of risks is tilted towards exiting too late and too slowly. Political economy pressures tend to go in this direction. At the macro level, the concern is that such a delayed exit may risk accommodating the build-up of a new set of financial imbalances or else lead to inflationary pressures. At the micro level, it may weaken unnecessarily the ability of markets to work effectively without official support and may distort the level playing field.

I should also stress here that, while the principles of exiting from these policies may be apparent, the actual path of exit could prove to be challenging and potentially bumpy. For one, communicating exit can be extremely tricky; there may be knife-edge market reactions to news of withdrawal. Moreover, because considerable uncertainty exists regarding the transmission channels of balance sheet policy, there is a risk that central bank actions will be misinterpreted. For example, a technical liability management operation such as issuing

central bank bills to drain bank reserves may be misinterpreted as a tightening of monetary conditions.

The number of potential pitfalls suggests that we should by no means take the scenario of a smooth exit for granted, and here again efforts by central banks to explain are constructive and welcome. No matter how much market conditions have seemingly improved, it is not entirely clear to what extent those improvements are based on the policies in place.

5. Closing remarks

To conclude, central banks' active management of the size and composition of their balance sheets does represent an additional tool to help ease constraints stemming from the zero lower bound and to manage crises. In the current one, it has clearly helped to ease severe liquidity strains and support the rebound in a number of key markets.

Notwithstanding these positive developments, this policy tool is best suited to restoring market functioning and bringing about more accommodative financial conditions. Under current circumstances, it is no substitute for the required fundamental restructuring of private sector balance sheets. In an environment of pervasive uncertainty regarding financial institutions' balance sheets, central bank actions for the most part only ease the problem, alleviating the symptoms rather than addressing the underlying causes. That is not to say that they do not contribute to the balance sheet repair. Indeed, the improvements in asset prices and the boost to bank profitability that have accompanied these policies have certainly helped to shore up balance sheets. Despite this, they cannot replace the forceful implementation of measures that address directly the fundamental weaknesses in private sector balance sheets or the need for better business models.

More generally, sustained reliance on a highly accommodative policy stance with respect to both interest rate and balance sheet policies risks creating a perception that the central bank alone is responsible for generating economic recovery. This could reduce the incentive for market participants and governments to take more fundamental measures. Also, I do not believe that we fully understand what the repercussions would be for asset prices, commodity prices and the global financial system as a whole if the world's major central banks keep policy interest rates very low for an extended period. If recent experience is any guide, we must pay serious attention to the risks that may arise. This is especially so for countries that are not suffering from some kind of economic headwinds, and some that are even benefiting from terms-of-trade gains and resurgent capital inflows.

Finally, there is the question is whether balance sheet policies represent an additional set of tools that can be used not just in crisis management but also in normal times. My own feeling is that the formidable practical challenges and the intense political pressure that inevitably accompany their use suggest that they should be employed only in exceptional circumstances and be withdrawn as soon as economic conditions permit. That said, it will be useful to reflect back and learn how some of these tools can be better designed and deployed in the future. A related question is how central bank operational frameworks should be designed to embed market-stabilising features more systematically and to improve flexibility in response to shocks. For instance, it may be the case that operational frameworks will retain their greater flexibility with regard to collateral requirements, counterparty eligibility and maturity of operations.

We still have a lot to learn from the crisis. Forums such as this one are an essential part of the learning process. It has been a pleasure for me to be here and I thank for your attention.