FINANCIAL STABILITY, BASEL 2 AND EMU

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Introduction

Overview of issues for discussion relating to financial stability, Basel 2 and EMU, covering 4 aspects:

1. Costs of financial stability – an illustration
2. Basel 2 – overview
3. Some criticisms of Basel 2
4. Further financial-stability issues for EMU

1 Costs of Financial Stability

- Widening literature on costs of banking crises, 10%+ of GDP, worse in OECD than EMEs
- Hypothetical NIESR estimate of cost of banking crisis, simulating of NiGEM model for UK:
  - Spread between personal and corporate borrowing and lending rates raised by 8 percent in first year (loan rate 4% up, deposit rate 4% down), declining in second and third. Similar rise affects equity risk premium
  - Corporate profits cut 17% reflecting loan losses by banks
  - House prices cut endogenously by 2.5% in first two quarters
  - Equity prices cut 6% in first quarters
  - Interest rates lowered 1.5% for 5 quarters ahead of fall in inflation (“emergency liquidity assistance”)

- Key driver is spread, reflecting credit rationing and banks' attempts rebuild capital. Affects cost of borrowing, personal income and corporate profits (loans floating rate)
- Asset prices affect consumption but also investment via cost of equity
- Impact greatest on investment – higher interest rates, risk premium and lower output
- Consumption also falls but current balance improves. Sum of effects on GDP –10% over 4 years, lower than some estimates of typical costs (Hoggarth/Sapporta)
- Cushioned by monetary policy, automatic stabilisers, long rates, depreciation of exchange rate

Impact on expenditure and sector balances

	Consump-tion	Business Invest-ment	Housing invest-ment	GDP	Current balance	Fiscal deficit
	% Diff from base	% Diff from base	% Diff from base	% Diff from base	% of GDP diff from base	% of GDP diff from base
2003	-3.17	-5.22	-5.26	-0.92	1.70	-1.90
2004	-6.90	-16.10	-16.09	-3.56	4.00	-1.70
2005	-7.30	-15.09	-15.10	-3.63	3.91	-0.06
2006	-5.47	-6.74	-6.74	-1.95	2.57	1.87

Effect on asset prices and yields

	Exchange rate	Equity prices	House prices	Long rate	Short rate
	% Diff from base	% Diff from base	% Diff from base	% points difference from base	% points difference from base
2003Q1	-6.80	-8.17	-2.31	-1.05	-1.50
2003Q4	-5.89	-2.21	-11.57	-0.88	-1.50
2004Q4	-4.79	5.57	-13.92	-0.65	-1.80
2005Q4	-3.46	9.41	-12.12	-0.38	-1.86
2006Q4	-2.16	8.49	-10.80	-0.13	-1.67

Additional issues for EMU

- Similar effects to UK can be expected – more sizeable in smaller economies (see early 1990s crises in Finland and Sweden compared with France and Italy)
- Cushioning effects of monetary policy, long rates and exchange rates absent to extent country is small part of EMU.
- In variant fixing UK interest rates and exchange rate, GDP decline 50% greater
- Spillover effects from crisis in a large country (see over)
- ….need for single supervisor?

Spillover effects of UK crisis on euro area

	Euro Area GDP	French GDP	German GDP	US GDP
	% Diff from base	% Diff from base	% Diff from base	% Diff from base
2003	-0.16	-0.14	-0.13	-0.02
2004	-0.38	-0.34	-0.34	0.01
2005	-0.32	-0.32	-0.22	0.10
2006	-0.08	-0.15	0.08	0.20

Generic patterns of financial instability

Phase of crisis	Nature	Example of features
Primary (favourable) shock	Diverse	Deregulation, monetary or fiscal easing, invention, change in market sentiment
Propagation - buildup of vulnerability	Common – main subject of macroprudential surveillance	New entry to financial markets, Debt accumulation, Asset price booms, Innovation in financial markets, Underpricing of risk, risk concentration and lower capital adequacy for banks, Unsustainable macro policy
Secondary (adverse) shock	Diverse	Monetary, fiscal or regulatory tightening, asymmetric trade shock
Propagation - crisis	Common	Failure of institution or market leading to failure of others via direct links or uncertainty in presence of asymmetric information – or generalised failure due to common shock
Policy action	Common – main subject of crisis resolution	Deposit insurance, lender of last resort, general monetary easing
Economic consequences	Common – scope depends on severity and policy action	Credit rationing leading to fall in GDP, notably investment

2 Basel 2 overview

- Underlying are shortcomings of Basel 1 – notably crude risk weights, also affecting pricing
- Focus on international banks and their credit risks – limit arbitrage by aligning capital with risks and deal with innovation. First proposal 1999, going through extensive consultation process, currently planned to be implemented in 2006 at the earliest
- EU planning to cover all banks via “CAD3” – US a small subset of top international banks
- Three pillars: capital adequacy, supervisory review and market discipline
- Supervisors less involved in determining rules for determining capital adequacy…

- …and focus instead on ensuring internal risk management procedures are adequate
- “Shift from rules based to process oriented regulation”
- Incentives to adopt better risk management via lower regulatory capital needs:
- Standardised approach for simple banks to complement process oriented, with more differentiated risk buckets and ratings generated by rating agencies
- More complex banks can use internal risk models as basis for allocating capital
  - “Foundation” approach – bank estimates probability of default (PD) and supervisor supplies other inputs
  - “Advanced” approach – banks run models and determine own parameters (LGD/EAD) , and hence capital allocation

- Enhanced sensitivity to collateral, guarantees, credit derivatives, netting and securitisation (innovations since Basel 1) – attempt to ensure adoption not encouraged by regulation alone
- Specific capital requirement to cover operational risk
- Enhanced role sought for market discipline, via disclosure
- Stress tests encouraged to assess vulnerability
- QIS3 suggests that banks adopting standardised approach will need more capital, IRB less, especially smaller banks
- We consider Basel 2 to be a step forward but note some caveats:

3 Some criticisms of Basel 2

Karacadag and Taylor (IMF)

- Fails to fully meet issue of economic versus regulatory capital (externalities)
- Accuracy of both external and internal ratings
- Lack of development of satisfactory credit risk models
- Potential moral hazard from regulatory approval of internal systems Lack of information on banks' internal systems
- Need for culture change by many regulators from rules based regulation to process based supervision

- Disclosure not sufficient for market discipline (uninsured debt)

Danielsson, Goodhart et al (LSE)

- Risk is endogenous and hence VARs can destabilise an economy or financial system (Russia/LTCM)
- Furthermore stress tests for individual institution show misleading indication of risks (UK insurance)
- Better risk measures are available than those used by the Basel Committee (extreme value theory)
- Rating agencies give conflicting and inconsistent view of creditworthiness – and are unregulated
- Operational risk modelling is not possible with current information, and no convincing reason for such regulation has been suggested

- The proposals will induce credit cycles – profitability and vulnerability uncorrelated
- These may enhance systemic risk because as credit quality falls in recession, capital requirements rise inducing credit rationing (some mitigation in latest IRB curves)
- “Capital standards unlikely to bind in real estate boom” as capital generated (Basel Committee)

ESFRC 2003

- Complexity and role of national supervisors in micro decisions of risk management hinders “arms length” relation, leading to “regulatory capture”
- Distortion of risk weights for SMEs for political ends

Some further concerns

- Wide-ranging stimuli to “herding” – similar risk models, rating dependence, capital requirements leading to sale of risky assets….
- ….offset is more current information available and forward-looking risk assessment
- There may be a contraction of the interbank market on account of higher capital requirements – increase liquidity risk especially in transition
- Also as banks ratings fall in recession interbank runs more likely
- Credit risk models only allowed to take correlations into account in limited way (i.e. no direct encouragement for diversification of sectoral or geographical exposures)

- Does not mandate “Spanish” build up of provisions in good times which could mitigate procyclicality
- Does not mandate liquidity requirement, macroprudential analysis (although Pillar 2 could focus on them)
- Lower capital requirements on residential mortgages may enhance house price booms, threatening macroeconomic stability (although bank risks historically limited)
- Likely errors in use of “released capital”

EMU aspects and Basel 2

- Euro interbank market has grown rapidly – how will it respond to Basel 2?
- Market discipline weak as many mutual and public banks in EMU countries
- Historical loss data will not capture heightened exposure to asymmetric shock (as single monetary policy)
- Need for cultural change by some regulators to process oriented supervision
- Banking structure with many small banks – will they seek to adopt IRB to cut capital, beyond their capabilities? (QIS3 smaller banks cut capital by 20% via IRB)
- Legislative approach in EU may hinder flexibility in adoption of Basel 2

4 Further financial-stability issues for EMU

Long term

- Moral hazard linked to varying generosity of deposit insurance (Germany)
- Trend to securitisation and disintermediation putting banks profitability under pressure in traditional business
- Securities market crises require adaptation by policy makers as crises more likely to spread across monetary area than banking crises
- Lack of experience with new monetary arrangements, generating uncertainty

- Difficulty of macroprudential analysis in structural change (e.g. finding “norms”)
- EMU generates financial innovations whose behaviour in a stressful situation not yet known
- Dealing with regional crises not warranting monetary response (see simulation)
  - large number of small banks which are not diversified across EMU
  - Securitisation not developed widely
  - Cross border transmission in single monetary area
- Long term issues linked to population ageing, also affecting banks
  - Fiscal crises as pay-as-you-go unsustainable
  - Asset price volatility in funded systems

Current challenges

- House price booms in a range of EMU countries which monetary policy cannot appropriately counteract (Netherlands, Ireland, Spain)…
- …and elsewhere some signs of weak banks (Germany, Italy)
- Generalised difficulties in life insurance sectors, ameliorated by rising long rates

New entrants

- Capital inflows which may aggravate lending booms and entail exchange rate risk
- …and also boost real exchange rate…
- …as well as subject to rapid reversal
- Possibly “excessive competition” following entry of foreign banks, cross border securities market and banking competition
- Hence likely asset price booms as convergence takes place aggravated by incentive for local banks to take risk to maintain profitability

Conclusions and issues

- Macroeconomics costs of banking crises shown to be high…
- …underlining need for sound banking regulation
- Basel 2 appears to be a step forward, with some caveats…
- …creating some particular issues for EMU, to add to existing financial-stability concerns for current and future entrants

Selected references

Barrell R, Davis E P and Pomerantz O (2004), “Costs of financial crises, household balance sheets and consumption”, mimeo, NIESR

Danielsson J et al (2001), “An academic response to Basel II”, LSE Financial Markets Group Special Paper No 130

Davis E P (2000), "Financial stability in the Euro area - some lessons from US financial history", LSE Financial Markets Group Special Paper No 123.

ESFRC (2003) “Bank Supervisors’ Business: Risk Management or Systemic Stability?” Statement n.16 of the European Shadow Financial Regulatory Committee

Karacadag C and M W Taylor (2000), "The new capital adequacy framework", SUERF Studies No. 8

UK Treasury (2003), “The new capital adequacy directive CAD3”, consultation document December 2003