EUROPEAN POLICYBRIEF

LOGO

The World of Finance 2030 –

AUGUR project.

AUGUR is an FP7 forward looking study assessing the position of Europe in the world in 2030. All the major macro dimensions that will shape the world of 2030 are considered, from trade flows to technologies and well being of populations. But one of the most intractable dimensions in forward-looking studies is the world of finance, despite the fact that finance will play a decisive role in the organization of our future world. The reason that forecasting the state of financial markets is so difficult is that the financial world does not proceed by steady trends. Instead it exhibits sharp swings related both to the speed of innovation and the frequency of crises, small and large. It is a world of too many wild cards to be captured in a reasonable set of future scenarios. This is all the more the case when, as now, we are still in the confused and uncertain course of a major global financial crisis. There will be a before and after 2008 just as there was a before and after 1929 which impacted most of the governing modes of the financial organization of developed nations at the time. But what form the "after" will take this time is not yet clear. Moreover, the present financial crisis involves a very closely interconnected set of worldwide financial markets, with a consequential range of outcomes that is difficult to anticipate.

Notwithstanding these fundamental difficulties, where new crises are very likely within the next 20 years, quite possibly arising from previously unanticipated locations and instruments, it is still possible to distinguish some main lines of debate on the reconstruction of financial markets that will condition the future role and organization of the financial sector at both national and international level. This brief attempts precisely to sketch these key lines of research that AUGUR is following in its approach to the World of Finance, 2030.

European Research Area

EUROPEAN POLICYBRIEF

	SUMMARY
Objectives of the research	The research programme seeks to analyse the development of international financial regulation, and to assess the impact of changing regulatory structures on both macro-economic risks (essentially financial stability) and micro-economic risks (the structure and behaviour of financial institutions and other firms). An important task is to examine the underlying contradictions in proposed regulatory reforms both in terms of internal consistency and in relation to their impact on overall economic performance.
Scientific approach / methodology	The study proceeds on both theoretical and empirical levels. The theoretical work consists of developing the theory of financial regulation, particularly in the relationship between (novel) macro and (traditional) micro aspects. The empirical work is both institutional, tracing the legal impact of changing financial regulation, and statistical, estimating the impact of regulation on the behaviour of the financial sector and of the economy as a whole. In all dimensions a key issue for policy-makers is the attempt to establish effective regulation of global markets in an often divided world.
New knowledge and/or European added value	Whilst there has been a universal acceptance of the need to develop macro-prudential regulatory tools, there has been an almost total failure to do so. The regulatory framework proposed under Basel III has reverted to traditional micro-prudential concerns, with most of the financial characteristics of the pre-crisis and crisis years being ignored. In particular, developments have focussed on the traditional question of capital adequacy,

European Research Area

EUROPEAN POLICYBRIEF

and have almost totally ignored risks on the liability side of the balance sheet. An important factor shaping the future of financial markets will be how long it will be possible to ignore such risks, and what will be the reaction when they are manifest in financial crises.

Key messages for policy-makers, businesses, trade unions and civil society actors

There has been a clear loss of momentum in regulatory reform, and few of the lessons of the crisis have been embodied in new structures. The focus on bank capital ignores both the role of the liabilities side of the balance sheet in the crisis, and the link between the liabilities side and macro-economic instability. The ratio of non-core liabilities (wholesale borrowing) to core liabilities (household deposits) is a key indicator of potential financial instability.

Objectives of the research

The financial crisis exposed serious failings in the content of financial regulation. As early as April 2007, the G7 finance ministers had noted that:

> "A striking aspect of the turmoil has been the extent of risk management weaknesses and failings at regulated and sophisticated firms".

This observation implied that there was something very wrong with the then content of regulation, a implication that was reinforced by Alan Greenspan's evidence to the US House of Representatives in October 2008 that:

> "The modern risk-management paradigm held sway for decades. The whole intellectual edifice, however, collapsed in the summer of last year."

The "intellectual edifice" that Greenspan referred to was the familiar Basel regulatory trilogy of greater transparency (in products), more disclosure (of firms' operating procedures), and best practice risk management by firms. This "micro-prudential" approach to regulation was based on the related propositions that the task of regulation was to remove market imperfections, and that efficient risk management by firms would ensure that risks were minimised for the system as a whole. It was the intellectual foundation of Pillars One and Three of Basel II.

The analytical foundations of micro-prudential regulation have been criticised for the failure to incorporate externalities into the estimation of systemic risk. Indeed, the impact of the Basel II enforcement of common techniques of "best practice" risk management *increased* market instability at times of stress. A series of policy reviews - the UK FSA's "Turner Review", the US Treasury's "Financial Regulatory Reform: A New Foundation", and the report of the "High Level Group on Financial Supervision in the EU" chaired by Jacques de Larosière - all came to the same conclusion: that the foundation of future financial stability should be macro-prudential regulation.

The research examines the impact of this macro-prudential approach on the actual content and practice of financial regulation, with respect both to the impact on overall financial stability and the consequences for the behaviour of firms.

Scientific approach / methodology

> "Micro prudential concerns itself with factors that affect the stability of individual institutions. Macro prudential regulation concerns itself with factors that affect the stability of the system as a whole. …... the nature of regulation applied to an individual institution depends crucially on how "systemic" its activities are. This is related .. to its size, degree of leverage and interconnectedness …."

The various proposals for the reform of financial regulation have been examined in the following terms;

First, are they analytically coherent, i.e., is there a clear analytical foundation to the propositions advanced?

Second, do they address the empirical characteristics of financial instability as revealed by the crisis?

Third, what is the likely impact on the structure and performance of the financial services industry, and on the relationship of financial services with the performance of the rest of the economy.

Fourth, how do measures of macro-prudential regulation relate to the major macro-economic variables of the economy, such as fiscal balance and international imbalances?

The last two issues are in effect crucial to link with the macro economic scenarios developed in AUGUR.

New knowledge and European added value

New knowledge is emerging in the form of questions that have as yet not been confronted clearly or not confronted at all, in the attempts to reform the international regulatory architecture

1. The Basel Accords form the core of the international regulatory framework in finance. Basel II was developed through the first decade of the century, and, whilst not formally instituted before the end of 2007, had a major impact on financial practice in the years immediately preceding the crisis of 2008. The question now is whether, given the evident failings of Basel II, Basel III, agreed in September 2010 and "ratified" at the G20 meeting in Seoul, can meet the challenges posed by the crisis. How much of the new "macro-prudential" approach been incorporated into Basel III?

2. Was the "macro-prudential" approach based on a coherent economic analysis, or was it a "macro shopping list" without a single intellectual message, and did this lack of coherence contribute to its failure to make headway?

3. Given that it is now recognised that fiscal policy (including international balances) is major component of systemic risk, is there any possibility of building a macro-regulatory framework other than within national Treasury departments?

4. Is the US approach of changing the structure of markets by legal means, as embodied in Dodd-Frank Act (the new US regulatory legislation enacted in June 2010), compatible with the European approach of changing behaviour via incentives (capital charges)?

5. Are capital charges on risk-weighted assets the best mechanism for mitigating risk, or do they represent (a) an excessive concentration on the asset side of the balance sheet; and (b) the regulatory approach which is most likely to be circumvented in the development of new financial instruments?

6. What will be the form and impact of regulation of the liability side of the balance sheet, either via leverage collars, or within the context of liquidity regulation?

Empirical analysis of the boom that preceded the crisis suggests that the key elements were:

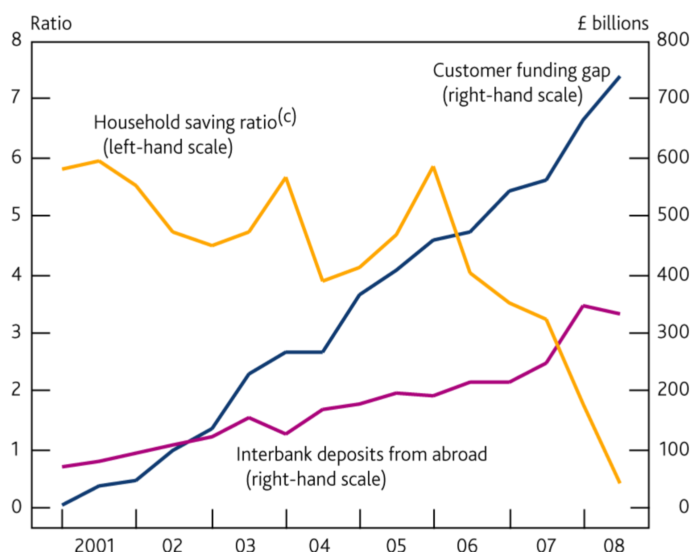
A. Excessive asset growth

B. A regulatory system that was focussed solely on the asset side of the balance sheet, and paid little attention to how asset purchase was funded, and consequently the vulnerabilities associated with the reliance on unstable short-term funding and short-term foreign currency debt.

Figure 1 illustrates the divergence between asset accumulation funded by deposits (core funding) and short term funding at British banks over the period 2000 in 2008. In 2000 lending (asset accumulation) was almost exactly balanced by core funding. The so-called funding gap was zero. By 2008 the funding gap had risen to in excess of £700 billion, around two-thirds of UK GDP, and about half of that wholesale funding came from overseas. The transformation of the financial system that occurred in the first decade of the century, with the extraordinary growth of wholesale financial markets, and consequently of wholesale funding of asset accumulation, is plain to see.

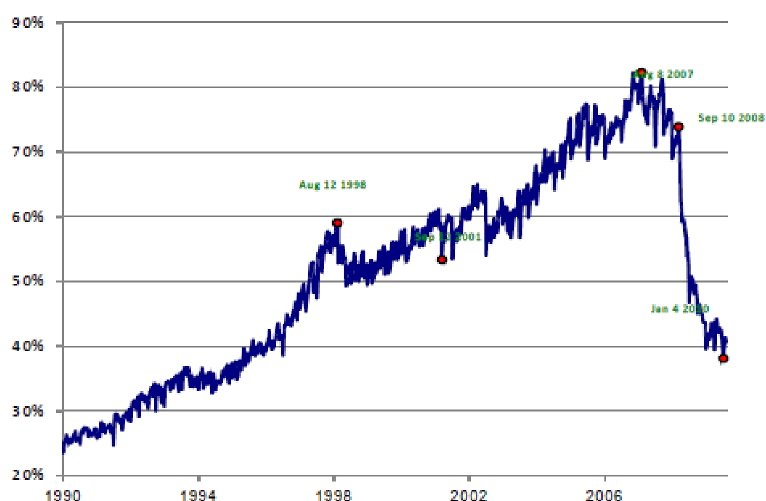
Typically, retail deposits grow in line with the aggregate wealth of the household sector. In a lending boom when credit is growing very rapidly, the pool of retail deposits is not sufficient to fund the increase in bank credit. Other sources of funding are tapped to fund rapidly increasing bank lending. *The state of the financial cycle is therefore reflected in the composition of bank liabilities.*

Figure 1. UK "customer funding gap"



The role of non-core liabilities in signalling the stage of the financial cycle can be
seen in the accounts of individual banks and at the aggregate level. Figure 2 plots the US stock of repurchase agreements (repos) of US primary dealers plus the stock of financial commercial paper – the two major sources of wholesale funding – expressed as a proportion of the M2 money stock. M2 consists of retail deposits and holdings in money market funds, and thus can be regarded as retail depositors' claims on the broader banking system.

Figure 2. Repos and Financial Commercial Paper as Proportion of M2



As recently as 1990, repos and financial CP were only a quarter of the size of M2. However, the ratio rose rapidly and reached over 80% by August 2007, only to collapse with the onset of the financial crisis.

Excessive asset growth and greater reliance on non-core liabilities are closely related to systemic risk and interconnectedness between banks. In a boom when credit is growing rapidly, the growth of bank balance sheets outstrips available core funding, and asset growth is mirrored in the greater cross-exposure across banks.

It is clear from the analysis that the relative neglect of the growth of liabilities in recent regulatory arrangements has been an important contributory factor in financial instability. New tools to regulate the growth and composition of financial sector

liabilities are needed.

It is also clear that the regulation of macro-prudential must be related to macro balances in general. As Jacques de Larosière argued in evidence to the House of Lords Economic Affairs Committee in March 2009:

> "When you exercise macro-prudential regulation you are bound to ask yourself questions of economic policy. Let us not hide ourselves from reality. Often…fiscal policies can be part of systemic risk".

Hence the distribution of fiscal surpluses and deficits and related international imbalances are fundamental components of financial stability.

PROJECT IDENTITY

Key messages for policy-makers, businesses, trade unions and civil society actors

The G20 summit in Seoul in November 2010 agreed new measures for financial regulation in the form of the new capital and liquidity framework for banks known as Basel III. The key components of Basel III are a strengthened common equity buffer of 7% together with newly introduced liquidity requirements and a leverage cap, to be phased in over a (very) extended timetable running to 2019. What was particularly striking about these new proposals was that capital holdings of most major banks today substantially exceed Basel III levels. The Financial Times commented:

> "To celebrate the second anniversary of the fall of Lehman, the mountain of Basel has laboured mightily and brought forth a mouse."

'Too big to fail' banks are in effect being subsidised by the public sector. To reduce public risk equity requirements need to be very much higher, perhaps as high as 20 or 30 per cent, without the asset risk-weighting.

The proposals that related directly to the professed macro-prudential aims of regulatory reform – the counter-cyclical capital buffer and the capital surcharge for the systemically important financial institutions (SIFIs) – proved most controversial and no agreement on them was reached in Seoul. They are still on an agenda, but it now seems unlikely that progress will be made. However, measures to manage liquidity, which necessarily involve linking the structure of assets with the structure of liabilities, could, if appropriately used, have macro-economic impact.

Excessive asset growth funded by non-core liabilities is at the heart of increased financial sector vulnerability. The problem is knowing when asset growth is "excessive". Simple rules of thumb such as the ratio of total debt to GDP may be useful, but more promising measures can be derived from the liabilities side of banking sector balance sheets.

For example, the ratio of non-core to core liabilities of the banking sector may be especially useful in gauging the stage of the financial cycle. Monetary aggregates and other liability measures of the banking sector could be developed with the particular task of tracking potential vulnerability. Whereas the traditional role of monetary aggregates has been through any effect on inflation, the macro prudential role of monetary

aggregates has to do with the behavioural and stability properties of such aggregates. The legal form of the claim may not coincide with the behavioural properties of the claim. For instance, household deposits will have empirical traits that differ from interbank deposits (they tend to be much more "sticky"), even though the legal form of the claims is identical.

Measures of cross-exposures across intermediaries may be useful complementary indicators, bearing in mind that cross-exposures themselves are pro-cyclical, and track non-core liabilities.

Macro-prudential policy tools to mitigate vulnerability should ideally be designed to fit closely with the early warning indicators and the conceptual underpinnings for the relevant economic externalities. Examples of macro prudential policy tools include:

Loan to value and debt service to income caps: Administrative rules that limit bank lending such as caps on loan to value ratios and debt service to income ratios may be a useful complement to traditional tools in banking supervision.

Leverage caps. Caps on bank leverage may be used as a way to limit asset growth by tying total assets to bank equity. The rationale for a leverage cap rests on the role of bank capital as a constraint on new lending. Note that leverage caps do not include any risk weighting.

A Levy on Non-Core Liabilities. The stock of non-core liabilities reflects the stage of the financial cycle and the extent of the under-pricing of risk in the financial system. A levy or tax on the non-core liabilities can serve to mitigate pricing distortions that lead to excessive asset growth. The Financial Stability Contribution (FSC) recommended by the IMF in its report on the bank levy to the G20 leaders is an example of such a corrective tax.

A levy on non-core liabilities has many desirable features. First, the base of the levy itself varies over the financial cycle. The levy bites hardest during the boom when non-core liabilities are large, so that the levy has the properties of an automatic stabilizer even if the tax rate itself remains constant over time. Given the well-known political challenges to the exercise of discretion by regulators, the automatic stabilizer feature of the levy has important advantages.

PROJECT IDENTITY

Second, a levy would address financial vulnerability while leaving unaffected the essential functioning of the financial system in channelling core funding from savers to borrowers. By targeting non-core liabilities only, the levy addresses externalities associated with excessive asset growth and systemic risk arising from interconnectedness of banks.

Third, the targeting of non-core liabilities addresses the vulnerability of open emerging economies to sudden reversals in capital flows due to deleveraging by banks. Indeed, for emerging economies, the levy on non-core liabilities could be aimed more narrowly at the foreign currency denominated liabilities only. A levy on the FX liabilities of the banking sector will have an impact on foreign currency flows, but such a policy is a macro prudential tool aimed at financial stability, rather than a tool for capital controls or a tool to manage exchange rates.

Liquidity management: The essential task of liquidity management is to align the structure (currency, maturity, risk etc) of liabilities with the structure of assets. The essential task of banks is maturity and risk transformation. If maturities and risk were precisely matched on both sides of the balance sheet then the bank would not make any money. Some mismatch is fundamental to banking. Indeed, it is very difficult to conceive of perfect matching. However, the more closely matched the two sides of the balance sheet the less risky is the bank's position likely to be. The more cash or short term government paper that banks are forced to hold the less severe will be the consequences of mismatches. Limiting currency mismatches is also important and should be part of an effective macro prudential risk management system, especially in developing countries.

Summing up

Financial stability is a global public good. But the financial regulation is a matter for national jurisdictions. Since the deregulation of financial markets in the 1970s there has been a persistent tension between liberalisation and regulation. Successive crises have resulted in the steady growth of international regulatory structures – embodied most clearly in the various Basel Accords, and the principles and codes that flow from them.

The recent crisis has resulted in further attempts to develop and extend the international regulatory architecture, attempts that have so far not resulted in a satisfactory response to the deficiencies exposed by the crisis. The fundamental reason for

the lack of progress is the macro-economic nature of the deficiencies. The relevant macro-economy is the global economy – what form of jurisdiction can there be over global markets? And macro-financial issues cannot be separated from the wider concerns of macro-economic policy whether domestic fiscal balances, monetary policies, or international balances. Hence the problems go beyond what might be seen as technical regulatory matters.

Moreover, the impact of the crisis, and of subsequent measures, was and is far from uniform across countries at different stages of (financial) development in different regions of the world. The crisis has been predominantly centred in Western countries with highly developed wholesale financial markets. The impact on the East has been mainly via the impact of Western financial disruption on trade and investment. It is not obvious that in these circumstances a uniform response is required. Yet that is what was pursued, with limited success, in Seoul. A major question for the future will be: can the global financial market survive, or will there be different market structures and different regulatory frameworks in East and West?

Scenarios

Despite the severe constraints on the scenario framework imposed by the nature of financial markets, it is possible to sketch out four credible patterns that market regulation, and consequently market structures might take.

1. Muddling through: little more is achieved beyond Basel III. The focus of regulation remains the traditional approach of capital charges, with little attention to the liability side of the balance sheet. There is unanimous international resistance to any form of "interference" in national macro-policies. Adjustment to national and international imbalances is predominantly via deflation in debtor economies, enforced by pressures in international bond markets. Financial markets in general continue to display sharp swings from euphoria to crisis, driven by persistent expansion and diversification of wholesale funding.

2. Macro-prudential regulation: within national jurisdictions (including the EU) there are new measures introduced to limit the destabilising impact of wholesale financial markets. These include pro-cyclical provisioning,

leverage collars, and a variety of devices to separate commercial banking from investment banking. However, these regulatory actions are not accompanied by any new approach to macro-economic imbalances. The pressures of international bond markets continue to exert deflationary pressures on deficit countries.

3. Regional balances: regional groupings emerge that seek to stabilise macro-financial relationships within the region. These groupings comprise not just the EU and NAFTA, but also new groupings in Asia and Australasia. Concerted macro-economic policy is accompanied by common measures to limit instability generated by financial markets, notably by quantitative controls on the expansion of wholesale funding (leverage collars and the like) and by regulation of liquidity. The international environment is characterised by negotiation between regional groupings. Over the next 20 years the dollar remains the predominant international currency, but the relative decline of the United States and the regionalisation of the world economy, steadily weakens the dollar's position, resulting in destabilising swings in financial markets. There is a clear divergence of interest between East and West.

4. International agreement: a World Financial Authority is established to regulate financial markets. The WFA has treaty powers inherited from the IMF, and an approach to regulation based on the structures of the Financial Stability Board, i.e. bringing together regulators, central banks and treasury departments. The WFA has wide ranging policy making powers and there are agreed enforcement procedures mediated through national jurisdictions. There is a concerted attempt to limit the cyclical instability generated by wholesale financial markets, via a levy on non-core funding and tight leverage controls. International imbalances are tackled by expansionary policies in surplus countries

PROJECT IDENTITY

Coordinator	CNRS (Centre National de la Recherche Scientifique), FRANCE
Consortium	**CNRS-CEPN** (Centre d'économie de Paris Nord), FRANCE **UCAM** (The Chancellor, Masters and Scholars of the University of Cambridge), UNITED KINGDOM **SOAS** (School of Oriental and African Studies, University of London), UNITED KINGDOM **ISMERI- EUROPA**, ITALY **KU** (Kozminski University), POLAND **WIIW** (Wiener Institut Fur Internationale Wirtschaftsvergleiche), AUSTRIA **SMASH** (Société de Mathématiques Appliquées et de Sciences Humaines), FRANCE
European Commission	Domenico ROSSETTI, DG Research, Unit L.2
Duration	October 2009 – September 2012 (36 months)
Funding Scheme	Collaborative project funded under the 7th Framework Programme of the European Community, FP7- SSH-2009, Challenges for Europe in the world of 2030
Budget	EC contribution: EUR 2 580 600
Website	www.augurproject.eu
Further reading	Publications
Related websites	http://ec.europa.eu/research/social-sciences/index_en.html http://www.ceps.eu
For more information	augurproject@gmail.com