



International Financial Reform

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For the past 4 years the creation of a “new international financial architecture” has been the subject of an active debate amongst academics and policy makers in national treasuries, central banks and international financial institutions such as the IMF and the World Bank. By “architecture” is meant the structure of financial rules and procedures defining the scope and operation of international financial markets. The existing structure is believed by some to be inefficient. It is undoubtedly prone to increasingly frequent severe crises, some of which threaten living standards around the world.

One of the most important themes in the debate is the management of systemic risk, that is the risk that the financial decisions of individuals and firms pose for the viability of the economic system as a whole. Today, I will draw on our work at CERF to suggest that some of the approaches to reform that are currently in favour are likely to do more harm than good – they are more threat than promise.

Externalities

Financial risk-taking is a concern of public policy because associated with the risk-taking actions of individuals there are externalities; i.e. costs and benefits accruing to the society that are *external* to the calculations of the individual investor, and not accounted for in the market place¹.

A good analogy is with environmental externalities. The factory owner does not take into account the costs imposed on society at large by the dirty smoke billowing from his chimney. The result will be socially inefficient, because the full social cost, including the dirt, will not be considered when the scale of output is determined.

A similar externality occurs when a major financial failure imposes costs on society going far beyond the losses suffered by the investors. The classic example is a bank run. The failure of an individual bank results in a panic that can spread from bank to bank, ruining the solvent as well as the insolvent. When the first bank was deciding

1. There are a number of other important market failures in the financial sector which attract the concerns of public policy, most notably the asymmetry of information between individual savers and market professionals that is the motivation of consumer protection. This lecture deals solely with the market failure manifest in systemic risk.

on its investments the potential social costs of a panic were not part of the calculation of risk and reward. The difference private loss and social loss is the externality. And because it failed to take social costs into account the first bank would have deemed it rational to take on greater risks than were rational from the social point of view.

In an economy where there are important externalities, competitive markets will be socially inefficient. The task of public policy, in this case of financial regulation, is to attempt to mitigate these inefficiencies.

Financial externalities are particularly potent because they are transmitted *macroeconomically*.

Financial markets are markets for stocks of assets, the value of which today is dependent on the expectation of their future value. To the extent that expectations are shared any factor that leads to a shift in expected future values (the panic of the bank run) will have an immediate impact on financial markets, and on the major macro-financial variables, such as the interest rate and the exchange rate.

So the failure of a single firm can, by influencing expectations, have an influence not only on its immediate counterparties, or even just on firms dealing in similar products, but also, through its impact on expectations, on financial markets as a whole, and then via the interest rate or the exchange rate the contagion spreads to the real economy at home and abroad.

Yet despite all this talk of externalities, contagion and panics, a peculiarity of market expectations is that they seem to be remarkably stable (or tranquil) for substantial periods of time, even when underlying real circumstances might be decidedly unpropitious. In consequence, the financial markets can resemble the cartoon character who, having run off the edge of the cliff remains suspended for some time in the mid-air, with no visible (or rational) means of support, before suddenly plunging into the abyss.

Periods of tranquillity defined by stable expectations and stable market confidence may sustain the illusion that financial markets are truly reflecting a strong real economy. The shattering of that illusion can be catastrophic.

One of the tasks of financial regulation is to keep markets away from the cliff edge, and when they rush over, to ensure that the damage to the economy as a whole is minimised.

International regulation

In the immediate post-war era financial markets were subject to severe controls: domestic financial markets were segmented, strict rules governed the scale and content of borrowing and lending, rates of interest were sometimes fixed (as in the US regulation Q that fixed returns on savings accounts), and exchange controls severely limited international capital flows and buttressed an international system of fixed exchange rates.

That era ended on 15th August 1971.

On that day President Richard Nixon ordered the US Secretary of the Treasury to stop selling gold at the fixed price of \$35 and ounce. The lynchpin of the fixed exchange rate system was gone, and the major currencies have fluctuated against one another ever since.

When governments had kept exchange rates fixed the private sector was freed from foreign exchange risk. Now the private sector had to face up to a world of fluctuating rates. Forex risk had been privatised.

There was now a pressing need to hedge against the costs that fluctuating exchange rates imposed. To reduce risk those who traded in foreign markets needed to be able to diversify their portfolios at will, changing the mix of currencies and financial assets in line with the changing perception of foreign exchange risk. This demanded the creation of new financial instruments, which in turn required the removal of many of the regulatory barriers that limited the possibilities of managing risk.

So exchange controls were abolished. Domestic restrictions on cross-market access for financial institutions were scrapped. Quantitative controls on the growth of credit were eliminated. Today's global market in monetary instruments was created.

One result was that financial regulators were trapped in increasingly irrelevant national boundaries.

So in 1975 the modern era of *international* financial regulation was born.

The definitive event was the formation of the Committee on Banking Supervision by the Group of Ten leading central bankers. This was a response to the first appearance of a new form of internationally propagated instability when the Bankhaus Herstatt collapsed in 1974. The failure of that German firm had seriously threatened the American banking system, an eventuality that neither German nor US regulators were, at that time, properly equipped to tackle². The task of the new Committee, which was and is based at the Bank for International Settlements in Basel, was to coordinate the activities of national regulators within the new international financial marketplace. Later the Basel Committee, as it became known, developed agreed rules for banking regulation, notably the capital adequacy rules introduced in 1988. More recently it has produced a detailed catalogue of regulatory principles designed to guide banking regulators around the world.

Today, the Basel Committee is taking the lead in financial regulation in the production of what is known as Basel II. This is a new international banking accord that replaces the capital rules of 1988, and is intended to tackle the systemic risks prevalent in modern financial markets. The thinking behind Basel II embodies the central principles deployed in the development of international financial regulation today. It is those principles that we need to assess if we are to gauge the likely impact of changes proposed in the new architecture.

2. The problem for the US markets arose from settlement risk in forex dealings, deutschmark legs had been paid but US dollar legs were unpaid.

The analytical framework

What analytical framework should underpin the development of international financial regulation of systemic risk?

The externality of systemic risk is in large part manifest through what the economist John Maynard Keynes called a “beauty contest”. In Keynes’s contest beauty is not in the eye of the beholder. Instead, the game is won by those who can accurately assess what others think is beautiful. In financial markets, it is knowing what others believe to be true that is the key to knowing how markets will behave. The market is driven by participants’ belief about what average opinion believes average opinion believes and so on, ad infinitum (Keynes, 1936, chpt.12; Eatwell and Taylor, 2000, chpts.1 and 3).

If such markets are to be liquid and reasonably stable then, as my CERF colleague Avinash Persaud has emphasised (Persaud, 2000, 2001) it is not enough that markets should be large, it is also a fundamental requirement that they should be characterised by a wide range of participants with heterogeneous objectives *and* with confident expectations that markets will be stable.

A market is liquid when buyers are broadly balanced by sellers.

Markets become illiquid when objectives become homogeneous. When everyone believes that everyone will sell, liquidity vanishes. Markets fall over the cliff when average opinion believes that average opinion has lost confidence in financial assets.

So what contributes to heterogeneity?

First, individual investors and traders must be highly heterogeneous, with different financial objectives. In traditional economics this was described as the difference between those seeking income certainty and those seeking wealth certainty, with different patterns of risk aversion, different investment time horizons and so on (Robinson, 1951),

Second, investors may have differing access to information, so even if their goals might be the same they will behave differently.

Third, when average opinion believes average opinion believes that markets are stable, then stability becomes a convention. Convention (meaning belief in stability) is vital in financial markets, because convention *creates* and *sustains* heterogeneity. For example, if it is believed that the exchange rate of the dollar to the pound sterling oscillates between \$1.40 and \$1.45, then once the rate rises above \$1.45 buyers will enter the market to support the dollar. Similarly, if the rate falls below \$1.40, then the dollar will be sold. This power of stable expectations should not be underestimated – by defining the *expected* range of movements in asset prices it fixes the *actual* range of fluctuations in current asset prices. But of course once convention is breached, then the flood will follow³.

3. The most powerful convention of all is that imposed by governments. When the exchange rates of the future Euroland currencies were declared prior to being irrevocably fixed on 1st January 1999, the markets rapidly converged on those rates.

Fourth, investors may be forced, by government regulation, into segmented markets – heterogeneity is effectively imposed by the authorities. For example, the UK mortgage market used to be legally separated from other investment markets, and allocation of mortgages was not entirely by price – queuing was also important. Similarly the Glass-Steagall Act segmented US financial markets, and exchange controls segmented national financial markets.

I am sure that it will not been lost on anyone that the liberalisation of financial markets that has taken place over the past 3 decades has inevitably reduced the heterogeneity in financial markets.

By definition liberalisation has broken down market segmentation - cross-market correlations have risen sharply.

And with liberalisation has come a growing professionalisation of financial management (BIS, 1998, chpt.V), and extensive consolidation of financial institutions (Group of Ten, 2001). Most investments are now managed by mutual funds, pension funds, insurance companies and so on; and these funds are themselves locked into sophisticated wholesale money markets, securitising and packaging and hence homogenising funds from previously segmented markets. This professionalisation has reduced the heterogeneity of investor preferences as expressed in the marketplace. The professional investor is not only subject to a continual pressure to maximise short-term returns, but also in a competitive market myopic (i.e. short-time horizon) investment is an optimal strategy (Kurz, 1987). So whatever the preferences of the private investor might be, convergence on myopic strategies by professional investors are homogenising the market. And with professional investment go professional information services – both in sources and processing – again making for a more homogeneous market. Consolidation is clearly a major homogenising force too.

As to the power of convention, it has probably been weakened by liberalisation. After all, in the immediate post-war era much of market convention was imposed by the public sector – fixed exchange rates, for example. All that has gone. However, the growing homogeneity of traders with common beliefs and common information may well reinforce conventional stability – making loss of that convention an even more catastrophic extreme event.

Macroeconomic and microeconomic aspects of international regulation

Public policy also needs to take into account the fact that beliefs about average opinion transmit externalities through macroeconomic variables – the interest rate say, or the general level of stock prices, or the exchange rate. So effective regulation of firms should be conceived in conjunction with macroeconomic policy. This is particularly true in an international setting, where a major focus of systemic risk is the exchange rate.

In policy terms, macroeconomic action may be a far more efficient means of reducing systemic risk than traditional microeconomic regulation.

An excellent example of the role of macro-linkages in the formation of regulatory policy has followed the Asian financial crisis of 1997-98. It is clear that an important component of the crisis was the excess foreign-exchange exposure of financial and other institutions in emerging markets. In consequence, the international financial institutions have been urging the authorities in those economies to tighten regulation of short-term forex exposure. The tightening is supposed to take place micro-economically by means of regulations that impact on the actions of individual firms. This is a complex task, and requires a significant input of a scarce resource - trained regulators. Moreover, the quantitative measures proposed are likely to have an uneven effect, limiting the forex exposure of financial institutions, but missing many holdings outside the financial sector.

The same goal could be attained macro-economically. Measures that raise the cost of short-term borrowing abroad, such as “Chilean-style” short-term capital controls, would encourage a reduction in the exposure of all firms, financial and otherwise (Agosin, 1998). The higher cost of short-term forex borrowing “prices in” the risk externality and hence increases economic efficiency. This macro approach would also have the advantage of economising on scarce talent⁴.

Summing-up

So, to sum up: Effective international regulation requires a new approach. This new approach must confront both the growing homogeneity of investor behaviour and the macro-manifestation of systemic risk. Sadly neither of these issues is prominent in current reform proposals.

Current developments

Today’s heightened interest in international regulation was stimulated by the financial events of 1998.

The financial crisis in the Fall of 1998 was the first post-World War II crisis in which events in emerging market economies seriously threatened the financial stability of the West, and where the origins of the crisis was clearly to be found in the workings of liberalised markets and private sector institutions.

The spark was the financial crisis that overwhelmed many of the Asian economies in 1997, and spread to Russia in 1998. But the centre of the conflagration was the near failure of the hedge fund Long Term Capital Management. More than any of the other problems in the Fall of 1998, the threats that LTCM’s difficulties posed to financial stability throughout the world illustrated beyond all reasonable doubt that the international financial system had entered a new era⁵. This was not a problem of

4. Although capital controls do not today suffer the same level of opprobrium as they did before the Asian crisis, the link between micro and macro means of attaining the same objective is seldom made. The neglect of macro-measures is particularly puzzling given that micro-regulation tends to be quantitative and to some degree discriminatory, whilst Chilean-style macro controls are price based and non-discriminatory – characteristics which might be expected to appeal to orthodox economic policy-makers.

5. Alan Greenspan commented that he had never seen anything in his lifetime that compared with the panic of August-September 1998.

sovereign debt, or macroeconomic imbalance, or even a foreign exchange crisis. Instead it was the manifestation of the systemic risk created by the market driven decisions of a private firm.

There has been an immediate response:

The G7 established the Financial Stability Forum, bringing together national regulators, central banks, treasury departments and international financial institutions to tackle international financial problems on a coordinated international basis.

The IMF and the World Bank set up a new, worldwide Financial Sector Assessment Program (FSAP).

The FSAP involves the Bank and IMF in detailed micro-economic appraisal of the financial markets and regulatory institutions of selected nations. This level of interest in private sector structures is a significant change in the involvement of the IMF in a nation's economic affairs, and probably marks a turning point in the surveillance activities of the Fund⁶.

This is a task of considerable sensitivity. The IMF could easily be drawn into the position of "grading" national financial systems, with any downward revision of grades having the potential to produce dramatic financial consequences (IMF, 2000B). Nonetheless, the IMF, as an accountable body with powers defined by treaty, can legitimately perform a surveillance function. In due course the IMF will require countries seeking its assistance to conform to international regulatory codes and standards. In other words, it will be able to *enforce* conformity to those standards, with severe financial penalties (withdrawal of offers of assistance) for those who do not comply. It is to be doubted, however, whether the IMF could enforce regulatory codes upon the more powerful countries that do not require its assistance (Eatwell and Taylor, 2000, chpt. 7)

Principles

What are the principles guiding this new IMF-World Bank initiative? The new FSAP surveillance concentrates on the adherence of national regulation and practices to core principles developed by the Basel Committee, together with the International Organisation of Securities Commissions (IOSCO) and the International Association of Insurance Supervisors (IAIS)⁷. But it is the principles underlying Basel II that are

6. This new microeconomic, private sector role was made explicit on 1st March 2001, when IMF announced the creation of an International Capital Markets Department, the task of which is "to enhance ... surveillance, crisis prevention and crisis management activities". It is proposed the new Department's responsibilities will include "the systematic liaison with the institutions which supply the bulk of private capital worldwide" (IMF, 2001).

7. For example, the June 2000 IMF "experimental" *Report on the Observation of Standards and Codes* (ROSC) for Canada, prepared by a staff team from the International Monetary Fund in the context of a Financial Sector Assessment Program (FSAP), on the basis of information provided by the Canadian authorities, produced "an assessment of Canada's observance of and consistency with relevant international standards and core principles in the financial sector, as part of a broader assessment of the stability of the financial system. The assessment covered (i) the Basel Core Principles for Effective Banking Supervision; (ii) the International Organization of Securities Commissions' (IOSCO) Objectives and Principles of Securities Regulation; (iii) the International Association of Insurance

the most important intellectual foundations of the new international financial architecture.

Those principles have been critically appraised by Persaud and by another CERF colleague, Jonathan Ward (2002).

Basel II is a reaction to the fact that the 1988 capital adequacy rules are outdated and frequently circumvented. That outcome is inevitable in a dynamic market. In future capital adequacy rules are to be far more flexible, and bolstered by an extension of supervision – qualitative assessment of and management of risk by public officials – and by market forces.

These are the three so-called pillars of Basel II: Pillar 1 - the determination of regulatory capital now heavily weighted toward use of banks' internal risk weighting models, as well as the views of ratings agencies; Pillar 2 – supervision; and Pillar 3 – market discipline enforced by greater disclosure of banks' financial status as well as their internal risk management procedures.

What is particularly noticeable is the emphasis on the role of firms' own risk management procedures and on market discipline. A rather odd way, you might think, to confront systemic risk, which is by definition an externality that internal procedures do not encompass and is not accounted for in the market place.

But perhaps of even greater importance is the powerful tendency of Pillar 1 and Pillar 3 proposals to increase the homogeneity of financial markets.

First, there is the emphasis on the use of firms' internal risk management systems, systems that are by definition, market sensitive. Whilst firms' models may differ in detail, they are constructed on similar analytical principles, estimated on similar historical data, and sensitive to the same market information.

Good risk management will result in firms holding a portfolio of assets that are not volatile and the prices of which are not highly correlated – not correlated in normal times that is. Suppose however that the volatility of a given asset rises sharply, the models will tell all the firms to sell. As all try to sell, liquidity dries up. As liquidity dries up, volatility spreads from one asset to another. Previously uncorrelated assets are now correlated in the general sell-off, enhanced by the model driven behaviour of other institutions caught up in the contagion. Whilst in conventional times such models may encompass a wide range of behaviour, in extreme circumstances the models will encourage firms to act as a herd, charging toward the cliff edge together⁸ (Persaud, 2000).

Supervisors' (IAIS) Supervisory Principles; (iv) the Committee on Payment and Settlement Systems (CPSS) Core Principles for Systemically Important Payment Systems; and (v) the IMF's Code of Good Practices on Transparency in Monetary and Financial Policies. Such a comprehensive coverage of standards was needed as part of the financial system stability assessment for Canada in view of the increasing convergence in the activities of banking, insurance, and securities firms, and the integrated nature of the markets in which they operate." (IMF, 2000A).

8. Philippe Jorion (2002) has rejected this argument. However, his defense of risk management systems is not convincing: he claims that "financial markets are no more unstable recently than over the past century", when the key comparison is with the 1950s and 1960s; he admits that the "jury is still out" on

Second, the emphasis on disclosure reduces the diversity of information that has in the past created diversity of views. Today information is ever more readily available, and disclosure of price sensitive information is legally required. Insider dealing on private information is, rightly, characterised as market abuse. But the attainment of equal information is bought at a cost – increased homogeneity and hence potentially reduced liquidity.

In the light of the enforcement of greater homogeneity by Pillars 1 and 3, considerable weight is placed on Pillar 2 (enhanced supervision) to inhibit the behaviour that generates systemic risk. Unfortunately it is not at all clear that an essentially subjective, personal interaction between bureaucrat and risk taker can be either consistent or effective, particularly on an international scale (Ward, 2002).

The drive toward homogeneity is not confined to the Basel II banking proposals. Regulators are responding to the creation of seamless financial markets, spanning banks, securities firms, insurance companies, pension funds, and so on, by requiring that they all follow the same regulatory regime. For example, in considering the relationship between banking and insurance, Sir Howard Davies of the UK Financial Services Authority argued “Our general view is that the capital treatment should in principle be the same, where the risks are the same”. So the competitive pressures for homogenisation throughout financial markets are being reinforced by the regulators.

Macroeconomics

The IMF has justified its move into financial regulation by reference to the powers of macroeconomic surveillance embodied in Article IV of its Articles of Association. It might therefore be hoped that the macroeconomic dimension of systemic risk would be to the fore both in its analysis and in its regulatory proposals.

And indeed, the IMF has proposed the construction of “macroprudential indicators” (MPIs) to assess the “health and stability of the financial system”. As currently constructed MPIs “comprise both aggregated microprudential indicators of the health of individual financial institutions and macroeconomic variables associated with financial system soundness” (Hilbers, Krueger and Moretti, 2000; see also Evans, Leone, Gill and Hilbers, 2000).

This attempt to link micro risk to the performance of the macro economy is laudable, and is exactly where the debate on effective international regulation should be going. However, there is a flaw in MPIs as currently conceived: there has been no attempt to link the microeconomic risk-taking to the risk created by the inter-actions of firms, in other words by the beauty contest⁹. Just adding up micro data won’t do. The whole is not just greater, but behaves very differently from the sum of the parts.

herding and acknowledges pro-cyclical effects; he argues that VaR models should be smoothed, ignoring the impact of daily-earnings-at-risk systems.

9. Even at the most simple level these interactions undermine the calculation of MPIs. For example, not only is the value of capital, and hence the capital adequacy ratio, directly effected by the revaluation of assets consequent upon a change in the interest rate, but also declines in the level of activity can readily transform prudent investments into bad loans

A further manifestation of the relationship between microeconomic risk and macroeconomic performance that is apparently neglected in the IMF's current approach derives from the links between risk management, financial contagion and the trade cycle. Strict regulatory requirements on risk exposures will result in firms reducing lending as a result of a downturn in the economy, thus exacerbating the downturn. In an up-turn, the perceived diminution of risk and the availability of regulatory capital will tend to increase the ability to lend, stoking up the boom (see Jackson, 1999; BIS, 2001).

This pro-cyclicality of regulation is further amplified by the contagion-inducing techniques of risk management. During the Asian crisis, for example, financial institutions followed the instructions of their risk models by reducing their exposure to emerging markets throughout the world. These cutbacks helped spread the crisis, as reduced lending and reduced confidence fed the financial downturn.

The key to the problem is, once again, the link between micro-economic actions and macro-economic consequences. Rational risk-management by individual firms precipitates a macro-economic reaction that, in a downturn, can place those firms and other firms in jeopardy, indeed could overwhelm the firms' defences entirely.

Yet because the links between regulation and macroeconomic policy are so little understood, there is no coherent policy response to this perverse consequence. Under pressure, regulators have adopted pragmatic solutions. At the onset of the Latin American debt crisis in the early 1980s many major US banks were technically bankrupt, since Latin American assets held on their books had lost their entire market value. Nonetheless, US regulators allowed those worthless assets to be evaluated in the banks' balance sheets at their value at maturity, hence boosting the banks' notional capital and preventing a sudden collapse in lending and liquidity¹⁰. In the autumn of 1998, many assets held on the balance sheets of financial institutions in London and New York were, if marked to market, worth nothing. Again, the regulators did not insist on an immediate (potentially catastrophic) write down.

For all countries, there is the further difficulty that even if some sort macroeconomic response were available to offset the procyclicality of regulation, macroeconomic policy is essentially national, whilst the problem may well be international in origin and scope.

A national approach

And it is the international dimension that is notable, and oddly, missing in the IMF's new approach. The FSAPs are appraisals of *national* financial systems. Yet many of the risks faced by a given national economy may well, in a seamless international financial system, emanate from outside the juridical boundaries of the nation state. It is precisely the national focus of regulators that has been persistently exposed as inadequate in recurrent crises in the past twenty years. It seems quite unsatisfactory to conduct an appraisal of the financial health of Colombia, for example, when many of the risks to which that country is exposed are external. And equally unsatisfactory to

10. This does not mean that regulatory standards were abandoned entirely: "... money centre banks whose loans to heavily indebted countries exceeded their capital in the early 1980s were allowed several years to adjust – but there was no doubt that they would have to adjust" (Turner, 2000).

conduct an FSAP of UK, when Britain is so obviously an integral part of a worldwide financial system. At very least IMF should be conducting FSAPs on major collectivities of states, say the G7 and East Asian economies taken together.

What is to be done?

The current approach to reform of the international financial architecture is increasing the homogeneity in behaviour, fails in its policy proposals to take account of the inter-relationship between micro-economic risk taking and macro-economic performance, and is still trapped within the intellectual perspective of the nation state. In these circumstances the likely consequences cannot be regarded with equanimity.

I would suggest that a satisfactory response to the economic losses imposed by the increasing volatility of financial markets should be to move in a rather different direction. Reforms should seek to increase liquidity by enhancing heterogeneity, should strengthen the forces of underpinning stabilising convention, should take full account of the possibilities of macro-economic measures to reduce systemic risk, and should be conceived on an international scale.

So what is to be done?

First, on the need to increase heterogeneity: Faced with a collapse in liquidity in the 1930s the policy response was to severely segment financial markets, a market structure that was further reinforced by the Bretton Woods agreement. Controlled financial markets served the immediate post-war era rather well.

But is there no other way that doesn't involve the cry of "forward to the 1950s"?

I believe there is. We can reap the benefits of an open international financial system, if there is a far greater recognition of the risks imposed on society by individual risk-taking investors, and that investors are made to bear a fairer proportion of the social costs of those risks. This would mean developing a far more powerful structure of international rules and charges associated with risk taking investment. Current proposals to impose bailout requirements on lenders and to permit repayment standstills in the face financial crises are steps in this direction. These measures will tend to increase the cost of funds. But this is what should happen, since too often funds are available today, and risks are taken, at well below their true social cost.

The failure of rules in the past has been primarily due to their becoming outdated. What is necessary is that there should be an effective international policy function with the powers to develop a more flexible structure of rules and rule making. And, of course, there needs to be an appropriate surveillance and enforcement powers, applicable to all (not just countries that need funding from the IMF).

Second, a powerful force enhancing stabilising convention in financial markets has been the lender-of-last-resort and deposit insurance. There no international lender-of-last-resort providing liquidity without strings. If there were, it might enhance stability, but it would also create severe moral hazard – lifting the costs from exactly those shoulders on which the burden should most heavily fall. That is why improvements to the official provision of liquidity must be balanced by more powerful rules on risk-taking. Regulation mitigates moral hazard.

Third, the new financial architecture should also encompass macro-economic concerns. This is particularly important for developing countries. They should be

permitted to substitute macro-economic controls for the resource intensive firm-level regulation that the IMF's current "one-size fits all" approach is imposing upon them.

Fourth, the rules need to make greater use of the new work on extreme, rare events¹¹, and this too should be integrated with a macro view.

Fifth, it should be acknowledged that in pursuing all these goals efficiency requires that the domain of the regulator should be the same as the domain of the market. None of the standard tasks of a financial regulator – authorisation, the provision of information, surveillance, enforcement, and the development of policy – are currently performed in a coherent manner in international markets.

In 1998, Lance Taylor and I recommended the establishment of a World Financial Authority or WFA (Eatwell and Taylor, 1998). The role of the WFA was to create a framework of truly *international* regulation.

Taylor and I knew that the probability of a WFA being actually established was not far from zero. But our prime objective in proposing the creation of a WFA was to test the regulatory needs of today's liberal financial markets. Whether WFA is created or not, the tasks that the model WFA should perform must be performed by someone if international financial markets are to operate efficiently.

Today an institutional structure of international financial regulation is emerging which embodies, albeit imperfectly, a few of the features of an idealised WFA.

The authorisation function is the responsibility of national regulators, with access to markets being determined by agreements specifying the terms of mutual recognition.

The information function is performed by national regulators supplemented by the international financial institutions, particularly the BIS and the International Accounting Standards Committee.

The surveillance function is performed by national regulators, supplemented now by the World Bank-IMF financial sector programme¹².

The enforcement function is the responsibility of national regulators, but is being developed internationally as an implicit outcome of the World Bank-IMF financial sector programme.

The policy function is in the hands of the BIS committees, IOSCO and the IAIS, the Financial Stability Forum, the IMF, and national authorities.

This list of international regulatory activities has 3 major features:

11. See the work done by my colleague Michael Dempster's research team in the Centre for Financial Research (Medova and Kyriacou, 2002)

12. In addition the international surveillance of financial crime, particularly money laundering, is conducted by the Financial Action Task Force (see Alexander, 2000).

1. If the same list were compiled 10 years ago most of the regulatory functions would lack any international dimension. Today in all areas other than authorisation, international bodies are taking up some of the regulatory tasks.
2. The list deals only with major international regulatory developments, and omits the growth of *regional* regulation, notably in the European Union.
3. Measured against the template of a WFA the international regulatory structure is limited, patchy, even incoherent. It portrays a response to crises rather a coherent design to the international propagation of systemic risk.

Conclusions

In this lecture I have proposed a number of principles that should guide the design of the new international financial architecture:

full cognisance should be taken of the social costs of the externality of systemic risk, particularly its macro-economic impact,

homogeneity of market behaviour is a threat to liquidity, particularly at times of high volatility when convention has broken down,

steps need to be taken to reinforce the stabilising power of convention,

and financial markets are today international, and hence policy formation and policy implementation should be international in scope too.

On the basis of these principles I believe that it would be possible to design a regulatory structure that would maximise the social benefit of open financial markets for the entire world community.

Sadly, the principles underlying current reforms are almost the diametric opposite of those that I propose. That is why I consider current reforms to hold little promise, and, sadly, to be in some ways a threat.

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* these papers are available at www.cerf.cam.ac.uk

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