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From the Fall of the Wall to the Fall of the Banks and Beyond: Three Persistent Problems for the Global Economy

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International Economy Program

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From the Fall of the Wall to the Fall of the Banks and beyond:
Three persistent problems for the global economy

Mark Thirlwell

Q. What is Socialism? A. It's the long and painful transition from capitalism to capitalism.

Joke popular around the time of the fall of the Berlin Wall

Q. What's the difference between capitalism and communism? A. Under communism you nationalise everything and then wreck the economy. Under capitalism, it's the other way around.

In 1949, communism saved China; in 1979 capitalism saved China; and in 2009, China saved capitalism.

Jokes popular around the time of the Global Financial Crisis

Summary

The fall of the Berlin Wall in November 1989 is a plausible date for the birth of the current global economy. The collapse of communism that followed not only removed the only credible competitor to capitalism as an approach to managing the world's economies, but by precipitating the international economic integration of the so-called Second World while reinforcing the commitment of the old Third World to engagement with world markets, it also helped stitch back together a world economy that had been fragmented since 1914.

The early version of the global economy that resulted was marked by several defining features: the victory of the market over the state; the rapid advance of globalisation, especially in its financial form; and the pre-eminence of the Western economic model in general, and the US economic model in particular.

Two decades on, and by November 2009 all of those features were in flux. In the aftermath of the Global Financial Crisis and the Great Recession that followed, the state's role in developed economies had made a dramatic return, even as a version of state capitalism flourished in some key emerging markets; the world had undergone a sharp bout of *de*globalisation during which international trade contracted at a rate even greater than that experienced during the 1930s Great Depression; the image of global finance, which had played a leading role in triggering and then transmitting the crisis, had been tarnished; the reputation of the West and especially the United States for economic competence had been trashed; and the economies of emerging Asia, led by China, had seen economic and financial power tilt significantly in their favour.

The features of the global economy at the end of the first decade of the twenty-first century look quite different to those that applied at the start of the last decade of the twentieth century.

Not everything had changed, however. In particular, the international economic environment continued to confront three persistent problems: a crisis problem; an adjustment problem; and a sustainability problem. Much of the economic history of the world economy over the past two decades has been shaped by these three problems, and dealing with the same challenges is shaping the current decade, too.

1989, the new global economy and three persistent problems

The brief period between the fall of the Berlin Wall in November 1989 and the dissolution of the Soviet Union in December 1991 brought an end to the short twentieth century.[1] It also concluded the economic and political competition between communism and capitalism with a victory for the latter, and similarly marked a decisive win in the contest between state and market.[2] At the same time, by encouraging the dissolution of many of the policy-built boundaries between First, Second and Third Worlds, it allowed the birth of something that looked like a truly global economy for the first time since the start of the First World War and so made globalisation the driving force of the international economic order.

Twenty years ago, as the survivors of the communist experiment in Eastern Europe looked out across the rubble of their post-communist economies and started to assess just how far behind their Western European neighbours they had fallen, a joke of the time asked *'What is Socialism?'* The answer – *'It's the long and painful transition from capitalism to capitalism'* – was a bitter comment on the sense of wasted opportunity produced by their long detour into central planning.

Twenty years later, and in the aftermath of the Global Financial Crisis (GFC), another joke was making the rounds in the same part of the world. *'What's the difference between capitalism and communism?'*, went the question. The answer: *'Under communism you nationalise everything and then wreck the economy. Under capitalism, it's the other way around.'* The past year had just seen the so-called 'transition economies' of central and eastern Europe and the former Soviet Union suffer their worst economic crisis since the output collapse that followed the end of central planning in the early 1990s.[3]

Two decades on from the fall of the Wall and the world economy was again being reshaped, this time by the fall of the Banks.[4] Desperate to prevent a re-run of the Great Depression, the state injected itself back into economic life in way that would have been deemed almost unthinkable just a few years before, as rich-world governments presided over the effective nationalisation of banks and insurance

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[1] Eric Hobsbawm, *Age of Extremes: The Short Twentieth Century 1914-1991*. London, Abacus, 1995.
[2] Daniel Yergin and Joseph Stanislaw, *The commanding heights: the battle for the world economy.* New York, Simon & Schuster, 2002
[3] EBRD, *Transition report 2009: Transition in crisis?* London, European Bank for Reconstruction and Development, 2009.
[4] Although in some cases, the 'fall' appears to have been short-lived. See for example Alex Berenson, A year later, little change on Wall St. *The New York Times*, 12 September 2009.

companies and the mass transfer of huge private sector liabilities onto public sector balance sheets. At the same time, the march of globalisation had been interrupted by a short, sharp burst of deglobalisation: in the final quarter of 2008 and the first quarter of 2009, international trade contracted at a rate not seen since the 1930s.

While events had certainly not come full circle, nevertheless, the triumph of the market heralded by the fall of the Wall had suffered a major setback. Similarly, the triumph of the West wasn't looking too secure, either. Arguably the country to come out of the GFC with its reputation most enhanced was China, where the government's prompt resort to stimulus had quickly managed to pull economic growth back on track after just two quarters of economic dislocation.[5] As the United States and Europe floundered, China was now, not altogether jokingly, being referred to as the last, best hope for capitalism.

The sheer *scale* of the setback to the world economy caused by the GFC was undoubtedly a major surprise. Yet in some ways, the blow to the prevailing international order should not have come as a complete shock. For all of its successes over the past twenty years, the global economy that was born in 1989 has struggled to manage three major problems:

The ***crisis problem***: A defining feature of the international economic environment has been the spread of global financial capitalism or alternatively, the gradual (and still incomplete) construction of a global financial market. This in turn has been associated with a series of financial crises, including the Mexican crisis, the Asian financial crisis, the Russian default, the Dot-com crash, and of course the GFC itself. Add in major domestic crises as well, and the world economy has been suffering significant financial accidents at a rate of something close to one in every three years. Given this record, it's not implausible to suggest that crises look to be an inevitable by-product of international financial integration and domestic financial liberalisation.[6] Indeed, at the time of writing, the Eurozone's ongoing struggle with debt and competitiveness problems around its periphery suggest that another major crisis might be in store.

The ***adjustment problem***: One of the great successes of recent economic history has been the integration of large parts of what used to be called the Second and Third Worlds into the international economy. The integration of – in some important cases – very populous countries with very low levels of income per capita and quite different national economic and political systems has inevitably created significant strains in some of the leading developed economies. These adjustment strains have contributed to a reduced political willingness on the part of the developed world to sustain the open markets necessary for globalisation, a significant decline in its population's appetite for further liberalisation, and a parallel decline in its ability to manage the path of the global economy on its own.[7]

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[5] Albeit at the cost of laying down some problems for the future.

[6] Paul Krugman, Crises: the price of globalization? in *Symposium sponsored by the Federal Reserve Bank of Kansas City on Global economic integration: opportunities and challenges*, ed. Federal Reserve Bank of Kansas City (Jackson Hole, Wyoming: Federal Reserve Bank of Kansas City, 2000).

[7] This problem is discussed in Mark Thirlwell, *Second thoughts on globalisation: Can the developed world cope with the rise of China and India?* Lowy Institute Paper 18. Sydney, Lowy Institute for International Policy, 2007.

The ***sustainability problem***: The already-large resource and environmental footprint of the developed world is now being significantly augmented by the rapid industrialisation and urbanisation of some of the most populous countries on the planet. The consequences have made themselves felt in commodity prices, in fears about resource (particularly energy and food) security, and in concerns about environmental sustainability (climate change, water shortages).

The difficulties raised by these three problems have tended to be compounded by a growing contradiction between *global* markets and *national* policymaking, and by the relatively poor state of repair and declining legitimacy of the existing institutions that had been created to deal with this gap between the global and the national – that is, the so-called Bretton Woods institutions of the IMF and the World Bank as well as the WTO.[8] Some good news here is that one important consequence of the GFC has been to deliver perhaps the first major new global institutional development of the post-Cold War era through the creation of the G-20 leaders' meetings.[9]

In the aftermath of the GFC all three of the above problems persist, and all three will continue to challenge the durability of the twenty-year old global economy.

The fall of the Wall and the triumph of the market

On the evening of 9 November, 1989, after weeks of protests in East Germany, Gunter Schabowski, a senior official in the East German politburo, gave a fumbling performance during a live television press conference. Schabowski appeared to indicate that East Berliners would now be allowed – immediately – free access to the West. Thousands of his countrymen promptly headed to the Wall to test this proposition, where they were met by confused border guards. The latter eventually succumbed to the chanted demands of the crowds and opened up the checkpoints to West Berlin.

The Berlin Wall had fallen and with it went the communist challenge to capitalism. Granted, the Soviet Union would stagger on for a couple more years, until its formal dissolution in December 1991. But by 1989 the game was up and the only remaining credible challenger to international capitalism was down and out: capitalism had won a knock-out victory. Some went further, and acclaimed a victory for Western liberalism more generally, as celebrated in Francis Fukuyama's 1989 essay, *The End of History.*[10]

At its peak, communist rule had extended directly over a third of the world's population and at times had threatened to encompass even more. It's easy to forget

[8] The WTO's predecessor, the GATT, was not a Bretton Woods institution. There had been plans to create an International Trade Organisation (ITO) to complement the IMF and the World Bank that *were* established by the July 1944 conference, but the US Congress refused to ratify the proposed ITO charter in 1950, leaving the GATT as the only multilateral framework governing world trade until the establishment of the WTO. Douglas A Irwin, *Free trade under fire.* Princeton and Oxford, Princeton University Press, 2002.

[9] While the WTO was established in this period, its origins lie in the Uruguay Round negotiations that got underway in 1986. Other candidates would be Basel II and the inaugural BRICs summit held in June 2009 at Yekaterinburg, Russia.

[10] Francis Fukuyama, The end of history. *The National Interest* (16) 1989.

now that for many observers at the time, the competition between the two systems appeared a close-run thing. In the 1950s and 1960s, the Soviet model of central planning had seemed to offer a viable alternative to the market system and even as recently as the 1970s, some still wondered whether the faltering economies of Western Europe might succumb to the attractions of the competing bloc. To take just one example, Andrew Glyn in his book *Capitalism Unleashed* opens the first chapter with a quote from an official in the US State Department regarding the UK's 1976 approach to the IMF, noting that Washington had been worried that if London had opted to take a different route, then the possibility of radical change in the UK could have triggered further shifts in Italy and France and then the 'whole system would have begun to come apart'.[11]

We now know that the actual challenge was far less potent than it appeared to contemporaries. In fact, the Soviet economic system had probably peaked as early as the 1950s and the extensive growth model on which it relied had reached its limits by the 1960s.[12] Indeed, on one set of estimates, Soviet growth from 1960 to 1989 was the worst in the world after controlling for investment and human capital, and this poor relative performance deteriorated over time.[13] The economics of 'existing socialism' as identified by one of its leading anatomists, Janos Kornai – a dominant position for state- and quasi-state ownership, a heavy reliance on bureaucratic coordination in place of the price mechanism, the prevalence of soft budget constraints and an economic system characterised by chronic shortages – turned out to be terminally dysfunctional.[14] The general economic ineptitude of the system is captured by another communist-era joke: *What would happen if a socialist republic were established in the middle of the Sahara desert? Within three years, it would have to import sand.*

As Kornai noted, Lenin himself had recognised that the contest between capitalism and communism would ultimately be decided by which could generate the higher productivity.[15] The fall of the Wall was a potent symbol of the victory of the former.

And it wasn't just a victory. It was an overwhelming one. By the end of the 1980s, it was crystal clear that across a range of countries, the dynamism of the market had comprehensively outperformed the dead hand of central planning. Despite its dramatic achievements in the Space Race and elsewhere, the Soviet Union itself had turned out to be little more than a Potemkin Economy.[16] But the message was perhaps delivered even more starkly by the outcome of a series of head-to-head

[11] Cited in Andrew Glyn, *Capitalism unleashed: Finance, globalization and welfare.* Oxford, Oxford University Press, 2006.
[12] Stanley Fischer, Russia and the Soviet Union Then and Now, in *The Transition in Eastern Europe*, ed. Olivier Jean Blanchard, Kenneth A Froot, and Jeffrey D Sachs. Chicago, University of Chicago Press, 1994.
[13] William Easterly and Stanley Fischer, The Soviet Economic Decline. *The World Bank Economic Review* 9 (3) 1995.
[14] Janos Kornai, What the change of system from Socialism to Capitalism does and does not mean. *Journal of Economic Perspectives* 14 (1) 2000.
[15] Ibid.
[16] It's somehow fitting that when, on 25 December 1991, Mikhail Gorbachev reached for the pen with which he would sign the decree officially terminating the existence of the Soviet Union, it contained no ink. Gorbachev had to borrow a pen from the CNN TV crew covering the event. The story is recounted in John Lewis Gaddis, *The Cold War.* London, Allen Lane, 2005.

competitions between capitalism and communism in three 'natural experiments'. So West Germany's economy had raced far ahead of that of East Germany, while South Korea's economic take-off had left North Korea looking like a relic from a distant age. Finally, living standards in Taiwan were a multiple of those in mainland China. That said, in this last case the leadership in Beijing had read the writing on their own wall sooner than their former European comrades had managed. They had abandoned the old economic model back in the late 1970s in an extremely successful move to prolong the life of the Party by embarking on the long march from Deng Xiaoping's socialism with Chinese characteristics to Beijing's still-evolving model of state capitalism with Chinese characteristics.[17]

The contrasting fortunes of the two camps seemed particularly sharp in Europe where '[a]s Western Europe integrated, Eastern Europe disintegrated'.[18] Over the same weekend in December 1991 President Mikhail Gorbachev was making a last, vain attempt to summon the heads of the Soviet Republics to Moscow; the leaders of Russia, Byelorussia and Ukraine were meeting to sign a declaration that the USSR had ceased to exist and to announce the creation of a Commonwealth of Independent States (CIS); and the 12 leaders of the European Community were gathering at Maastricht to consider their plans for a European Union (EU), and initialling agreements that would pave the way for European Monetary Unification and a European Central Bank.[19]

The Single Market project had been completed by January 1993, while the Maastricht Treaty signed on 7 February 1992 created the EU and ultimately led to the launch of the euro in 1999.

The birth of a global economy

Before the fall of the Wall, it was common to talk about a tripartite world economy comprising the First World of the advanced capitalist economies; the Second World of the Socialist Bloc; and the Third World of developing economies.[20] The comprehensive nature of capitalism's economic victory effectively destroyed this distinction, at least as far as economic policy was concerned. The world 'moved from the sharply divided international economy of the Cold War to an increasingly integrated global capitalist economy.'[21] This transformation reflected three key consequences of 1989-1991:

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[17] The idea of a series of natural experiments provided by divided countries has been emphasised by many observers. See for example Mancur Olson, Big bills left on the sidewalk: Why some nations are rich and others poor. *Journal of Economic Perspectives* 10 (2) 1996. Olson makes the point that one important benefit of such natural experiments is that they rule out attributing differences in economic performance to culture: the explanation has to rest with institutions and economic policies.

[18] Norman Davies, *Europe: A history.* Oxford, Oxford University Press, 1996.

[19] Ibid.

[20] Jeffrey D. Sachs and Andrew Warner, Economic reform and the process of global integration. *Brookings Papers on Economic Activity* (1) 1995. See also Jeffrey D Sachs, Twentieth-century political economy: A brief history of global capitalism. *Oxford Review of Economic Policy* 15 (4) 1999.

[21] Robert Gilpin, *The challenge of global capitalism: the world economy in the 21st century.* Princeton, Princeton University Press, 2002.

First, there were the ramifications for domestic policy within the First World itself. True, the early 1980s had already brought a decisive shift in economic philosophy in the advanced capitalist economies in favour of a greater economic role for the market relative to that of the state. The Thatcher-Reagan revolution had already helped tilt the balance of economic power back towards the market. But the complete and utter collapse of the economic system that had pushed the role of the state to its greatest extent now provided a potent vindication for, and reinforcement of, that earlier change in direction, and moreover delivered the impetus for further liberalisation efforts, with the result that '[b]y the end of the 1990s, the industrial economies were freer of government control than they had been since the 1930s'.[22]

Second, so definitive was the result of the Cold War-era competition between the economic models of the First and Second Worlds that it culminated in the almost complete disappearance of the latter.

> 'The relinking of the closed economies did something essential to make globalization possible: It made, for the first time since the First World War, the world economy truly global.'[23]

Third, that same victory also brought to an effective conclusion many of the collateral debates regarding a potential middle way for policymakers in the Third World. Granted, once again the shift in economic policy in developing countries can in many cases be dated back to the 1980s.[24] Still, the same year that brought the fall of the Wall and Fukuyama's declaration that history had ended, also saw John Williamson's introduction of the term 'Washington Consensus'.[25] While Williamson's description of a set of broadly accepted, market-based economic policies for emerging markets has since taken on a resonance unintended by its author, the decisive ideological victory of Washington over Moscow meant that, as far as economic policy was concerned, policymakers in the developing world were left with only one compelling model from which to choose.[26] By the end of the twentieth century there was arguably more agreement on economic doctrine than at any time since 1914.[27] Sometimes voluntarily, and sometimes under the forceful and occasionally brutal prodding of the IMF, developing country policymakers across the world found themselves donning some variation of the market-friendly set of policies that Thomas Friedman called the 'Golden Straitjacket'.[28]

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[22] Jeffry A Frieden, *Global capitalism: its fall and rise in the twentieth century.* New York, W.W.Norton, 2006.

[23] Yergin and Stanislaw, *The commanding heights: the battle for the world economy*. 'It was the failure of the closed economies, and their turbulent return to open trade, that cemented the foundations of the present era of globalization.'

[24] Sachs and Warner, Economic reform and the process of global integration.

[25] John Williamson, *A short history of the Washington Consensus.* Paper commissioned by Fundación CIDOB for a conference "From the Washington Consensus towards a new Global Governance". Barcelona, Institute for International Economics (IIE), 24-25 September, 2004.

[26] This is obviously a gross simplification: in reality, there was a wide range of different capitalist models to choose from – Japanese, Scandinavian, Rhineland, and Anglo-Saxon, for example. But the broader point holds in that these were all variants on the same underlying model.

[27] Frieden, *Global capitalism: its fall and rise in the twentieth century*.

[28] Thomas L Friedman, *The lexus and the olive tree.* London, HarperCollins, 1999.

These three consequences meant that by 'the first decade of the post-Cold War era the market reigned supreme.'[29] The international scope of this triumph had a further, crucial consequence: it delivered a powerful new impetus to international economic integration or globalisation.

Finally, there was also an important geopolitical element to these developments. As Ronald Findlay and Kevin O'Rourke have described, historically 'periods of sustained expansion in world trade have tended to coincide with the infrastructure of law and order necessary to keep trade routes open being provided by a dominant 'hegemon' or imperial power', with past examples including the *Pax Mongolica* and the *Pax Britannica*.[30]

> 'The immediate post-Cold War world is not multipolar. It is unipolar. The center of world power is the unchallenged superpower, the United States, attended by its Western allies.'[31]

Between the end of the Second World War and 1989, the *Pax Americana* fulfilled this role for the countries of the advanced or First World. With the fall of the Wall leaving the United States as the last superpower standing (the so-called 'unipolar moment'), the reach of the *Pax Americana* was significantly extended in the short term, but was also then challenged by the very forces of globalisation it had unleashed, as the latter worked gradually to diminish the *relative* economic position of the US economy.

Globalisation accelerates

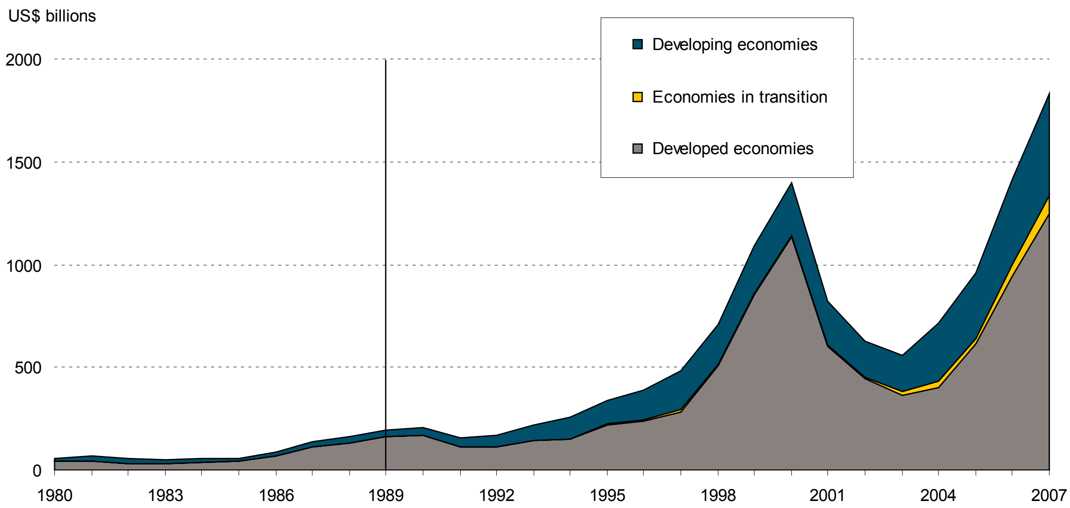
The process of stitching back together a global economy which had been destroyed by the First World War and the Great Depression had begun as early as 1944 with the allies' conference at Bretton Woods in New Hampshire. Under the original Bretton Woods framework, which traded off liberalising trade flows against capital account restrictions, the post-1945 world did see the return of trade integration under the auspices of the General Agreement on Tariffs and Trade (GATT). A big increase in international financial integration largely had to wait for the collapse of the Bretton Woods system of fixed exchange rates. The majority of this international economic integration took place within the boundaries of the developed world, however, and the tripartite division of the international economy described above meant that this form of 'globalisation' was in practice very much a geographically constrained version – something of a contradiction in terms. Following the fall of the Berlin Wall and the

[29] Michael Mandelbaum, *The ideas that conquered the world: Peace, democracy and free markets in the Twenty-First century.* New York, PublicAffairs, 2003.
[30] Ronald Findlay and Kevin H O'Rourke, *Power and Plenty: Trade, war and the world economy in the Second Millennium.* Princeton, Princeton University Press, 2007.
[31] Charles Krauthammer, The Unipolar Moment. *Foreign Affairs* 70 (1) 1990. Later on Krauthammer says: 'It is, of course, true that if America succeeds in running its economy into the ground, it will not be able to retain its unipolar role for long. In which case the unipolar moment will be brief indeed (one decade, perhaps, rather than say three or four).'

collapse of communism those geographical constraints were loosened, to such a dramatic extent that the 1990s became the 'decade of globalisation'.[32]

The combined impact of the end of the tripartite division of the world economy, the renewed push to economic liberalisation and deregulation that this spurred, and the role played by technological advances in the information and communications technology (ICT) sector meant that for the next two decades international economic integration would advance rapidly on two broad fronts.

Figure 1: The surge in foreign direct investment



Source: UNCTAD, *World Investment Report 2008: Transnational corporations and the infrastructure challenge*. (2008)

The first was the globalisation of production. *Push* factors favouring production overseas were growing competition and rising costs within existing domestic markets, while *pull* factors included technology-facilitated falls in transport and communications costs and more liberal policy regimes.[33] The ICT revolution combined with falling barriers to trade and foreign direct investment (FDI) in such a way that the resultant *integration* of world markets was combined with the international *disintegration* of the production process, whereby countries 'increasingly specialize[d] in producing particular stages of a good, rather than making a complete good from start to finish', as firms sought to exploit the comparative advantages of different economies as they applied to specific parts or components.[34]

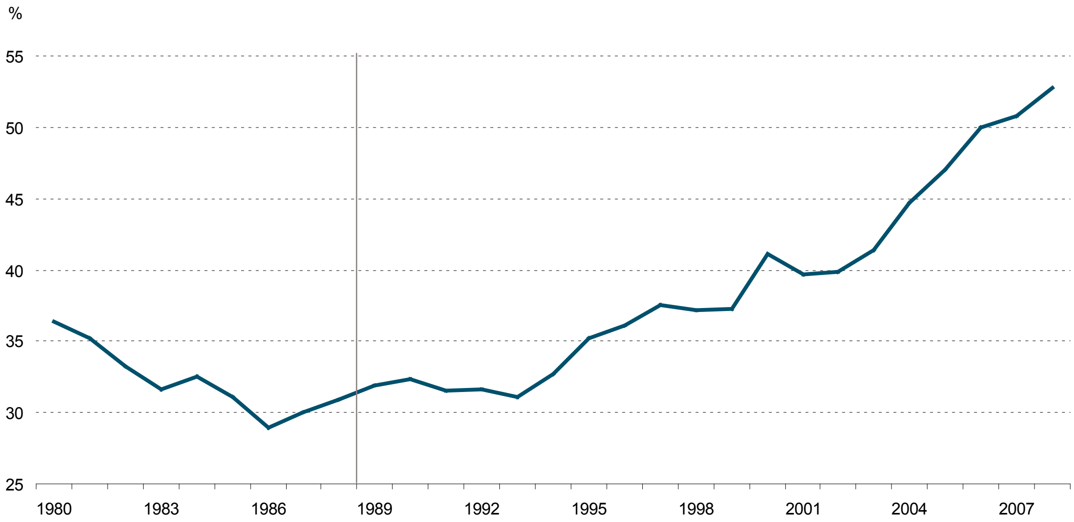
The second half of the 1990s in particular brought a surge in cross-border investment, as annual worldwide FDI flows, after having increased from about US$55 billion in the early 1980s to just over US$200 billion by 1990, soared to almost US$1.4 trillion

[32] David Reynolds, *One world divisible: a global history since 1945*. The global century series. London, Penguin Books, 2001.
[33] World Bank, *Private capital flows to developing countries: The road to financial integration.* Oxford, Oxford University Press, 1997.
[34] Robert C Feenstra, Integration of trade and disintegration of production in the global economy. *Journal of Economic Perspectives* 12 (4) 1998. Also David Hummels, Jun Ishii and Kei-Mu Yi, The nature and growth of vertical specialization in world trade. *Journal of International Economics* 54 2001.

by the end of the decade (Figure 1).[35] The resulting proliferation of cross-border production networks and supply chains helped forge a new international division of labour in the world economy: the 'Great Specialisation' of the nineteenth century (whereby the newly industrialised developed world had specialised in manufacturing production and the developing world in primary products) was being unwound at a fairly rapid pace.[36]

One consequence of these changes was a sharp increase in the share of trade in world output (Figure 2).[37]

Figure 2: The rise in world merchandise trade as a share of world output



Source: World Bank, *World development indicators online*. (2010)

The globalisation of production expanded from trade in goods to trade in services, a process that would gain further momentum with the development of offshore outsourcing, as the logic of slicing and dicing the supply chain was extended from blue collar manufacturing and assembly processes to white collar back office and support functions.[38]

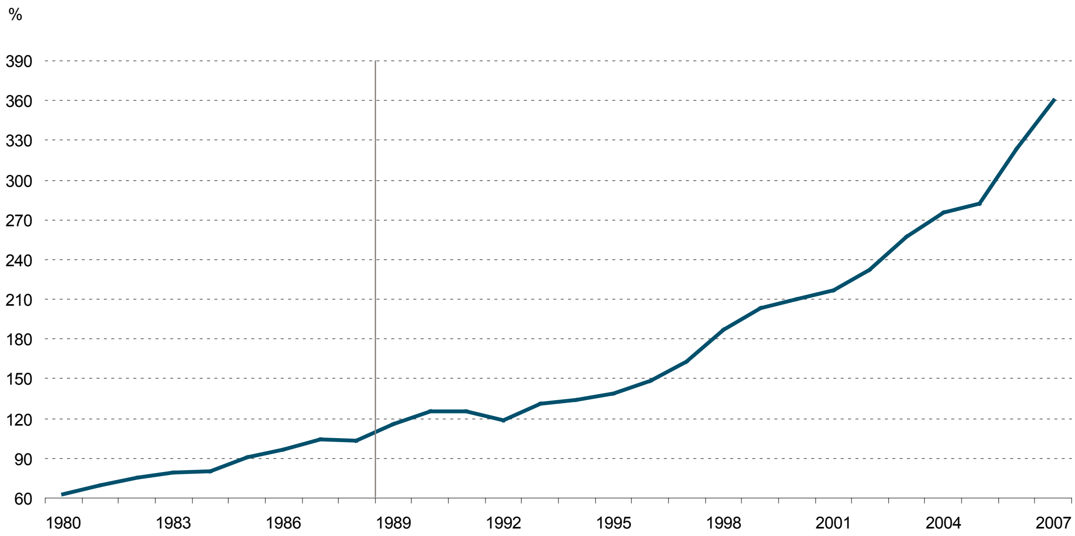
The process of international economic integration on the second front – finance – was even more spectacular. International financial assets and liabilities as a share of world GDP had risen from less than 116% in 1989 to more than 216% by 2001 and stood at more than 360% by 2007 (Figure 3). One way to view this dramatic increase is as a simple indicator of financial integration: by the mid-1990s, the world economy had seen the 'resurrection of global finance'.[39] By the end of the decade, analysts could reasonably claim to identify the emergence of what was effectively one global financial system that encompassed all of the developed world and sizeable portions of

[35] Ashoka Mody, Is FDI integrating the world economy? *World Economy* 27 (8) 2004.
[36] Findlay and O'Rourke, *Power and Plenty: Trade, war and the world economy in the Second Millennium*.
[37] For a broad overview of the changing international trade environment, see Mark Thirlwell, *The new terms of trade.* Lowy Institute Paper 07. Sydney, Lowy Institute for International Policy, 2005.
[38] See for example Alan Blinder, Offshoring: the next industrial revolution? *Foreign Affairs* 85 (2) 2006.
[39] Benjamin J Cohen, Phoenix risen: the resurrection of global finance. *World Politics* 48 (2) 1996.

the developing world – or at least those parts of it that were increasingly being described as emerging markets rather than developing countries.[40] Another way to interpret Figure 3 is as indicating 'an orgy of leverage, an explosive proliferation of interlinked counterparty risks.'[41]

Once again, the same driving forces were at work. Financial markets transitioned from being relatively insulated and regulated national markets towards a more globally integrated market due to a combination of advances in ICT and both internal and external financial market deregulation.[42]

Figure 3: International financial assets and liabilities as share of World GDP



Source: Updated and extended version of dataset constructed by Lane and Milesi-Ferretti, *The external wealth of nations mark II: Revised and extended estimates of foreign assets and liabilities, 1970–2004* (2007).

With some initial impetus provided by the push factors of weak developed country growth and a cyclical downturn in global interest rates in the early 1990s, and with continuing economic reform and liberalisation taking place in the developing economies providing a pull factor, the 1990s in the period before the Asian financial crisis witnessed a strong surge of private capital flows into emerging markets as investors looked for opportunities for higher returns and for risk diversification (Figure 4).[43] The change was dramatic: in the 1980s, developing countries had attracted barely any portfolio flows, but by the mid-1990s they were receiving almost 30% of global equity flows.[44]

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[40] Frieden, *Global capitalism: its fall and rise in the twentieth century*. Note, however, that some major emerging markets, including in particular China and India, remained very cautious in terms of their approach to financial integration, retaining strict controls on capital flows.

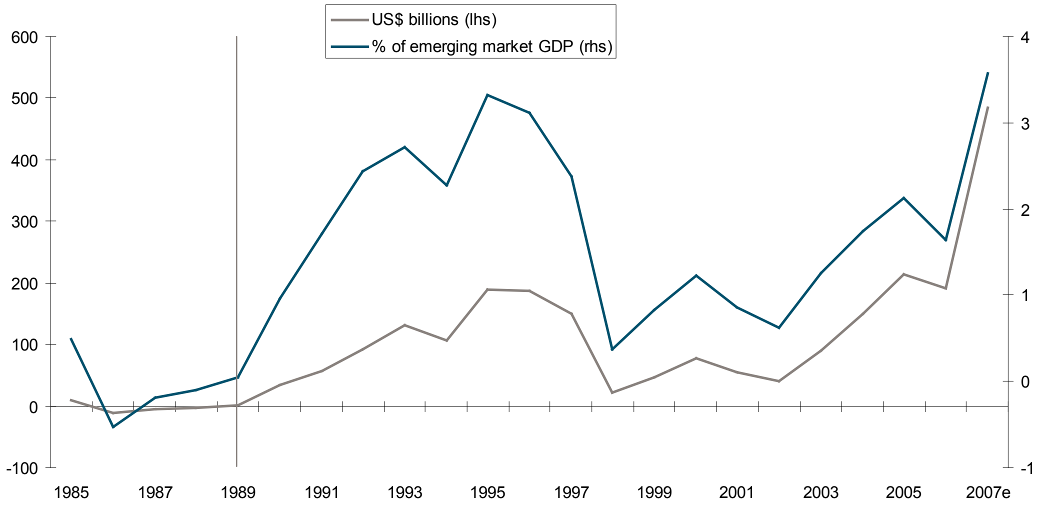
[41] Maurice Obstfeld. The immoderate world economy. Keynote Speech 3rd Annual JIMF-SCCIE Conference UC Santa Cruz, May 2009.

[42] World Bank, *Private capital flows to developing countries: The road to financial integration*.

[43] On the link between slow developed country growth and the search for yield in emerging markets around this time, see Guillermo Calvo, Leonardo Leiderman and Carmen M Reinhart, Capital inflows and real exchange rate appreciation in Latin America: The role of external factors. *IMF Staff Papers* 40 (1) 1993.

[44] World Bank, *Private capital flows to developing countries: The road to financial integration*

Figure 4: Net private capital inflows to emerging markets



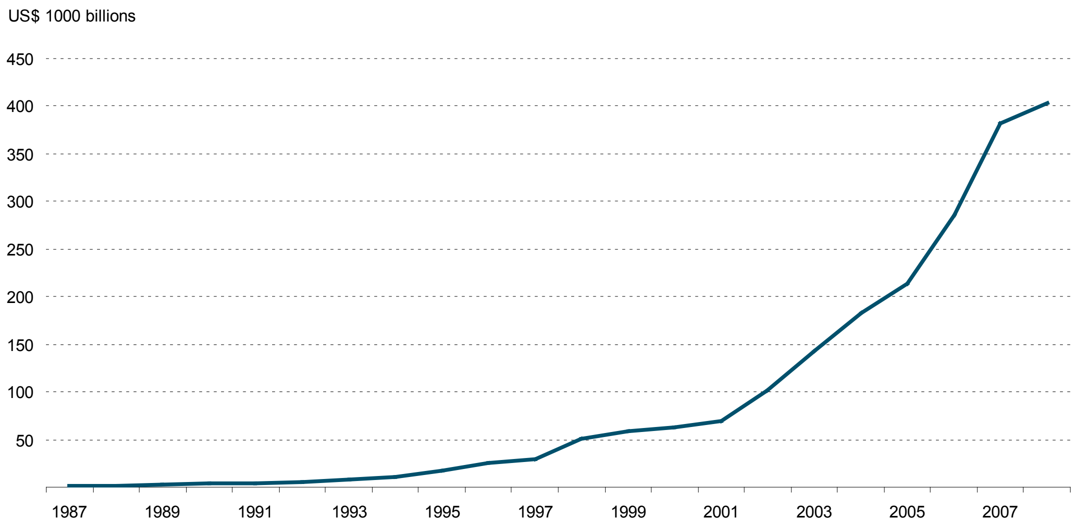
Source: International Monetary Fund (IMF), *World Economic Outlook: Globalization and Inequality*. (2007)

> THE DERIVATIVES GENIE IS NOW WELL OUT OF THE BOTTLE, AND THESE INSTRUMENTS WILL ALMOST CERTAINLY MULTIPLY IN VARIETY AND NUMBER UNTIL SOME EVENT MAKES THEIR TOXICITY CLEAR. CENTRAL BANKS AND GOVERNMENTS HAVE SO FAR FOUND NO EFFECTIVE WAY TO CONTROL, OR EVEN MONITOR, THE RISKS POSED BY THESE CONTRACTS. IN MY VIEW, DERIVATIVES ARE FINANCIAL WEAPONS OF MASS DESTRUCTION, CARRYING DANGERS THAT, WHILE NOW LATENT, ARE POTENTIALLY LETHAL.[45]

Financial innovation also played an increasingly important role in this globalisation of finance. In particular, the 1990s saw the start of what would become the spectacular growth of financial derivatives. According to the ISDA, the notional amount of total interest rate and currency swaps outstanding rose from about US$2.5 trillion at the end of 1989 to US$63 trillion at end 2000, and to US$403 trillion at end 2008 (Figure 5). According to the BIS, the notional value of all over-the-counter (OTC) derivatives peaked at more than US$683 trillion in June 2008, and still stood at US$592 trillion by the end of the year, equivalent to about 970% of global nominal GDP.

[45] Warren E Buffett, *Chairman's Letter: Berkshire Hathaway Annual Report 2002.* 21 February, 2003.

Figure 5: Interest rate and currency swaps outstanding



Source: ISDA

The (temporary) triumph of the Bretton Woods institutions

The Bretton Woods institutions played an important supporting role in the expansion of international economic integration. The post-Cold War world was one in which the IMF enjoyed a significant amount of influence, as its remit was extended beyond the 1980s scope of profligate-then-penurious developing countries to encompass first the transition economies of Eastern Europe and then to the range of hitherto successful emerging markets that found themselves buffeted by the growing waves of private capital. Even Russia joined the Fund in 1992, and promptly received a US$1 billion stand-by agreement.

> 'The IMF was the Vatican of free-market economics . . . the IMF had, in the wake of the Cold War, acquired the power to induce governments to adopt sweeping policies, with serious economic effects . . . in the wake of the Cold War it was nearly omnipresent.'[46]

The WTO, established as a successor to the GATT in 1994 after the conclusion of the Uruguay Round, also had an important role to play as the new overseer of global trade integration. Since '[b]y the early 1990s, there was only a handful of countries that explicitly rejected participation in world trade, or that had regimes so eccentric or chaotic as to be outside the global economic system' this was a potentially powerful position, the more so as another consequence of the Uruguay Round had been to extend the array of issues under its remit from trade in goods to also include trade in services and intellectual property rights. With autarky right out of fashion, and the success of the relatively open economies of East Asia front of mind for policymakers across the developing world, WTO accession became an important policy goal for countries like China and Vietnam and, armed with an effective disputes settlement

[46] Mandelbaum, *The ideas that conquered the world: Peace, democracy and free markets in the Twenty-First century*.

mechanism, to many the WTO looked like it was en route to 'becoming a regulator of the would-be global economy.'[47]

From the Age of Diminished Expectations to the Roaring Nineties

Despite the compelling nature of capitalism's victory, however, initially the global economy that emerged after 1989-91 did not look especially promising for either victors or vanquished. Take for example Japan, where a huge stock-market bubble had burst in December 1989. At the start of the 1990s, Japan was entering the Great Recession from which it would fail to emerge until – perhaps – 2005, and was poised to succumb to the longest period of below-potential growth experienced by any developed economy since World War II.[48] The fall in the prices of Japanese land and shares meant that between 1990 and 2002 an estimated JPY1,500 trillion of national wealth was destroyed.[49] Elsewhere, Western Europe was struggling to cope with the economic consequences of German Unification, with the resulting high German interest rates and restrictive Bundesbank policies helping contribute to the European currency crises of 1992. The East was doing it even tougher, with the cumulative loss in GDP between 1989 and 2004 varying from a 12%-14% drop in the Czech Republic and Poland to a 38% fall in the Baltic states.[50] Further east still, and the story was even worse: the countries of the Former Soviet Union had been plunged into an economic catastrophe marked by a calamitous decline in living standards.[51] For the 25 economies of Central and Eastern Europe and the Former Soviet Union, by the time the collapse in output had bottomed out, it had fallen by more than 40% on average. Indeed, fully ten years after the transition from communism to market had started, output was higher than its pre-transition level in only three countries: Poland, Slovakia, and Slovenia.[52]

Even the United States, the leader of the victorious side in the Cold War, was undergoing a period of economic malaise. At the end of the 1980s its economy had been suffering from the aftermath of the Savings and Loans crisis, while its commercial banks were also in trouble thanks to the collapse of a commercial real-estate boom (hot on the heels of their misadventures in Latin America), leaving them in 'their worst period since the Depression: [as] hundreds of small and medium-sized banks failed, and giants like Citibank and Chase Manhattan were in distress.'[53] The result was a credit crunch that had made it hard to escape from the 1990 recession, despite the fact that the Fed lowered the Fed funds rate 23 times in the three years between July 1989 and July 1992 (Figure 6). Writing at the start of the decade, Paul Krugman described a United States economy that apparently could do little more than deliver 'stability without progress, avoid a depression without achieving sustained

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[47] Philippe Legrain, *Open world: the truth about globalisation.* London, Abacus, 2003.
[48] Kenneth N Kuttner and Adam S Posen, The Great Recession: Lessons for Macroeconomic Policy from Japan. *Brookings Papers on Economic Activity* 32 (2) 2001.
[49] Richard C Koo, *The Holy Grail of Macroeconomics: Lessons from Japan's Great Recession.* Singapore, Wiley, 2008.
[50] Barry Eichengreen, *The European Economy since 1945: Coordinated Capitalism and Beyond.* Princeton, Princeton University Press, 2007.
[51] For a more upbeat view of post-reform Russia, see Andrei Shleifer and Daniel Treisman, A normal country: Russia after communism. *Journal of Economic Perspectives* 19 (1) 2005.
[52] Stanley Fischer and Ratna Sahay, *The transition economies after ten years.* IMF Working Paper WP/00/30. Washington DC, International Monetary Fund, February, 2000.
[53] Alan Greenspan, *The Age of Turbulence: Adventures in a new world.* New York, Allen Lane, 2008.

economic growth' and where a 'persistent trade deficit has accelerated America's relative decline in the world economy, to the point where we may well be the third-ranked economic power by the end of this decade.' According to Krugman, it was an 'Age of Diminished Expectations'.[54]

Arguably, the only significant bright spot in the global economy was to be found in emerging Asia, where the catch-up process initiated by Japan and emulated by the Newly Industrialising Economies of Korea, Taiwan, Singapore and Hong Kong had subsequently been extended first to the Tiger economies of Southeast Asia and then to China and – by the start of the 1990s – had reached India. An increase in private capital inflows, only temporarily disrupted by Mexico's Tequila crisis, helped fuel rising investment in East Asia (and in other emerging markets), encouraging both an increase in growth and a rise in current account deficits, as investors looked to diversify away from the lacklustre growth performance of the developed world.

Even this bright spot was a source of some rich-country qualms. As the globalisation of production gathered pace through the late 1980s and into the early 1990s, many in the rich countries worried about the implications of the transfer of manufacturing activity overseas for their own economies, and fretted as to the impact on their own low-skilled workers of growing trade with the low-wage developing world.[55]

Figure 6: The effective US Federal Funds rate (monthly average)

Source: Board of Governors of the Federal Reserve System

By the mid-1990s, however, the US economy was benefitting from the ICT revolution, which had boosted US productivity performance and contributed to an increase in optimism that would help fuel a consumer and stock-market boom.

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[54] Paul Krugman, *The Age of Diminished Expectations: US economic policy in the 1990s.* Cambridge, Massachusetts, The MIT Press, 1992.

[55] In fact, the evidence at the time seemed to suggest that technology rather than trade had the larger impact on the relative position of low-skill labour. David Greenaway and Douglas Nelson, Globalization and labour market adjustment. *Oxford Review of Economic Policy* 16 (3) 2000. See also Peter H Lindert and Jeffrey G Williamson, Does globalization make the world more unequal?, in *Globalization in historical perspective.* Chicago, The University of Chicago Press, 2003.

Following a quarter century of sluggish gains, US labour productivity growth in the nonfarm business sector rose sharply in the mid-1990s: after growing at an average rate of 1.5%pa between 1973 and 1995, it grew at 2.5%pa between 1995 and 2000, and then at 3.3%pa between 2000 and 2004. The surge in the second half of the 1990s was driven by developments within the ICT sector, while the growth in the first half of the next decade appears to have been powered in part by pressure to cut costs and reduce margins.[56] Krugman's Age of Diminished Expectations gave way to Joseph Stiglitz's Roaring Nineties as the 'new economy' of the United States proceeded to establish its status as the leader of the new global economy with the US consumer as its driving force.

> 'In the Roaring Nineties, growth soared to levels not seen in a generation. Newspaper articles and experts proclaimed that there was a New Economy, that recessions were a thing of the past and that globalization was going to bring prosperity to the whole world.'[57]

Alan Greenspan, whose 18-year tenure as Chairman of the US Federal Reserve began in August 1987, cites 9 August 1995 as the day the US dot-com boom was born, with the initial public offering (IPO) of Netscape.[58] The day the stock began to trade, it had rocketed from US$28 a share to US$71 a share: the IT boom was on and – as a stock-market bubble started to inflate – was rivalling the emerging markets boom. The introduction of the 1996 Telecommunications Act also had a profound impact on the regulatory and competitive environment, helping stimulate a wave of corporate mergers in the ICT sector. There is a longstanding pattern whereby periods of technological innovation are followed by outbreaks of financial exuberance and bubbles, and for many observers it was clear that the United States was about to repeat the experience.[59] In December 1996, Greenspan delivered his famous warning about the dangers of 'irrational exuberance', but subsequently seemed to end up drinking from the same Kool-Aid as the new-economy hype continued to gather momentum.

'Capital punishment' and the perils of global finance

Global finance was generating significant risks to go alongside the lucrative opportunities. What should have been an early warning signal arrived in 1994 in the shape of the Tequila crisis, identified by then US Treasury Secretary Robert Rubin as the 'first crisis of the Twenty-first Century.'[60] Mexico was in large part a victim of a

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[56] Stephen D. Oliner, Daniel E. Sichel and Kevin J. Stiroh, Explaining a productive decade. *Brookings Papers on Economic Activity* (1) 2007. Also Stephen D. Oliner and Daniel E. Sichel. Explaining a productive decade: An update. Paper presented at the Symposium on the Outlook for Future Productivity Growth Federal Reserve Bank of San Francisco. San Francisco, 14 November 2008.
[57] Joseph Stiglitz, *The Roaring Nineties: Why We're Paying the Price for the Greediest Decade in History.* London, Penguin, 2003.
[58] Greenspan, *The Age of Turbulence: Adventures in a new world.*
[59] Carolotta Perez, *Technological revolutions and financial capital: The dynamics of bubbles and golden ages.* Cheltenham, Edward Elgar, 2003.
[60] Robert E Rubin and Jacob Weisberg, *In an uncertain world.* New York, Random House, 2004.

self-fulfilling investor panic.[61] True, with the benefit of hindsight there were clear problems: Mexico was running large current account deficits, and was reliant on heavy foreign borrowing, much of it short-term. The Chiapas uprising in January 1994 and assassination of presidential candidate Luis Colosio also added political risk to the mix. But the big problem appears to have been a liquidity problem – Mexico did not have not enough reserves relative to its stock of short-term debt – which left it vulnerable to a sudden investor panic. It was also the case that Mexico was a victim of decisions taken elsewhere: specifically, the US Fed's decision to increase interest rates significantly changed foreign investor incentives.[62]

Yet within seven months of the Tequila crisis Mexico had regained access to international capital markets, and within two years, the world economy seemed to be back on track. In any financial crisis there are typically competing explanations involving blaming the shortcomings of the debtor or the creditor. Usually, both explanations have some merit, but in the case of the Mexican crisis, the main policy lessons drawn at the time were of the 'blame the debtor' variety. As a result, what could perhaps have served as a wake-up call about the crisis-prone nature of the new global financial order became instead a source of complacency, with the lessons drawn being about Mexican-specific vulnerabilities and the apparent efficacy of the tools that the IMF and the US Treasury had at their disposal.[63]

Rubin himself notes that in 1995 he had referred to the Mexican crisis as a 'very low probability event', but his view subsequently changed.

> 'The likelihood of a contagious crisis emanating from problems in any one developing country may ordinarily be small. But modern capital markets . . create a seemingly inevitable tendency toward periodic destabilization that is difficult to anticipate and prevent.'[64]

Even more compelling evidence for the instability hypothesis duly arrived a couple of years later in the form of the Asian financial crisis.[65] Once again, as with the Mexican crisis it was possible to interpret the crisis largely in terms of domestic failings on the part of the victim economies. Especially since there clearly were significant domestic weaknesses in terms of corporate governance and shaky financial sectors, along with over-investment and widespread moral hazard.[66] But it also seemed quite clear that, as with Mexico, a big part of the problem was a degree of

[61] Jeffrey D Sachs, Aaron Tornell and Andres Velasco, The collapse of the Mexican peso: What have we learned? *Economic Policy* 11 (22) 1996.
[62] Guillermo Calvo, Leonardo Leiderman and Carmen M Reinhart, Inflows of capital to developing countries in the 1990s. *Journal of Economic Perspectives* 10 (2) 1996.
[63] Paul Krugman, *The return of Depression Economics.* London, Allen Lane / The Penguin Press, 1999. According to Krugman, 'both Mexico and Washington simply got lucky.'
[64] Rubin and Weisberg, *In an uncertain world*.
[65] For a good description of the crisis, see Paul Blustein, *The Chastening: Inside the crisis that rocked the global financial system and humbled the IMF.* New York, Public Affairs, 2003.
[66] See for example Giancarlo Corsetti, Paolo Pesenti and Nouriel Roubini, Paper Tigers? A model of the Asian crisis. *European Economic Review* 43 (7) 1999.

inherent instability on the part of international capital flows, and more specifically, a tendency to succumb to self-fulfilling panics.[67]

The crisis of 1997-98 not only rocked the East Asian region but also had repercussions for emerging markets from Brazil to Russia, culminating in the first sovereign default of a nuclear (ex-)superpower on 17 August 1998.[68] There were adverse consequences for the United States, too, where the failure of the hedge fund Long-Term Capital Management (LTCM) seemed briefly to risk creating a full-scale financial panic. In the event, however, the New York Fed was able to arrange a rescue for LTCM and following a series of rate cuts by the Fed, confidence had been restored.[69] Indeed, the share market was setting new records by the end of the year.

The triumph of the market, one decade on

One lesson to be learned from the Asian financial crisis was about the perils of global finance and the vulnerability of emerging markets to 'sudden stops' in capital inflows.[70] But it was also possible to draw another, different lesson. Instead of flighty capital markets, one could blame Asian crony capitalism, and instead of the instability of global finance, one could see – again – state failure.

As Brink Lindsey has pointed out, the East Asian economic model that had successfully combined competition and interventionism over the previous decades gave the region a 'dualistic role' in the economic policy debates of the 1980s and 1990s. During the earlier decade, the region was often depicted as following a successful, market-oriented alternative model to that pursued both by the communist economies of the Second World and the more inward-looking states of Latin America. But by the 1990s, those still looking for a policy alternative to the renewed focus on markets had turned to an East Asia where there was a greater role for industrial policies and the guiding hand of the government than was allowed for in the cruder (and some not so crude) versions of the Washington Consensus. As Lindsey puts it, while East Asia's rise may have confounded the predictions of the 'true believers in state-led economic development' in the earlier period, subsequently the East Asian model became 'the last great refuge for those very same true believers.'[71] And of course it also offered a home-grown alternative to the Western model for proponents of 'Asian values' from within the region.[72]

The Asian financial crisis, and Japan's ongoing slow-motion economic collapse before it, were severe blows for this kind of worldview. Lindsey again:

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[67] Steven Radelet and Jeffrey Sachs, The East Asian Financial Crisis: Diagnosis, remedies, prospects. *Brookings Papers on Economic Activity* 28 (1) 1998.
[68] Another nuclear power followed shortly afterwards, when Pakistan missed an interest payment in November 1998.
[69] According to Krugman 'even now Fed officials are not quite sure how they pulled this rescue off.' Krugman, *The return of Depression Economics*.
[70] Guillermo Calvo, Capital flows and capital market crises: The simple economics of sudden stops. *Journal of Applied Economics* 1 (1) 1998.
[71] Brink Lindsey, *Against the Dead Hand: The uncertain struggle for global capitalism.* New York, Wiley, 2002.
[72] See for example Kishore Mahbubani, The Pacfic Way. *Foreign Affairs* 74 (1) 1995.

> 'IN 1990 THE BUBBLE FINALLY BURST. WITHIN A FEW YEARS, THE SAD STATE INTO WHICH JAPANESE ECONOMY HAD FALLEN WAS, AT LAST, UNDENIABLE. AND AFTER A FEW YEARS MORE, THE OUTBREAK OF THE ASIAN FINANCIAL CRISIS REVEALED DEEP STRUCTURAL FLAWS IN ECONOMIES UP AND DOWN THE PACIFIC RIM. THE EAST ASIAN MODEL WAS DEAD. AND WITH ITS DEMISE, NOT A SINGLE VIABLE MODEL OF CENTRAL PLANNING WAS LEFT ON THIS EARTH.'[73]

Not surprisingly, however, East Asia's policymakers drew quite different lessons from this period. In particular, given that the 'capital punishment' levelled by the economic crisis seemed to be extremely disproportionate relative to the economic 'crimes' of which they were now accused, many regional policymakers came to the conclusion that global financial markets presented major economic (and political) risks – in 1998, Roger Altman, a former US Treasury Official, had described global capital markets as the 'nukes of the '90s' given their potential destructive power.[74] They also concluded that relying on the IMF for protection against their violent fluctuations was the height of folly.[75] Instead, policymakers decided self-insurance in the form of the accumulation of large stocks of foreign exchange reserves was the way to go. This was a policy choice that would be supported by the maintenance of competitive exchange rates and the emergence in the post-crisis economies of a gap between savings and investment due to a decline in the latter, and which anyway dovetailed rather nicely with the region's existing predisposition towards a quasi-mercantilist focus on export-promotion.

Still, as of the end of the 1990s it was quite possible to think that the world economy had witnessed not just the triumph of capitalism over communism, but also the victory of the American version of capitalism over its Asian and European competitors.[76] The dominance of Washington, and of the IMF, was captured in a famous January 1998 photograph which depicted Michel Camdessus, then Managing Director of the Fund, standing to one side with his arms folded and looking on as Indonesia's President Soeharto signed on to an IMF agreement. The following year, on 15 February 1999, *Time* magazine's cover depicted the 'three marketeers' – Alan Greenspan, Robert Rubin and Larry Summers – under the title 'The Committee to Save the World'.

One decade on from the fall of the Wall, and the United States looked to be the undisputed winner of the Age of Globalisation.

[73] Lindsey, *Against the Dead Hand: The uncertain struggle for global capitalism*.
[74] Altman is cited in Gilpin, *The challenge of global capitalism: the world economy in the 21st century*.
[75] Takatoshi Ito, Asian currency crisis and the International Monetary Fund 10 years later: Overview. *Asian Economic Policy Review* 2 (1) 2007.
[76] Stiglitz, *The Roaring Nineties: Why We're Paying the Price for the Greediest Decade in History*.

The golden age of central banking

In a global economy where the role of the state in directing economic affairs seemed to have fallen right out of fashion, there was one striking exception: the world's central banks. In a survey of the world economy in September 1999, *The Economist* magazine noted that 'the past decade has seen the biggest bull market of all time – not just in equities, but in central banking, too.'[77] The origin of the triumph of the central bankers was the Great Inflation of the 1970s and the subsequent disinflation of the 1980s. The arrival of Paul Volcker as Chairman of the US Federal Reserve in 1979 is widely seen as marking a decisive turning point in the central banks' war on inflation, with the Volcker Fed successful in bringing down the US inflation rate to 4% by 1984. The Greenspan Fed then succeeded in pushing inflation even lower, reaching a rate of below 2% by the early 2000s, a rate that Greenspan described as 'effective price stability'.[78] The success of disinflation in the US was matched elsewhere in the world economy, with average inflation worldwide falling from 14% in the early 1980s to 4% by the early 2000s.[79]

> 'The past 20 years have spanned central banking's golden age . . . In an era when state planning fell into disrepute, here was one lot of technocrats who actually knew what they were talking about.'[80]

This success in dealing with inflation was associated with two major changes in the central banks and their operations: central bank independence and the rise of inflation targeting.

The shift to formal independence started in the same year as the fall of the Berlin Wall. Up until the late 1980s, only the US Fed, the German Bundesbank, and the Swiss National Bank enjoyed legal independence.[81] But beginning with the Reserve Bank of New Zealand (RBNZ) in 1989, and then spreading to include the Reserve Bank of Australia (RBA), the Bank of England, the Bank of Japan and the newly formed European Central Bank (ECB), a range of other central banks were subsequently granted a much greater degree of independence from their erstwhile political masters.[82] According to measures of legal independence, for example, by 2003 central banks had become far more independent than they had been in the 1980s,

[77] The Economist, Navigators in troubled waters. Survey: The world economy. *The Economist*, 23 September 1999.
[78] Marvin Goodfriend, How the world achieved consensus on monetary policy. *Journal of Economic Perspectives* 21 (4) 2007.
[79] Ibid.Citing Kenneth S Rogoff, *Globalization and disinflation* (paper presented at the symposium sponsored by the Federal Reserve Bank of Kansas City on Monetary Policy and Uncertainty: Adapting to a changing economy, Jackson Hole, Wyoming, 28-30 August 2003).
[80] The Economist, Only human. Survey: The world economy. *The Economist*, 18 October 2007.
[81] Economist, Navigators in troubled waters. Survey: The world economy.
[82] Central bank independence is typically broken down into two types: (1) target independence or the right to set its own targets and objectives and (2) operational independence or the right to pursue its objectives as it sees fit. In practice, no central bank has (1), and (2) is a matter of degree, rather than a strict on/off choice.

with their liberation even more impressive in developing economies than in developed ones.[83]

The second big development in the war on inflation was the rise of inflation targeting (IT), a policy approach which came to be seen as the best practice in 21st century monetary policymaking.[84] The IT approach is characterised by 'the announcement of official target ranges for the inflation rate at one or more horizons, and by explicit acknowledgment that low and stable inflation is the overriding goal of monetary policy.'[85] Once again the pioneer was the RBNZ, which adopted an IT framework in 1989/90. By 2009, at least 29 countries had introduced IT frameworks, including the RBA, the Bank of England, and the Bank of Canada. Starting in the late 1990s, the central banks of a number of major emerging markets, including Brazil, Chile, Indonesia, Korea, Mexico and Turkey also adopted their own versions of the approach.[86] Moreover, the list of inflation targeters became even more impressive once allowance was made for closely related approaches: the US Fed could be said to be following a form of implicit inflation targeting, while the ECB operated a hybrid system which incorporated both an inflation target and a focus on money growth rates.[87]

The transformation in the institutions of monetary policy implied by these two developments reflected a combination of factors.[88] The globalisation of finance in particular seems to have increased the importance of central bank independence for emerging markets as a signal of macroeconomic responsibility to international investors, turning into a crucial part of the tailoring for Friedman's 'golden straitjacket'. The failure of other approaches – particularly fixed exchange rate pegs – to provide nominal anchors also provided some impetus. There was also theoretical support. By the late 1990s there was a 'working consensus on the core principles of monetary policy'.[89] These principles included 'a priority on price stability; the targeting of core rather than headline inflation; the importance of credibility for low inflation; and pre-emptive interest rate policy supported by transparent objectives and procedures.'[90] Indeed, by the mid-2000s it was possible to go further, and see the emergence of a new international monetary system (or 'non-system') that encompassed the majority of the OECD along with several major emerging markets, combining relatively free capital mobility and floating exchange rates with independent, inflation-targeting central banks.[91]

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[83] Christopher Crowe and Ellen E Meade, The evolution of central bank governance around the world. *Journal of Economic Perspectives* 21 (4) 2007.
[84] Stephen Cecchetti, *What is inflation targeting?* , VoxEU.org, 1 July, 2006.
[85] Ben S. Bernanke and Frederic S Mishkin, Inflation targeting: A new framework for monetary policy? *Journal of Economic Perspectives* 11 (2) 1997.
[86] Scott Roger, *Inflation targeting at 20: Achievements and challenges.* IMF Working Paper WP/09/236. Washington DC, International Monetary Fund, October, 2009.
[87] Goodfriend, How the world achieved consensus on monetary policy.
[88] See Alex Cukierman, *The revolution in monetary policymaking institutions.* VoxEU.org, 27 September, 2007.
[89] Goodfriend, How the world achieved consensus on monetary policy.
[90] Ibid.
[91] Andrew K Rose, A stable international monetary system emerges: Inflation targeting is Bretton Woods, reversed *Journal of International Money and Finance* 26 (5) 2007.

Bubble trouble

Despite this degree of consensus on best practice, there still remained areas of significant policy dispute. Prominent among these was a fierce debate over the best way to deal with major increases in asset prices.[92]

While the Asian financial crisis of 1997-98 brought an abrupt end to the 1990s emerging market boom in international capital markets, it ended up adding more fuel to the ongoing ICT boom centred on the US economy. Capital flight from emerging markets into the United States helped push down long-term interest rates and further support the rise in the share market, while the collapse in the Asian economies and in their exchange rates also encouraged investment in the ICT sector through the fall in the price of Asian exports of electronics. That investment was then given an additional boost by the approach of the turn of the century and widespread concerns over an anticipated Y2K problem that was widely predicted to risk catastrophic consequences unless corrected.

As US share prices continued to climb, looming Y2K threat or not, the debate about whether policymakers should respond also gathered pace. By 1999, the Greenspan Fed had decided that its best policy option was benign neglect as asset prices inflated, while standing ready to mop up the mess if and when the bubble burst. In Greenspan's own words:

> 'After thinking a great deal about this, I decided that the best the Fed could do would be to stay with our central goal of stabilizing product and services prices. By doing that job well, we would gain the power and flexibility needed to limit economic damage if there was a crash. That became the consensus within the FOMC. In the event of a major market decline, we agreed, our policy would be to move aggressively, lowering rates and flooding the system with liquidity to mitigate the economic fallout. But the idea of addressing the stock-market boom directly and pre-emptively seemed out of our reach.'[93]

Shortly after Greenspan had presented a version of this argument to Congress in 1999, the Fed started to tighten monetary policy anyway, raising rates in order to take back some of the easing that it had delivered during the 1997-98 financial crisis. But share prices continued to rise, reaching their peak in March 2000.

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[92] For the debate on how central banks should respond to asset prices see Adam Posen, Why central banks should not burst bubbles. *International Finance* 9 (1) 2006 and Nouriel Roubini, Why central banks should burst bubbles. *International Finance* 9 (1) 2006. For an influential contribution to pre-GFC central bank orthodoxy on this point, see Ben S. Bernanke and Mark Gertler, Should central banks respond to movements in asset prices? *American Economic Review* 91 (2) 2001.

[93] Greenspan, *The Age of Turbulence: Adventures in a new world*. p. 201.

Once calendars had ticked over to the year 2000 and Y2K millennia mania had faded away, however, the dot-com bubble started to deflate from April 2000 as rationality made a long-delayed return to equity valuations. The Fed reacted as Greenspan had planned, cutting rates in order to cushion the blow to activity. It started easing in 2001, lowering rates by a total of 550bp in a series of steps until mid-2003, when the Fed funds rate reached just 1%, which was where it remained until mid-2004.[94] Meanwhile, as the IT boom receded, the US economy was hit by a wave of corporate scandals – Enron, WorldComm, Tyco, Global Crossing – which revealed major failures of US corporate governance and hence placed a rather different complexion on the earlier Western criticisms leveled at Asian crony capitalism. The resulting regulatory response included the passing of the Sarbanes-Oxley Act in 2002, and in a foreshadowing of recent commentary there was much discussion of inappropriate incentives for corporate America and the dangers of excessive greed.[95]

The Fed's decision to ease monetary policy proved successful in boosting economic activity and the Greenspan doctrine of an asymmetric approach to asset bubbles duly received a major boost. One of the positive side-effects supposedly achieved by the increase in central bankers' credibility was this ability to respond to adverse economic shocks with aggressive interest rate policy.[96] But as low interest rates began to fuel another run-up in US asset prices – this time concentrated in the interest-rate sensitive housing sector – some observers began to decry the Greenspan Fed as a 'serial bubble blower'. Others fretted about the destabilising consequences for financial market expectations of a so-called 'Greenspan Put', as investors expected the Fed would always act (successfully) to prevent the market falling, but would not act to stop it rising.[97] Economists at the BIS, in particular, worried that by following Greenspan's approach of focusing only on product and services prices, and by neglecting asset prices, the Fed was making a significant policy mistake, having been rendered unduly complacent by the subdued nature of the former.[98]

Enter the BRICs

While the United States was reaping the mixed benefits of Greenspanomics, the emerging markets growth story that had been temporarily derailed by the crises of the late 1990s was getting back on track. The leading players had now changed, however. Globalisation in general and the accelerating international division of labour in particular were now contributing to a period of extremely rapid catch-up for some of the world's largest developing countries, with China in pole position. The latter's emergence as the world's factory was given an international stamp of approval when Beijing was granted WTO membership at the end of 2001. China's share of

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[94] As well as responding to the punctured dot-com bubble, the Fed was also responding to the blow to confidence occasioned by the September 11 2001 terrorist attacks and the geopolitical events that followed.

[95] See for example John Cassidy, The Greed Cycle. *The New Yorker*, 23 September 2002.

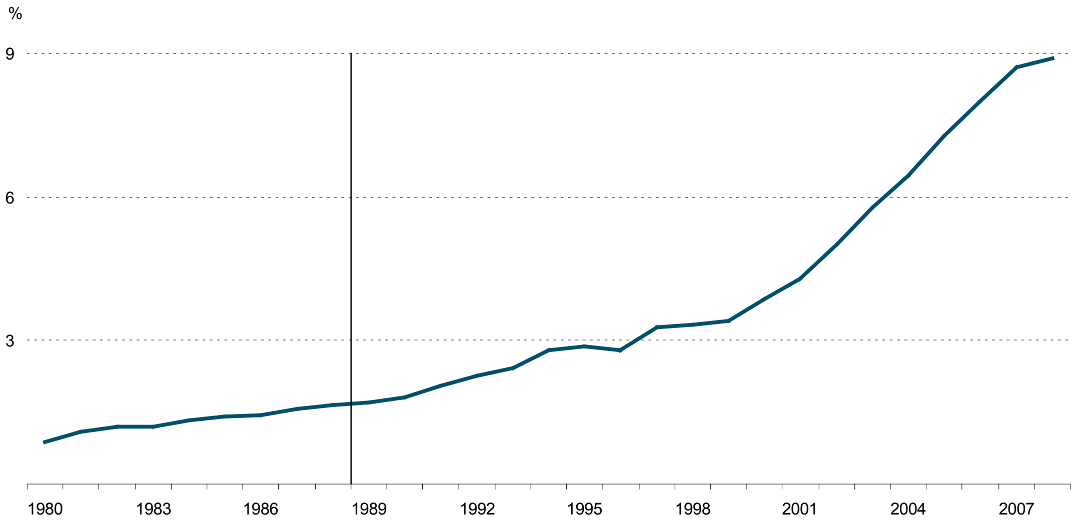
[96] Goodfriend, How the world achieved consensus on monetary policy.

[97] Marcus Miller, Paul Weller and Lei Zhang, Moral hazard and the US stock market: Analysing the "Greenspan Put". *Economic Journal* 112 (478) 2002.

[98] Claudio Borio and William R White, *Whither monetary and financial stability? The implications of evolving policy regimes* (paper presented at the Symposium sponsored by the Federal Reserve Bank of Kansas City on Monetary policy and uncertainty: adapting to a changing economy, Jackson Hole, Wyoming, 28-30 August 2003). See also William R White, *Is price stability enough?* BIS Working Papers No 206. Basel, Bank for International Settlements, April, 2006.

world merchandise exports had risen from just 1.7% of the world total in 1989 to 4.3% by 2001, and in the next seven years it jumped again, climbing to 8.9% by the end of 2008, in second place behind Germany (Figure 7).

Figure 7: China's share of world merchandise exports (1980-2008)



Source: WTO database

China's impressive economic success brought an increased focus on the prospects for globalisation to turbo-charge growth in the world's other big emerging markets. With India, the world's other billion-people-plus economy, also demonstrating signs of having shifted onto a significantly higher growth path, the search was on for emerging markets likely to be both large enough and economically successful enough to shape the international economic environment.[99] Goldman Sachs identified four such economies – Brazil, Russia, India and China – and coined the acronym BRICs. The BRICs concept was made prominent by an October 2003 paper *Dreaming with BRICs: the path to 2050* which argued that taken together the four emerging markets would become a major force in the world economy.[100]

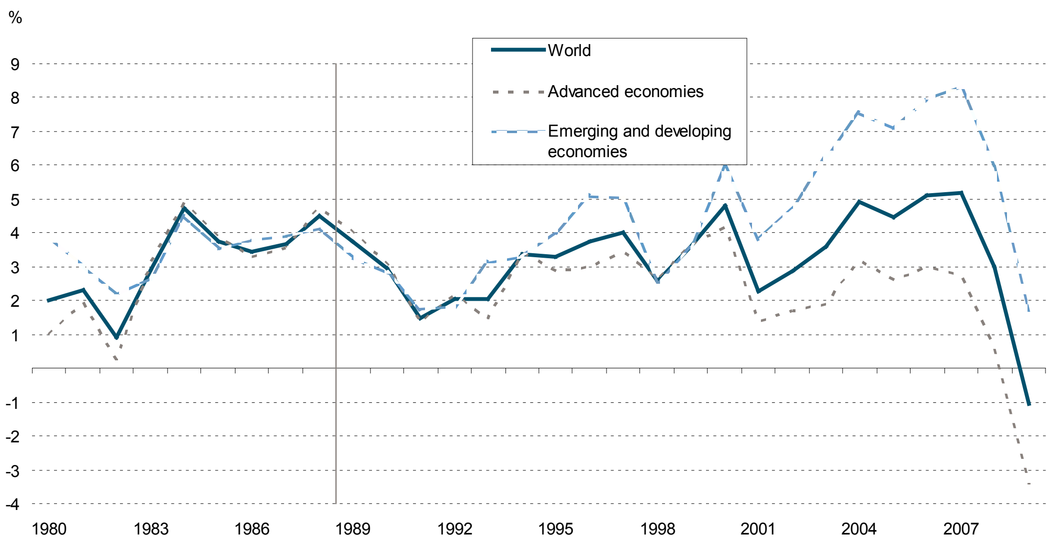
Although the hyperbole regarding the BRICs may have been overdone, the success of China in particular in sustaining double-digit economic growth for more than two decades has nevertheless had a profound influence on the international economic environment. The economic take-off in China and other emerging markets at the start of the current century opened up a significant gap in economic growth performance between the developed and developing worlds (Figure 8), and this in turn encouraged

[99] For one take on India's economic take-off, see Mark Thirlwell, *India: the next economic giant.* Lowy Institute Paper 01. Sydney, Lowy Institute for International Policy, 2004.
[100] Dominic Wilson and Roopa Purushothaman, *Dreaming with BRICs: the path to 2050.* Goldman Sachs Global Economics Paper No.99, 2003.

the emergence of a new concept to complement the idea of the BRICs: the theory of *decoupling*, which proposed that such was the shift of growth momentum in favour of the emerging markets that they would increasingly become independent poles of growth in the global economy, reducing their reliance on the developed world as an external driver of their economic performance.[101]

Emerging market economic success now helped spur a second great wave of private capital inflows, which started to build from around 2002. While there were some parallels with the previous surge that had been brought to an abrupt end by the Asian financial crisis, there were important differences too. These included much stronger current account positions for most emerging markets along with substantial stocks of foreign exchange reserves which had been built up as self-insurance by developing country policymakers. There was also a shift in the composition of inflows to a relatively more important role for net FDI.[102] In turn, that rise in FDI, by bolstering access to best-practice technology and managerial techniques, further encouraged the complementary processes of economic catch-up and the further deepening of the international division of labour. The result was the onset of what can be described as a Great Convergence.

Figure 8: Real GDP growth (1980-2009)



Source: International Monetary Fund (IMF), *World Economic Outlook: Sustaining the recovery*. (2009)

Learning to live with the Great Convergence

In the first chapter of his book *A Farewell to Alms*, Gregory Clark shows how the basic outline of world economic history is simple enough to be contained in one

[101] M. Ahyan Kose, Christopher Otrok and Eswar Prasad, *Dissecting the decoupling debate.* VoxEU.org, 4 October, 2008. See also Thomas Helbling, Peter Berezin, M. Ahyan Kose, Michael Kumhof, Doug Laxton and Nikola Spatafora, Decoupling the Train? Spillovers and Cycles in the Global Economy, in *World Economic Outlook: Spillovers and Cycles in the Global Economy.* Washington DC, International Monetary Fund, 2007.
[102] See chapter 3 in International Monetary Fund (IMF), *World Economic Outlook: Globalization and Inequality.* World Economic and Financial Surveys. Washington DC, International Monetary Fund, October, 2007.

diagram.[103] Picture a chart plotting world income per person over time. Before the start of the nineteenth century, the world was caught in a Malthusian trap, defined by the absence of any trend growth in average income per person, and so the chart is a relatively flat line.[104] After 1800, the industrial revolution brought sustained gains in income per person for a sub-group of countries by triggering the onset of modern economic growth. So the line moves dramatically upwards. At the same time, this income per person line bifurcates, as the rest of the world gets left behind. The growing gap in living standards that results has been described as the Great Divergence.[105]

The relatively recent onset of rapid economic growth in India and (especially) China, countries which together account for more than one in three of the world's population, can therefore be seen a kind of Great Convergence that has started to unwind the previous divergence in income per head.[106]

In terms of human welfare, probably the most fundamental impact of the onset of this Great Convergence was the mitigation of global poverty, where emerging Asia's success – and more particularly China's success – in pushing up the pace of economic growth has had major implications. According to estimates by World Bank economists Shaohua Chen and Martin Ravallion, in 1990 about 41½% of the total population of the developing world (that is, more than 1.8 billion people) were living below the PPP$1.25 poverty line.[107] By 2005 that share had fallen to about 25% of the developing world's population (a still high 1.4 billion, or more than one in five of the world's population). This fall in global poverty was mainly a Chinese story: in 1990, 683 million Chinese (60% of China's population) were living below PPP$1.25 a day: by 2005 the number had been slashed to 208 million (or just 16%).[108]

The Great Convergence also contributed to a dramatic shift in relative prices. Crudely put, the integration of China and the other big emerging markets into the world economy put downward pressure on the prices of the goods and services that these countries produced and exported, and upward pressure on the prices of the goods and services that they consumed and imported. The first of these two effects was also the

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[103] Gregory Clark, *A farewell to alms: A brief economic history of the world.* Princeton, Princeton University Press, 2007. The chart is Figure 1.1.

[104] Angus Maddison's work suggest that there was in fact significant growth in income per head between 1AD and 1820, albeit at a *much* slower rate than after than Industrial Revolution. Angus Maddison, *The world economy: a millennial perspective.* Paris, Development Centre of the Organisation for Economic Co-operation and Development, 2001.

[105] Kenneth Pomeranz, *The great divergence: China, Europe and the making of the modern world economy.* Princeton, Princeton University Press, 2000. See also Lant Pritchett, Divergence, big time. *Journal of Economic Perspectives* 11 (3) 1997.

[106] For a longer discussion of the Great Convergence, see Mark Thirlwell, *The Great Convergence.* International Economy Comments #4. Sydney, Lowy Institute for International Policy, 9 November, 2010.

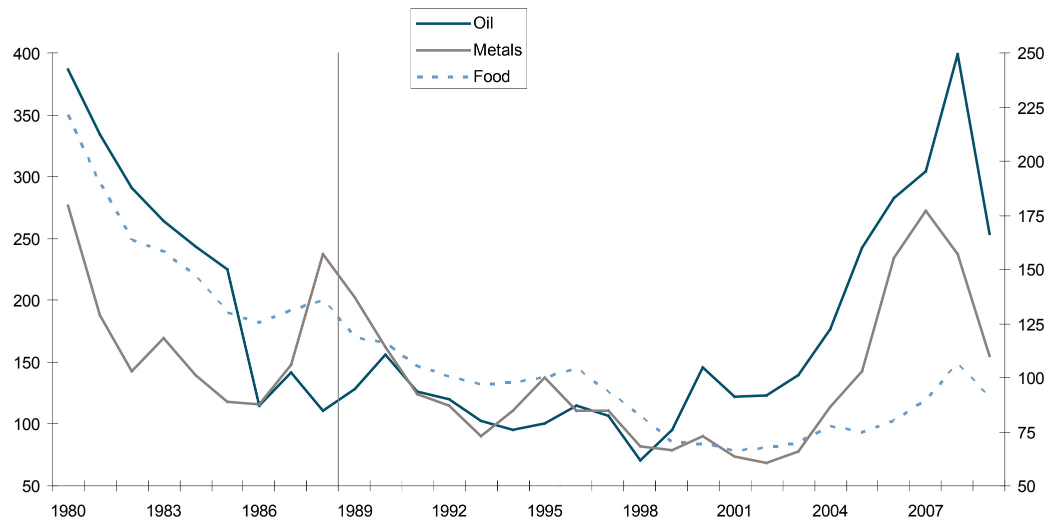
[107] The $1.25 a day poverty line is the mean of the national poverty lines for the poorest 15 countries in terms of consumption per capita. The new estimates from Chen and Ravallion reflect revisions to the estimates of PPP based on the 2005 International Comparison Program, a new compilation of poverty lines for developing countries, and new household surveys. Shaohua Chen and Martin Ravallion, *The developing world is poorer than we thought, but no less successful in the fight against poverty.* Policy Research Working Paper 4703. Washington DC, World Bank, 2008.

[108] For India the drop in share is from 51% to 41.6%, but the absolute number of people living below the $1.25 poverty line has risen from 435.5 million to 455.8 million. Ibid.

first to make itself felt though the global economy, as China's hyper-competitiveness placed downward pressure on the price of manufactured consumer goods: in 2004, acording to the US magazine *Business Week*, the 'three scariest words in US industry' were 'The China Price'.'[109]

While 'The China Price' might have been bad news for competing manufacturers, it was good news for consumers, and it was also good news for central banks, as increased competition in the global economy appeared to be keeping overall inflation in check, and hence contributing to the Great Moderation (discussed below). Globalisation certainly appeared to have made central bankers' jobs easier, as falling import prices, tougher international competition and a reduction in workers' bargaining power all contributed to a diminution in price pressures, and hence a fall in the cost of fighting inflation. By helping central banks do their jobs, the new environment also increased their credibility.[110] As Ken Rogoff put it, globalisation appeared to have delivered a 'spectacularly favourable milieu' for monetary policy.[111] It was this same favourable inflation environment that enabled the Greenspan Put, by allowing the Fed to cut interest rates in response to adverse financial shocks without fear of inflationary fallout.[112]

Figure 9: Real commodity prices (Index, 1995 = 100)



Source: International Monetary Fund (IMF), *World Economic Outlook: Sustaining the recovery*. (2009)

As the decade wore on, however, the second part of the relative price shift kicked in, in the form of sharp nominal and real increases in commodity prices, especially for oil.[113] By the time they reached their peak in the first half of 2008, the real prices of energy and metals had more than doubled over the course of the previous five years,

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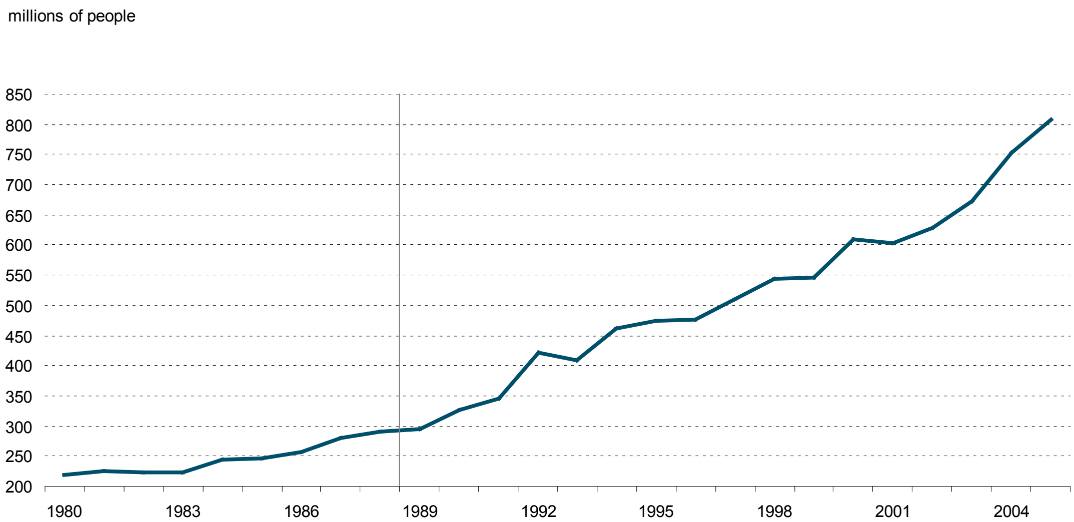
[109] Cited in Frieden, *Global capitalism: its fall and rise in the twentieth century*.
[110] See for example The Economist, Weapons of mass disinflation. *The Economist*, 14 September 2006. Also The Economist, A foreign affair. *The Economist*, 20 October 2005.
[111] Kenneth S Rogoff, The myth of central banks and inflation. *Financial Times*, 29 August 2006. Also Rogoff, *Globalization and disinflation* .
[112] Martin Wolf, Fed must weigh inflation against recession. *Financial Times*, 25 September 2007.
[113] For a discussion of the factors behind the increase in commodity prices, see Adam Cagliarini and Warwick J McKibbin, *Global relative prices shocks: The role of macroeconomic policies.* Reserve Bank of Australia Conference: Inflation in an Era of Relative Price Shocks 17–18 August, 2009.

and the real price of food had risen by more than 75% (Figure 9). The 2003-2008 commodity boom was longer, stronger and broader than any previous commodity boom in the 20th century: average commodity prices doubled in US dollar terms (in part boosted by dollar depreciation) compared to a peak-to-trough price increase of about 60% in the 1973-74 boom, and this time around the price rises covered a wider range of commodities and lasted longer than the price booms of the 1950s and the 1970s.[114] This surge in commodity prices challenged the benign inflationary environment of the earlier part of the decade, and policymakers started to worry that globalisation and the Great Convergence could become a headwind, rather than a tailwind, for future disinflationary efforts.[115]

Figure 10: The export-weighted global labour force



Source: International Monetary Fund (IMF), *World Economic Outlook: Spillovers and Cycles in the Global Economy*. (2007)

Globalisation and the rise of the BRICs also appeared to be exerting a significant influence on other critical relative prices in the world economy: that of labour relative to capital and of unskilled labour relative to skilled labour. The simple version of the argument runs as follows: the economic integration of populous emerging markets like China and India represented a dramatic increase in the effective global labour force (Figure 10). Since these economies were also relatively capital poor, the consequence was a big fall in the global ratio of capital to labour, which in turn implied a fall in returns to labour and a rise in returns to capital, a prediction which seemed to be borne out in the shift in the relative share of income going to capital and labour in the developed economies.[116] At the same time, there was a parallel increase

[114] Chapter 2 in World Bank, *Global economic prospects 2009: Commodities at the crossroads.* Washington DC, World Bank, 2008.

[115] For example Donald L Kohn, The effects of globalization on inflation and their implications for monetary policy. Speech by Governor Donald L Kohn at the Federal Reserve Bank of Boston's 51st Economic Conference. (Chatham, Massachusetts: 2006). Also Greg Ip, Dallas Fed's Fisher changes his tune on globalization's inflation effects. *The Wall Street Journal*, 6 June 2007. And Austin Ramzy, China's next big export: inflation. *Time*, 11 October 2007.

[116] Richard B Freeman, What really ails Europe (and America): the doubling of the global workforce. *The Globalist*, 3 June 2005. For trends in the labour share of income, see Anastasia Guscina, *Effects of globalization on labor's share in national income*. IMF Working Paper WP/06/294. Washington DC, International Monetary Fund, 2006.

in the supply of low-skill relative to high-skill workers, a shift which exacerbated the ongoing rise in wage differentials being driven by skill-biased technological change.[117]

SOBs, SOEs and SWFs: the rise of State Capitalism

The Great Convergence had yet another profound impact on the international economic environment: it redistributed economic weight and power towards a group of economies that awarded a relatively larger role to the state in economic affairs than had become common in the developed world.[118] State-owned enterprises (SOEs) accounted for around 5% of the total economy (measured by output, value added or employment) of an average OECD economy, while in the largest emerging economies the share of SOEs ranged from 10% to 40%.[119] This shift was particularly striking since it ran directly counter to the post-1989 trend of the triumph of markets over government. For many observers, the growing importance of SOEs and their like signalled the emergence of a potential new competitor to the hitherto triumphant market-based systems of the West, a competitor that could be loosely described as state capitalism.[120]

Of course, state intervention in the economy had hardly disappeared with the fall of the Berlin Wall. Oil had long been a sector where developing countries had been keen on state ownership, for example. But the growing importance of national oil companies (NOCs) was increasingly apparent. By 2006 they accounted for all of the world's top ten oil companies, as ranked by proven reserves.[121] On some estimates, the share of global oil reserves still in private-sector hands had fallen to 13% or less, with the dominance of the NOCs expected to grow even further since most forecasts had oil extraction declining in those countries still open to commercial players.

A more recent feature of the international economic environment was the growing importance of state-owned, publicly traded companies. This trend was driven by the partial privatisation in emerging markets of government enterprises in banking, oil and gas, infrastructure, transportation, where private investors were typically allowed to take a minority of shares, while governments retained the majority of the company and controlled decision-making. A particularly notable example of this trend was the case of PetroChina, which following the world's largest Initial Public Offering (IPO) in 2007 then became the world's largest company by market value.[122] Post-IPO, only around 12% of shares were in public hands, with ultimate control resting with its state-owned parent, China National Petroleum.

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[117] David H Autor, Lawrence F Katz and Melissa S Kearney, The polarization of the US labor market. *American Economic Review* 96 (2) 2006. Paul Krugman, Trade and wages, reconsidered. *Brookings Papers on Economic Activity* 39 (1) 2008.

[118] Note that this is a point about cross-country developments rather than developments over time. In China, for example, the share of SOEs in GDP has declined from more than three-quarters in the late 1970s to around one-third today.

[119] OECD, *The corporate governance of SOEs operating abroad.* Paris, Organisation for Economic Cooperation and Development, 2009.

[120] See for example Ian Bremmer, State Capitalism comes of age: The end of the free market? *Foreign Affairs* 88 (3) 2009. Expanded into Ian Bremmer, *The end of the free market: Who wins the war between states and corporations?* New York, Portfolio, 2010.

[121] Actually, top 13. The Economist, Oil's dark secret. *The Economist*, 10 August 2006.

[122] Xinhua, PetroChina becomes world's largest listed company. *Xinhua*, 5 November 2007.

Increasingly, the world's largest companies by market value included government-controlled enterprises.

> 'Only four years ago, the world's 10 largest listed companies in terms of market value were private commercial entities domiciled in the US and Europe. Today, five of the top 10 publicly traded corporations are government controlled. Three of these are Chinese, including PetroChina. Another is Russian (Gazprom) and one Brazilian (Petrobras).'[123]

Perhaps the most striking symbol of the rise of state capitalism, however, came in the form of Sovereign Wealth Funds (SWFs). By 2007, it was apparent that SWFs were becoming an increasingly important player in global finance, and on most forecasts they were expected to be even more important in the future. According to one much-cited report of that year, for example, SWFs were forecast to grow in size from around US$2.5 trillion as of early 2007 to US$12 trillion by 2015.[124] Arguably, it was the rise of SWFs more than any other development which prompted the most discussion about the emergence of a new form of state capitalism.[125]

Why the increase in SWF wealth? In large part, it was a by-product of the shift in relative prices towards resources described above. Thus the sharp run-up in oil prices which peaked in mid-2008 provided a significant boost to export earnings for Middle Eastern economies that had a relatively long tradition of converting a proportion of their oil revenues into financial assets via SWFs ever since Kuwait established the first modern SWF in 1953.[126] But SWFs also started to look like an appealing option to economies like China, which had been accumulating large stocks of foreign exchange reserves that they were typically investing in low-yielding US denominated securities. As the scale of Beijing's reserves had expanded past any possible self-insurance motive, this traditional investment pattern implied both a rising opportunity cost due to the low rate of return *and* a growing threat of major capital losses in the event of any future fall in the US dollar. It also started to imply an increasing financial burden for the People's Bank of China (PBOC), as a July 2005 decision to move the yuan away from a pure US dollar peg to a currency basket began an appreciation against the dollar, turning potential currency losses into reality, while the gap on returns between the PBOC's sterilisation bonds and the low yields on US government paper meant that sterilisation was becoming an increasingly expensive

[123] Angel Gurria, secretary-general of the OECD, quoted in Kate Burgess, OECD scrutinises state-owned groups. *Financial Times*, 20 June 2008.
[124] Stephen Jen, *How big could sovereign wealth funds be by 2015?* Currencies, Morgan Stanley Research Global, 3 May, 2007 As a result of the GFC, Jen has since revised down this growth forecast to US$10 trillion by 2015. Stephen Jen and Spyros Andreopoulos, *SWFs: Growth tempered - US$10 trillion by 2015.* Currencies, Morgan Stanley Research Global, 10 November, 2008. The IFSL forecasts US$8 trillion by 2015. Marko Maslakovic, *Sovereign Wealth Funds 2009.* IFSL Research. London, International Financial Services London (IFSL), March, 2009.
[125] Gerard Lyons, *State capitalism: The rise of Sovereign Wealth Funds.* Standard Chartered, 15 October, 2007. Robert M Kimmitt, Public footprints in private markets: Sovereign Wealth Funds and the world economy. *Foreign Affairs* 87 (1) 2008.
[126] Andrew Rozanov, Who holds the wealth of nations? *Central Banking Journal* 15 (4) 2005.

business.[127] Creating a SWF to invest the excess reserves in a more aggressive manner was therefore an appealing option.

For some observers, the spectre of an enhanced role for SWFs raised fundamental questions about the role of states in financial markets, including a fear that SWF investment implied a kind of cross-border nationalisation that could undermine the 'logic of the capitalist system'.[128] But it was the decisions by China and Russia to establish SWFs of their own that really grabbed the attention of the developed world, by injecting geopolitics into the debate about SWFs and tapping into fears about the rise of so-called authoritarian capitalists, or state capitalist powers.[129] This interest was enhanced – and the fears tempered somewhat – during the opening months of the GFC in late 2007, when SWFs are estimated to have invested more than US$60 billion in Western financial institutions. The resulting policy debate seemed to involve trading off the benefits of access to SWF capital against concerns about their growing influence, with the former tending to win out in newly straitened times.[130]

It should be noted that the increased involvement of government in international capital flows wasn't only about SWFs. It was also visible in a growing international role for SOEs, state-owned banks (SOBs), and other government-controlled economic actors. In Australia, the successful stock-market raid staged by the Chinese SOE Chinalco on resource company Rio Tinto brought many of these issues together in one package: a bid by an SOE for a major resource company, closely tied to financial backing from a SWF and a SOB.[131] To the extent that a new economic model – state capitalism – was now up and running, the Chinalco bid for Rio seemed a powerful example of what it might entail – at least up until the bid was rejected.

The Great Moderation, Bretton Woods II and the Global Savings Glut

By the middle of the first decade of the current century, the trends described above had combined to produce an international macroeconomic environment that was characterised by two striking features.

The first of these was the *Great Moderation*, a term introduced in a 2002 paper by James Stock and Mark Watson to capture the stylised facts of a significant moderation in the US business cycle and a decline in economic volatility more generally.[132] Variants on this optimistic idea had been around since at least the late 1990s, when observers had started to wonder whether the 'waves of the business cycle [were]

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[127] Ming Zhang and Fan He, China's Sovereign Wealth Fund: Weaknesses and Challenges. *China & World Economy* 17 (1) 2009. Friedrich Wu and Arifin Seah, The rise of China Investment Corporation: A new member of the sovereign wealth club. *World Economics* 9 (2) 2008.

[128] Lawrence H Summers, Funds that shake capitalist logic. *Financial Times*, 29 July 2007.

[129] For example, Azar Gat, The return of authoritarian great powers. *Foreign Affairs* 86 (4) 2007.

[130] Benjamin J Cohen, Sovereign wealth funds and national security: the Great Tradeoff. *International Affairs* 85 (4) 2009.

[131] Richard McGregor, A complex rationale for China's raid on Rio. *Financial Times*, 14 February 2008.

[132] James H Stock and Mark W Watson, *Has the business cycle changed? Evidence and explanations* (paper presented at the symposium sponsored by the Federal Reserve Bank of Kansas City on Monetary Policy and Uncertainty: Adapting to a changing economy, Jackson Hole, Wyoming, 28-30 August 2003). See also Ben S. Bernanke, *The Great Moderation.* Remarks by Governor Ben S. Bernanke at the meetings of the Eastern Economic Association. (Washington DC: 2004).

becoming ripples'.[133] While originally applied to the US economy, the concept seemed to apply more broadly, especially since, in many ways, the world economy between 2003 and 2007 *did* appear to be enjoying something of a Golden Age. World growth was running at rates not seen since the early 1970s, inflation appeared to be quiescent, and there had been no major international financial crisis since Argentina's default in early 2002. Policymakers, and the economists who advised them, congratulated themselves on having found the right mix of policy tools to run a stable modern economy:

> 'My thesis in this lecture is that macroeconomics in this original sense has succeeded: Its central problem of depression-prevention has been solved, for all practical purposes, and has in fact been solved for many decades.' [134]

Financial markets seemed to agree. Global real interest rates and financial measures of risk aversion had fallen to unusually low levels, leaving a pronounced disconnect between perceptions of very low financial risk and continuing concerns regarding geopolitical risk (including fears about international terrorism post-September 11, 2001, along with developments in Iraq, Iran, Afghanistan and North Korea).

The second striking feature of this environment was the global constellation of current account imbalances, capital flows and exchange rate arrangements that came to be known as *Bretton Woods II.* [135] Beginning in the late 1990s, the United States had started to run large current account deficits (Figure 12). Increasingly, these had as their counterparts sizeable current account surpluses in the economies of Emerging Asia, led by China, and later on, as the commodity boom intensified, surpluses in the major Middle Eastern oil exporters. One apparently perverse implication of this pattern was that capital was flowing uphill in the world economy – that is, flowing out of relatively poor developing economies like China and into rich economies like the United States. At first glance, this seemed strange, since economic theory would predict a higher rate of return on investment in (relatively) capital-scarce developing economies, and hence net capital flows in the opposite direction to that actually observed.[136]

The Bretton Woods II hypothesis drew parallels with the fixed exchange rate regime of the original Bretton Woods system to explain this international pattern of current account positions in terms of the relationship between a periphery (Emerging Asia in general, China in particular) and the centre (the United States). According to the theory, the periphery pursued a development strategy based on export-led growth and supported by undervalued exchange rates, capital account controls and official capital

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[133] Steven Weber, The end of the business cycle? *Foreign Affairs* 76 (4) 1997.

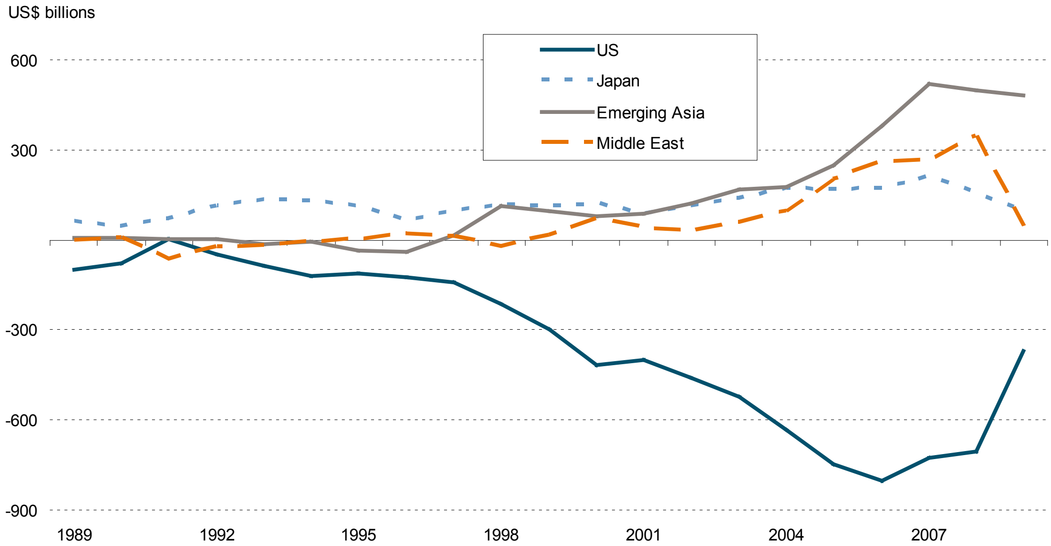
[134] Robert E Lucas, "Macroeconomic priorities" Presidential Address to the American Economic Association. *American Economic Review* 93 (1) 2003.

[135] Michael P Dooley, David Folkerts-Landau and Peter Garber, *An essay on the revived Bretton Woods system.* Working Paper 9971. Cambridge MA, National Bureau of Economic Research, September, 2003.

[136] The fact that capital flows from rich to poor countries are much smaller than naïve theory would predict is known as the Lucas Paradox. Robert E Lucas, Why doesn't capital flow from rich to poor economies? *American Economic Review* 80 (2) 1990.

outflows. These outflows involved the accumulation of foreign exchange reserves in the form of the financial liabilities of the centre, the United States.[137] Put slightly differently, China and the other exporting nations were extending to the United States a form of vendor finance by buying US financial assets and holding them as foreign exchange reserves, with the consequent inflow of funds then providing the United States with the ability to purchase a large share of the exports being pumped out by its emerging market financiers.

Figure 11: Current account balances for selected economies and regions



Source: International Monetary Fund (IMF), *World Economic Outlook: Sustaining the recovery*. (2009). Emerging Asia comprises Developing Asia plus the Newly Industrialised Asian Economies.

An important element of the Bretton Woods II view was that the prevailing pattern of global imbalances was sustainable, since both sides gained by the arrangement and so had little incentive to change policies. This sustainability was also bolstered by the particular benefit that the United States enjoyed as issuer of the US dollar – now the closest thing the global economy had to a reserve currency.

Other economists were much less convinced about the durability of this equilibrium, however.[138] In particular, the appearance of massive US external deficits from 2004 onwards saw a growing number of observers forecasting a major US dollar correction.[139] This alternative view of the world saw global imbalances as a much

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[137] Dooley, Folkerts-Landau and Garber, *An essay on the revived Bretton Woods system*. Under Bretton Woods I the United States was at the centre, while the role of the periphery was taken by Europe and Japan.

[138] For an early sceptical view on the sustainability of the US current account deficit, see Maurice Obstfeld and Kenneth Rogoff, *Perspectives on OECD economic integration: implications for US current account adjustment* (paper presented at the Federal Reserve Bank of Kansas City symposium on "Global economic integration: opportunities and challenges", Jackson Hole, Wyoming, 24-26 August 2000). For a similarly sceptical look at the differences between Bretton Woods I and II see Barry Eichengreen, Global imbalances and the lessons of Bretton Woods, in *The future of the international monetary system*, ed. Marc Uzan. Cheltenham, Edward Elgar, 2005.

[139] Maurice Obstfeld and Kenneth Rogoff, The unsustainable US current account deficit position revisited, in *G7 current account imbalances*, ed. Richard H Clarida. Chicago, University of Chicago Press, 2007.

more precarious situation, a feeling perhaps best captured by Larry Summers's description of the setup as involving 'a kind of balance of financial terror':[140]

> 'It is true and can be argued forcefully that the incentive for Japan or China to dump treasury bills at a rapid rate is not very strong, given the consequences that it would have for their own economies. That is a powerful argument, and it is a reason a prudent person would avoid immediate concern. But it surely cannot be prudent for us as a country to rely on a kind of balance of financial terror to hold back reserve sales that would threaten our stability.' [141]

Disagreements over the sustainability of global imbalances were matched by – and related to – disagreements over their causes. Once again, there were two broad sets of interpretations, one focused on the behaviour of the debtors (the deficit countries) and the other on that of the creditors (the surplus countries).[142]

The first interpretation blamed the borrower. This view looked to the world's biggest current account deficit country and argued that global imbalances were the product of a US economy managed by a central bank that had become a 'serial bubble-blower' and which was running a monetary policy that was too loose; controlled by a government that had lost fiscal discipline by trying to have both guns *and* butter; and powered by a US consumer who had forgotten how to save. Thus, as described above, the nominal Fed funds rate had been cut to 1% by mid-2003, and stayed there for almost a year. For many critics, this was too low for too long.[143] For others, it reflected a mistaken neglect of asset prices.[144] Meanwhile, fiscal policy had also turned more expansionary. Thus, the federal budget had swung from a surplus of 2.4% of GDP surplus in 2000, to a deficit of 1.5% of GDP by 2002, and a peak deficit of 3.6% of GDP in 2004. Finally, US households continued to consume despite a weak performance in terms of their real income growth. The household saving rate, which had been declining since the 1980s, had fallen to just 0.6% by 2007. At the same time, households had taken on more debt: US household leverage – as measured by the ratio of debt to disposable income – had more than doubled from around 65% in the mid-1980s to a record high a record high of 133% in 2007. The pace of debt

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[140] Lawrence H Summers. The United States and the global adjustment process. The Third Annual Stavros S. Niarchos Lecture, Institute for International Economics. Washington DC, 17 June 2004.

[141] Ibid.

[142] Actually, there were a range of interpretations, including some that focused on whether we were actually even measuring the imbalances properly. See for example Richard Cooper, US deficit: It is not only sustainable, its is logical. *Financial Times*, 31 October 2004. Ricardo Hausman and Federico Sturzenegger, Dark matter makes the US deficit disappear. *Financial Times*, 8 December 2005. For a good overview, see Barry Eichengreen, Global imbalances: The New Economy, the Dark Matter, the Savvy Investor and the Standard Analysis. *The Journal of Policy Modelling* 28 (6) 2006.

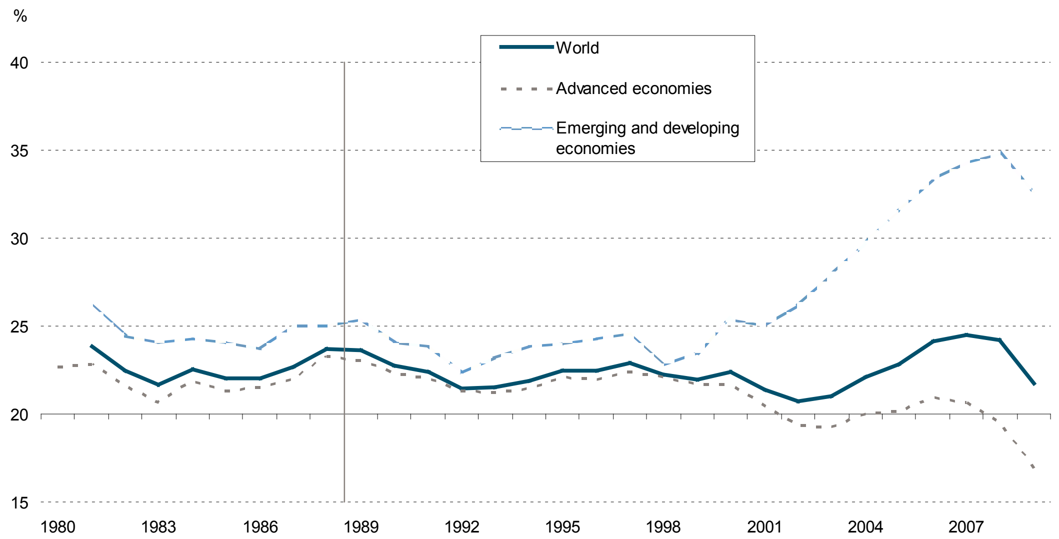
[143] John B Taylor, *The Financial Crisis and the Policy Responses: An Empirical Analysis of What Went Wrong.* November, 2008.

[144] Borio and White, *Whither monetary and financial stability? The implications of evolving policy regimes* .

accumulation accelerated dramatically into the new century as low interest rates and rising house prices encouraged a rapid take-up of mortgages.[145]

The second interpretation blamed the creditor and focussed on the behaviour of the current account *surplus* countries. The most widely cited version of this approach was advanced by Ben Bernanke with his description of a *global savings glut*.[146] According to Bernanke, a key outcome of the 1997-98 financial crisis had been the transformation of East Asian economies from net capital importers into net capital exporters. At a policy level, this reflected their previously mentioned desire to accumulate large stocks of foreign exchange reserves as self-insurance, while in terms of national savings and investment rates, it reflected depressed levels of investment in the crisis-hit economies.

Figure 12: Savings rates



Source: International Monetary Fund (IMF), *World Economic Outlook: Sustaining the recovery*. (2009)

From about 1996 to early 2000, capital had poured into the United States, pulled in by the hope and hype inspired by the New Economy. This was then supplemented by capital flows pushed out from crisis-stricken emerging markets. These inflows helped fuel further large increases in share prices and in the value of the dollar and these higher asset prices then encouraged a fall in US savings rates.[147] Initially, the counterpart to these lower savings rates was higher investment, particularly in the ICT sector. But after the bursting of the dot-com bubble, the pace of US investment declined. Yet since desired global saving remained strong, and since desired saving now exceeded desired investment, according to the savings glut hypothesis the real

[145] Reuven Glick and Kevin J Lansing, *US Household deleveraging and future consumption growth.* FRBSF Economic Letter Number 2009-16, Federal Reserve Bank of San Francisco, 15 May, 2009.
[146] Ben S. Bernanke, *The global saving glut and the US current account deficit.* Remarks by Governor Ben S Bernanke at the Sandridge Lecture, Virginia Association of Economics. (Richmond, Virginia: 2005). The argument is explored at greater length in Martin Wolf, *Fixing global finance.* Baltimore, Johns Hopkins University Press, 2008.
[147] Remember that by definition the current account balance is the difference between national savings and investment. If savings exceed investment, the current account will be in surplus; if investment exceeds savings, then the current account will be in deficit.

rate of interest had to fall to balance the market for global saving and investment. As a result, low real interest rates now replaced high share prices as the big driver of lower US saving rates. In particular, low mortgage rates encouraged record levels of home construction and rapid gains in housing prices. The latter produced a rise in US housing wealth that was then tapped by households through cash-out refinancing and home equity withdrawals.[148] The mechanics of this process appeared to become even more powerful once savings rates in emerging markets were being boosted both by the 2003-2008 commodity price boom and by a sharp increase in savings rates in emerging Asia (Figure 13).

There was another important element to the blame the creditors story, which focused on the role of China's exchange rate policy. The yuan had been pegged to the US dollar at a rate of roughly 8.3 yuan per dollar since 1994, and while China had won praise during the 1997-98 financial crisis for not devaluing the yuan and adding to regional currency instability, in subsequent years Beijing was repeatedly accused of exchange rate manipulation and deliberately undervaluing its currency, with critics pointing to a sustained policy of 'large-scale, one-way, sterilized intervention in exchange markets'.[149] However, actual estimates as to the degree of undervaluation varied widely, since although analysts suggesting an undervaluation as large as 15%-40%, other estimates have suggested little undervaluation or even a slight degree of overvaluation.[150] Criticism of China's exchange rate policy was particularly pronounced in the United States, where Congress focused on a large and growing US-China bilateral trade imbalance, and senior US politicians called for a legislative response to the undervaluation of the yuan. To a very limited extent, China did respond to this external pressure and on 21 July, 2005, Beijing announced a new exchange rate regime, whereby the yuan was linked to a basket of currencies instead of the US dollar. The new regime allowed a modest cumulative degree of yuan appreciation, although never by enough to assuage China's US critics.

Which of these various descriptions of the drivers behind global imbalances was closest to the truth? As the IMF's Olivier Blanchard and Gian Maria Milesi-Ferretti suggested, in practice a range of factors explained the evolution of the imbalances over time. So although the large US current account deficit and external demand for US assets remained consistently important parts of the story (although the composition of this demand has shifted significantly over time), other factors – including high oil prices, high savings rates in China, the collapse in investment in post-financial crisis emerging Asia – were important at different stages.[151]

Finally, although the United States absorbed the lion's share of the global savings glut, the housing boom was not just confined to North America: a range of other countries including, but not limited to, much of the rest of the English-speaking world also saw a sharp rise in housing investment and a big increase in house prices. In

[148] Bernanke, *The global saving glut and the US current account deficit.* Remarks by Governor Ben S Bernanke at the Sandridge Lecture, Virginia Association of Economics.

[149] Morris Goldstein, *A (lack of) progress report on China's exchange rate policies.* Working Paper Series WP 07-5. Washington DC, Peterson Institute for International Economics, June, 2007.

[150] Steven Dunaway and Xiangming Li, *Estimating China's 'equilibrium' real exchange rate.* IMF Working Paper WP/05/202. Washington DC, International Monetary Fund, October, 2005.

[151] Olivier Jean Blanchard and Gian Maria Milesi-Ferretti, *Global imbalances: In midstream?* IMF Staff Position Note SPN/09/29. Washington DC, International Monetary Fund, 22 December, 2009

most of these cases there was a similarly strong correlation with loose domestic credit conditions and current account deficits. Similarly, the Fed was not the only central bank running a loose monetary policy. The Bank of Japan had been pursuing its zero interest rate policy (ZIRP) since early 2001 and both the ECB and the Bank of England loosened monetary policy between 2001 and 2003, all contributing to generally easy global monetary conditions.

Re-engineering global finance

The economic environment created by the Great Moderation and global imbalances presented the financial sector with two big challenges:

- a global mismatch in the demand for, and supply of, financial assets due to the operations of Bretton Woods II; and

- Low real rates of return.

Start with Bretton Woods II. On one side of the arrangement were large US current account deficits reflecting rising US household consumption that was increasingly funded by a big rise in the mortgage debt of US households. This created an increase in the supply of long-dated, illiquid, private-sector financial instruments. Meanwhile, on the other side of the deal, the counterparts to these US external deficits were Chinese and other emerging market surpluses. While the excess savings that created these surpluses might have started off as emerging market household or enterprise savings, the resulting current account surpluses ended up in the hands of emerging market governments – Finance Ministries and Central Banks – which wanted to invest them in the kind of short- and medium-term, liquid, government financial instruments that typically comprise a country's foreign exchange reserves. The result was a global mismatch in the growing demand for safe government financial assets and the increasing supply of riskier private sector assets.[152] In particular, the scale of the demand for US government paper coming from the official sector in emerging markets proved to be large enough to push down the yields on these assets. This in turn squeezed out some of the traditional private-sector buyers of US government paper, who needed higher yields than were now on offer, but who still required assets with the same kind of (low) risk profile.

The financial sector sought to meet this demand for low risk and high yields by transforming the excess supply of thousands of billions of US mortgages into the sort of safe, liquid financial assets that were in excess demand.[153] Or at least, into something that seemed to look like these kinds of assets, and which could be rated accordingly. To do this, it created a kind of 'international division of risk-taking' whereby the global financial system mediated the transfer of savings from savings-surplus emerging markets to savings-deficient developed economies by creating a chain of risk-takers that effectively transformed (say) the short-term yuan deposits of

[152] This argument is set out in Daniel Gros, *Global imbalances and the accumulation of risk.* VoxEU.org, 11 June, 2009.
[153] Ibid.

Chinese households into fixed-rate, dollar-denominated mortgage loans to US households.[154]

At the same time, the combination of low official policy rates and low long-term interest rates resulting from the Great Moderation and the global savings glut had together produced unusually low interest rates at both the short and the long end of the yield curve. These rates were considerably below the levels which most investors had become used to, and dissatisfaction with these rates gave birth to a 'search for yield.'[155]

Two key financial technologies permitted the financial sector to respond to these challenges: securitisation and structured finance.

Securitisation is the process by which most mortgage loans are sold to investors. In the mortgage market, under the traditional – *originate-and-hold* – system, a household would get its mortgage from (usually) a bank, which would then typically keep the loan on its balance sheet, receiving repayments from the household until the loan was fully repaid. Under the new – *originate-and-distribute* – system, instead of keeping the loan on its books, the originator of the mortgage sold it on to a third party. The third party – which in the United States could be a government-sponsored entity like Fannie Mae or Freddie Mac, or a private-sector institution such as Countrywide Financial or Lehman Brothers – then bundled a group of these mortgages together into a bond whose payments were based on the repayments on the collection of individual mortgages. These payment rights were then sold to investors. Securitisation thus converted individual mortgages into tradeable mortgage-backed securities (MBS).[156]

Structured finance took the securitisation process one step further, by collecting and securitising the MBS. The result was collateralised debt obligations (CDOs), or bonds backed by pools of other bonds in the form of MBS. The clever trick here was that the resulting cash flows were divided into tranches that were paid out to different classes of investors. These payouts were made in a specific order, starting with the 'senior' tranches who got paid first and moving down through various levels to the 'equity' tranche who got paid last – and who therefore took on the greatest risk of non-payment.[157] This prioritisation scheme used in structuring the various tranches was a way to make some of them – the senior and super-senior tranches – much safer than the average asset in the underlying pool, and so to create 'safe' assets from underlying assets that were much more risky.[158] In particular, it was possible to construct the super-senior and senior tranches in such a way that they qualified for AAA ratings from the ratings agencies, although this often also required external credit and liquidity enhancements from the selling banks.

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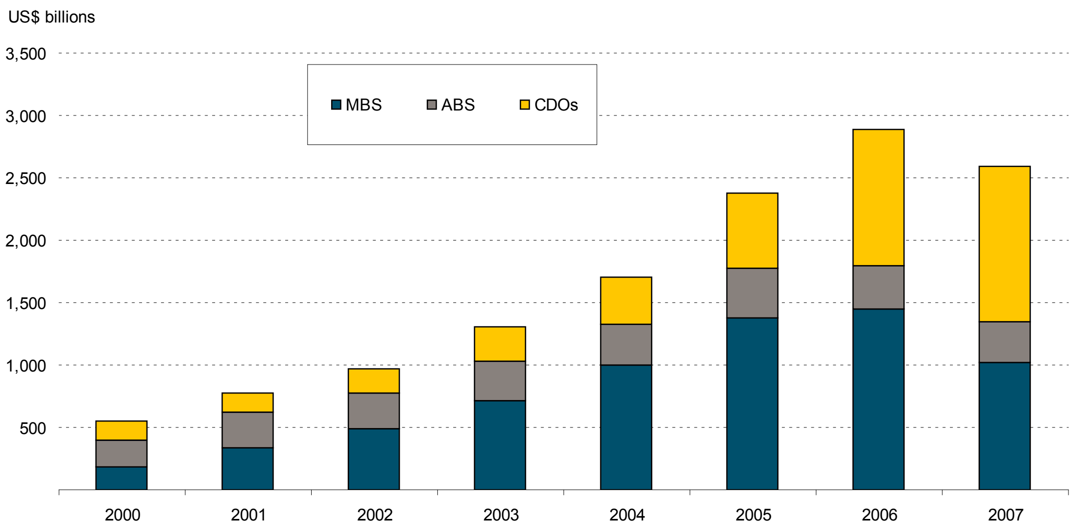
[154] Anton Brender and Florence Pisani, *Globalised finance and its collapse.* Belgium, Dexia SA, 2009.
[155] Mervyn King, Speech by Mervyn King, Governor of the Bank of England, at the Northern Ireland Chamber of Commerce and Industry. (Belfast: 2007).
[156] This description is from Richard J Rosen, The role of securitization in mortgage lending. *Chicago Fed Letter* (244) 2007.
[157] Box 2.1 in International Monetary Fund (IMF), *Global Financial Stability Report: Containing Systemic Risks and Restoring Financial Soundness* World Economic and Financial Surveys. Washington DC, International Monetary Fund, September, 2008.
[158] Joshua Coval, Jakub Jurek and Erik Stafford, The economics of structured finance. *Journal of Economic Perspectives* 23 (1) 2009.

Figure 13: US and European Structured Credit Issuance



Source: International Monetary Fund (IMF), *Global Financial Stability Report: Containing Systemic Risks and Restoring Financial Soundness* (2008)

This ability to transform risk contributed to the spectacular growth of structured finance: in an environment of low yields on traditional low-risk investments such as government paper, structured finance provided a way to offer an attractive combination of AAA-rated paper *and* higher yields. As a result, in the period up until July 2007 growth in structured credit finance products was exponential, with issuance in the United States and Europe growing from just US$500 billion in 2000 to US$2.6 trillion in 2007 (Figure 13).[159] This explosion of securitisation and structured finance resulted in the development of a parallel or 'shadow' banking system alongside the traditional banking system, with a dramatic expansion in the share of assets held by nonbank financial intermediaries.[160]

At the same time as solving the asset mismatch problem, structured finance also helped provide a solution to the search for yield. Financial institutions could meet the desire for higher returns in two ways – by taking on more risk and by taking on more leverage.

Start with risk. Since – at least in theory – financial market participants were rewarded for *risk-adjusted* returns, there was a preference to take on disguised risk. One way to do this was to take on 'tail' risk: that is, risks that generate severe adverse consequences with a small probability but offer generous compensation the rest of the time. Such deals are the equivalent of selling disaster insurance: the insurer collects the insurance premia in ordinary times, so generating a positive return, against the

[159] Box 2.1 in International Monetary Fund (IMF), *Global Financial Stability Report: Containing Systemic Risks and Restoring Financial Soundness* .
[160] Gillian Tett and Paul J. Davies, Out of the shadows: How banking's secret system broke down. *Financial Times*, 16 December 2007.

possibility of a rare, but very large, negative return in the event of the disaster occurring and having to pay the claim.[161] Investors who bought the AAA-rated structured credit products described above could be seen as doing something similar, by pocketing the additional spread on these instruments relative to traditional AAA-rated securities (equivalent to the insurance premium) while ignoring the additional default risk involved.[162]

The second solution to the need to generate higher returns was to take on more leverage (that is, boost the ratio of assets to equity). Unfortunately, this was also at the cost of an increase in default risk as well as an increase in the risks to market stability implied by the possibility of future de-leveraging. Again, financial engineering played an important supporting role here, as banks were able to use securitisation and structured finance to arbitrage regulation and increase their leverage.[163]

Unfortunately, both the securitisation process and the tools of structured finance turned out to suffer from some fundamental underlying weaknesses:[164]

- The originate-and-distribute model created a significant incentive problem, since offloading the loans reduced the incentive of the originator to maintain basic loan standards. One consequence was the low quality of the underlying assets used to construct some MBS and CDOs – products such as 'Liar Loans' (for the borrower with no supporting documentation) and NINJA loans (for borrowers with no income, no job, and no assets).[165]

- CDOs turned out to be much riskier for investors than their ratings had seemed to imply. This reflected a range of problems including: the presence of an overlap of geographic locations and vintages within the underlying mortgage pools that increased the chance of higher-than-expected default correlations; the fact that the probability of default and expected recovery values both turned out to be much worse than the ratings agencies had assumed, due to the impact of a fall in credit quality of borrowers and the impact of fire sales on asset prices; the way in which ratings had been based in part on a native extrapolation of current conditions – the Great Moderation – which turned out to be a bad predictor of the future; and finally, the fact that ratings failed to account for the extreme exposure of structured products to declines in overall economic activity (in other words, to systemic risks).[166] Moreover, given that rating agencies were paid by the issuers of the loans, there were also important incentive problems with the ratings decisions themselves.

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[161] Raghuram G Rajan, *Has financial development made the world riskier?* (paper presented at the Symposium sponsored by the Federal Reserve Bank of Kansas City on The Greenspan Era: lessons for the future, Jackson Hole, Wyoming, 25-27 August 2005).
[162] Douglas D Diamond and Raghuram G Rajan, *The credit crisis: Conjectures about causes and remedies.* NBER Working Paper 14739, National Bureau of Economic Research, 2009.
[163] Philipp Schnabl, *How banks played the leverage 'game'.* VoxEU.org, 7 February, 2009.
[164] For a more detailed discussion see the references in Mark Thirlwell, *Crunched: Lessons from the 2007 TLA crisis.* Lowy Institute Perspective. Sydney, Lowy Institute for International Policy, November, 2007.
[165] Steven Pearlstein, 'No money down' falls flat. *Washington Post*, 14 March 2007.
[166] Coval, Jurek and Stafford, The economics of structured finance.

Three persistent problems

By early 2007, the global economy was in a somewhat peculiar position. On the one hand, the world was entering the final year of the strongest four-year period of economic growth since the early 1970s, inflation was under control, and there had been no major international financial accidents since early 2002. The global economy could be said to be enjoying something of a mini-Golden Age. On the other hand, there were clear signs of stress emerging across a series of indicators, including a downturn in the US housing market, and worries about a range of imbalances and other vulnerabilities.

More fundamentally, as it started to approach its twentieth birthday, the global economy faced three sets of persistent problems, each of which threatened to derail the mini-Golden Age.

First there was a ***crisis problem***. The period since the fall of the Berlin Wall had brought 'the triumph of the global over the local, of the speculator over the manager and of the financier over the producer . . . the transformation of mid-20th century managerial capitalism into global financial capitalism . . . the financial sector, which was placed in chains after the Depression of the 1930s, [was] once again unbound.'[167] But this transformation had come at a price, in the form of a series of costly financial crises:

> 'Almost every three years for a generation, there has been a substantial crisis in which a financial system that has as its fundamental purpose the dissemination and diversification of risk has misfired. It has proved to be a source of risk, leading to the loss of jobs for hundreds of thousands, if not millions, of people.' [168]

The Asian financial crisis of 1997-98 was a particularly important data point, since the economic devastation of a region which had hitherto been a widely praised exemplar of sound economic management and developmental success raised profound questions about the costs and benefits of international financial flows.

Despite the relative serenity of the 2003-207 period, it was possible to identify a disturbing pattern in the era of global finance: large volumes of international capital poured into relatively small and shallow local markets with destabilising results. These episodes of 'capital flow bonanzas' imposed large costs on both advanced and emerging market economies: in the case of the former they tended to be associated with a more volatile macroeconomic environment, while in the case of the latter they

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[167] Martin Wolf, Unfettered finance is fast reshaping the global economy. *Financial Times*, 18 June 2007.

[168] Lawrence H Summers, *Shaping the next expansion.* Speech to the New York Economic Club. New York, 29 October, 2009.

were linked to a higher likelihood of a full-scale economic crisis.[169] Repeated financial crises seemed to be an inevitable by-product of international financial integration, in part because financial globalisation had exerted substantial pressures on governments to relax the kind of policy restrictions that in previous decades had made such financial crises less likely.[170] In this view, the 'age of financial liberalization was, in short, an age of crises.'[171] According to some observers of the global economy, by 2007 another crisis seemed overdue.

Second, there was an ***adjustment problem***. The economic integration of the BRICs and other successful emerging markets into the world economy had produced several overlapping points of friction with the developed world. Many in the rich world were scared by the arrival of powerful new competitors: in the early 2000s, the rise of offshore outsourcing and the associated success of India in exploiting the benefits of ICT to expand its presence in international services trade served to add new white-collar fears of job insecurity to the already existing fears of blue-collar workers disturbed by the migration of manufacturing from the developed to the developing world.[172] Indeed, those traditional fears were being stoked anew by China's emergence as the world's factory, with a growing focus on Beijing's exchange rate policy, seen by many, particularly in the United States, as an unfair subsidy to Chinese competitiveness and a major distortion of the international economic environment.[173] Others in the developed world were spooked by the security implications of the ongoing shifts in economic power, the rise of SWFs and other state-controlled investment vehicles a potent symbol of their concerns. Still others were ill at ease with the increases in national inequality that seem to be a side-effect of the new global economy and were troubled by the implications of substantially expanded trade with low-wage developing economies, manifested in a 'growing recognition that the vast global middle is not sharing the benefits of the current period of economic growth — and that its share of the pie may even be shrinking.'[174]

One result of all these worries was a growing pressure on policymakers in rich countries to act either to temper or to offset the forces driving international economic integration. Another was an even more pronounced decline in the ability of those same governments to deliver any additional liberalisation – a decline epitomised by the repeated inability of the world's trade ministers to bring the Doha round of multilateral trade negotiations to a successful conclusion. Indeed, on 24 July 2006, it was announced that the Doha negotiations would be suspended indefinitely, reflecting apparently irreconcilable difficulties over agricultural trade, and some read in this failure the end of the current period of globalisation.[175] Certainly, official warnings

[169] Carmen M Reinhart and Vincent R Reinhart, Capital flow bonanzas: An encompassing view of the past and present, in *NBER International seminar on macroeconomics 2008*, ed. Jeffrey Frankel and Christopher Pissarides. Chicago, University of Chicago Press, 2009.
[170] Krugman, Crises: the price of globalization?
[171] Wolf, *Fixing global finance*.
[172] Blinder, Offshoring: the next industrial revolution?
[173] See for example Ernest H. Preeg, Exchange rate manipulation to gain an unfair competitive advantage: The case against Japan and China, in *Dollar overvaluation and the world economy*, ed. C. Fred Bergsten and John Williamson. Washington DC, Peterson Institute for International Economics, 2003.
[174] Lawrence H Summers, The global middle cries out for reassurance. *Financial Times*, 29 October 2006.
[175] Martin Jacques, The death of Doha signals the demise of globalization. *The Guardian*, 13 July 2006.

of the dangers of protectionism were common: in the month after the round was suspended, the new US Treasury Secretary Hank Paulson used the occasion of his first major speech to warn that the world was facing a 'disturbing wave of protectionism.'[176] Later that same month, Britain's then Chancellor of the Exchequer, Gordon Brown, was worrying out loud about a 'surge of protectionism'.[177] Again, for many observers of the global economy in 2007, a political backlash against globalisation in the rich world appeared to be a significant risk.[178]

Finally, there was a ***sustainability problem.*** The resource security implications and environmental consequences of the rapid industrialisation and urbanisation of the world's two most populous economies, along with a range of other large emerging markets, added to the already substantial resource- and environmental-footprints of the rich world, heralded a return of old fears about natural constraints to growth. Worries about the approach of resource and/or environmental constraints have been around since the time of Malthus, and in the modern era since at least the early 1970s discussion about the Limits to Growth, so such fears were hardly new. But the great commodity boom that got underway in 2003 and a growing international emphasis on the dangers posed by climate change meant that by early 2007 there was a new focus on sustainability:

> "Yet one thing is certain: the current trajectory of human activity is not sustainable. If we simply do what we are doing on the planet with unchanged technology – but on a much larger scale as China, India and other large population centres experience rapid economic growth – the environmental underpinnings of global well-being will collapse."[179]

Institutional failure

The challenges posed by these three problems were further aggravated by another major difficulty facing the world economy at the start of 2007: the poor state of repair of the international economic architecture.

This problem was perhaps most evident in the case of the IMF, which had suffered a major blow to its standing as a result of the Asian financial crisis.[180] The combination of East Asia's post-crisis decision to opt for self-insurance rather than risk ever again falling into the hands of the Fund, along with the relative dearth of financial crises following Argentina's 2002 default, meant that by 2008 the IMF seemed to be in terminal decline. Developed economies had long since stopped taking notice of the Fund's policy advice except when it suited them, and now, flush with huge stocks of

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176 Ed Luce, Paulson warns protectionism threatens prosperity. *The Financial Times*, 1 August 2006.
177 Gordon Brown, Tough choices that safeguard stability. *The Financial Times*, 29 August 2006.
178 Thirlwell, *Second thoughts on globalisation: Can the developed world cope with the rise of China and India?*
179 From the introduction of Chapter 3 in Jeffrey D. Sachs, *Common Wealth: Economics for a crowded planet.* Camberwell, Allen Lane Penguin Books (Australia), 2008.
180 One famous critique of the Fund's performance is found in Joseph Stiglitz, *Globalization and its discontents.* London, Penguin Books, 2002.

foreign exchange reserves, the world's major emerging markets felt similarly able to ignore its strictures. This impotence was on display with the Fund's failure to deal with the issue of global imbalances: its chosen policy response – the so-called Multilateral Consultation on Global Imbalances launched in April 2006 – was a flop. It was also visible in the debate over China's exchange rate policy, with the Fund again largely reduced to the role of hapless onlooker.[181] Indeed, by early 2008, a cash-strapped IMF was facing the prospect of significant downsizing, prompting the quip that IMF now stood for 'It's Mostly Firing'.[182]

The Fund wasn't the only international economic institution that was struggling. The WTO was also finding the new global economy a tough operating environment. Granted the WTO could claim one major triumph, with the landmark accession of China on 11 December, 2001. But otherwise it too was dealing with a new and less welcoming environment. For example, some ten years on from the fall of the Berlin Wall, the Battle of Seattle on 29 November 1999 had been the scene of a dramatic backlash against the would-be regulator of the global economy and the failure of an attempt to start a new round of multilateral trade negotiations. Protestors called for 'No globalization without representation' and chanted against global capitalism.[183] Seattle was important not so much for the demonstrations, but rather because it symbolised the rise of a new trade agenda on the part of the developed world, one that sought to respond to some of the adjustment strains produced by globalisation, and one which was driven by many of the concerns of free-trade sceptics.[184] This trend was seen as cover for disguised protectionism by many developing countries, however, and did little to improve the backdrop for restarting negotiations. In the event, the Doha round of trade negotiations only got underway in the aftermath of the September 2001 terrorist attacks, at a time when the world was looking for symbols of global solidarity. Subsequently, the negotiations had dragged, with most players showing a distinct lack of enthusiasm for further liberalisation, and with Doha-boosters repeatedly embarrassed by a failure to deliver meaningful progress.

The most pressing challenge facing both the Fund and the WTO was the need to accommodate the shifting balance of economic power implied by the Great Convergence. In the case of the former, for example, emerging markets were not only dismayed by the IMF's performance during the Asian financial crisis. They were also unhappy with the distribution of voting power within the Fund itself, which gave the lion's share of influence to the developed world. Similarly, the 'bipolar' system that had largely underpinned international trade negotiations in the past – which, crudely put, had rested largely on the ability of the United States and the EU to craft an agreement acceptable to the two economies before presenting this to the rest of the world – no longer cut it in a world characterised by rising new trading powers. These same shifts in economic power also had implications for the World Bank and for official development agencies in the developed world, as emerging markets increased

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[181] Michael Mussa, *IMF Surveillance over China's exchange rate policy.* Paper presented at the Conference on China's Exchange Rate Policy, Peterson Institute, 19 October. Washington DC, Peterson Institute for International Economics, 2007.
[182] The Economist, The IMF downsizes: It's mostly firing. *The Economist*, 7 February 2008.
[183] Frieden, *Global capitalism: its fall and rise in the twentieth century.*
[184] Gilpin, *The challenge of global capitalism: the world economy in the 21st century.*

their own aid flows to poorer economies and offered an alternative source to traditional donors.[185]

It was these same shifts in the balance of economic and financial power that now disqualified the G7 group of rich countries from its previous role as the effective steering committee for the world economy.[186] The skewed membership of the G7 meant that its ability to tackle some of the most pressing issues in international policy – global imbalances and exchange rate flexibility; oil prices and energy security; the future of the Doha Round of world trade negotiations; development and debt relief; emerging market risk; the future of the IMF and World Bank – was fatally compromised.[187]

Emerging markets themselves had responded to these developments by calling for a bigger say in the existing institutions of the global economic order. They had also started to make some early moves towards creating alternatives of their own, including in the form of bilateral and regional trade agreements. Perhaps the most eye-opening innovation in this regard was the inaugural meeting of the BRIC economies, held on 16 June, 2009 in Yekaterinburg, Russia.[188] In a potent symbol of the shifting balance of power, the four economies united to call for major changes to the international economic order. Symbolism aside, however, in reality the fact that the four BRICs had a strictly limited set of things in common besides sharing the same acronym meant that the ability of the new summit to deliver meaningful cooperation looked limited – a point reinforced later in the same year with the rise of bilateral tensions between China and India.[189]

Finally, things looked no better when it came to dealing with the sustainability problem described above. For example, serious international negotiations on climate change policy had got underway with the Rio Earth Summit in 1992. Rio had two outcomes: the non-binding United Nations Framework Convention on Climate Change (UNFCCC) which had entered into force in 1994 to no great effect, and the establishment of the 'Conference of Parties' (COP) series of meetings, the first of which was held in Berlin in 1995. COP3 was held in Kyoto in December 1997 and produced the Kyoto Protocol, which came into force on 16 February 2005 (that is, nearly 13 years after the Rio Summit) and which set out formal greenhouse gas emissions targets for developed (Annex I) counties. Unfortunately, Kyoto looked flawed from the start, and no sooner had the Protocol entered into force than the search was on for a more effective successor.[190]

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[185] Ngaire Woods, Whose aid? Whose influence? China, emerging donors and the silent revolution in development assistance. *International Affairs* 84 (6) 2008.
[186] The G7 is an informal grouping of finance ministers and central bank governors from the US, Japan, Germany, UK, France, Italy and Canada.
[187] Mark Thirlwell and Malcolm Cook, *Geeing up the G-20.* Lowy Institute Policy Brief. Sydney, Lowy Institute for International Policy, April, 2006.
[188] Guy Faulconbridge, Developing world leaders show new power at summits. *Reuters*, 16 June 2009.
[189] Peter Wonacott, China, India stoke 21st-Century rivalry. *The Wall Street Journal*, 26 October 2009.
[190] Warwick J McKibbin, *Sensible climate policy.* Lowy Institute Issues Brief. Sydney, Lowy Institute for International Policy, February, 2005.

The GFC and the Great Recession

Of the three persistent problems that had been confronting the global economy at the start of 2007, it was arguably the sustainability problem that started to bite first and hardest. By early 2008, a sharp increase in food prices was creating significant hardship for the world's poorest people, and had produced a major rise in food insecurity: the number of food-insecure people worldwide had increased by between 50 million and 130 million over the course of 2007, as improvements in food security had stalled in Asia and an already serious situation in parts of Africa worsened.[191] The World Bank warned that as many as 33 countries were at risk of social upheaval due to rising food prices.[192] Bank economists also estimated that the rise in food prices may have pushed up to 105 million people back into poverty.[193] Moreover, since the rise in food insecurity had occurred in conjunction with (and was closely connected to) a rise in energy insecurity, as oil prices surged past US$100/barrel in February 2008 before peaking at almost US$150/barrel in July that year, by 2008 resource constraints seemed to be a very pressing problem indeed.

In the event, however, it was the crisis problem that would turn out to have the greatest impact on the world economy at the end of the decade, as the difficulties in the US housing sector morphed into a modern version of a major banking panic.[194] 'Traditional' banking panics involve retail depositors running on their banks and trying to withdraw their funds all at the same time, rendering the banking system insolvent. The modern variant as experienced at the close of the noughties involved financial firms 'running' on other financial firms in the shadow banking by choosing either to not renew sale and repurchase (repo) agreements, or to increase the repo margin (haircut). The result was massive deleveraging and ultimately the insolvency of the shadow banking system, which in turn had serious spillover effects into the traditional banking sector.[195]

The failure of Lehman Brothers in September 2008 marked both a dramatic intensification and internationalisation of the financial crisis and the point at which the likely consequences for the real economy became so dire that serious comparisons with the 1930s Great Depression appeared to be warranted. By the end of 2008, the global economy was contracting at a dramatic rate: the quarter-on-quarter, annualised falls in real GDP ranged from more than 5% for the United States and more than 7% for the UK and the Euro-area, to more than 10% for Japan and well over 15% for highly trade-exposed emerging markets like Korea and Singapore. Even the growth

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[191] USDA, *Food security assessment, 2007.* Washington, DC, United States Department of Agriculture, July, 2008. Annex 1 lists the countries covered by the Food Security Assessment.

[192] Bob Davis and Douglas Belkin, Food inflation, riots spark worries for world leaders. *The Wall Street Journal*, 14 April 2008.

[193] Maros Ivanic and Will Martin, *Implications of higher global food prices for poverty in low income countries.* Policy Research Working Paper 4594. Washington DC, World Bank, April, 2008.

[194] Gary Gorton, *Slapped in the face by the invisible hand: Banking and the panic of 2007.* Paper prepared for the Federal Reserve Bank of Atlanta's 2009 Financial Market's Conference: Financial innovation and crisis, May 11-13, 2009.

[195] Ibid.In this modern version of the banking run, the repo takes the role played by the demand deposit in a traditional banking run. In a repo transaction the financial institution lending the money in effect makes a deposit with the borrowing institution in return for a bond as collateral. This collateral may involve a haircut, which is the percentage difference between the market value of the pledged collateral and the value of the funds lent – so a 5% haircut means the borrower can borrow $95 for each $100 in pledged collateral, for example.

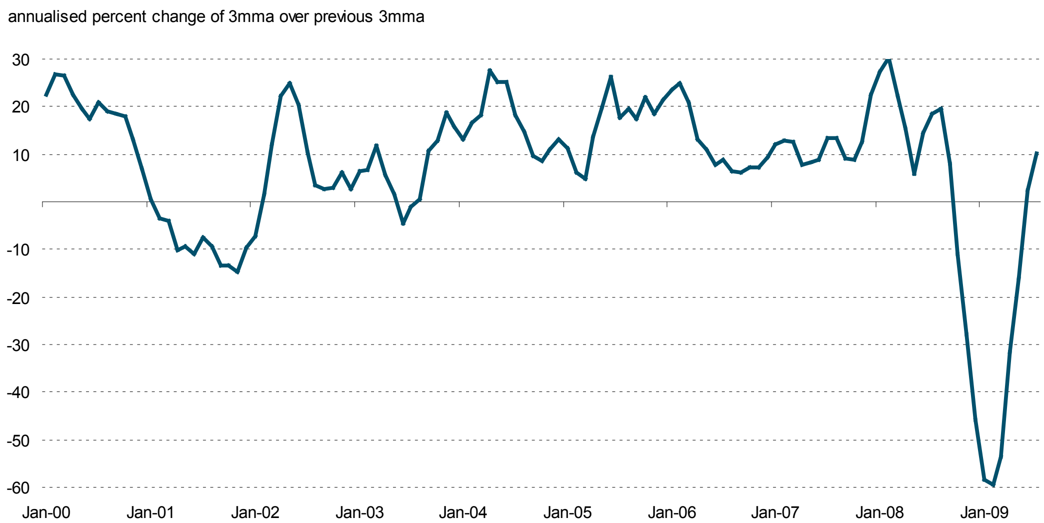
machine that is the Chinese economy stalled, and overall world economic activity fell by more than 6% quarter-on-quarter. The fall in world industrial production was even more stunning, as output plunged by an unprecedented 21% at an annualised rate in the final quarter of 2008. The first quarter of 2009 would deliver similarly grim news. The mini-Golden Age was over, and had been replaced by the Great Recession.

Deglobalisation

As global economic activity plummeted at the end of 2008, the same mechanisms that had previously powered globalisation now shifted into reverse, and cross-border trade and financial flows underwent an abrupt contraction. A two-decade period which had been characterised above all by the triumph of globalisation was coming to an end with a sharp burst of deglobalisation.

Not surprisingly, global capital flows were hit hard by the crisis. There was a severe contraction in the balance sheet of international banks, as total gross international claims of BIS reporting banks fell by US$1.9 trillion in Q4:2008 and by US$1 trillion in Q1:2009.[196] The World Bank estimated that total private capital flows to emerging markets in 2008 dropped to US$707 billion, down from a peak of US$1.2 trillion in 2007.[197] According to UNCTAD, global FDI inflows fell from an historic high of US$1,979 billion in 2007 to US$1,697 billion in 2008, a decline of 14%. The slide in FDI inflows continued into 2009, with the first quarter seeing a fall of more than 44% compared with their level in the same period in 2008.[198]

Figure 14: Value of world trade (in SDR terms)



Source: International Monetary Fund (IMF), *World Economic Outlook: Sustaining the recovery*. (2009)

Global trade flows also took a pummelling as the impact of the collapse in demand was further magnified by the disruption to financial systems. In the final quarter of

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[196] BIS, *BIS Quarterly Review, December 2009.* Basel, Bank for International Settlements, 19 December, 2009.

[197] World Bank, *Global Development Finance 2009: Charting a global recovery.* Washington DC, World Bank, 2009.

[198] UNCTAD, *World Investment Report 2009: Transnational corporations, agricultural production and development.* Geneva, United Nations Conference on Trade and Investment, 2009.

2008, the value of world merchandise exports slumped by 21% on the previous quarter, and was down by 11% over the same period in 2007 (Figure 14). The fall then steepened in the first quarter of 2009, with exports dropping by 22% on the previous quarter and down 31% against the same period in 2008. Economists Barry Eichengreen and Kevin O'Rourke pointed out that the collapse in global trade during the first 10 months of the Great Recession had significantly outpaced that experienced during the Great Depression.[199]

While there has never been a shortage of writers eager to pen the obituary of the current age of globalisation, the collapse in international exchange at the end of 2008 and the start of 2009 provided some powerful ammunition for the pessimists' case.[200]

'Socialism with American characteristics'

Just as the onset of the Great Recession had triggered a sharp reversal in one key trend of the past twenty years (the shift from globalisation to deglobalisation), so did the dramatic policy response to the crisis by the developed world's governments produce a second, as policymakers across the developed world embarked upon a dramatic extension of the degree of government intervention in their economies. Not only were the traditional tools of monetary and fiscal policy applied to head off economic disaster, but they were applied to an unprecedented extent.

Central banks in the United States, the UK and (once again) Japan found themselves pushing policy rates to the zero bound, and then experimenting with non-traditional monetary policy measures (so-called quantitative easing). Indeed, the extent of non-conventional measures pursued by the Bernanke Fed led to the striking observation that 'At the peak of his interventions, the Fed came to resemble the Soviet Gosbank, as much as micro-allocator of credit as a steward of macroeconomic policy.'[201]

Meanwhile, fiscal authorities embarked on large-scale fiscal stimulus packages which, when combined with the impact of the recession on revenues and spending for the so-called automatic stabilisers of fiscal policy, produced double-digit budget deficits (Figure 15) and projected increases in the stock of public debt equivalent to between 10 and 30 percentage points of GDP in several advanced economies (Figure 16).

Huge sums of money were directed towards the banks: total intervention to support the financial sector in the US, UK and euro area as of mid-2009 was about US$14 trillion, or almost a quarter of global GDP – a scale of intervention that dwarfed any previous state support of the banking system.[202]

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[199] Barry Eichengreen and Kevin H O'Rourke, *A tale of two depressions (3rd update).* VoxEU.org, 1 September, 2009.

[200] See for example Harold James, The late, great globalization. *Current History* 108 (714) 2009 and also Roger C. Altman, Globalization in retreat. *Foreign Affairs* 88 (4) 2009.

[201] Arvind Subramanian, How economics managed to make amends. *Financial Times*, 27 December 2009.

[202] Andrew G Haldane and Piergiorgio Alessandri, *Banking on the state.* Paper delivered at the Federal Reserve Bank of Chicago 12th Annual International Banking Conference on 'The international financial crisis: Have the rules of finance changed?' in Chicago on 25 September, 2009.

'The sheer scale of support to the banking sector is breathtaking. In the UK, in the form of direct or guaranteed loans and equity investment, it is not far short of a trillion (that is, one thousand billion) pounds, close to two-thirds of the annual output of the entire economy. To paraphrase a great wartime leader, never in the field of financial endeavour has so much money been owed by so few to so many. And, one might add, so far with little real reform.'[203]

In the United States, the extent of government bailouts and intervention meant that, one year on from the collapse of Lehman Brothers, the US government found itself as the country's 'biggest lender, insurer, automaker and guarantor against risk for investors large and small.'[204] This expanded role included a 60% stake in General Motors, an 80% stake in the insurer AIG, and a major role in financing car loans, credit card debt, and 9 out of 10 of new US mortgages.[205] The extent of government support for what had been some of the most financially well-remunerated sectors of the US economy prompted a revival of the term 'lemon socialism', or, as Gao Xiquing, President of China Investment Corporation quipped, 'socialism with American characteristics.'[206]

Crises of credibility

The sheer scale of the shocks produced by the GFC and its aftermath – the sharp burst of deglobalisation, the effective nationalisation of large chunks of the US and UK banking sectors – was of an order of magnitude sufficient to undermine the credibility of a range of institutions and ideas.

One prominent victim was the economics profession. On 18 July 2009, the *Economist* magazine had on its cover the picture of a melting economics textbook and the accompanying leader noted that 'Of all the economic bubbles that have been pricked, few have burst more spectacularly than the reputation of economics itself.'[207] In the UK, economists even wrote a letter to the Queen in response to a royal question as to why nobody had seen the GFC coming.

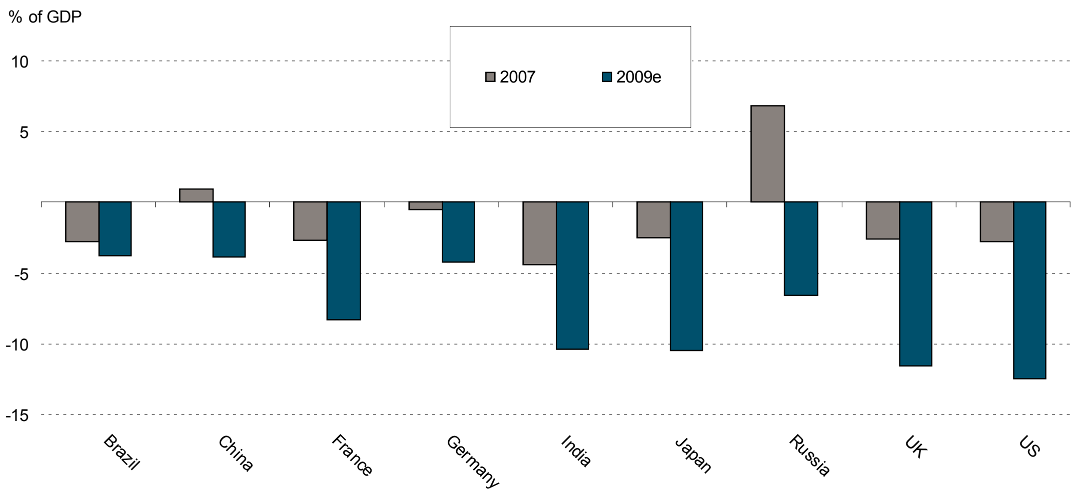
A great amount of ink has since been spilled trying to work out what went wrong. Some have focused on the incentives facing economists in the years preceding the crisis and argued that 'the problem lay not so much with the poverty of the underlying

[203] Mervyn King, Speech by Mervyn King, Governor of the Bank of England, to Scottish business organisations. (Edinburgh: 2009).
[204] Edmund L Andrews and David E Sanger, US is finding its role in business hard to unwind. *The New York Times*, 14 September 2009.
[205] Ibid.
[206] The Gao Xiqing quote is cited in Philip Stephens, Bankers, bonuses and the market: plus ca change. *Financial Times*, 15 October 2009.
[207] The Economist, What went wrong with economics? *The Economist*, 16 July 2009.

theory as with selective reading of it – a selective reading shaped by the social milieu.'[208] Newly minted Nobel Laureate Paul Krugman wrote a much-cited article in the *New York Times Magazine* in which he argued that the economics profession 'went astray because economists . . .mistook beauty, clad in impressive-looking mathematics, for truth'.[209]

Still, initially there also seemed to be a reasonable case for the defence. In particular, it could justifiably highlight the fact that – thanks to policy intervention – the world managed to avoid re-running the Great Depression of the 1930s, suggesting that the economics profession had managed to impart something worthwhile to policymakers after all.[210] Unfortunately, this argument has since been undercut somewhat by the fact that a sizeable number of prominent academic economists have been making the case that the actual policy response was at best unnecessary and at worst harmful, and that the post-GFC period has seen a steady decline in the degree of consensus as to the appropriate policy settings in the developed world.

Figure 15: Overall fiscal balance pre- and post-GFC, selected economies



Source: Annex Table 1 in International Monetary Fund (IMF), *The state of public finances cross-country fiscal monitor: November 2009*. (2009)

The crisis also called into question the role and value of the financial sector and the nature of the linkages between that financial sector and the regulators, policymakers and politicians supposed to oversee it. In the UK, Lord Adair Turner, Chairman of the Financial Services Authority, declared that 'some financial activities which proliferated over the last ten years were "socially useless", and some parts of the system were swollen beyond their optimal size.'[211] In the United States, critiques of the financial sector ranged from former IMF chief economist Simon Johnson's contention that financial policy had been captured by a financial oligarchy to Matt Taibbi's polemical description of Goldman Sachs as a 'great vampire squid wrapped

[208] Barry Eichengreen, The last temptation of risk. *The National Interest* 101 2009.
[209] Paul Krugman, How did Economists Get It So Wrong? *The New York Times Magazine*, 6 September 2009.
[210] Subramanian, How economics managed to make amends.
[211] Adair Turner, *Mansion House speech.* Speech by Adair Turner, Chairman, FSA, The City Banquet, The Mansion House, London, 22 September, 2009.

around the face of humanity'.[212] Johnson's critique seemed to be given added force by the fact that, one year on from the outbreak of the crisis, observers could still note that much remained unchanged on Wall Street, with little progress on tighter regulations even as bankers' pay was returning to pre-crisis levels.[213] Indeed, there were signs that the financial sector's survivors at the time were enjoying something of a mini-boom in response to a combination of policy rates set near zero, public guarantees, taxpayer support, and reduced competition.[214]

> 'A WHOLE GENERATION OF POLICYMAKERS HAS BEEN MESMERIZED BY WALL STREET, ALWAYS AND UTTERLY CONVINCED THAT WHATEVER THE BANKS SAID WAS TRUE.'[215]

It wasn't just the private financial sector that had a change of image. Some of the world's central bankers likewise received a major blow to their credibility, leaving their institutions facing their 'greatest challenge since they won the battle against inflation a generation ago.'[216] Did the golden age of central banking depart along with the world economy's mini-Golden Age?[217] Certainly, public trust in central bankers underwent a sharp decline in the crisis-hit economies.[218] Central bank policy and doctrine also came under greater scrutiny, with inflation targeting signaled out by some critics as a contributor to the financial crisis, by encouraging central banks to focus on a narrow definition of inflation to the exclusion of asset prices and credit growth.[219] Ben Bernanke's Fed – along with other central banks – was encouraged to rethink its attitude towards dealing with asset price bubbles.[220] Moreover, even the Fed's independence became the subject of debate.[221] While some of the post-GFC attacks on central bank independence have been based on political point-scoring or crank analysis, the GFC did pose the doctrine of independence some tough questions, not least since the degree of intervention recently required in the economy – making decisions over which banks to save and which to allow to go under, balancing the risks of inflation and deflation and the interests of creditors and debtors – were arguably so significant and so political that the idea of leaving them to unelected technocrats is problematic.[222]

With mainstream economic theory, the financial sector, and central banks all damaged to some extent by the crisis, not to mention the presence of a stunning back-flip on the

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[212] Simon Johnson, The Quiet Coup. *Vanity Fair*, March 2009 and Matt Taibbi, The great American bubble machine. *Rolling Stone*, 9-23 July 2009

[213] Berenson, A year later, little change on Wall St.

[214] Graham Bowley, Bailout helps fuel a new era of Wall Street wealth. *The New York Times*, 17 October 2009.

[215] Johnson, The Quiet Coup.

[216] Economist, Only human. Survey: The world economy.

[217] Stefan Gerlach, Alberto Giovannini and Cedric Tille, *Are the golden years of central banking over?* , VoxEU.org, 17 July, 2009.

[218] Daniel Gros and Felix Roth, *The crisis and citizens' trust in central banks.* VoxEU.org, 10 September, 2009

[219] Paul De Grauwe, *There is more to central banking than inflation targeting.* VoxEU.org, 14 November, 2007. Moritz Schularisk and Alan Taylor, *Credit booms go wrong.* VoxEU.org, 8 December, 2009. Also Axel Leijonhufvud, *The perils of inflation targeting.* VoxEU.org, 25 June, 2007.

[220] Jon Hilsenrath, Fed debates new role: bubble fighter. *The Wall Street Journal*, 2 December 2009.

[221] Alan Blinder, Threatening the Fed's independence. *The Washington Post*, 20 November 2009.

[222] Axel Leijonhufvud, *Central banking doctrine in light of the crisis.* VoxEU.org, 13 May, 2008.

part of governments in the world's leading economies regarding the economic role of the state, it's not surprising that the world's leading economics commentator, writing in the world's leading financial newspaper, was moved to declare that 'The assumptions that ruled policy and politics over three decades suddenly look as outdated as revolutionary socialism.'[223] His view found a kind of echo in testimony by Alan Greenspan delivered to the US Congress in October 2009:

> 'In recent decades, a vast risk management and pricing system has evolved, combining the best insights of mathematicians and finance experts supported by major advances in computer and communications technology. A Nobel Prize was awarded for the discovery of the pricing model that underpins much of the advance in derivatives markets. This modern risk management paradigm held sway for decades. The whole intellectual edifice, however, collapsed in the summer of last year because the data inputted into the risk management models generally covered only the past two decades, a period of euphoria.'[224]

More generally, the GFC represented a big strike against the economic credibility of much of the developed – or Western – world, and against that of the United States in particular.[225]

In fact, the GFC is arguably the third – and by far the largest – shock to the image of the Western model since its triumph over communism (with the current problems in the Eurozone a strong candidate to be the fourth). The Asian financial crisis may have been identified by many in the West as a home-grown problem, but was seen by its many of its victims as a product of global capital markets and a US-dominated IMF that offered mistaken and unnecessarily harsh policy advice. Next, the Dot-com crash and its corporate scandal-ridden aftermath went some way to scotching any ideas about the relative superiority of Western corporate governance. Now the GFC has undermined claims about the superiority of Western economic management more generally, even as it has undermined their economies' growth and employment performance.[226]

The policy response to the crisis also prompted some grinding of teeth in East Asia, where people were slow to notice the glaring difference between the policy advice they received in 1997-98 and the policy actions taken by Washington, London and elsewhere during 2008-09.[227] As a consequence, the tolerance on the part of emerging Asian policymakers for Western advice on sound economic management

[223] Martin Wolf, Seeds of its own destruction. *Financial Times*, 8 March 2009.
[224] Alan Greenspan, *Testimony to the Committee of Government Oversight and Reform.* Washington DC, US Congress, 23 October, 2009.
[225] Not all of the developed world: Australia and Canada have come out of the GFC looking pretty good.
[226] Roger C. Altman, The Great Crash, 2008: A geopolitical setback for the West. *Foreign Affairs* 88 (1) 2009.
[227] Kishore Mahbubani, Why Asia stays calm in the storm. *Financial Times*, 28 October 2008.

has been all but exhausted, a feeling shared with those in other emerging markets.[228] As a result, the (popular version of the) Washington Consensus, already looking somewhat sickly in the aftermath of the Asian financial crisis and further tarnished by the Argentine collapse and default at the start of the following decade, was yet another prominent victim of the GFC.

Some winners

While the GFC produced an awful lot of losers, there were also some important winners. For example, the crisis breathed new life into one major institution that had been in quite deep trouble pre-crisis: the IMF had a 'good war', coming out of the GFC with a big increase in financial resources and a bunch of new clients, initially mainly from Central and Eastern Europe and more recently from the periphery of the Eurozone.[229] The tally is a bit more balanced when it comes to the WTO, since on the downside, hopes that the GFC and the collapse in trade it sparked would finally provide the incentive needed for global leaders to drag the Doha round over the finishing line were not fulfilled. On the upside, however, there was no re-run of the 1930s experience of a rapid descent into trade protectionism: by and large, countries refrained from substantial increases in their tariff rates and stuck with their existing WTO commitments. Granted, this still left plenty of room for governments to play with so-called murky protectionism – financial bailouts of financial and non-financial companies and other forms of state support – as well as utilise anti-dumping measures, countervailing duties and safeguard actions.[230] Nevertheless, the existing system did a good job in limiting the recourse to protection, just as it was designed to do.[231] On balance, that should be recorded as a win.

Of course, the crisis did more than breathe new life into old institutions. More importantly, it encouraged the rise of a major new forum in the biggest change in the international economic architecture since the creation of the WTO. The elevation of the G-20 to a leaders' meeting with the Washington Summit in December 2008 marked a formal, official recognition that the old G7 could no longer cut it in the new global economy, and that a broader 'steering committee' was now essential. The third G-20 leaders' meeting, held on 24-25 September 2009 in Pittsburgh, saw the assembled leaders publicly declare that the G-20 would now be the new peak body for international economic cooperation:

> Today, we designated the G-20 as the premier forum for our international economic cooperation....We agreed to have a G-20 Summit in Canada in June 2010, and in Korea in November 2010. We expect to meet annually thereafter, and will meet in France in 2011.[232]

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[228] Ronnie Chan, The West's preaching to the East must stop. *Financial Times*, 3 January 2010.
[229] The Economist, The IMF assessed: A good war. *The Economist*, 17 September 2009.
[230] Simon J Evenett, *Crisis-era protectionism one year after the Washington G20 meeting.* VoxEU.org, 27 November, 2009.
[231] Joseph Francois, *The economic crisis, Doha completion and protectionist pressure.* VoxEU.org, 17 December, 2008.
[232] Leaders' Statement: The Pittsburgh Summit 24-25 September 2009.

For many observers, however, China was the biggest winner of all from the GFC.[233] Initially, the Chinese economy faltered in the face of weaker external demand, and pre-crisis talk of decoupling looked overly optimistic. But Beijing responded to the crisis with one of the world's largest economic stimulus packages, which provided a rapid and substantial boost to economic activity. This success in dealing with the crisis undoubtedly burnished the prestige of its state-capitalist model. At a time when much of the developed world was still contracting, China reported an economic growth rate for 2009 comfortably in excess of 9%, a success that drew admiring – and sometimes envious – glances from around the world.[234]

It's true that Beijing bought this economic resilience at some cost. The return of the state has not just been a developed-country story: government has had to step in to keep Chinese growth going as well.[235] And the government's approach almost certainly stored up problems for the future, by exacerbating existing imbalances and excesses in the Chinese economy.[236] Nevertheless, in the immediate aftermath of the GFC, where once there had been the Washington Consensus, now something like a Beijing Accord appeared to be the real deal. Perhaps for the first time in roughly two decades, the policy model that triumphed at the end of the Cold War had a credible challenger, at least as far as developing countries were concerned.

Into the 'new normal' and the 'terrible twenties'

The almost cataclysmic end of the world economy's 2003-2007 mini-Golden Age and the resulting pattern of winners and losers inevitably raised questions about what would come next. In particular, in the aftermath of the crisis, hopes for a continuation of the period of high economic growth and low volatility seemed to have gone the way of the dinosaurs. The faith that policymakers and investors had placed in the Great Moderation was replaced by a new-found respect for the shocks and discontinuities implied by a world of Black Swans and Fat Tails. (That said, the repeated ability of investors in particular to forget about the last crisis and move blithely on to the next should never be discounted.)

The shift to a more pessimistic outlook was captured in talk of the prospect of a growth path characterised as a 'new normal' for many of the world's developed economies, an environment that would be characterised by lower average economic growth, higher public debt (Figure 16), higher unemployment, higher sovereign risk, and more intrusive regulation.[237] The mini-Golden Age of 2003-07 was widely judged to have been transformed into something rather more leaden.

Figure 16: Gross general govt. debt pre- and post-GFC, selected economies

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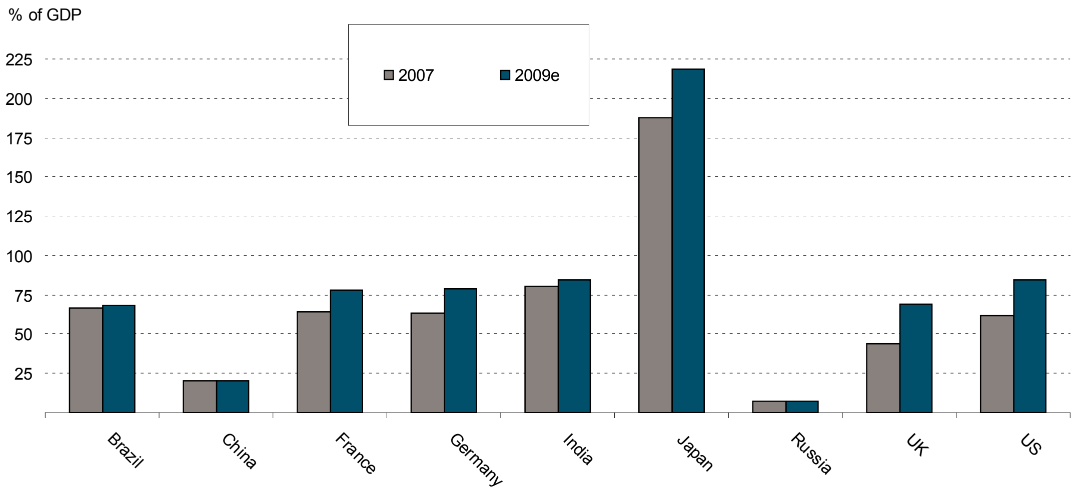
[233] See for example Fareed Zakaria, The recession's real winner: China turns crisis into opportunity. *Newsweek*, 17 October 2009.

[234] The United States shrank by 3.5% in 2009, while the Eurozone contracted by 4.3%.

[235] Barry Naughton, In China's economy, the State's hand grows heavier. *Current History* 108 (719) 2009.

[236] Yu Yongding, *China's policy responses to the global financial crisis.* Richard Snape Lecture. Melbourne, Productivity Commission, 25 November, 2009. Also Stephen Roach, Manchurian Paradox. *The National Interest* 101 2009.

[237] Mohamed A. El-Erian, *A new normal.* Secular Outlook, PIMCO, May, 2009. Kenneth S Rogoff, The 'new normal' for growth. *Project Syndicate*, 5 May 2009.



Source: Annex Table 1 in International Monetary Fund (IMF), *The state of public finances cross-country fiscal monitor: November 2009*. (2009)

Certainly, the lessons of past financial crises and their aftermath suggested that the crisis-hit economies of the developed world were unlikely to enjoy a rapid recovery. History shows that just as recessions associated with financial crises tend to be longer and deeper than those following other adverse shocks, so do the recoveries following those recessions tend to be slower and shallower than average, a negative result that is compounded by highly synchronised (affecting ten or more advanced economies) downturns.[238] Moreover, post-crisis environments are typically characterised by big increases in government debt, slower growth rates and a prolonged period of high unemployment.[239] At the time of writing, a sluggish recovery across much of the developed world and the onset of severe debt- and competitiveness-related problems suggested that this pessimistic assessment was largely on track.

For a large proportion of the rich world, then, the global economy looks to be heading into what might be described as its 'terrible twenties'.

On the other hand, the aftermath of the GFC has also confirmed the resilience of growth outperformance by the economies of the emerging world. While both rich and emerging economies suffered from the immediate impact of the crisis – the sharp downturns in global trade and capital flows at the end of 2008 and start of 2009 affected pretty much every economy that was plugged into the international system – recovery has been much more robust in emerging economies. In 2009, for example, while real GDP in advanced economies as a group was shrinking by 3.7%, emerging and developing economies managed to grow by 2.8%. In 2010, advanced countries grew by 3.1% while emerging and developing economies expanded by a much more impressive 7.3%.

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[238] International Monetary Fund (IMF), From recession to recovery: How soon and how strong?, in *World Economic Outlook: Crisis and recovery.* Washington DC, International Monetary Fund, 2009.

[239] Carmen M Reinhart and Kenneth S Rogoff, The aftermath of financial crises. *American Economic Review* 99 (2) 2009. Carmen M Reinhart and Vincent R Reinhart, *After the fall.* Paper presented at the Jackson Hole Economic Policy Symposium on Macroeconomic Challenges: The Decade Ahead, Wyoming, August 26-28, Federal Reserve Bank of Kansas, 2010.

Not only do emerging economies appear to have become more resilient to downturns in the developed world despite the increase in economic linkages between them, but there appears to have been an increase in trend growth rates in the emerging world.[240]

This improved relative economic performance has fed through into a greater degree of self-confidence. For example, major official investors in the US currency – such as Beijing – have occasionally worried aloud about the safety of their investments, and the 2009 BRICs summit went so far as to canvas alternatives to the greenback, a call echoed by the call from Zhou Xiaochuan, Governor of the People's Bank of China, for a greater role for the SDR in the international monetary system.[241]

In summary, the post-GFC economic performance of emerging economies in general, the relative success of China in particular, and the damage that the GFC has caused both to rich-country growth prospects and policy credibility all seemed to argue for a world that looks much more multipolar than its pre-GFC version – at least in economic terms. The US National Intelligence Council's most recent set of long-range projections, *Global Trends 2025: A Transformed World*, was highlighting the emergence of a multipolar world even as the GFC was underway.[242] In the aftermath of the crisis, two of the report's authors concluded that the GFC had accelerated the trend.[243] Indeed, such has been the post-crisis divergence in economic performance between developed and emerging economies that the description 'GFC' has lost ground to alternative formulations, such as the North Atlantic Financial Crisis.

It's not all change - those three problems again

The fall of the Berlin Wall in November 1989 marks a plausible date for the birth of the first truly global economy since the start of World War One, and the two decades that followed have witnessed some dramatic transformations in the international economic environment. For most of its first decade, that global economy was characterised by the triumph of the market over the state and by the advance of globalisation, particularly in its financial form. One decade on from the fall of the Wall, and those two trends seemed entrenched, with the United States established as the clear winner not just of the Cold War, but of the era that followed it.

A decade after that, however, and the picture looked rather different. The world had just experienced a major financial crisis and a dramatic collapse in economic activity that culminated in an intense burst of *de*globalisation. The state had been injected back into both the national and international economic arena to an extent that would have been almost inconceivable just a few years before. In many cases, it had also been saddled with hefty new financial liabilities. The United States and the West

[240] Otaviano Canuto, *Recoupling or switchover: Developing countries in the global economy.* Washington DC, The World Bank, 2010

[241] Zhou Xiaochuan, *Reform the International Monetary System. An essay by Dr Zhou Xiaochuan, Governor of the People's Bank of China* 23 March, 2009.

[242] National Intelligence Council, *Global trends 2025: A transformed world.* Washington DC, National Intelligence Council (NIC), November, 2008.

[243] Mathew J Burrows and Jennifer Harris, Revisiting the future: Geopolitical effects of the financial crisis. *The Washington Quarterly* 32 (2) 2009. See also Mark Thirlwell, *Our post-GFC world economy.* Lowy Institute Perspectives. Sydney, Lowy Institute for International Policy, December, 2010.

more generally had suffered major blows both to their economic performance and to their credibility as competent economic managers.

The big winners of the past two decades currently appear to be the world's leading emerging markets, particularly China. This enhanced status is reinforced by their position – thanks to their large stocks of foreign exchange reserves and high savings rates – as the financial backers of the once profligate and now increasingly indebted developed world. The market model championed by the West has (perhaps) found a new competitor in the form of China's state capitalism – the Beijing Accord against the Washington Consensus.

Not everything has changed, however.[244] Despite the size of the latest shock to hit the world economy, the United States remains the world's largest economy, and the US dollar is still the closest thing the world has to a reserve currency (although that status does look increasingly fragile).[245] The return of the state in the developed world has been highly qualified by the parlous financial position of many of those economies ('the state might be back, but it's broke') while in emerging markets there is little sign of any wholesale retreat from the current balance of market and government: the current crisis of confidence is a *developed*, not a developing, country one.[246]

Crucially, the post-GFC world continues to confront the same three problems that helped shape the pre-GFC world: the crisis problem, the adjustment problem, and the sustainability problem.

Dealing with the crisis problem is arguably the most pressing of the three problems in the aftermath of the biggest financial crisis in modern history, not least since the ongoing problems in the Eurozone suggest that another bout of instability could well be in store. An important complicating factor here is the speed at which financial crises now unfold. In a speech at the end of 2009, Jean-Claude Trichet, President of the ECB, noted that while financial crises are not new, 'the speed of their transmission has accelerated tremendously over the past few decades. While the unfolding of the sovereign debt crises in the 1980s occurred over the course of years, the Asian financial crisis developed, at its peak, over months rather than years. The last intensification of the present crisis, starting in mid-September [2008], has spread around the globe in the course of half-days.'[247]

Meanwhile, the adjustment problem will also remain a feature of the post-GFC world, as financially distressed and economically weakened developed economies are likely to be even more concerned about the challenges raised by emerging market competitors than they were during the boom years of 2003-2007. When the pie is expanding rapidly, it is relatively easier not to fight about the size of each slice, but in

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[244] This is the theme of Mark Thirlwell, *All change or plus ca change? The global financial crisis and four key drivers of the world economy.* Lowy Institute Perspectives. Sydney, Lowy Institute for International Policy, February, 2009. Updated in Thirlwell, *Our post-GFC world economy.*

[245] And if current IMF forecasts prove correct, China will become the world's largest economy (if GDP is measured on a PPP basis) by 2016.

[246] Kishore Mahbubani and William Weld, Asia keeps the West's betrayed faith. *Financial Times*, 21 July 2009.

[247] Jean-Claude Trichet, *Systemic risk.* Clare Distinguished Lecture in Economics and Public Policy by Jean-Claude Tricher, President of the European Central Bank, organised by Clare College, University of Cambridge, 10 December, 2009.

a world of higher unemployment and weaker economic growth in the rich world, its policymakers and politicians are going to be even more focused on international distributional issues and hence inclined to take a tougher stance on matters such as China's exchange rate policy.

The sustainability problem will likewise remain firmly on policymakers' agendas, and will also remain painfully difficult to deal with. Commodity prices did fall sharply after the onset of the GFC, prompting some to argue that the so-called commodity super cycle of 2003-08 had been nothing more than another in a long series of commodity booms and busts. But the subsequent resumption of strong economic growth in the developing world, together with a series of supply shocks including adverse climate conditions over 2010 which helped push up food prices and political turbulence in the Middle East and North Africa in 2010 and 2011 which similarly boosted the oil price, together helped keep commodity prices much higher than the lacklustre growth performance of the developed world would normally have indicated. Resource – food, energy and water – security continues to occupy officials from Beijing to Washington.

Finally, there is the risk of dangerous feedback effects among these three problems. For example, one possibility is that dealing with the sustainability problem – whether it be matters of climate change or food or energy security – will end up being conflated with the adjustment problem, as developed countries turn to trade or investment policies ostensibly to pressure developing countries on environmental issues, but also with more than half an eye on the possibilities offered by disguised (or 'green') protectionism.[248] Such an approach would be yet another threat to the future of the global economy as it negotiates its third decade.

[248] See for example Simon J Evenett and John Whalley, *The G20 and green protectionism: Will we pay the price at Copenhagen?* Policy Brief no. 14. Waterloo, Ontario, The Centre for International Governance Innovation, April, 2009.

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