

A developing country view of the current global crisis: what should not be forgotten and what should be done

Roberto Frenkel and Martin Rapetti*

Macroeconomic theory will surely be affected by the current global crisis. There are signs that some 'old' theories and insights will have a comeback. This paper argues that among them economists should not forget the lessons that have been learnt from three decades of several financial crises in developing countries. We emphasise two important lessons. First, preventing crises in developing countries requires not only the regulation of domestic financial systems, but also a consistent set of macroeconomic policies. In particular we stress the need for consistency between the exchange rate rule, the capital account regime and the domestic financial market regulations. Second, financial crises in developing countries tend to worsen both the balance of payments and the fiscal balance. Traditional adjustment policies tend to exacerbate the recessive trends in output and employment. This is just the opposite of what is required and what governments in developed countries are able to do. Developing countries should push for an agenda that helps them deal with these problems.

Key words: Financial crises, Developing countries, Minsky
JEL classifications: G01, F32, F53

1. Introduction

The current global crisis originated in the US financial market. Since this is the centre of a network that interlinks the national financial systems of almost all countries in the world, the crisis spread very quickly. The fall in asset prices, the liquidity contraction and increased uncertainty in financial markets gradually started to affect economic activity. The resulting contraction in aggregate demand spread all over the world through international trade channels, thereby reinforcing the contractive forces. According to the International Monetary Fund (IMF), in 2009 the world economy will experience the biggest contraction in the last 60 years. Most analysts agree that the world economy is going through the worst crisis since the Great Depression.

Manuscript received 25 March 2009; final version received 6 May 2009.

Address for correspondence: Roberto Frenkel, Centro de Estudios de Estado y Sociedad (CEDES), Sanchez de Bustamante 27, Buenos Aires C1173AAA, Argentina; email: frenkel@cedes.org

* CEDES and University of Buenos Aires, Argentina (RF) and CEDES and University of Massachusetts, Amherst (MR). This paper is a result of the project 'Financial Instability and Financial Regulation in Latin America'. The authors thank the Ford Foundation for financial support and Leila Davis and three anonymous referees for useful comments.

Financial and economic crises can hardly be understood within the dynamic stochastic general equilibrium (DSGE) framework; the building block of modern macroeconomic theory. DSGE models derive macroeconomic outcomes from explicit choice-theoretic microfoundations, where agents are assumed to optimise intertemporally under rational expectations. The standard modelling strategy is to collapse all heterogeneity in the system into a single representative agent. The models are stochastic because they allow random exogenous shocks to the system, whose probability distribution is known by the representative agent. The models can include nominal rigidities arising, for instance, from the price-setting behaviour of monopolistic firms.

The contrast between the current crisis and the world pictured by modern macroeconomic theory is striking. It is difficult to believe that a financial crisis can result from the decisions of agents that know the probability distribution of future events. Uncertainty (not risk) about the future and the confidence with which agents form their expectations about the future seem to be key ingredients for understanding financial crises. Both of them are ignored in DSGE models. Similarly, a model based on a single agent can hardly inform about important asymmetries between agents that influence microeconomic behaviour and macroeconomic outcomes. The existence of asymmetric information between lenders and borrowers, for instance, is important to understand financial markets behaviour and financial crises.

The contrast between contemporary macroeconomic theory and current events has had an impact in academic circles. Heterodox economists have had a long-standing critical attitude towards mainstream macroeconomic theory. But more strikingly, several influential figures in the mainstream have recently expressed their dissatisfaction with it. Among the sceptics we find Robert Solow (2008), George Akerlof and Robert Shiller (2009), Willem Buiter (2009), Paul Krugman (2009) and Dani Rodrik (2009). One seemingly shared view among both heterodox and mainstream critics is that contemporary mainstream macroeconomics has systematically neglected important knowledge and insights that were widely known by previous generations of economists.

We are sympathetic with this view. However, based on how the debates have developed so far, we fear that the recollection of previous useful knowledge may end up being partial. A key insight of structuralist and institutional economics is that economic behaviour does not necessarily replicate identically in all countries. Economic structures, institutions and history play important roles in shaping agents' behaviour and therefore affecting macroeconomic outcomes. This should not be forgotten.

This article focuses on two important differences between developed and developing countries regarding financial crises. Section 2 argues that the factors that trigger the booming phase preceding a financial crisis are different in developed and developing countries. The conditions that have led to financial crises in developing countries typically arose from the implementation of macroeconomic policies, which created incentives that ended up generating the boom-and-bust cycles. On the contrary, in developed countries the elements that trigger the booming phase have developed endogenously within the domestic financial systems. Section 3 deals with the difference between developed and developing countries regarding governments' ability to conduct stabilisation policy once financial crises unfold. The main argument here is that since agents in developing countries typically have a preference for foreign assets, governments have less room to conduct expansive monetary and fiscal policies than in developed countries. Based on these two differences, at the end of each section we present proposals to ameliorate the effects of the current global crisis on developing countries. Section 4 concludes.

2. Financial crises, here and there

The neglect of crises by modern mainstream macroeconomic theory should certainly not be attributed to all schools of economic thought. The works by Karl Marx, John Maynard Keynes, Michael Kalecki, Hyman Minsky and Axel Leijonhufvud, to mention just a few influential cases, have highlighted the inherent instability of capitalist economies and their propensity to crises. Since the sub-prime crisis unfolded, there have been signs of reaction against the DSGE paradigm and an incipient revalorisation of the contribution of those scholars who stressed financial crises as a central topic of economic analysis. Among them, Minsky's work has received significant attention.¹

It is not surprising that analysts and observers of the financial markets have brought Minsky's ideas back from an almost total intellectual exile. The conditions that caused and then helped to develop the current financial crisis in the USA correspond very neatly to Minsky's model of financial crises.² His model stresses that unregulated market economies are not dynamically stable systems that converge to a full-employment equilibrium, but systems that are cyclical in nature, in which crises are not unusual events. A key element of this cyclical pattern is the endogenous nature of agents' risk perception and expectations. The Minskyan cycle can be described as follows.

The tranquility of states of full-employment gradually leads to a diminishing perception of risks and increasingly optimistic expectations about the future. It is also during periods of tranquil expansion that 'profit-seeking financial institutions invent and reinvent "new" forms of money, substitutes for money in portfolios, and financing techniques for various types of activity' (Minsky, 1986, p.199). As financial innovation and optimistic expectations develop, additional demand for goods and assets is created. Asset prices increase, giving rise to additional profit opportunities and thus attracting new investors. This positive feedback characterises the booming phase of the cycle, in which the greater appetite for risk and new financial instruments make the system increasingly fragile. At some point, some event calls agents' attention to the high degree of exposure to risk in the system and a phase of financial distress begins. The emerging awareness of higher risk makes most agents switch their portfolios in favour of safer and liquid assets and postpone spending decisions. Excess demand for liquidity and low-risk assets ends up pricking the bubble. A massive loss of wealth follows. In this contractive phase, pessimistic expectations are dominant and negative feedbacks are the rule. The deflationary developments in the financial markets make most agents either liquidity-constrained or bankrupt, in both cases affecting their spending decisions negatively. Private consumption falls and investment collapses, further fueling the deflationary trends. What started as a contraction in the financial sector has now spread to the whole economy: the financial crisis has led to a systemic economic crisis. In Minsky's view, government regulation cannot eradicate this cyclical pattern completely, but can soften it considerably so as to prevent *great* crises from happening (*again*).

¹ Several newspaper articles, including some in the *New York Times*, *The Wall Street Journal* and the *Financial Times*, have emphasised the link between Minsky's work and the current financial crises. Blogs of economists vindicating Minsky's work include those of Bradford DeLong, Nouriel Roubini and Willem Buiter. From a more academic perspective, Akerlof and Shiller (2009) provide a strong endorsement of the relevance of Minsky's insights.

² Minsky's work on financial crises and their relation to the macroeconomy is vast. Both his critique of the neoclassical digestion of Keynes' contributions, and the relevance of finance in Keynes' framework can be found in Minsky (1975); a synthetic presentation of his model of financial crises in Minsky (1977); and the most polished and mature exposition of his thought in Minsky (1986). Charles Kindleberger (1978) provides an exhaustive historical account of financial crises analysed within Minsky's framework.

Minsky's model is certainly useful for understanding the subprime crisis in the USA and to frame possible policy responses; tighter regulation of domestic financial markets being an obvious one. It would be positive for the understanding and prevention of financial crises if Minsky's contributions have a greater influence on both economic research and policy making. Similarly, it is important for both economists and policy makers to consider the extensive research on the large number of crises that have occurred in developing countries during the last 30 years. Most of those experiences happened in Latin America. The region began to participate in the second wave of financial globalisation in the early 1970s and has suffered many crises since then. Other developing countries joined the financial globalisation process later, in the early 1990s, and together with the Latin American countries began to be called 'emerging market economies'. The crises in some of these economies—such as those in the five East Asian countries, Russia and Turkey—add to the list of capital market crises in developing countries.

Minsky's model has inspired many studies of financial crises in developing countries since the mid-1970s. Taylor (1998A) argues that many of these crises followed a similar type of Minskyan boom-and-bust cycle, in which the cyclical behaviour of agents' preferences toward risk and the lack of public regulation of financial markets led to systemic crises. A distinguishing characteristic of these crises, however, is that the booming phase began not with innovations within the financial markets, but with the implementation of macroeconomic policies that gave rise to a profitable environment for financial arbitrage between domestic and foreign assets. These policies typically included the liberalisation of the domestic financial market, the deregulation of the capital account, and some 'credible' rule of nominal exchange rate predetermination (Frenkel, 2003). The prototypical boom-and-bust cycle resulting from that macroeconomic configuration is described as follows.

The rapid deregulation of previously 'repressed' capital markets raises domestic interest rates.¹ In such a context, the combination of credibly fixed (or predetermined) exchange rates and capital account liberalisation leads to significant spreads between the yields of foreign and domestic assets. Initially, a few local players take advantage of the arbitrage opportunities, issuing foreign debt to do so. Their exposure to risk essentially depends on the probability that the exchange rate rule is altered (i.e. the exchange rate risk). From the viewpoint of the individual investor, engaging in external borrowing to exploit an arbitrage opportunity has no significant effect on the sustainability of the exchange rate rule. However, since the first movers are exploiting significant benefits, other players have strong incentives to jump in, even when by doing so their combined actions may have negative macroeconomic consequences. As Salih Neftci (2002), a market practitioner, points out, 'if the banking system is immature, or if modern risk management is not very well understood, it may be extremely difficult to explain to the owners of a bank returns such as 7–8%, while competitors have been displaying performances of 10–15% for two or three years in a row'.

Capital inflows expand liquidity and credit in the economy. As a result, domestic interest rates and spreads fall, and output and employment grow. The expansion of aggregate demand leads to price increases (particularly in non-tradable sectors), which under fixed (or predetermined) exchange rate regimes generates an appreciation of the real exchange

¹ In a high inflation context, as observed in the Latin American countries where this set of policies was implemented in the form of stabilisation programmes, the likelihood of finding attractive domestic interest rates is even higher.

rate. The real appreciation reinforces the inflow of capital seeking capital gains by holding domestic assets and, therefore, further fuels the expansion of credit and output growth. The combined effect of the real exchange rate appreciation and economic growth stimulates the demand for imports, while exports weaken. The worsening of the trade balance together with the increase in interest and dividend payments resulting from the reduction of the net foreign assets leads to a current account deficit.

Given the progressive worsening of the external balance, the credibility of the exchange rate rule weakens. As the probability of exchange rate devaluation increases, the balance sheet of the domestic financial system—which is short on foreign currency and long in local assets—becomes increasingly fragile. Some players, possibly the most risk averse or the best informed, begin undoing their positions in domestic assets, leading to a slowdown in the capital inflows. Authorities increase interest rates in order to retain capital. However, there eventually comes a point at which no interest rate can attract new external financing. Foreign exchange reserves at the Central Bank, which grew during the booming phase of the cycle, begin falling as the monetary authority intervenes to sustain the exchange rate regime. However, the run against the Central Bank's foreign exchange reserves cannot be stopped and the exchange rate rule is finally abandoned. A sequential or simultaneous twin (external and financial) crisis is the final outcome.

This type of developing-country Minskyan cycle was first observed in Argentina and Chile during the late 1970s (i.e. the so-called Southern Cone episodes), where systemic financial crises unfolded in both countries about one year before their balance of payment crises in 1980 and 1981, respectively. Similar stylised cycles were observed in the Mexican and Argentine crises of 1995, the East Asian crises of 1997–98, the Russian crisis of 1998, the Brazilian crisis of 1999, and the Argentine and Turkish crises of 2001.¹ In all these episodes, crises were preceded by periods of boom, where financial intermediation and asset price bubbles developed in a context of increasing risk-taking behaviour. The analyses of all these episodes referred to in footnote 1, page 5 show that crises did not result from unsustainable fiscal policies, negative external shocks or moral hazard behaviour due to explicit or implicit government guarantees. They arose, instead, from the increasing financial fragility that resulted from the worsening of the external robustness of the economies. The deterioration of external conditions and the increase in financial fragility ultimately resulted from the destabilising consequences of domestic and foreign private sectors taking risky positions, and public sectors unable or unwilling to regulate financial markets during the booming phase (Taylor, 1998A).

Tables 1 to 5 present key macroeconomic variables for six of these boom-and-bust cycles in developing countries. Table 1 describes the Chilean experience during the late 1970s and the early 1980s. After a drastic deregulation of the domestic financial market in 1975, the country followed a stabilisation plan based on an active crawling peg (i.e. the 'tablita') and the opening of the capital and current accounts. Table 2 shows indicators for Mexico from 1988 to 1995. This period starts with the launching of the 'Economic Solidary Pact'—a programme combining pegged exchange rate, trade liberalisation and fiscal

¹ A seminal model of financial crises in developing countries within this framework is Frenkel (1983), which was inspired by the crises of Argentina and Chile in the early 1980s. Empirical accounts of these experiences are found in Ffrench-Davis (1983), Damill and Frenkel (1987) and Fanelli and Frenkel (1993). Analyses of other crises in developing countries within this framework include Ros (2002) and Cruz *et al.* (2006) for the Mexican crisis of 1995; Arestis and Glickman (2002) for the Asian crises of 1997–98; Taylor (1998B) and Palma (1998) for the previously mentioned cases and the Russian and Brazilian crises of 1998 and 1999, respectively; Yeldan (2006) for the Turkish crisis of 2001; and Damill *et al.* (2005) for the Argentine crisis of 2001–02.

Table 1. Chile: selected macroeconomic variables, 1977–1983

	1977	1978	1979	1980	1981	1982	1983
Gross domestic product (GDP) growth	8.7	7.5	8.7	8.1	4.7	-10.3	-3.8
Trade balance (% of GDP)	-1.8	-3.3	-2.8	-4.2	-10.3	-1.9	2.7
Current account (% of GDP)	-4.1	-7.1	-5.7	-7.1	-14.5	-9.5	-5.6
Capital account (% of GDP)	4.6	12.0	12.0	12.2	13.8	4.2	5.7
Central bank's FX reserves (absolute variation) ^a	66	753	1,314	1,409	-238	-1,292	22
Domestic credit to private sector (% of GDP)	20.0	28.9	36.3	46.9	53.2	84.1	75.3
Deposit interest rate (%)	94.9	63.5	45.2	37.7	40.9	48.7	28.0
US lending interest rate (%)	6.8	9.1	12.7	15.3	18.9	14.9	10.8
Exchange rate variation (%) ^b	65.1	47.0	17.7	4.7	0.0	30.5	54.8
Ex-post spread ^c	23.0	7.4	14.8	17.7	22.0	3.3	-37.6
Real exchange rate ^d	100.0	108.9	95.6	83.0	83.4	105.1	125.6
External debt (% gross national income)	42.8	49.5	46.7	45.5	50.4	77.6	99.7
Fiscal balance (% of GDP)	-1.1	-0.1	4.8	5.4	2.6	-1.0	-2.6

Column in bold text indicates the year in which Chile abandoned its fixed exchange rate regime.

^aIn millions of US dollars.

^bNominal exchange rate defined as the domestic price of the US dollar: (+) depreciation; (-) appreciation.

^cSpread = deposit interest rate - (US lending interest rate + exchange rate variation).

^dNominal exchange rate deflated by the relative consumer price index inflation: (+) depreciation; (-) appreciation.

Source: World Development Indicators, World Bank.

austerity—and is followed by the removal of restrictions to capital inflows and the deregulation of the banking system in the early 1990s. Tables 3 and 4 collect the Thai and Korean experiences of gradual liberalisation of the domestic financial markets and the capital accounts initiated in the late 1980s and accelerated in the early 1990s. Finally, Table 5 shows Argentina's macroeconomic performance under the convertibility regime: a shock-type stabilisation programme beginning in 1990–91, in which the government adopted a currency board and implemented a drastic deregulation of the financial system and the full liberalisation of trade and capital movements. During this period Argentina experienced two cycles, one ending with a financial crisis in 1995 and the other with a twin external and financial crisis in 2001–02. In each table, a column is highlighted in bold text to indicate the year in which the countries abandoned their fixed or semi-fixed exchange rate regimes.¹

The tables are intended to illustrate the essential stylised facts of the boom-and-bust cycles in developing countries.² We purposely selected episodes in different regions and periods to suggest that the nature of these cycles is fairly general. All the tables show that at the beginning of these episodes domestic interest rates were high enough to attract capital from abroad. The simple measure of the interest rate differential adjusted by the *ex-post* variation of the nominal exchange rates shows, with the exception of Korea, the existence

¹ Besides the column in bold text, which indicates the year in which Argentina's currency board was abandoned *de facto* (December 2001), the column in italic text (1995) in Table 5 indicates the year of the financial crisis triggered by the Mexican contagion (i.e. the 'tequila' effect).

² For more detailed analyses, the reader is referred to the literature cited in footnote 1, page 5.

Table 2. Mexico: selected macroeconomic variables, 1988–1995

	1988	1989	1990	1991	1992	1993	1994	1995
Gross domestic product (GDP) growth	1.2	4.2	5.1	4.2	3.6	2.0	4.4	-6.2
Trade balance (% of GDP)	1.4	-0.1	-1.1	-2.9	-5.0	-3.9	-4.8	2.7
Current account (% of GDP)	-1.3	-2.6	-2.8	-4.7	-6.7	-5.8	-7.0	-0.5
Capital account (% of GDP)	-2.7	2.8	4.1	7.2	7.0	7.3	2.6	4.2
Central bank's FX reserves (absolute variation) ^a	-7,365	414	3,476	7,836	1,119	6,127	-18,857	10,604
Domestic credit to private sector (% of GDP)	11.1	15.6	17.5	20.9	28.0	31.7	38.7	29.2
Deposit interest rate (%)	55.2	33.4	30.4	18.0	15.9	16.7	15.1	39.8
US lending interest rate (%)	9.3	10.9	10.0	8.5	6.3	6.0	7.1	8.8
Exchange rate variation (%) ^b	64.5	8.4	14.2	7.5	2.3	1.0	8.3	89.9
Ex-post spread ^c	-18.6	14.1	6.2	2.0	7.3	9.7	-0.3	-58.9
Real exchange rate ^d	100.0	94.6	89.9	82.0	75.0	70.8	73.6	106.6
External debt (% gross national income)	56.4	43.7	41.1	37.3	31.7	33.3	33.9	60.5
Fiscal balance (% of GDP)	-8.9	-4.6	-2.5	2.9	4.1	0.5	0.0	-0.5

Column in bold text indicates the year in which Mexico abandoned its fixed exchange rate regime.

^aIn millions of US dollars.

^bNominal exchange rate defined as the domestic price of the US dollar: (+) depreciation; (-) appreciation.

^cSpread = deposit interest rate - (US lending interest rate + exchange rate variation).

^dNominal exchange rate deflated by the relative consumer price index inflation: (+) depreciation; (-) appreciation.

Source: World Development Indicators, World Bank.

of significant arbitrage opportunities. The booming phase is observed very clearly in all cases. There are large capital inflows, accumulation of foreign exchange reserves and expansion of the domestic credit to the private sector. Along with these processes, domestic interest rates (and spreads) tend to decrease and output grows at high rates. However, a simultaneous deterioration of the external conditions is also observed. All cases show that during the booming phase the real exchange rate appreciates, while both the trade balance and the current account worsen. Around the years that the exchange rate rules are abandoned, indicated by the columns in bold text, signs of reversion of the cycle emerge: capital inflows and foreign exchange reserve accumulation decelerate and domestic interest rates tend to rise. Then the crises erupt. We observe reversals of capital inflows, contractions of foreign exchange reserves and sharp depreciations of the nominal (and real) exchange rates. Economic activity contracts substantially and credit to the private sector collapses. With the exception of Argentina in 2001, none of these episodes registers significant fiscal imbalances neither during the booming phase nor prior to the crisis.

The discussion above suggests that financial crises in developing countries and the current one in the USA have been similar in their dynamics. In all these cases, the combination of lax public regulation of domestic financial markets and the cyclical nature of agents' preference toward risk and expectations has led to a boom-and-bust cycle ending in a systemic crisis. The crises in developing countries are not singular in this aspect. There is, however, a key difference between these crises and the subprime crisis in the USA (and other developed countries). The difference lies in the factors kicking off the booming phase

Table 3. Thailand: selected macroeconomic variables, 1990–1998

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Gross domestic product (GDP) growth	11.2	8.6	8.1	8.3	9.0	9.2	5.9	-1.4	-10.5
Trade balance (% of GDP)	-7.5	-6.5	-4.0	-4.2	-4.8	-6.7	-6.3	1.4	15.9
Current account (% of GDP)	-8.5	-7.7	-5.7	-5.1	-5.6	-8.1	-8.1	-2.0	12.7
Capital account (% of GDP)	12.9	11.9	8.2	8.5	9.0	12.1	9.0	-5.8	-10.3
Central bank's FX reserves (absolute variation) ^a	3,750	4,134	2,791	4,256	4,841	6,658	1,706	-11,747	2,640
Domestic credit to private sector (% of GDP)	83.4	89.1	98.5	111.4	127.7	139.8	147.2	165.7	155.9
Deposit interest rate (%)	12.2	13.7	8.9	8.6	8.5	11.6	10.3	10.5	10.7
US lending interest rate (%) ^b	10.0	8.5	6.3	6.0	7.1	8.8	8.3	8.4	8.4
Exchange rate variation (%) ^b	0.6	-0.3	-0.5	-0.3	-0.7	-0.9	1.7	23.8	31.9
Ex-post spread ^c	1.6	5.4	3.0	2.9	2.0	3.7	0.3	-21.6	-29.6
Real exchange rate ^d	100.0	98.4	97.0	96.3	93.3	89.9	88.9	103.6	132.1
External debt (% gross national income)	33.3	39.0	38.3	42.7	46.1	60.6	63.5	74.6	97.2
Fiscal balance (% of GDP)	4.6	4.8	2.9	2.1	1.9	2.9	1.0	-0.3	-2.6

Column in bold text indicates the year in which Thailand abandoned its fixed exchange rate regime.

^aIn millions of US dollars.

^bNominal exchange rate defined as the domestic price of the US dollar: (+) depreciation; (-) appreciation.

^cSpread = deposit interest rate - (US lending interest rate + exchange rate variation).

^dNominal exchange rate deflated by the relative consumer price index inflation: (+) depreciation; (-) appreciation.

Source: World Development Indicators, World Bank.

Table 4. Korea: selected macroeconomic variables, 1990–1998

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Gross domestic product (GDP) growth	9.2	9.4	5.9	6.1	8.5	9.2	7.0	4.7	-6.9
Trade balance (% of GDP)	-1.1	-2.7	-1.2	0.4	-0.7	-1.1	-3.5	-0.6	12.9
Current account (% of GDP)	-0.8	-2.7	-1.2	0.2	-1.0	-1.7	-4.2	-1.6	11.7
Capital account (% of GDP)	0.6	2.3	2.3	0.6	2.2	3.1	4.5	-1.0	-2.5
Central bank's FX reserves (absolute variation) ^a	-425	-1,102	3,414	3,126	5,409	7,041	1,353	-13,692	31,634
Domestic credit to private sector (% of GDP)	62.8	62.5	61.2	61.4	62.2	61.2	65.0	72.7	80.3
Deposit interest rate (%)	10.0	10.0	10.0	8.6	8.5	8.8	7.5	10.8	13.3
US lending interest rate (%) ^b	10.0	8.5	6.3	6.0	7.1	8.8	8.3	8.4	8.4
Exchange rate variation (%) ^b	5.4	3.6	6.4	2.8	0.1	-4.0	4.3	18.3	47.3
Ex-post spread ^c	-5.4	-2.1	-2.7	-0.2	1.3	4.0	-5.1	-15.9	-42.4
Real exchange rate ^d	100.0	98.9	102.1	103.1	99.7	94.2	96.3	108.4	155.5
External debt (% gross national income)	13.8	13.5	14.0	13.7	18.0	17.5	22.3	28.7	43.9
Fiscal balance (% of GDP)	-0.7	-1.6	-0.5	0.6	0.3	0.3	0.5	0.3	-3.8

Column in bold text indicates the year in which Korea abandoned its fixed exchange rate regime.

^aIn millions of US dollars.

^bNominal exchange rate defined as the domestic price of the US dollar: (+) depreciation; (-) appreciation.

^cSpread = deposit interest rate - (US lending interest rate + exchange rate variation).

^dNominal exchange rate deflated by the relative consumer price index inflation: (+) depreciation; (-) appreciation.

Source: World Development Indicators, World Bank.

Table 5. Argentina: selected macroeconomic variables, 1991–2002

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Gross domestic product (GDP) growth	12.7	11.9	5.9	5.8	-2.8	5.5	8.1	3.9	-3.4	-0.8	-4.4	-10.9
Trade balance (% of GDP)	1.6	-1.5	-2.4	-3.1	-0.4	-0.7	-2.2	-2.5	-1.7	-0.6	1.3	14.9
Current account (% of GDP)	-0.3	-2.4	-3.5	-4.3	-2.0	-2.5	-4.1	-4.8	-4.2	-3.2	-1.4	8.6
Capital account (% of GDP)	1.0	4.1	5.2	4.5	2.0	3.9	5.1	5.7	4.7	2.8	-2.5	-12.6
Central bank's FX reserves (absolute variation) ^a	1,240	3,985	4,052	504	-24	3,740	2,705	2,431	1,495	-1,198	-10,597	-4,063
Domestic credit to private sector (% of GDP)	12.6	15.4	18.3	20.3	20.0	20.2	21.9	24.2	24.9	23.9	20.8	15.3
Deposit interest rate (%)	61.7	16.8	11.3	8.1	11.9	7.4	7.0	7.6	8.0	8.3	16.2	39.2
US lending interest rate (%) ^b	8.5	6.3	6.0	7.1	8.8	8.3	8.4	8.4	8.0	9.2	6.9	4.7
Exchange rate variation (%) ^b	95.5	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	221.1
Ex-post spread ^c	-42.3	5.6	5.3	1.0	3.1	-0.9	-1.4	-0.8	0.0	-0.9	9.3	-186.6
Real exchange rate ^d	100.0	82.5	76.8	75.6	75.2	77.3	78.7	79.2	81.9	85.4	88.8	230.1
External debt (% gross national income)	35.6	30.4	27.6	29.5	38.9	41.7	44.1	47.9	50.8	50.9	56.9	153.2
Fiscal balance (% of GDP)	n/a	n/a	1.2	0.0	-0.5	-2.0	-1.5	-1.4	-1.7	-2.4	-3.2	-1.5

Column in *italic* text indicates the year of the financial crisis triggered by the Mexican contagion (the 'tequila' effect).

Column in **bold** text indicates the year in which Argentina abandoned its fixed exchange rate regimes.

^aIn millions of US dollars.

^bNominal exchange rate defined as the domestic price of the US dollar: (+) depreciation; (-) appreciation.

^cSpread = deposit interest rate - (US lending interest rate + exchange rate variation).

^dNominal exchange rate deflated by the relative consumer price index inflation: (+) depreciation; (-) appreciation.

Source: World Development Indicators, World Bank.

of the Minskyan cycle. In the case of developing countries, the financial bubbles and innovations that emerged and developed in the booming phase of the cycle resulted from the implementation of macroeconomic policy rules, which gave rise to a configuration making financial arbitrage between domestic and foreign assets profitable. In this regard, the implementation of new macroeconomic rules can be understood as exogenous shocks on the domestic financial systems, which rapidly created incentives for the arbitrage operations that kicked off the booming phases.

The real state bubble and the financial innovations that started with the securitisation of mortgages (and other debts) are, on the other hand, the key ingredients of the booming phase of the Minskyan cycle in the subprime crisis. Both the bubble in the real estate market and innovation in the financial market are processes that developed within these markets and nurtured one another over a long period. Certainly, there were also external elements that influenced both processes. There is now an ongoing discussion—which is likely to last for some time—regarding the roles during the 2000s of the soft monetary policy and the foreign capital inflows to the USA in stimulating these processes. However, even when these factors can be considered relevant for the development of the booming phase, the comparison highlights the difference between the exogenous nature of the elements triggering the booming phase in the developing countries crises and the endogenous dynamics of the cycle in the subprime crisis.

To sum up, the trigger of the Minskyan cycle in developing countries crises has an important *exogenous* component, which has been associated with the implementation of new macroeconomic policies. On the other hand, the factors that triggered the cycle in the current financial crisis in the USA are essentially *endogenous*. The bubbles and the innovations that emerged and developed in the booming phase were the spontaneous and gradual result of the financial system's evolution.

Bearing this distinction in mind has important implications for economic policy. The crises in both developed and developing countries have revealed the weaknesses and inadequacies of loosely regulated domestic financial systems. Comprehensive regulation is essential to avoid instability and crises. However, the discussion above suggests that the prevention of financial instability and crises in developing countries involve elements that go beyond the regulation of domestic financial systems. Preventing financial crises also requires macroeconomic management that seeks to prevent instability and preserve consistency between the exchange rate policy and the sustainability of the external balance. A crisis-preventive macroeconomic regime for developing countries should include: (i) exchange rate systems that provide flexibility to the authorities and prevent speculation; (ii) capital account management techniques; (iii) policies that secure robust external accounts, including the accumulation of foreign exchange reserves and the preservation of competitive (or non-appreciated) real exchange rates.

The debate about financial regulations is open and there are many initiatives. A risk that developing countries face in this context is that reforms end up being discussed and shaped by developed countries and then imposed as international standards, as has been happening thus far. This is an important issue that developing countries should fight against, but even more important for them is to take advantage of the circumstances and push for their own agenda. This agenda should incorporate at least three important lessons learnt from their own experiences of financial crises. First, it should make explicit the autonomy of developing countries in shaping the crisis-preventive macroeconomic regime that best fits their needs. Second, a global system of crisis prevention should include international norms that help smooth capital movements, and also institutions and

international mechanisms that help compensate for private capital outflows.¹ Third, developing countries should pursue an international agreement on real exchange rate levels.² Developing countries can benefit from maintaining competitive real exchange rates for various reasons. For the current discussion, it is relevant to stress that competitive exchange rates typically imply low dependence on foreign savings and lead to the accumulation of foreign exchange reserves. Both increase the external robustness of the economy and thus help prevent sudden stops and financial crises.

3. Policy responses, here and there

Once the financial bubble generated during the ‘subprime-mania’ was pricked, governments of developed countries rapidly started to conduct stabilisation policies. The initial reaction was to use monetary policy in the form of aggressive interest rate cuts. However, the sharp collapse of asset prices and the evidence that financial markets continued to be highly illiquid led central banks to conduct monetary policy using an ‘unconventional’ quantitative easing strategy. These drastic measures were sterile in their attempt to stop the declining trend in economic activity. Several governments of developed countries then decided that it was time to implement aggressive expansive fiscal policies. For instance, the Obama administration in the USA launched a significant fiscal stimulus package of \$787 billion in February 2009.

In parallel with these developments, newspapers, magazines and the blogosphere were witness to very heated debates among economists from prestigious academic centres about the efficacy of these policies. Before the subprime crisis there was wide consensus among mainstream economists that governments should conduct stabilisation policy mainly through the use of monetary policy based on interest rate management. The policy response to the current crisis—in which a quantitative easing monetary policy and an aggressive fiscal policy play essential roles—found little support in modern mainstream macroeconomic theory.³ Its inadequacy in this respect has led to a revalorisation of Keynesian economics and policy-making. In particular, the insight that in contexts of depression and uncertainty fiscal policy is an effective tool to fight the contractive effects of crises has regained some prominence. This emerging trend, however, has thus far been narrowly focused on the case of developed countries. Economists and policy makers should be aware that there are also significant differences between developed and developing countries regarding the use of macroeconomic policy to counteract the contractive effects of financial crises.

Financial crises imply wealth losses and financial disintermediation. Both factors lead to a contraction in consumption and investment and, consequently, to a fall in output and employment. In developed countries, agents take their deposits out of risky banks and switch their portfolios in favour of money and safe assets such as public bonds. The increase in the demand for money and public bonds implies that the government faces a greater supply of finance at a lower cost. In such a context, expansive fiscal policy can try to compensate for the contraction in private expenditure and thus revert or ameliorate the contractive trend in economic activity.

¹ The substantial increase of the IMF’s lending capacity decided by the G20 in April 2009 and the creation of the FCL by the IMF in late March 2009, both discussed in Section 3, represent important steps in this direction.

² For further discussion see Frenkel and Rapetti (2009).

³ See Woodford (2003) for a comprehensive exposition.

In the current financial crisis in the USA, the flight to quality has implied a greater demand for Treasury bonds, whose interest rates have fallen to a minimum. Given that the government issues debt in its own currency, the probability of default of these assets is very low. A bondholder may fear that the value of the asset will depreciate rapidly if she perceives that the public debt is following an unsustainable path. Another source of concern may be that an excessive fiscal expansion ends up accelerating inflation and therefore eroding the real value of bonds. So far none of these concerns seem to be affecting people's perceptions, since US Treasury bonds continue to operate as both a domestic and an international store of value (Dooley *et al.*, 2009).

The situation is similar in Europe and Japan. In the Euro area the outlook is somewhat more complex because there is a perception that public debts in some countries may be following an unsustainable path. Italian and Greek public bonds, for instance, stand at a significant discount relative to German bonds. However, it is hard to imagine that the European Union would, at the risk of its dissolution, passively let Italy or Greece declare the default of their public debts or a unilateral restructuring. Even when the degrees of freedom of fiscal policy are certainly lower than in Germany, they are still much higher than in most developing countries.

Let us now consider the effects on the balance of payments. In developed countries the international repercussions via the contraction of trade affect both exports and imports more or less symmetrically. There is no clear asymmetry in the way quantities and prices of exports and imports are affected by the contraction of international trade. Therefore a global crisis does not tend to generate or accentuate any problem in the current account. On the other hand, there are no capital outflows and in the case of global crises they are even more likely to experience capital inflows, since their currencies are seen as international stores of value.

In sum, financial crises in developed countries typically induce a higher demand for money and public bonds, thus facilitating the financing of expansive fiscal packages. Furthermore, financial crises do not translate into balance of payment problems, either through the current account or through the capital account.

The effects of financial crises in developing countries are definitely more complex. In these countries, crises also result in wealth loss, credit contraction and a fall in aggregate demand with recessive effects on output and employment. But, contrary to the case of developed countries, financial disintermediation typically generates a reduction in the demand for domestic currency and public bonds. The behaviour is similar to that observed in financial crises in developed countries in the sense that agents run away from risky assets. The key difference is that in developing countries the set of risky assets includes public bonds and domestic corporate debts, which are all subject to country risk. The flight to quality is thus funnelled to the demand for money and public bonds from developed countries. In developing countries, financial crises lead to capital outflows.

The repercussions of a contraction of international trade also induce a worsening of the current account. In most developing countries, a significant proportion of imports corresponds to manufactured goods, whereas a relatively high component of exports is commodities.¹ Since the price-elasticity of commodities is greater than that of

¹ This is a simplifying characterisation of most developing countries' trade structures. It does not hold for those developing countries whose exports are concentrated in manufacturing and services, and their imports in energy, food and raw materials. This is the case, for instance, for China and India. The commodity prices boom that preceded the current global crisis had negative effects on the trade balance of these economies. The subsequent decline in commodity prices since mid-2008 has had, on the contrary, a positive impact on their terms of trade.

manufactured goods, a contraction in international trade affects the terms of trade of most developing countries negatively. The combination of capital outflows and current account deterioration leads to domestic currency depreciation and expectations of further depreciation. The resulting adjustment mechanism of the external balance typically operates through the contractionary effects of depreciation on output and employment.

On the other hand, the portfolio shift of local and foreign agents against domestic assets reduces the supply of finance for governments. The resulting rise in the cost of finance together with a contraction of tax revenues due to the recessive tendencies (coming from both the financial disintermediation process and the balance of payments adjustment) forces the authorities to cut public expenditure. The result is just the opposite of the developed countries case: at the outset of a recession, governments in developing countries are forced to run contractive fiscal policies and raise interest rates. This has traditionally been the conditionality demanded by the IMF in its financial assistance programmes. The countries that agree to run fiscal austerity programmes and raise interest rates, thereby accentuating the recessive tendencies, do not generally do it because of an ideological bias. Most likely, governments consider the default of public and external debts a worse outcome than recession and decide to follow contractive fiscal and monetary policies instead.

In sum, financial crises in developing countries have two additional effects to those typically observed in developed countries. First, a financial crisis leads to a balance of payments adjustment due to a worsening of both the current account and the capital account. Second, the contraction in tax revenues and the rise in the cost of finance worsen the fiscal balance. The adjustment mechanism required to simultaneously balance the public and external accounts varies according to the specific circumstances of each country, but it typically includes some combination of exchange rate depreciation, interest rates hikes and contractive fiscal policy. In any case, in developing countries the policy response to financial crises tends to add contractive impulses to the recessive trends in output and employment. In the most robust cases, the financial crisis leads to an increase in the fragility of public and external balances and a recession (e.g. Mexico in 1995). In the most fragile cases, the financial crisis can lead to a balance of payment crisis, default of the public debt and a collapse of economic activity (e.g. Argentina in 2001–02).

As mentioned above, the IMF has traditionally promoted adjustment programmes based on restrictive fiscal and monetary policies. There have, however, been recent signs of change. The conditionality of the financial assistance programmes that have been signed since the eruption of the subprime crisis¹ is less restrictive and more specific than in the past. The institution is also promoting expansive fiscal policies for both developed and developing countries in order to counteract the recessive trends triggered by the global crisis (Blanchard *et al.*, 2008). Notwithstanding this positive change in its approach to crisis response, the IMF has paid little attention to the problem of how developing countries will finance those policies. The tension between the need for expansive fiscal and monetary policies and the scarcity and high cost of finance is a problem that affects not only those economies that have been suffering the effects of the global crisis the most, but almost all developing countries. In this regard, the IMF finds itself trapped in a contradiction: on the one hand, it asserts the need of expansive fiscal and monetary policies to ameliorate the recessive trends in the global economy but, on the other hand, it

¹ Since September 2008, the IMF has signed SBAs with Byelorussia, El Salvador, Georgia, Hungary, Iceland, Latvia, Pakistan, Serbia, Seychelles, Ukraine and Romania. These countries are among those who have most suffered the effects of the global crisis.

has asked—although more moderately—for contractive policies in the recent stand-by arrangements that have been signed.

The proclamation of the IMF authorities in favour of expansive fiscal policies is correct, but the nature of the crisis makes the likelihood of those policies being implemented in most developing countries very low. The contradiction derives from the lack of coordinated international action, which would be required in order to finance expansive fiscal programmes in many developing countries simultaneously. Up until April 2009, the IMF was constrained by both the amount of resources available, and by the characteristics of the existing programmes of financial assistance. These were originally designed to deal with short-run balance of payment problems for one country or a small group of countries in a context of normality in the international financial market. When crises in emerging market economies became recurrent during the 1990s, many analysts pointed out that the amount of financial resources available and the nature of the IMF's programmes were both insufficient and inadequate to deal with crises and contagion in an increasingly globalised world. The current global crisis made these problems even more evident.

Recently there have been substantial steps towards overcoming these problems. Regarding the lack of financial resources available to the IMF, in April 2009 the G20 decided to triple the lending capacity of the institution by making available an additional \$500 billion of resources. The IMF was also authorized to issue an additional US\$250 billion in the stock of special drawings rights (SDRs). However, since the G20 did not give any explicit mandate regarding the allocation of funds, the orientation and formulation of the new programmes remain open to the discretion of the IMF board.

Regarding the inadequacy of the IMF's financial assistance programmes, a few days before the G20 summit the institution announced an overhauling of its programmes. The conditionality and terms of the stand-by arrangements (SBA) have been simplified and their focus narrowed (e.g. the weight of structural reform conditions has been reduced). SBAs may now be provided on a precautionary basis—where countries choose not to draw upon approved amounts but retain the option to do so if conditions deteriorate—both within the normal access limits and in cases of exceptional access. Notwithstanding these positive innovations, the SBAs continue to be the main form of financial assistance to developing countries affected by the crisis. It should not be forgotten that these credit lines are designed to assist countries that face short-term balance of payment problems and tend to have a contractionary bias.

The main innovation regarding the IMF facilities was, however, the creation of the flexible credit line (FCL), which replaces the short-term liquidity facility.¹ The FCL has been designed for crisis prevention or resolution. Countries have the flexibility to either draw on the credit line at the time it is approved, or to use it with the precautionary purpose of reinforcing their foreign exchange reserves. FCL arrangements are approved by the IMF board for countries meeting pre-set qualification criteria, 'including strong fundamentals, policies, and track records of policy implementation'. Access to this credit facility is determined on a case-by-case basis, is not subject to caps, and is available (if desired) in a single up-front disbursement. Furthermore, disbursements under the FCL are not

¹ This credit facility was created in late October 2008 and was designed for crisis prevention in countries facing short-term financing difficulties. The approval only depended on a favourable evaluation in the regular Article IV consultation prepared by the IMF staff. The facility provided up to 500% of the countries' quota at the IMF for a three-month period, with a double renewal option. However, given the stigma associated with resorting to emergency windows for fear of the market's perceiving this as a sign of weaknesses, and the small magnitude of the potential financial assistance, no country ever required this credit line.

conditional on the implementation of specific policies, as is the case under the stand-by arrangements. So far, Mexico has received a FCL of US\$47 billion, Poland and Colombia have requested precautionary assistance for US\$20.5 billion and US\$10.4 respectively, and Peru could follow.

Both the increase in the IMF's lending capacity and the overhauling of the credit facilities are positive steps. In particular, the creation of the FCL brings the IMF closer to the role of a lender of last resort in the international financial market. This initiative could help protect developing countries from sudden capital outflows triggered by panics in the international financial market. However, none of these measures represent a coordinated international initiative to foster world aggregate demand and reactivate the world economy. In order to do what the IMF says needs to be done on the fiscal front, something different is required: a significant injection of resources to finance fiscal stimulus packages in many developing countries that are facing external and public financing restrictions. Similar to what is occurring in the USA, these programmes should have two focuses. One direct beneficiary of the fiscal programme should be the most vulnerable people. They should be reached through social security, health and education programmes. These programmes would not only help improve their living conditions but also would have multiplicative effects on employment and economic activity. Second, the fiscal programmes should aim to reinforce physical infrastructure, protection of the environment and the development of technology. The motivation behind this second target is to use fiscal policy not only to stabilise the economy in the short-run, but also to contribute to the acceleration of growth in developing countries.

These credit facilities should try to avoid short-term financing and their interest rates should be low. In contrast to the programmes designed to overcome short-term disequilibria like the SBAs—which tend to penalise the assisted country to avoid moral hazard behaviour—these programmes should be promoted so as to stimulate their request by developing countries. It is important to note that the use of funds by individual countries has positive external effects on the other country members of the IMF. Developing countries should ask for interest rates similar to those faced by the USA and other developed countries for financing their own fiscal programmes.

The SDRs could be used for such purposes. The US government has systematically opposed the expansion of the stock of SDRs since the early 1980s, arguing that it could lead to inflation. That argument is not valid in the current situation. The US Federal Reserve and other central banks of developed countries have not hesitated in massively expanding the supply of their currencies since the outset of the crisis, because they rightly identified that the threat is not inflation but deflation. The situation has been implicitly recognised by the recent decision to substantially increase the outstanding stock of SDRs. Financing expansionary fiscal programmes with the issuing of SDRs is the international equivalent of the simultaneous monetary and fiscal expansionary programmes presently being implemented by many developed countries.

The IMF should offer a new credit line to the governments of developing countries to finance the above described expansive fiscal programmes. The new credit line should be directed mainly to governments and not central banks. The credit facility should not aim (exclusively) to reinforce the stock of foreign exchange reserves or insure the public debt service, as seems to be the goal of the FCL. In the current depressive context of developing countries, it is not primarily liquidity that is needed, but sources of aggregate demand. Besides, if the funds are used to reinforce the stock of foreign exchange reserves and not to serve the financial needs of governments, they may end up being used to finance private

capital outflows. The proposed use of the issuing of SDRs does not preclude other potential uses. Among them, it might be necessary to use the new credit line for the assistance and restructuring of domestic financial systems in those developing countries where much is needed, as in many Eastern European countries.

4. Concluding remarks

Macroeconomic theory will surely be affected by the current global crisis. There are signs that some 'old' theories and insights will have a comeback. It is positive that economists are willing to recover previous useful knowledge. With this spirit in mind, this paper argues that economists should not forget the lessons that have been learnt during three decades of several (and painful) financial crises in developing countries. We emphasise two important lessons related to financial crises. First, preventing crises in emerging market economies requires not only the regulation of domestic financial systems, but also a consistent set of macroeconomic policies. This includes the exchange rate policy and policies related to the management of the balance of payments and the stock of foreign exchange reserves. Furthermore, a global system of crisis prevention should include international norms that help smooth capital movements, as well as institutions and international mechanisms that help compensate for private capital outflows. Second, financial crises in developing countries tend to worsen both the balance of payments and the fiscal balance, and traditional adjustment policies tend to exacerbate the recessive trends in output and employment. This is exactly the opposite of what is required and what governments in developed countries are able to do. The recent increase in the IMF's lending capacity, together with the changes in the terms and conditionality of SBAs and the creation of the FCL facility are positive measures to help developing countries cope with the current crisis. However, they are not enough. The IMF should also offer a credit line for the governments of developing countries so that they can afford expansive fiscal programmes to offset the contractionary forces affecting their economies.

Finally, the G20 has recently begun discussions about the design of a new financial architecture aimed at preventing the development of boom-and-bust cycles in financial markets. Developed countries will probably give prominence to the regulation of financial activities and markets. Developing countries should support initiatives in that direction, but they should also push for an agenda that helps them deal with the problems discussed here.

Bibliography

- Akerlof, G. and Shiller, R. 2009. *Animal Spirits*, Princeton, Princeton University Press
- Arestis, P. and Glickman, M. 2002. Financial crisis in Southeast Asia: dispelling illusion the Minskyan way, *Cambridge Journal of Economics*, vol. 26, 237–60
- Blanchard, O., Spilimbergo, A. and Symansky, S. 2008. 'Fiscal Policy for the Crisis', IMF Staff Position Note, SPN/08/01
- Buiter, W. 2009. The unfortunate uselessness of most 'state of the art' academic monetary economics, Willem Buiter's Maverecon blog, 3 March, available at <http://blogs.ft.com/maverecon/2009/03/the-unfortunate-uselessness-of-most-state-of-the-art-academic-monetary-economics/> [date last accessed 19 May 2009]
- Cruz, M., Amann, E. and Walters, B. 2006. Expectations, the business cycle and the Mexican peso crisis, *Cambridge Journal of Economics*, vol. 30, 701–722
- Damill, M. and Frenkel, R. 1987. 'De la apertura a la crisis financiera. Un análisis de la experiencia argentina de 1977 a 1982', *Ensayos Económicos*, no 37, Banco Central de Argentina

- Damill, M., Frenkel, R. and Rapetti, M. 2005. The Argentinean Debt: History, Default and Restructuring, *Economia Revista da ANPEC*, vol. 6, no. 3, 29–90
- Dooley, M., Folkerts-Landau, D. and Garber, P. 2009. 'Bretton Woods II Still Defines the International Monetary System', National Bureau of Economic Research Working Paper No. 14731
- Fanelli, J. M. and Frenkel, R. 1993. On Gradualism, Shock Treatment and Sequencing, in International Monetary and Financial Issues for the 1990s, *Research Papers for The Group of Twenty-four*, Vol. II, New York, United Nations
- Ffrench-Davis, R. 1983. The monetarist experiment in Chile: a critical survey, *World Development*, vol. 11, 905–26
- Frenkel, R. 1983. Mercado financiero, expectativas cambiarias y movimientos de capital, *El Trimestre Económico*, L, no. 200, October–December, 2041–2076
- Frenkel, R. 2003. Globalization and financial crises in Latin America, *CEPAL Review*, No. 80, 41–54
- Frenkel, R. and Rapetti, M. 2009. Economic development and the international financial system, in Ocampo, J.A. (ed.), *Financial Markets Regulation*, Oxford, Oxford University Press, forthcoming
- Kindleberger, C. 1978. *Manias, Panics, and Crashes: A History of Financial Crisis*, New York, John Wiley and Sons
- Krugman, P. 2009. A dark age of macroeconomics, Paul Krugman's blog, 27 January, available at <http://krugman.blogs.nytimes.com/2009/01/27/a-dark-age-of-macroeconomics-wonkish/> [date last accessed 19 May 2009]
- Minsky, H. 1975. *John Maynard Keynes*, New York, Columbia University Press
- Minsky, H. 1977. in Altman, E.I. and Sametz, A.W. (eds), *A theory of systemic fragility*, New York, Financial Crises: Institutions and Markets in a Fragile Environment, John Wiley and Sons
- Minsky, H. 1986. *Stabilizing an Unstable Economy*, New Haven, CT, Yale University Press
- Neftci, S. 2002. FX Short positions, balance sheets and financial turbulence. An interpretation of the Asian financial crisis, in Eatwell, J. and Taylor, L. (eds), *International Capital Markets. Systems in Transition*, Oxford, Oxford University Press
- Palma, G. 1998. Three and a half cycles of 'mania, panic, and [asymmetric] crash': East Asia and Latin America compared, *Cambridge Journal of Economics*, vol. 22, 789–808
- Rodrik, D. 2009. The sorry state of (macro)economics, Dani Rodrik's blog, 11 March, available at http://rodrik.typepad.com/dani_rodriks_weblog/2009/03/the-sorry-state-of-macroeconomics.html [date last accessed 19 May 2009]
- Ros, J. 2002. From the capital surge to the financial crisis and beyond: Mexico in the 1990s, in Ricardo, Ffrench-Davis (ed.), *Financial Crises in 'Successful' Emerging Economies*, Washington, DC, Brookings Institution Press
- Solow, R. 2008. Comments on 'Modern Macroeconomics in Practice: How Theory is Shaping Policy' by V.V. Chari and Patrick J. Kehoe, *Journal of Economic Perspectives*, vol. 22, no. 1, Winter 243–9
- Taylor, L. 1998A. Capital market crises: liberalisation, fixed exchange rates and market-driven destabilization, *Cambridge Journal of Economics*, vol. 22, 663–76
- Taylor, L. 1998B. 'Lax Public Sector and Destabilizing Private Sector: Origins of Capital Market Crises', in United Nations Conference on Trade and Development, International Monetary and Financial Issues for 1990s, vol. 10
- Woodford, M. 2003. *Interest and Prices: Foundations of a Theory of Monetary Policy*, Princeton, Princeton University Press
- Yeldan, E. 2006. Neoliberal global remedies: from speculative-led growth to IMF-led crisis in Turkey, *The Review of Radical Political Economics*, vol. 38, no. 2, 193