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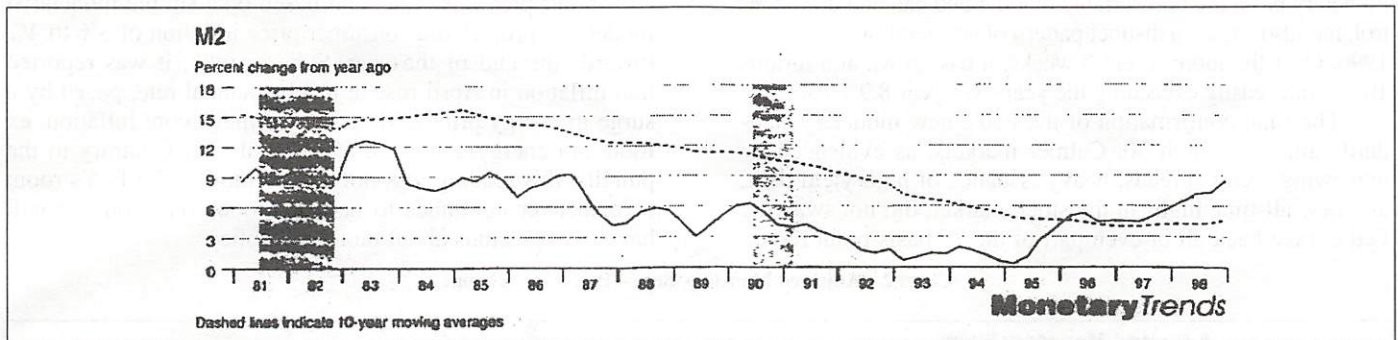


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The truth behind what drives US monetary Policy: What is is not what appears

The picture in Chart 1 says it all.

Chart 1 - M2 - Percent change from year ago



To appreciate the significance of Chart 1, you need only remember that the Mexican crisis, the now legendary Tequila affair, took place in early 1995, and that it was followed by the Asian crisis of 1997 and the Russian crisis of 1998. These three crises were the first truly global financial events in nearly one quarter century – when the US closed the gold window and, not long thereafter, Opec tripled oil prices.

The Mexican crisis, brought about in the first instance by the extremely accommodative US monetary policy of the early '90s, revealed the extraordinary vulnerability of leading financial institutions and, thus, the world financial system, to a local, pain-inflicting, event of default. The sudden eruption elicited a prompt but mistaken response: The US Treasury, the IMF, and the Fed stepped into the breach, avoiding an immediate catastrophe but storing up an even greater one for the future.

Higher interest rates notwithstanding – it will be recalled that from 1994Q1 to 1995Q1, Fed Funds were hoisted by 300 basis points – money supply was allowed to grow at a substantially faster pace than in earlier years. *In a truly monetary sense, policy became progressively easier following the Mexican crisis.*

Trapped by the increasing fragility of the global financial markets, the Fed rationalized an increasingly easier posture in the face of a brewing speculative bubble in its own backyard. Chart 1 tells that story.

An analysis of what the Fed said and what it actually did reinforces the sad message of our chart:

1) Following the Mexican crisis, the Fed eased in July and

December of 1995.

- 2) In July 1996 the Fed adopted a tightening bias *and maintained it until a small 25 basis-point hike in March 1997, a full 7 months later.* One surmises that it could do no less than that to preserve some semblance of credibility.
- 3) In May 1997 the Fed reinstated a tightening bias *but pulled it back after the South Asian stock markets collapsed in October.* Clearly domestic considerations were taking a back seat to global events. If the Fed was merely

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Some implications of a tighter Fed

Contributions by Albert D. Friedberg, Steve H. Hanke, and Martin Mayer.

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talking tough but carrying a small stick, it may have been forgiven given the hoary circumstances. But that was not the case. Behind the tough words, the Fed was continuing to inflate: The growth of the broader measures of money supply was allowed to accelerate to 10-year highs in nominal terms and 20-year highs in real terms (recall that inflation was substantially higher in the early '80s).

- 4) Finally, the Fed reinstated a tightening bias in early 1998 but retracted it in the face of the Russian collapse, the seize-up in the emerging markets and its subsequent spillover into the US financial markets. Disregarding its previous tightening tendency, the Fed embraced more easy money, lowering rates three times. The dramatic action did calm markets, but at the expense of signaling to the world that the Fed had adopted a new monetary standard, which for lack of a better term, we have called a "financial fragility standard."

The recent slowdown in the money numbers is temporary and technical in nature, as it has to do with shifts in deposits rather than a less accommodative posture. Chart 2 shows that the acceleration in broad money was not a fluke: The adjusted monetary base, the one variable that the Fed can and does control, has also shown a distinct pattern of acceleration since early 1996. Over the more recent 8 weeks, it has grown at a furious 10.7% rate, easily exceeding the year-over-year 8.9% pace.

The final confirmation of the Fed's new monetary standard came on March 30. Calmer markets, as evidenced by narrowing credit spreads, heavy issuance of high-yield debt, and new all-time highs in the stock market, did not sway the Fed to take back all or even part of the 75 basis-point reduc-

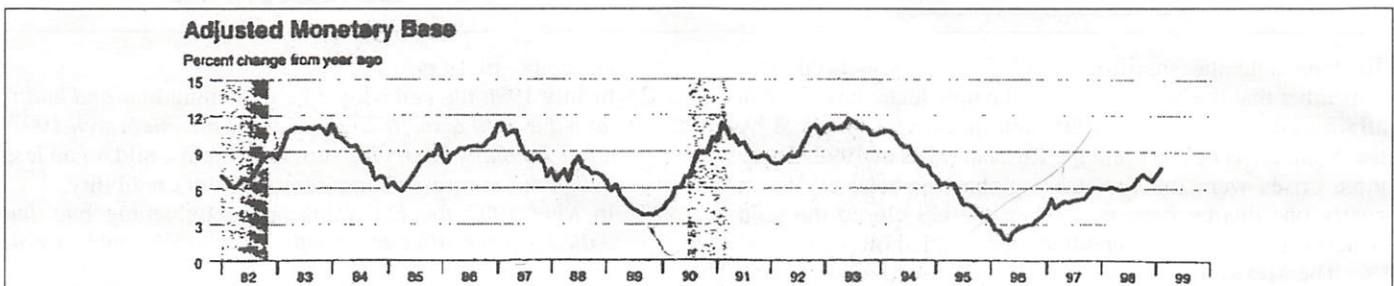
tion engineered 6 months earlier to stave off a much-feared financial collapse. The absurd asymmetry of the new policy came into focus: While rates can and must be lowered to save us from apocalypse, they cannot be raised again lest we bring about this much-feared cataclysm.

For many months, we have posited an eventual end to this policy, based on the notion that excessive money creation will, at some point, cause inflation to accelerate. With accelerating inflation staring it in the face, the Fed will have little choice but to put an end to its easy-money policy. It will have run out of room to maneuver. Very reluctantly, it will begin to tighten. Undoubtedly, this tightening will cause a US stock market collapse – a financial event of far greater consequence to the world than the Asian or the Latin crisis.

Because the specter of the financial fragility standard has not been exorcised, the Fed will try to walk an ever thinner line, accepting greater inflation than warranted but incurring perhaps less pain than possible. There is little doubt that this unstable state of affairs, too, will end and one of the two scenarios will emerge: rapid inflation/economic stagnation or credit deflation/economic depression.

In our previous issue, and based on a simple monetarist model, we projected a consumer price inflation of 3% to 4% towards the end of the year. Subsequently, it was reported that inflation in April rose at a 9.1% annual rate, paced by a surge in energy prices. More worrisomely, core inflation, ex food and energy, rose at a 5% annual rate. Contrary to the pundits, this reading was not an aberration. The Fed's room to maneuver continues to narrow. Soon, very soon, it will have to get serious about monetary policy.

Chart 2 – Adjusted Monetary Base – Percentage change



FINANCIAL CRISIS

The explosion in leverage: a tentative, new proxy, and a very tentative forecast

What distinguished the successive Mexican, Asian, Russian, and Brazilian crises from the arguably more weighty crises of the past quarter-century – the UK secondary banking crisis and the first LDC Opec-induced crisis of the '70s, the Latin defaults of the early '80s, the Scandinavian and Japanese banking crises of the mid- and late-'80s? Why did fear reach such a pitch and why did panic grip global financial markets – as evidenced by soaring, record-breaking widening of credit quality spreads – at the time of the more recent crises, despite the seemingly inherently less severe nature of the crises them-

selves? The answer lies in leverage.

Repeated government interventions have reassured investors over the past 25 years that invariably, risks will be contained, short of a generalized default. This attitude has raised the moral hazard threshold to levels unimagined only a short 10 years ago, allowing financial-sector credit to be multiplied many times faster than the underlying growth of money. As a result, financial sector leverage has soared to unprecedented heights.

Despite risk-reducing signals, minute changes in fear lev-

els threaten to topple complex and highly-leveraged financial structures. A simple example will suffice: The purchase of an asset with a 50% down payment will force the new owner to inject more money or be forced to liquidate his position should this asset drop by 49.5% (assuming no slippage and an instantaneous sale; in practice, of course, margin clerks act far earlier); the same purchase with a mere 5% down, i.e., 10 times more leverage, forces a potential liquidation much sooner, perhaps after the asset dropped by only 4.5%. Confidence that the asset would not collapse and that eventually principal value would most probably be preserved is of little benefit to the distressed lender. Liquidation must proceed immediately if the new owner does not top up his bet.

As the global financial system has progressively become more leveraged, "margin calls" have threatened to wreak havoc, despite the fact the crises themselves have been shallower and less meaningful to the global economy than their predecessors.

In a recent conference jointly sponsored by the IMF, the World Bank, and the World Trade Organization, prominent participants examined causes of increased volatility in capital flows and searched for new ways to prevent and manage crises. In the IMF's own words, "interest in crisis prediction has mounted in the 1990s as the frequency, size, and virulence of crises have sharply increased" [emphasis ours]. They would have done well, we submit, to recognize that capital flows are mostly generated by credit intermediaries that have taken on extremely leveraged financial structures – reassured by prospects of official support.

In Chart 3 we present a tentative, but only partial (as it excludes the explosion in the use of derivatives in recent years – see the accompanying article by Martin Mayer) proxy for leverage that attempts to describe the magnitude of the potential problem. We make a number of observations:

- a) Leverage had increased between three- and four fold from the trough of the recession of the early '70s to the peak of the subsequent recovery – the year that led to the most severe depression in the post-war period (1974-1975).
- b) The depression of that year saw leverage sink by more than 90%, taking the overall leverage level well below that prevailing during the earlier decade. In fact, a case can be

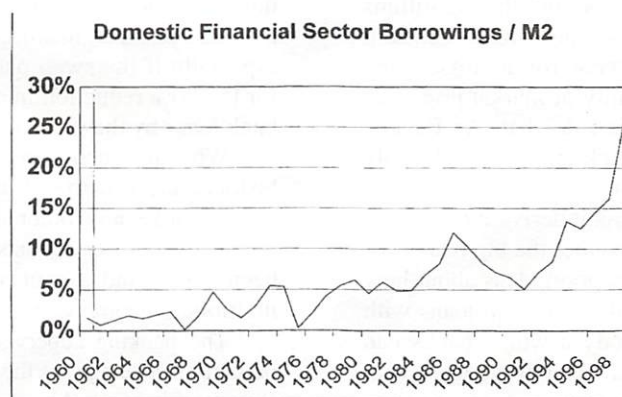
made that the de-leveraging activity of 1974-75 was not only a product of the depression but also that it aggravated and perhaps was a leading cause of the downturn.

- c) Before the recession of the early '80s, leverage returned to the pre-1974 highs and remained at a high level even through the recession, an indication perhaps that the "system" had become comfortable with that amount of leverage and/or that the asset price decline was not too severe.
- d) Gradually, leverage picked up speed and reached a new high just before the 1987 stock market crash. The equity collapse of late 1987 coupled with the severe real estate downturn of the late '80s and the recession of the early '90s (itself a cause and a consequence of the de-leveraging process) brought leverage down to the familiar and more comfortable levels prevailing in the early '80s.
- e) The financial mania of the mid- to late '90s raised financial system leverage to uncharted territory, easily explaining the most recent sharp and virulent outbreaks of panic at the most minute decline in asset prices. With leverage at about four times the level existing before the last three major recessions and, significantly, having risen more than fivefold from the trough of the last recession (recall point (a) above), one wonders what is in store at the next fall in asset prices – particularly the grossly overvalued US stock market.

We would venture to guess, based on our observations on leverage, that estimates based on conventional empirical models that suggest that 'a 25% decline in equity values that lasted for a year could knock as much as a percentage point off the growth in consumer spending' (see "US: Testing the Golden Age for the US Consumer" by Richard Berner, in *Global Economic Forum*, published by Morgan Stanley Dean Witter, May 28, 1999) are naive and wildly off.

At best, in our opinion, a 25% equity market decline, could trigger a de-leveraging process considerably more painful than the one accompanying the 1990-91 recession (assuming a return to the "comfortable" levels prevailing in 1982-83 and 1991). At worst, and assuming, improbably, that the Fed would be unable to contain the forced wave of liquidation, it could trigger an economic depression of the 1974-75 or even 1929-31 variety.

Chart 3 – US Financial Leverage



OBSERVER**The dangers of derivatives***By Martin Mayer**Reprinted with permission of The Wall Street Journal © 1999 Dow Jones & Company, Inc. All rights reserved.*

Custom-tailored financial derivatives are a neat example of how invention becomes the mother of necessity. Since the financial engineers began tinkering with the machinery of money flows in the late 1980s, banks and other intermediaries have backed up behind these ingenious dams an estimated \$70 trillion of derivatives (financial instruments valued according to the changes in price of other financial instruments). They have done so because derivatives create a felt need for their own employment.

Derivatives make it possible for businesses from construction to food processing to energy to shipping to make plans with greater certainty about their financial costs than they ever could before. The creation and trading of derivatives earns something like a third of the profits of the big banks – and perhaps more, because many of the deals they make are done only for the derivatives activity they will stimulate. Derivatives provide a plausible rationale for financial-industry mergers that otherwise would not make sense.

Unlimited leverage

Unfortunately, these “over the counter” derivatives – created, sold and serviced behind closed doors by consenting adults who don't tell anybody what they're doing – are also a major source of the almost unlimited leverage that brought the world financial system to the brink of disaster last fall. These instruments are creations of mathematics, and within its premises mathematics yields certainty. But in real life, as Justice Oliver Wendell Holmes wrote, “certainty generally is an illusion.” The derivatives dealers' demands for liquidity far exceed what the markets can provide on difficult days, and may exceed the abilities of the central banks to maintain orderly conditions. The more certain you are, the more risks you ignore; the bigger you are, the harder you will fall.

Meanwhile the rules of this game – adopted and enforced by the world's banking supervisors – further shrink what are already low time horizons in the financial markets. Measuring their positions every day through the algorithms of “value at risk” analysis, players must make constant adjustments of hedges and options to control the losses they may suffer from unanticipated volatility of market prices. In real markets, often enough, you can't do that. As Eugene Rotberg, former treasurer of the World Bank, says, “The only perfect hedge is in a Japanese garden.”

The current plat du jour – the “credit derivative” – is the most dangerous instrument yet, and neither the big banks nor the bank examiners seem to have any good ideas about how to handle it. A vehicle by which banks can swap loans with each other apparently gives everybody a win – banks can diversify their portfolios geographically and by category with the click of a mouse.

But the system is easily gamed, and it sacrifices the great strength of banks as financial intermediaries – their knowledge of their borrowers, and their incentive to police the status of the loan. After the disturbances of last autumn, a senior executive of a large Wall Street house wrote a series of rules for its executive committee to keep in mind. Among them: “When a loan is securitized, nobody has the credit watch.” Researchers at the Federal Reserve Bank of New York concluded that in the presence of moral hazard – the likelihood that sloughing the bad loans into a swap will be profitable – the growth of a market for default risks could lead to bank insolvencies.

Worse yet: As this business has grown, it has moved far from its early days as a way to swap risks. Most “credit derivatives” now are simply a way for a market participant – a bank or a hedge fund – to acquire a portfolio of loans or securities with no upfront cost and very low interest charges.

The instrument is called a Total Rate of Return Swap. One side of the swap promises to pay the interest that would be earned in the London interbank market on the value of the securities in the package, plus, say, a premium of 100 basis points (one percentage point). The other side promises to pay the yield on the securities. The receiver of the payments on the securities usually puts up some form of collateral, which may be as little as 5% of the value of the package, to assure the payer that he will get his interest and premium. In effect, the receiver of the payments on these loans or securities has bought the securities for the duration of the swap on 95% margin, even though the law says nobody can buy securities without putting up half the price.

Banks and supervisors have a lot of trouble accounting for these instruments. If the bank owns the loans and securities it is swapping, it will own them again when the swap expires, which argues that capital should continue to be allocated against the principal. If it doesn't own them, then the transaction is simply a bet on the price movements that does not acquire or dispose of an asset, and can be carried off the balance sheet at a much lower capital charge. In June 1997, the Fed ruled that banks could take all such transactions off the balance sheet, making them virtually cost-free to banks – especially if the swap partner is another bank and qualifies for the 80% reduction in capital requirements given to interbank loans by the rules of the Bank International Settlements.

Why are such derivatives dangerous? The one lesson history teaches in the financial markets is that there will come a day unlike any other day. At this point the participants would like to say all bets are off, but in fact the bets have been placed and cannot be changed. The leverage that once multiplied income will now devastate principal.

The banking supervisors have not begun to control the buildup of leverage on the derivatives chassis. Indeed, Federal Reserve Chairman Alan Greenspan has argued that the math-

ematicians are improving their formulas to make the business less risky. But the more security the math seems to give, the greater the risk on the day the highly improbably happens. Eighty years ago Frank Knight, arguably the greatest American economist ever, wrote that economists did not always make clear "the approximate character of their conclusions, as descriptions of tendency only." In theoretical mechanics, perpetual motion was possible; in real life it was not. "Policies must fail, and fail disastrously, which are based on perpetual motion reasoning without the recognition that it is such," Knight wrote.

Questions for Congress

The House Banking Committee holds hearings today [May 20, 1999] on the lessons of last year's financial crisis. Congressmen should inquire about the extent to which both practitioners and supervisors are using what Knight called "perpetual motion reasoning" in dealing with derivatives.

Mr Mayer is a guest scholar at the Brookings Institution and author of "Risk Reduction in the New Financial Architecture," published by the Levy Institute of Bard College.

ARGENTINA

Reflections on the dollarization debate

By Steve H. Hanke

The dollarization debate in Argentina has entered an unhealthy phase, one in which most commentators are displaying an enormous capacity for fantasy and myth-making. To put the debate on solid ground and give it some perspective, it is instructive to go back to 1990. That is the year when, with the encouragement from José María Ibarbia, I developed a blueprint for an orthodox currency board system (CBS) for Argentina. That blueprint, *Banco Central o Caja de Conversión?*, was eventually published as a short monograph in 1991.

In summary, an orthodox CBS is a monetary institution that issues notes and coins. These notes and coins are backed with a minimum of 100%, up to a maximum of 110%, of a foreign reserve currency, and the CBS money is fully convertible into the reserve currency at a fixed exchange rate on demand. In addition, an orthodox CBS cannot act as a lender of last resort, does not regulate reserve requirements for commercial banks, only earns seigniorage from interest on reserves, and does not engage in forward-exchange transactions.

Instead of adopting an orthodox CBS, Argentina installed a pseudo currency-board system on April 1, 1991. The system is called convertibility, an uncommon term for an unusual regime. Convertibility deviates from an orthodox CBS in important respects. For example, Argentina's convertibility system engages in limited lender of last resort activities; it regulates reserve requirements for commercial banks; it can hold up to one third of the dollar-denominated reserves it keeps to back its monetary liabilities in the form of bonds issued by the government of Argentina; and the Convertibility Law requires only that the central bank's monetary liabilities be covered by a minimum of 100% in dollar-denominated assets. Accordingly, when the central bank's assets exceed its monetary liabilities, the one-to-one link between foreign reserves and the monetary base is broken, and in consequence, the quantity of base money does not automatically change with changes in the demand for base money.

These deviations from currency-board orthodoxy result in a less-than-adequate unification of the Argentine peso with the US dollar. Even though the convertibility system has produced reasonably sound money for Argentina and is superior to any central banking system in Latin America, there has

often been speculation that the peso will be devalued. Interest rates in pesos have accordingly been persistently higher than interest rates in US dollars within Argentina.

If the architects of convertibility had simply studied the history of currency board systems and their performance, they would have anticipated the inevitable problems resulting from deviations. Indeed, such a study would have shown that even minor deviations from currency board orthodoxy are similar to a pebble in one's shoe: small but damned annoying.

President Menem and I discussed the problems associated with convertibility and how to fix them on Feb. 10, 1999. We reviewed three options (see Friedberg's *Commodity & Currency Comments* "Experts Report," Feb. 1, 1999). The first was an orthodox CBS. Such a system would correct the flaws in convertibility, and make the peso sounder, while retaining the general features of convertibility, most notably the one-to-one peso-dollar exchange rate. It would also allow Argentina to continue to earn seigniorage from interest on foreign reserves and retain political and legal sovereignty over its monetary regime. The politics of remaking the Convertibility Law into an orthodox CBS law would make the implementation of this option very divisive and time consuming.

Dollarization based on a bilateral treaty between Argentina and the US was the second option. By replacing the peso with the dollar, Argentina would become part of a unified currency area with the US, much like any other US state, and the flaws in convertibility would be eliminated. This dollarization option would also allow Argentina to share some of the seigniorage the US generates from producing dollars used in Argentina. However, with a dollarization treaty, Argentina would cede political and legal sovereignty over its monetary regime. In addition, the implementation of this form of dollarization would be unduly complicated and time-consuming.

Unilateral dollarization, the third option, would differ from the treaty-based form of dollarization in three important respects. Argentina would lose the seigniorage earned from foreign reserves, but it would retain political and legal sovereignty over its monetary regime. In addition, unilateral dollarization could be implemented with due speed.

Not surprisingly, I counseled unilateral dollarization.

According to my calculations, it would be desirable, a conclusion confirmed in a recent study by the Federal Reserve Bank of Chicago (see Chicago Fed Letter, No.142, June 1999). That study concluded that unilateral dollarization is unambiguously desirable. In addition, unilateral dollarization is the only option that President Menem could possibly hope to implement before the end of the year.

It is time for the politicians in Argentina to stop postur-

ing and start looking after the interest of the economy and the Argentine people. To do this, they must unilaterally dollarize and do so before the technocrats study dollarization to death.

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FED POLICY

Some implications of a tighter Fed

By Steve H. Hanke

On May 18, a tightening bias was introduced to the Federal Open Market Committee's (FOMC) policy directive. Many Fed watchers pooh-poo the whole idea of using biased or symmetric directives as predictors of future Fed policy, however. And past evidence supports their skepticism. In the past 11 years, the Fed tightened in only one third of the cases in which the directives were biased toward tighter policy and it eased in about half of the cases in which the directives were biased toward easing. Moreover, the Fed either tightened or eased in one third of the cases in which the bias was symmetric. So, indeed, there has been a low correlation between the directives and future action.

But that was then. As of December 1998, the FOMC announced that the directives would have sharper teeth. Indeed, the December FOMC minutes state that "such announcements would not be made after every change in the symmetry of the directive, but only when it seemed important for the public to be aware of an important shift in the members views." Consequently, we now anticipate that tightening will be predicted by the bias in the current FOMC directive.

Several other factors also lead us to the conclusion that tightening will occur. The credit crunch premise for the dramatic Fed easing last fall was a false premise. Bank credit and broad money actually increased dramatically during the so-called crunch. As Prof. Tim Congdon of Lombard Street Research, Ltd. puts it so pithily, "the rates of growth of bank balance sheets were so extraordinarily fast that the episode would be better described as a 'credit craze' than a 'credit crunch'"

In addition, as we pointed out in the Nov. 30, 1998 issue of FC&CC, unsustainable imbalances in the economy exist. And thanks, in large part, to the Fed's easing last fall continue to become ever-larger. In particular, the economy continues to grow well above trend, and the current account deficit contin-

ues to balloon.

The Fed will, therefore, follow through on its biased directive and tighten. The implications will have a marked impact on emerging markets, where the sea of liquidity that has engulfed these markets will dry up. In consequence, risks will be re-priced and emerging market spreads will widen. And that's not all. The mini bubbles that are in evidence in many emerging stock markets will be popped.

Brazil has benefited most from the Fed's easing. Indeed, the consensus now believes that a soft landing is in the cards for Brazil, an economy that accounts for 45% of all Latin America's economic activity. The economy remains vulnerable, however. The current account has not responded to the devaluation of the real, and in consequence, the deficit remains about 4.5% of GDP.

The financing of the current account deficit could become the Achilles' heel of a soft landing scenario, particularly as the Fed begins to tighten. If this weren't enough, the Cardoso administration faces a daunting fiscal reform agenda. One misstep could throw the financing of a large current account deficit into question.

The Fed tightening will also take its toll in the beleaguered euro. Indeed, a Fed tightening will keep the euro pointed down towards parity with the greenback, or slightly below, something we anticipated in "Euroland, high hopes, and emerging doubts" (March 28, 1999).

Germany and Italy have been hit hard by the financial crises in Asia and Russia, and together they account for half of the euro-zone's economic activity. In consequence, they have dragged the European economy down. Add to that the endemic supply-side structural problems that keep unemployment at unacceptably high levels, and we have the makings of calls for even more interest rate reductions. This, in combination with Fed tightening, would send the euro well below parity.

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