

The New International Monetary Order

Mark Carney
Senior Associate Deputy Minister
Department of Finance
Speech to the Toronto Society of Financial Analysts¹
23 November 2004

It is an honour to present my first speech as Senior Associate Deputy Minister of Finance to the TSFA. Of course, I recognize that I am here only due to my previous role as Deputy Governor of the Bank of Canada. I trust you will forgive the bait and switch. What follows are personal views which may not necessarily be shared by either the Bank or the government.

I would like to focus on an issue central to the prospects for global economy and to the investment outlook: the state of the international monetary system.

I would like to focus on an issue central to the prospects for global economy and to the investment outlook: the state of the international monetary system. At first blush, this choice may appear curious. While we all know changes in currency values can sometimes overwhelm even the best bottom-up stock-selection, the challenge is normally to identify (or to hedge)

1. Mark Carney, Deputy Governor at the Bank of Canada responsible for international issues from 5 August 2003 to 12 November 2004, was appointed Senior Associate Deputy Minister of Finance on 15 November 2004. This speech has been slightly abridged for purposes of publication.

prospective currency fluctuations rather than to anticipate the consequences of new international monetary arrangements. Yet this is precisely what many serious commentators and some policy-makers would have you believe: namely, that the world has settled into a new international monetary paradigm, often referred to as the new Bretton Woods system.

Judging from the sophistication of this audience, I suspect that word “paradigm” has raised your antennae, and in fact, you are about to hear why, from an international macroeconomic perspective, “*This time it’s different*,” remain the four most expensive words in the English language.²

To help you draw your own conclusions about whether we are in a new quasi-gilded age, I will divide my remarks into four broad sections. I will start by briefly reviewing the challenge of global imbalances. Then, I will consider arguments why the current state of affairs may be sustainable, even desirable. Next, I will argue that, in effect, Templeton’s dictum holds: We are not living in different times, the new “system” is destined to pull apart, and it will be extremely costly to think otherwise. I will conclude by considering the policy implications of this state of affairs. I shall leave the investment implications to you, the professionals.

The Challenge of Global Imbalances

Before proceeding, I would like to be clear what we mean by global imbalances. The Bank of Canada has discussed the prospects for global adjustment at length over the past eighteen months. While thus far the Canadian economy has reacted relatively well to global change, it is important to consider the scale of the task. At present, there are two major, related macro imbalances: a large current account deficit in the

2. Attributed to Sir John Templeton. See, for example, Chancellor (1999).

United States and substantial balance-of-payments surpluses in Asia.

At present, there are two major, related macro imbalances: a large current account deficit in the United States and substantial balance-of-payments surpluses in Asia.

The U.S. current account deficit

The U.S. current account deficit is without precedent. At 5.5 per cent of GDP, it is larger than that of any major industrial country since the break-up of the Bretton Woods system in 1971. Its scale is magnified when one considers that the United States is a relatively closed economy. For instance, the U.S. deficit represents more than 20 per cent of the U.S. traded-goods sector, which is roughly equivalent to the pre-crisis ratios in Mexico and Argentina.³

The U.S. current account deficit is likely to continue to rise over the next several years, for three reasons.

Uncomfortable arithmetic

First, the underlying arithmetic is particularly challenging. U.S. imports are presently about 50 per cent larger than U.S. exports. As a result, even if imports and exports grow at their historic norms (about 6 per cent) and the economy grows at its potential (about 3.5 per cent), today's deficit will top 6 per cent within three years.

However, exports are unlikely to track imports, as the U.S. propensity to import is at least 50 per cent greater than its propensity to export.⁴ That is, if you assume that the U.S. and the rest of the world's (ROW) gross domestic product (GDP) each rise at an equivalent rate, U.S. imports will increase at a rate about 50 per cent faster than U.S. exports. Applying this relationship (which is not fully understood by economists but has held for more than 30 years) to the simple example

3. The equivalent ratios for Mexico in 1994 and Argentina in 1998 were 12 per cent and 25 per cent, respectively.

4. This is a conservative assumption. Hooper, Johnson, and Marquez (2000) estimate a U.S. propensity to import of 1.8 per cent and to export of 0.8 per cent

above implies a U.S. deficit of 7.5 per cent of GDP within three years.⁵

Unbalanced global growth

The second reason why the U.S. current account deficit is likely to deteriorate is that changes in relative global growth are unlikely to come to the rescue. Simply put, the ROW is unlikely to grow at a rate faster than the United States. In recent years, the U.S. economy has accounted for about one-third of global growth and, amongst the major economies, only the United States, Canada, China, India, and Russia have contributed more than their weight of global GDP to global growth.

In part, this performance reflects potential growth rates that differ dramatically across major economic regions. For example, blessed with more favourable demographics, more flexible labour markets, and (partially as a consequence) stronger structural productivity growth, the American and Canadian economies have potential growth rates that are more than 50 per cent greater than those of our other G-7 partners.

As a result, absent other adjustments, U.S. imports will likely continue to be pulled in by domestic demand growth at a rate that exceeds the impact of foreign economic growth on U.S. exports.

Savings-investment gap

One potential adjustment would be an increase in U.S. relative savings. The current account deficit is equivalent to the savings-investment gap of an economy, so by definition, narrowing the difference between savings and investment will reduce the current account gap.

In recent years, the opposite has happened as declines in U.S. national savings have outweighed reductions in investment. The U.S. national savings rate has fallen over the past five years to its lowest level in history. At less than 1.5 per cent of GDP, the U.S. national savings rate is about half its level of ten years ago. The post-bubble increase in corporate savings (as balance-sheet repair was undertaken) has been swamped by a further decline in household savings and the sharp swing into government deficit financing.

Over the same period, investment growth rates have fallen, and investment spending has remained principally domestically focused. The combination of a low

5. Projections of Roubini and Setser (2004) and Mann (2004) yield similar results.

interest rate environment and heavy foreign competition has encouraged investment in the residential housing, commercial real estate, and retail sectors (what economists call the non-tradable sector of the economy). In other words, foreign savings are financing sectors of the economy which will not ultimately help generate exports and therefore narrow the current account deficit.

For most economies, this situation would probably already have spelled trouble as similar dynamics did in Mexico and Thailand in the 1990s. However, even if it has a net foreign liabilities/exports ratio of 280 per cent, comparable to that of single-B-rated Brazil, the United States substantially mitigates its repayment burden by borrowing overwhelmingly in its own currency (Roubini and Setser 2004). Unlike most economies, a U.S. depreciation unambiguously improves its debt-servicing ability.⁶

To summarize, the U.S. current account deficit is unprecedented; it will deteriorate even with balanced global growth, which itself is unlikely to be forthcoming absent substantial adjustments.

The U.S. current account deficit is unprecedented; it will deteriorate even with balanced global growth.

How then is the deficit being financed? And how long can the process continue? This brings us to the second major global imbalance: the large current account and balance-of-payments surpluses in Asia.

Asian balance-of-payments surpluses

These are the complements of the U.S. current account deficit. China is perhaps the best and certainly the most relevant example, and I will rely on it heavily to illustrate broader regional dynamics. The International Monetary Fund (IMF) projects that China's current account surplus this year will be 2.5 per cent of GDP.⁷ While it is often remarked that Chinese imports are

also growing rapidly, they are only keeping pace with exports in value terms.⁸ Part of the story is the rapid development of a pan-Asian supply chain, centred on China, which exports most notably to the United States.

China's structural current account surplus is arguably even higher than current levels. The 2.5 per cent surplus exists despite an economy growing above its potential rate and a deterioration in its terms of trade owing to rapidly rising commodity prices. An emerging market with a bright future would normally be expected to run a current account deficit as it imports capital goods, principally financed from abroad, to speed its development. Our own experience at the turn of the last century is typical: from 1900 to 1913, Canada's current account deficit averaged 9 per cent as our major export industries were built.⁹

Instead, China is running both capital and current account surpluses, leading to a rapid accumulation of foreign exchange reserves. Chinese reserves have grown at 28 per cent compound annual growth rates (CAGRs) in the past five years, to a projected \$562 billion at year-end. As a whole, Asian central banks hold about \$2 trillion, or two-thirds of the world's official foreign exchange reserves.

By virtually every measure, these increases have been disproportionate. The growth in Asian reserves has easily outpaced the growth in the region's share of global GDP and global trade. More importantly, reserves in non-Japan Asia (NJA) are now well above prudential levels. For example, Chinese reserves cover 8.5 months of imports, compared with the prudential norm of three months.¹⁰ Even given the dollar's acknowledged role as the reserve currency, Asian reserves are overweight the greenback. At year-end 2003, Bank for International Settlements (BIS) data revealed that dollar-denominated assets made up about 70 per cent of Asian reserves, or more than two times America's 30 per cent share of the world economy.

While there are some data discrepancies, it seems clear that Asian central bank intervention is financing a large portion of the U.S. current account deficit. For example, last year, official flows to the United States

6. Assuming of course that debt is of sufficient duration and that increases in future borrowing costs are not too severe. Both assumptions seem plausible at present. For example, in 2003, the U.S. net liability position increased by only 2 per cent, despite running a 5 per cent current account deficit.

7. Article IV, November 2004, pp. 31–32.

8. Ibid.

9. Urquhart (1986). Part of the explanation is low consumption in China. Chinese consumption currently represents only about 40 per cent of GDP, compared to two-thirds in Canada today.

10. They also represent six times short-term external debt. All figures are from IMF Article IV, November 2004.

represented over \$400 billion, equivalent to roughly three-quarters of the U.S. current account deficit.¹¹

How these developments are interpreted is crucial to the outlook for the international monetary system.

Why the Situation Might Work

There are two competing explanations for the emergence of large global imbalances and sizable shifts in global capital flows. That they are probably best categorized as increased flexibility and calculated inflexibility suggests that they cannot both be right.

Increased flexibility

Some commentators, most notably, Alan Greenspan, Chairman of the U.S. Federal Reserve, have suggested that the current situation arises from the combination of rational portfolio decisions and increased global flexibility.

From this perspective, a good starting point is to recognize that the U.S. current account deficit represents around 10 per cent of total ROW savings (of around \$6 trillion).¹² Naturally, not all of these savings are invested domestically. Net capital flows to the United States depend on the relative attractiveness of American assets and the willingness of investors to diversify internationally. Advocates of increased flexibility assert that both current levels and future trends support continued financing of prospective U.S. current account deficits.¹³

There is clearly some support for the relative attractiveness of U.S. real and financial assets. On a macro level, the U.S. potential growth rate is the highest within the G-7. Chairman Greenspan notes that, “The pickup in U.S. productivity growth in the mid-1990s [was] the likely proximate cause of foreigners’ perception of increased rates of return on capital in the United States.”¹⁴ Of course, higher productivity and potential growth rates do not necessarily translate into higher relative future returns if market participants such as yourselves have already discounted this pro-

spective out-performance. Moreover, as all returns should be risk adjusted, there remains the question of whether the denominator in the “Sharpe ratio” for U.S. assets will rise.

That said, even lower risk-adjusted returns would not necessarily slow the growth of capital inflows to the United States. Portfolio diversification alone argues for increased flows to the world’s largest and deepest capital market, especially considering the prospects for capital account liberalization in China. It is logical that, as capital controls are liberalized, a larger proportion of Chinese private savings will be invested in the U.S. economy, which still represents one-quarter of global GDP and almost half of its marketable financial assets. This intuition is supported by research by my former colleague at the Bank of Canada, John Helliwell. John’s work suggests that home bias in developed economies has declined markedly over the course of the last decade.¹⁵ The explosion in capital markets volume—of which the tenfold increase in daily Canadian-dollar foreign exchange volume over the past twenty years is but one measure—also suggests a more flexible financing environment.¹⁶

There are two consequences if the global economy maintains this momentum towards increased flexibility of goods and capital. First, we can expect greater dispersion of current account balances. In this regard, it is not necessarily surprising that the disparity between the world’s current account deficits (mainly in the United States) and surpluses (mainly in Asia) has never been greater.¹⁷ Second, a more flexible environment should help to ensure a smoother adjustment to global imbalances through appropriate moves in product and equity prices, interest rates, and exchange rates.¹⁸

Importantly, increased flexibility requires market players to predominate in order for it to be effective. At present, large official purchases of U.S. government

11. Higgins and Klitgaard (2004) argue that the BIS data provide a better measure of central bank financing of the U.S. current account deficit than the U.S. balance-of-payments data, since they capture central bank funds intermediated through private foreign intermediaries.

12. Cooper (2004). As opposed to the two-thirds of net foreign savings I quoted earlier.

13. Note that, to pull this off, you need net flows with the United States that are more attractive on a volume basis to Chinese than China is to U.S. investors.

14. Greenspan (2003, 2).

15. Helliwell (2004) updates the Feldstein-Horoika calculations that demonstrated tight correlations of domestic savings and investment rates across countries belonging to the Organisation for Economic Co-operation and Development (OECD) by decomposing these correlations into 5-year intervals to find a decline in the correlation in the last years of the 1990s. He does note, however, that “it is quite possible that the greater variance of current account balances reflects the coming and going of these crises more than the operation of more globally fluid investment markets” (pp. 4-5).

16. See the Bank of Canada’s *Survey of Foreign Exchange and Derivatives Market Activity in Canada* (28 September 2004).

17. By IMF estimates, that spread is currently the equivalent of 2.3 per cent of world GDP—double the gap of 10 years ago (Roach 2004).

18. Greenspan (2003, 6).

securities may be muting market signals and dulling the flexible system's adjustment mechanisms.¹⁹

Calculated Inflexibility: The New Bretton Woods System

This brings me to the second possible reason for systemic stability, which I shall term calculated inflexibility. The most celebrated proponents of this approach are Mike Dooley, David Folkerts-Landau, and Peter Garber (DFG) of Deutsche Bank who, in effect, argue that a new international monetary order has emerged. According to DFG, the new Bretton Woods system is self-reinforcing, mutually beneficial to Asia and the United States, and stable enough to endure for decades.²⁰

While I do not have time to fully articulate the subtleties and would encourage you to read their work, I think I can fairly summarize their argument as follows:

- There now exists a new de facto Bretton Woods agreement (referred to as BW2) with an Asian-dollar block.
- These Asian economies seek to minimize exchange rate appreciation and volatility in an effort to promote trade and investment.²¹
- DFG employ strong political economy arguments to assert that the system is self-reinforcing. Again, Chinese dynamics are central. According to DFG, the most serious threat to social stability in China is its economy's ability to absorb the sizable pool of surplus labour. The authors argue that China's export-fuelled growth helps to absorb the 15–20 million workers who enter the industrial labour market each year.²² Assuming that there are 200–300 million surplus workers in China, the lifespan of BW2 is measured in decades.

19. Although it is often claimed that these purchases are concentrated in U.S. Treasuries, it is not clear that they take place at the long end of the yield curve.

20. They are by no means alone (see, for example, McKinnon 2003).

21. Crucial to their motivation is the core lesson that they learned from the Asian crisis: namely, that the pre-1998 growth model based on investment financed by external capital had become increasingly hostage to sudden stops and reversals in capital flows. Immediately following the Asian crisis, current account surpluses were run in order to rebuild reserves. Once prudential levels were reached, reserve accumulation has continued as Asian countries intervened heavily to prevent export-retarding exchange rate appreciation.

22. It is never fully explained why export-oriented industries are superior creators of jobs to non-tradable sectors.

- American interests are also served. The recycling of dollars back into U.S. treasuries keeps yields down. In turn, low interest rates support valuations of U.S. assets that consumers lever in order to fund further consumption (much of which is of cheap Asian goods).
- Larry Summers has termed this arrangement the balance of financial terror: the end of Asian-dollar purchases would sharply constrain U.S. investment and growth (through higher interest rates) while the ensuing appreciation would undermine the Asian export sectors. According to DFG, in this standoff nobody blinks for the next twenty years.
- U.S. corporations are offered the opportunity to invest in the Asian miracle, which buys their (and ultimately the U.S. government's) support for the system. In one aggrandizement of the thesis, it is argued that this dynamic in effect creates a total return swap collateralized on Chinese-owned U.S. Treasuries (which would be defaulted upon if China expropriates American investments in China).
- Eventually (at the end of the decade), the U.S. dollar depreciates against its Asian crosses, thus ensuring a sustainable U.S. net liability position. Asian countries take the eventual capital loss, a cost which is greatly outweighed by the benefits of current export-led growth.
- The ROW, including Canada, Europe, and Latin American emerging markets, represent a periphery of floaters. We are interested bystanders outside of the virtuous circle said to exist between America and Asia.

The Periphery Doesn't Hold: Why BW2 Won't Work

The DFG thesis of a bold new international monetary order is a seductive approach that makes for provocative academic discussions but poor policy choices. Asian reserve accumulation, initially motivated by prudential considerations, then propelled by the policy inertia that inevitably seems to afflict those who choose fixed exchange rate regimes, is now fanned by the quasi-intellectual justification of new-paradigmers

who have proclaimed the birth of the new Bretton Woods system.

Yet there are at least five reasons why the BW2 system seems destined to fail.

First, even new paradigms cannot suspend basic economic relationships. Although countries can fix their nominal exchange rates, even with partially liberalized capital flows, they cannot fix their real exchange rates. As a result, relative price adjustments (rather than exchange rate moves) will eventually drive the required real appreciation. Quite simply, Asian inflation will be higher than American. There is already evidence of mounting consumer price inflation in China, which has moved from 1 per cent deflation two years ago to 4 per cent+ inflation this year.²³

Second, foreign exchange intervention requires sterilization in order to control domestic money supply. This is very costly. For China, the immaturity of the financial system reduces the costs (i.e., financial repression), but this advantage will lessen as China modernizes. In addition to these flows costs, large capital losses (potentially on the order of 3 per cent of GDP) are likely on foreign exchange reserves (Higgins and Klitgaard 2004).

Third, even in my limited experience in government and international relations, I have reason to be skeptical of claims of complex yet seamless simultaneous coordination across borders, between governments, and among public and private actors. For example, in the United States, the interests and influence of U.S. firms who invest in Asia trump those of the domestic manufacturing sector and their employees. How likely is that? And why would that also be the case in Europe and Canada, which currently bear a disproportionate burden of any dollar depreciation? Is it not possible that the balance of winners and losers could increase the likelihood of protectionism?

Fourth, coordination among Asian governments is assumed. However, BW2 has neither the credible commitment to exchange rate stability nor the adjustment mechanism that characterized the old BW system. An emerging pan-Asian supply chain is not equivalent to the development of an institutionally anchored currency block. For example, Asia has as many managed floats as formally pegged exchange rates.²⁴ Moreover, it is not clear that all countries in the region

23. The impact on social stability of high inflation should not be discounted, as it can have considerable redistributive consequences.

have the same adjustment time frame. The weight of surplus labour in the rest of NJA is generally smaller, and the level of domestic financial sophistication is generally much greater than in China. This means that inflation pressures and negative carrying costs of sterilization will likely rise faster outside than inside China.

As in any coordinated game without institutional barriers, defection incentives are high. Given that one of the acknowledged elements of the end-game is a large capital loss on reserve holdings, a question must be, why wouldn't Korea or Taiwan want to minimize their loss by getting out first? As Barry Eichengreen has pointed out, even with the institutional strictures of the first BW system, France, Germany, and the United Kingdom did just that by selling their gold to the United States in 1970 (Eichengreen 2004). Defection incentives are further fed by other differences between the original Bretton Woods system and the current situation, including the greater heterogeneity of Asia, the existence of a more appealing alternative to the dollar in the euro, and the relative absence of capital controls (Eichengreen 2004).

Finally, the development process works directly at odds with the maintenance of a long-term peg. In order for the Chinese economy to continue to progress, its domestic financial system must develop. However, it cannot fully do so without interest and exchange rate flexibility.²⁵ Even before these prices are liberalized, as the financial sector develops, capital controls will become more difficult to enforce and sterilization more expensive. Crucially, this dynamic will be sped by the rapid increase in global cross-border capital flows discussed above.

In sum, the fact that there is more than a little truth in the increased-flexibility argument means that the calculated inflexibility behind the new Bretton Woods system will likely be short-lived.

Our Policy Framework in These Circumstances

I will end as I started: with a bait and switch. Belying the title of my address, I have just argued that there is not a new international monetary order, but rather

24. International monetary history has consistently shown that the halfway house between fixed and floating exchange rates is a very dangerous place to be.

25. In this regard, the recent move to a more flexible interest rate is more important than the increase in the official rate.

that there currently exists an ad hoc arrangement of two co-existing systems: one floating, the other fixed. This is not sustainable for major currencies.

Other currencies can fix, but only if they subjugate their monetary policy to the centre. Absent sterilization, countries which fix their currencies will effectively operate a pure gold standard or currency-board arrangement. This will ensure that they quickly bear their share of global adjustment via changes in their inflation rate. If they try to thwart this adjustment through sterilized intervention, countries avoid their responsibilities in exchange for merely postponing the inevitable. In the long run, real exchange rates will adjust, even in China.

However, the time path of adjustment matters, even if the end result is not in doubt. With the sixth largest economy in the world and a 6 per cent share of global trade, China has a major currency. Its economic impact is magnified by the supply-chain incentives for other Asian currencies to track the renminbi. This scale means that the potential costs to the global economy of delaying adjustment could be high. There is likely overinvestment in export industries in Asia and underinvestment in export industries in the United States. In addition, the risks and costs of increased protectionism should not be trivialized.

*In a world of free capital movements,
the only valid adjustment mechanism
is enlightened self-interest.*

And to what end are these risks being run? Absent a dramatic retrenchment in global capital mobility, it appears inevitable that the floating system will reassert its primacy. The weight of global capital flows and the benefits of flexibility are simply too great to be ignored. The challenge is thus to smooth the exit path for the fixed block. The sooner this happens, the better market signals will work, and the smoother the adjustment of global imbalances will be.

In a world of free capital movements, the only valid adjustment mechanism is enlightened self-interest. International monetary history suggests that countries usually fail to take systemic concerns into account

when making short-term policy decisions, so an appeal to the greater good seems unlikely to work. International policy coordination can play a role but only when it is in the interests of all countries to coordinate policies.²⁶ That's why the Plaza Accord worked, but the Louvre Accord did not.

One of the principal advantages of the G-7 and G-20 is their ability to promote mutual understanding and to encourage individual members to take steps which are in their interests. By helping to coordinate individually rational policies, the G-7 and G-20 can maximize their collective impact.

Such a situation exists today. It is in China's interest gradually to liberalize interest rates, capital controls, and its exchange rate regime. China simply cannot reach its full potential if it does not, and it risks much more if it delays. The costs of the current policies are multiple: China wastes massive resources; it has an inefficient financial sector prone to connected and speculative lending; its loose monetary policy is feeding inflation and, potentially, asset bubbles; and its undervalued terms of trade are depriving Chinese consumers and further distorting investment decisions.

Similarly, individual country incentives within the G-7 are aligned to reduce global imbalances. Specifically, it is in American interests to reduce their budget deficit and encourage private savings. As Europe and Japan have recognized, it is in their interests to aggressively pursue structural reforms. Finally, it is in Canada's and Britain's interest to maintain our sound macroeconomic policy records while redoubling efforts to maximize the flexibility of our economies, increase the efficiency of our financial systems, and ultimately raise our overall levels of productivity.

*All major nations have a common
incentive to increase flexibility in the
cross-border movement of goods,
services, capital, and labour.*

All major nations have a common incentive to increase flexibility in the cross-border movement of goods, services, capital, and labour. The new international

26. That is, the doctrines of Adam Smith are as valid at the international level as at the firm level.

monetary order will likely be one in which G-4 currencies—the U.S. dollar, the yen, the euro, and the renminbi—all float against each other, and in which other currencies, including the Canadian dollar, will have a choice: to float on their own or to fix to a block which itself floats.

In this international monetary order, Canada's choice remains clear. A floating Canadian dollar gives us monetary policy independence and an automatic buffer against economic shocks. My former employer, the Bank of Canada, has used this independence to achieve an inflation rate that is low, stable, and predictable, thereby ensuring that Canadians can consume, invest, and save with a high degree of confidence. At the same time, the exchange rate has responded to global shocks, including the Asian crisis in the late 1990s, and to the current robust global growth in a manner that has helped and will help to ensure that our economy undertakes the necessary adjustments to global change. Canada understands the international

monetary order, and we will work with our partners to ensure that we can all realize the full potential of a flexible, dynamic global economy.²⁷

A floating Canadian dollar gives us monetary policy independence and an automatic buffer against economic shocks.

Thank you for your attention. I would be happy to take any questions.

27. See, for example, Murray (2000).

References

- Bank of Canada. 2004. *Survey of Foreign Exchange and Derivatives Market Activity in Canada*, 28 September.
- Bank for International Settlements (BIS). 2004. Chapter 5, "Foreign Exchange Markets." *74th Annual Report* (28 June). Available on the Web at <<http://www.bis.org/publ/ar2004e.htm>>.
- Chancellor, E. 1999. *The Devil Take the Hindmost*. New York: Penguin Books.
- Cooper, R. 2004. "America's Current Account Deficit Is Not Only Sustainable, It Is Perfectly Logical Given the World's Hunger for Investment Returns and Dollar Reserves." *Financial Times*, 1 November.
- Dooley, M., D. Folkerts-Landau and P. Garber. 2003. "An Essay on the Revived Bretton Woods System." NBER Working Paper No. 9971.
- . 2004a. "The Revived Bretton Woods System: The Effects of Periphery Intervention and Reserve Management on Interest Rates and Exchange Rates in Center Countries." NBER Working Paper No. 10332.
- . 2004b. "Direct Investment, Rising Real Wages and the Absorption of Excess Labor in the Periphery." NBER Working Paper No. 10626.
- . 2004c. "The U.S. Current Account Deficit: Collateral for a Total Return Swap." Deutsche Bank, August.
- Eichengreen, B. 2004. "Global Imbalances and the Lessons of Bretton Woods." NBER Working Paper No. 10497.
- Freund, C. .2000. "Current Account Adjustment in Industrialized Countries." International Finance Discussion Papers No. 2000-692. Federal Reserve Board.
- Goldstein, M. 2004. "Adjusting China's Exchange Rate Policies." Working Paper No. 04-1. Institute for International Economics.
- Greenspan, A. 2003. Remarks at the 21st Annual Monetary Conference, Cato Institute. Washington, D.C., November.

References (cont'd)

- Helliwell, J. 2004. "Demographic Changes and International Factor Mobility." Paper presented at the Global Demographic Change: Economic Impacts and Policy Changes symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, 26–28 August.
- Higgins, M and T. Klitgaard. 2004. *Reserve Accumulation: Implications for Global Capital Flows and Financial Markets*. Current Issues in Economics and Finance 10. Federal Reserve Bank of New York.
- Hooper, P., K. Johnson, and J. Marquez. 2000. "Trade Elasticities for the G-7 Countries." *Princeton Studies in International Economics* 87 (August).
- International Monetary Fund. 2004. *People's Republic of China: 2004 Article IV Consultation—Staff Report; Staff Statement; and Public Information Notice on the Executive Board Discussion*. 5 November.
- McKinnon, R. 2003. *The World Dollar Standard and Globalization, New Rules for the Game*. Stanford University, August.
- McKinnon, R. and G. Schnabl. 2004. "The Return to Soft-Dollar Pegging in East Asia: Mitigating Conflicted Virtue." *International Finance* 7: 169–201.
- Mann, C.L. 2004. "Managing Exchange Rates: Achievement of Global Re-balancing or Evidence of Global Co-dependency?" *Business Economics* (July): 20–29.
- Murray, J. 2000. "Why Canada Needs a Flexible Exchange Rate." *North American Journal of Economics and Finance* 11: 41–60.
- Obstfeld, M. and K. Rogoff. 2000. "Perspectives on OECD Economic Integration: Implications for U.S. Current Account Adjustment." In Federal Reserve Bank of Kansas City, *Global Economic Integration: Opportunities and Challenges*, 169–208.
- . 2004. "The Unsustainable U.S. Current Account Position Revisited." NBER Working Paper No. 10869.
- Roach, S. 2004. "Collision Course." Morgan Stanley Global Economic Forum, 27 September. Available on the Web at <<http://www.morganstanley.com/GEFdata/digests/20040927-mon.html>>.
- Roubini, N. and B. Setser. 2004. "The U.S. as a Net Debtor: The Sustainability of the U.S. External Imbalances." New York Stern School of Business. Available on the Web at <<http://www.stern.nyu.edu/globalmacro/>>.
- Summers, L. 2004a. "The United States and the Global Adjustment Process." Speech at the Third Annual Stavros S. Niarchos Lecture. Institute for International Economics, Washington, D.C. 23 March.
- . 2004b. "The U.S. Current Account Deficit and the Global Economy." Per Jacobsson Lecture, October. Available on the Web at <<http://www.perjacobsson.org/2004/100304.pdf>>.
- Urquhart M. 1986. *Gross National Product, Canada 1870–1926: The Derivation of the Estimates*. Kingston: McGill-Queen's University Press. IMF Database. Statistics Canada.
- United States Department of the Treasury, Federal Reserve Bank of New York, and Board of Governors of the Federal Reserve System. 2003. "Report on U.S. Holdings of Foreign Securities as of December 31, 2001," May.
- . 2004. Treasury International Capital (TIC) System." Available on the Web at: <<http://www.treas.gov/tic/index.html>>.