

Frankel Jeffrey A.

**Article**

## Program report: International finance and macroeconomics

NBER Reporter Online

**Provided in Cooperation with:**

National Bureau of Economic Research (NBER), Cambridge, Mass.

*Suggested Citation:* Frankel Jeffrey A. (1999) : Program report: International finance and macroeconomics, NBER Reporter Online, National Bureau of Economic Research (NBER), Cambridge, MA, Iss. Winter 1999/2000, pp. 1-7

This Version is available at:

<https://hdl.handle.net/10419/67016>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*

# NBER Reporter

NATIONAL BUREAU OF ECONOMIC RESEARCH

Reporter OnLine at: [www.nber.org/reporter](http://www.nber.org/reporter)

WINTER 1999/2000

## In This Issue

Program Report: International Finance and Macroeconomics	1
Research Summaries Emerging Equity Markets and Market Integration	8
Forecasting and Empirical Methods in Finance and Macroeconomics	11
The Effects of Liability Rules on Medical Practice	15
International Economic Organizations, Developing Country Reforms, and Trade	18
NBER Profiles	21
Conferences	24
Bureau News	37
Bureau Books	55
Current Working Papers	57

## Program Report

### International Finance and Macroeconomics

Jeffrey A. Frankel\*

This summary of research by members of the NBER's Program on International Finance and Macroeconomics describes work on particular parts of the world, including the emerging markets, Japan, and Europe, as well as studies of international economic integration and flexible exchange rates that have universal relevance.

### Recent Crises in Emerging Markets

Recurrent crises in emerging markets warrant much thought, and NBER researchers have responded accordingly. Some of their work has been discussed in a series of conferences organized by NBER President Martin Feldstein and in annual meetings of the NBER's InterAmerican Seminar in Economics and the East Asian Seminar in Economics.

The most recent three-year period began with a number of postmortems on the Mexican peso crisis, including discussions of the origins of the crisis in 1994—by Sebastian Edwards, Andrew M. Warner, and Sergio L. Schmukler and me—and analysis of its aftermath in 1995—by Edwards and Miguel Savastano and Anne Krueger and Aaron Tornell.<sup>1</sup>

The return of crises in East Asia in 1997, and their spread to emerging market countries around the world in 1998, likewise raised a number of questions, including what had caused this turmoil.<sup>2</sup> Several explanations

\*Jeffrey Frankel is Director of the NBER's Program on International Finance and Macroeconomics and is also a Research Associate in the NBER's Programs on International Trade and Investment, Monetary Economics, and Asset Pricing. He is the James W. Harpel Professor of Capital Formation and Economic Growth at Harvard University and a former member of the President's Council of Economic Advisers.

WWW.NBER.ORG

Our web site  
features a searchable  
index to over 5000  
NBER Working Papers  
issued since 1978.

It also includes searchable  
indexes to all NBER books and  
to all current NBER Research  
Associates and Faculty Research  
Fellows.

In addition, our web site has  
the NBER Macroeconomic History  
Database (3500 different  
time series), the Penn World  
Tables of country data, and other  
items.

# NBER Reporter

NATIONAL BUREAU OF ECONOMIC RESEARCH

The National Bureau of Economic Research is a private, nonprofit research organization founded in 1920 and devoted to objective quantitative analysis of the American economy. Its officers and board of directors are:

President and Chief Executive Officer—*Martin Feldstein*  
Chief Financial Officer—*Sam Parker*

## BOARD OF DIRECTORS

Chairman—*John H. Biggs*  
Vice Chairman—*Carl F. Christ*  
Treasurer—*Robert Mednick*

## DIRECTORS AT LARGE

Peter Aldrich	George C. Eads	Michael H. Moskow
Elizabeth E. Bailey	Martin Feldstein	Rudolph A. Oswald
John Herron Biggs	Stephen Friedman	Robert T. Parry
Andrew Brimmer	George Hatsopoulos	Peter G. Peterson
Carl F. Christ	Karen N. Horn	Richard N. Rosett
Don R. Conlan	John Lipsky	Kathleen P. Utgoff
Kathleen B. Cooper	Leo Melamed	Marina V. N. Whitman

## DIRECTORS BY UNIVERSITY APPOINTMENT

George Akerlof, <i>California, Berkeley</i>	Joel Mokyr, <i>Northwestern</i>
Jagdish W. Bhagwati, <i>Columbia</i>	Andrew Postlewaite, <i>Pennsylvania</i>
William C. Brainard, <i>Yale</i>	Nathan Rosenberg, <i>Stanford</i>
Glen G. Cain, <i>Wisconsin</i>	Craig Swan, <i>Minnesota</i>
Franklin Fisher, <i>MIT</i>	David B. Yoffie, <i>Harvard</i>
Saul H. Hymans, <i>Michigan</i>	Arnold Zellner, <i>Chicago</i>
Marjorie B. McElroy, <i>Duke</i>	

## DIRECTORS BY APPOINTMENT OF OTHER ORGANIZATIONS

Marcel Boyer, *Canadian Economics Association*  
Mark Drabentstott, *American Agricultural Economics Association*  
William C. Dunkelberg, *National Association of Business Economists*  
Gail Fosler, *The Conference Board*  
A. Ronald Gallant, *American Statistical Association*  
Robert S. Hamada, *American Finance Association*  
Robert Mednick, *American Institute of Certified Public Accountants*  
John J. Siegfried, *American Economic Association*  
David A. Smith, *American Federation of Labor and Congress of Industrial Organizations*  
Josh S. Weston, *Committee for Economic Development*  
Gavin Wright, *Economic History Association*

The NBER depends on funding from individuals, corporations, and private foundations to maintain its independence and its flexibility in choosing its research activities. Inquiries concerning contributions may be addressed to Martin Feldstein, President & CEO, NBER, 1050 Massachusetts Avenue, Cambridge, MA 02138-5398. All contributions to the NBER are tax deductible.

The *Reporter* is issued for informational purposes and has not been reviewed by the Board of Directors of the NBER. It is not copyrighted and can be freely reproduced with appropriate attribution of source. Please provide the NBER's Public Information Department with copies of anything reproduced.

Preparation of the *NBER Reporter* is under the supervision of Donna Zerwitz. Requests for subscriptions, changes of address, and cancellations should be sent to *Reporter*, National Bureau of Economic Research, Inc., 1050 Massachusetts Avenue, Cambridge, MA 02138-5398. Please include the current mailing label.

were considered, including the high and variable volume of flows in modern, liberalized international capital markets.<sup>3</sup>

Another possible explanation is increases in world interest rates, which seem to have been proximate causes in earlier crises, although less relevant in 1997–8.<sup>4</sup> A third possibility is the behavior of foreign investors, and a fourth is the composition of capital inflows.<sup>5</sup> A high level of foreign direct investment seems to be helpful, but a concentration of short-term dollar-denominated debt, especially relative to reserves, is a danger signal. Rodrik and Velasco show that the short-term debt-to-reserves ratio is a robust predictor of financial crises.<sup>6</sup>

Another possible explanation for the crises is attempts to maintain pegged exchange rates.<sup>7</sup> Such attempts in the crisis countries ended when foreign exchange reserves were depleted. The impact on the economy from the resulting devaluation was greater than if the currency peg had been abandoned earlier. Policies to fix exchange rates in Latin America were often the legacy of attempts to stabilize from high inflation rates in the 1980s.<sup>8</sup> In East Asia these policies have been complicated by rapid growth and by movements in the yen-dollar exchange rate.<sup>9</sup>

For some time there has been a division between those who attribute currency crises to traditional fundamentals, including overly expansionary monetary policy and other macroeconomic policy mistakes—for example, Michael D. Bordo and Anna J. Schwartz—and those who attribute it to investor panic and multiple equilibria, such as Steven Radelet and Jeffrey D. Sachs.<sup>10</sup> These competing theories of balance-of-payments crises have been classified as first-versus second-generation models of speculative attacks. Research by Robert P. Flood and Nancy P. Marion,

Maurice Obstfeld, and Velasco has put the different models into context.<sup>11</sup>

In East Asia, most of the countries had relatively good macroeconomic fundamentals. As a result, diagnoses of crises there emphasize a different sort of fundamentals instead of macroeconomic policies: distortions in the financial structures of emerging economies.<sup>12</sup> Specifically, a third generation of models of currency crises sought to explain "crony capitalism," defined more formally as implicit government guarantees for poorly regulated banks and corporate debtors, which create moral hazard. The pioneering leader of these models, writing before the East Asia crisis began, was Michael P. Dooley.<sup>13</sup> Others who developed the models include Chinn, Dooley, and Sona Shrestha; Craig Burnside; Martin S. Eichenbaum and Sergio Rebelo; and Aizenman.<sup>14</sup>

An important question to address is why the crises were so severe once they occurred, inflicting recession, bankruptcy, and poverty on much of the economy. Chang and Velasco have emphasized the post-devaluation burden of short-term dollar-denominated debt.<sup>15</sup> Banks and firms find that they cannot service their dollar-denominated debt after the devaluation because their revenues are primarily in local currency. James Levinsohn, Steven Berry, and Jed Friedman show that, in part because of debt problems, the poor in Indonesia indeed were hit the hardest.<sup>16</sup>

At the same time, there has been a rethinking of the traditional view that a country that abandons its exchange rate target has the solace of lower interest rates and a related stimulus to growth and employment. Even in looking at Western Europe, Robert J. Gordon challenges the conventional wisdom that those who devalued in 1992-3 were rewarded with noninflationary growth.<sup>17</sup> In the case of East Asia, especially, the crisis victims

suffered from high interest rates and sharp recessions regardless of whether they devalued early, late, or not at all.

Another topic our program addresses is contagion: the tendency for a currency crisis in one emerging-market country to be followed by troubles in others far away. Such situations have now gone beyond correlations that can readily be explained by competition in export markets. For example, the contagion from Russia to Brazil in August 1998 cannot be explained easily by trade links between these two countries, nor by competition in third markets. A number of IFM Program members have been studying contagion.<sup>18</sup>

How can crises be prevented in the future, or at least be made less frequent and less severe? Some researchers have begun to study proposals for restrictions on capital flows. Chile maintained penalties on short-term capital inflows, which appear to have succeeded in changing the composition of its inflows at least. However, Edwards warns that these penalties do not explain Chile's success.<sup>19</sup> Leonardo Bartolini and Drazen point out that liberalization of capital outflows sends a positive signal to investors and can result in increased inflows.<sup>20</sup> Karen K. Lewis also looks at official international restrictions on capital flows.<sup>21</sup>

Some proposals for modification of the international financial architecture call for a reform of multilateral institutions.<sup>22</sup> Work by Feldstein and Ricardo J. Caballero and Arvind Krishnamurthy offers some innovative ideas about the provision of international collateral by developing country borrowers.<sup>23</sup>

## Japan and the European Union

Members of the IFM program have continued to watch the industrialized

world as well as the emerging markets. In the 1990s Japan found itself in a recession trap that was worse than most forecasts, while Europe entered a monetary union that so far has succeeded better than many had forecast.

The banking system played a central role in the decade-long Japanese slump, despite both the Basel capital standards agreement and the Big Bang of 1998 trying to nudge Japanese banks into the modern era. The premium that Japanese banks pay for funds helps to explain their problems.<sup>24</sup>

In January 1999 the European Economic and Monetary Union (EMU) was inaugurated, and the euro, its common currency, was born. NBER researchers analyzed a variety of aspects of the immediate transition to the EMU.<sup>25</sup> Obstfeld, Giovanni Peri, and others also examined the fundamental question for the longer term: is Europe suited to a common currency?<sup>26</sup> Feldstein has suggested that the EMU does not make economic sense and was instead adopted for political reasons.<sup>27</sup>

A number of IFM Program members have considered how the new European Central Bank (ECB) could conduct monetary policy.<sup>28</sup> Lars E. O. Svensson suggests that the ECB could target the price level.<sup>29</sup> Richard Portes and Helene Rey predict that the euro will rival the dollar some day as an international currency.<sup>30</sup> Michael B. Devereux, Charles M. Engel, and Tille consider the implications of trade being invoiced in euros.<sup>31</sup> Casella asks what fiscal policy might be under the European stability pact, and William H. Branson, Jorge Braga de Macedo, and Jurgen von Hagen wonder about prospective policy expansion to the East.<sup>32</sup>

Some of the NBER research on the European economy is presented at the NBER's International Seminar on Macroeconomics (ISOM), which

takes place each summer in a different European country. For the past several years, ISOM has been under the direction of Andrew K. Rose and Charles Wyplosz.

## Global Economic Integration

IFM Program members have continued to investigate the extent, nature, and effects of global integration. One important new approach has been to incorporate in the analysis data on transactions among cities or provinces within the same country with data on transactions between countries. This makes it possible to identify the effects of national borders and national currencies, not just the effects of geographic separation. This approach has been used by John F. Helliwell and Ross McKittrick and Obstfeld.<sup>33</sup>

Some researchers take a historical perspective, looking back over the entire twentieth century. International economists can surprise people by showing that financial integration 100 years ago by many measures was as high as, or even higher than, it is today. For example, early in the century capital flows allowed greater gaps between countries' saving and investment levels than existed in the postwar period.<sup>34</sup> Bordo, Eichengreen, and Jongwoo Kim argue that the increase in financial integration has been greater than international economists allow; Bordo, Eichengreen, and Douglas A. Irwin argue the same for globalization more generally, including integration with respect to trade.<sup>35</sup>

One method of studying international integration with respect to trade is to look at the ability of arbitrage to eliminate geographical differences in prices. Such tests on the general price level are part of the large literature on purchasing power parity.<sup>36</sup> Tests of arbitrage are particularly interesting when they focus

on prices of specific, narrowly defined commodities and examine the role of distance and transport costs between geographic locations.<sup>37</sup> Notwithstanding the much-touted trend of globalization, geographic distance remains a very important factor in trade, as are political barriers such as national borders and national currencies.

## Flexible Exchange Rates

All of the preceding issues bear on the choice of exchange rate regime, particularly fixed versus floating rates, and on whether the question is more difficult in a world of international financial integration.<sup>38</sup> Both regimes have advantages, of course. Fixed rates provide a noninflationary anchor for monetary policy. Pegged regimes are characterized by lower inflation but higher variability of output.<sup>39</sup> Exchange rate stability also purportedly promotes international trade and investment.<sup>40</sup> That point is particularly relevant if the variability that shows up under a floating regime is attributable to gratuitous "noise trading," as Olivier Jeanne and Rose suggest.<sup>41</sup> Floating rates, on the other hand, may allow monetary independence. But how do we trade off these advantages?

Recent currency crises in emerging markets have convinced some observers that a general move toward increased exchange rate flexibility is in order. The success of some countries with currency boards or full monetary union has convinced others that rigid institutional commitments to fixed rates are the solution. A third, newly popular view is that either of the two extremes—free floating or firm fixing—is tenable, but that intermediate regimes including target zones are not. In truth, however, no single regime, whether fixed or floating, can be right for all countries. The choice depends on the

specific characteristics of the country in question.<sup>42</sup>

On what does the choice of regime depend? Traditional theory included such criteria as openness and synchronicity of business cycles. Recent experience has added other criteria, emphasizing initial conditions (such as price-setting behavior, the prevalence of dollar debt, and the adequacy of reserve levels) and factors relevant for the credibility of giving monetary policy an exchange rate anchor (such as the political economy of a hyperinflationary past).<sup>43</sup> All of these characteristics can themselves be influenced by the choice of exchange rate regime. Countries that fix their exchange rates and thereby promote trade are more likely to qualify as an optimum currency area *ex post* than *ex ante*.<sup>44</sup>

Meanwhile, econometricians continue to search for an explanation of the seemingly random movements in the exchange rate. Some have pursued the traditional macroeconomic approach, which looks at determinants such as fiscal policy.<sup>45</sup> Others have pursued the new microstructure approach.<sup>46</sup>

The effects of exchange rate movements on employment have been studied by a number of NBER researchers.<sup>47</sup> Others have asked how firms deal with exchange rate volatility.<sup>48</sup> Firms can hedge away exchange rate risk.<sup>49</sup> But hedging is not free; a risk premium separates the forward rate from the expected future spot rate.<sup>50</sup> The prospect of eliminating the exchange risk premium is one of the attractions of firmly fixed exchange rates.

Increasingly, these central questions of financial integration and exchange rate regimes are relevant for all countries, for emerging markets as much as for the industrialized world.

<sup>1</sup> S. Edwards, "The Mexican Peso Crisis? How Much Did We Know? When Did We

- Know It?" NBER Working Paper No. 6334, December 1997, and "A Tale of Two Crises: Chile and Mexico," NBER Working Paper No. 5794, October 1996; A. M. Warner, "Mexico's 1994 Exchange Rate Crisis Interpreted in Light of the Non-Traded Model," NBER Working Paper No. 6165, September 1997; J. A. Frankel and S. L. Schmukler, "Country Fund Discounts, Asymmetric Information, and the Mexican Crisis of 1994: Did Local Residents Turn Pessimistic before International Investors?" NBER Working Paper No. 5714, August 1996; S. Edwards and M. A. Savastano, "The Morning After: The Mexican Peso in the Aftermath of the 1994 Currency Crisis," NBER Working Paper No. 6516, April 1998; A. O. Krueger and A. Tornell, "The Role of Bank Restructuring in Recovering from Crises: Mexico 1995-98," NBER Working Paper No. 7042, March 1999.
- <sup>2</sup> A. Tornell, "Common Fundamentals in the Tequila and Asian Crises," NBER Working Paper No. 7139, May 1999; T. Ito, "Capital Flows in Asia," NBER Working Paper No. 7134, May 1999.
- <sup>3</sup> Q. Meng and A. Velasco, "Can Capital Mobility be Destabilizing?" NBER Working Paper No. 7263, July 1999; D. Rodrik and T. van Ypersele, "Capital Mobility, Distributive Conflict, and International Tax Coordination," NBER Working Paper No. 7150, June 1999; B. Eichengreen and A. Mody, "What Explains Changing Spreads on Emerging-Market Debt: Fundamentals or Market Sentiment?" NBER Working Paper No. 6408, February 1998; V. V. Chari and P. Kehoe, "Hot Money," NBER Working Paper No. 6007, April 1997; P. Bacchetta and E. van Wincoop, "Capital Flows to Emerging Markets: Liberalization, Overshooting, and Volatility," NBER Working Paper No. 6530, April 1998.
- <sup>4</sup> B. Eichengreen and A. K. Rose, "Staying Afloat When the Wind Shifts: External Factors and Emerging-Market Banking Crises," NBER Working Paper No. 6370, January 1998.
- <sup>5</sup> W. Kim and S.-J. Wei, "Offshore Investment Funds: Monsters in Emerging Markets?" NBER Working Paper No. 7133, May 1999; and "Foreign Portfolio Investors before and during a Crisis," NBER Working Paper No. 6968, February 1999; B. Eichengreen and A. Mody, "Lending Booms, Reserves, and the Sustainability of Short-Term Debt: Inferences from the Pricing of Syndicated Bank Loans," NBER Working Paper No. 7113, May 1999; R. Chang and A. Velasco, "The Asian Liquidity Crisis," NBER Working Paper No. 6796, November 1998.
- <sup>6</sup> D. Rodrik and A. Velasco, "Short-Term Capital Flows," NBER Working Paper No. 7364, September 1999; J. A. Frankel and A. K. Rose ("Currency Crashes in Emerging Markets," NBER Working Paper No. 5437, January 1996, and *Journal of International Economics* 41, no. 3-4 (1996), pp. 351-66), found similar compositional effects on the probability of crises.
- <sup>7</sup> S. Edwards and M. A. Savastano, "Exchange Rates in Emerging Economies: What Do We Know? What Do We Need to Know?" NBER Working Paper No. 7228, July 1999; F. S. Mishkin, "Lessons from the Asian Crisis," NBER Working Paper No. 7102, April 1999; B. Eichengreen, "Does Mercosur Need a Single Currency?" NBER Working Paper No. 6821, December 1998.
- <sup>8</sup> G. A. Calvo and C. A. Végh, "Inflation Stabilization and BOP Crises in Developing Countries," NBER Working Paper No. 6925, February 1999; E. G. Mendoza and M. Uribe, "Devaluation Risk and the Syndrome of Exchange Rate-Based Stabilizations," NBER Working Paper No. 7014, March 1999; J. M. Campa, P. H. Kevin Chang, and J. F. Refalo, "An Options-Based Analysis of Emerging Market Exchange Rate Expectations: Brazil's Real Plan, 1994-7," NBER Working Paper No. 6929, February 1999.
- <sup>9</sup> T. Ito, E. Ogawa, and Y. N. Sasaki, "How Did the Dollar Peg Fail in Asia?" NBER Working Paper No. 6729, September 1998; M. D. Chinn, "On the Won and Other East Asian Currencies," NBER Working Paper No. 6671, August 1998; T. Ito, P. Isard, and S. Symansky, "Economic Growth and Real Exchange Rate: An Overview of the Balassa-Samuelsson Hypothesis in Asia," NBER Working Paper No. 5979, March 1997.
- <sup>10</sup> M. D. Bordo and A. J. Schwartz, "Why Clashes between Internal and External Stability Goals End in Currency Crises, 1797-1994," NBER Working Paper No. 5710, June 1997; S. Radelet and J. D. Sachs, "The Onset of the East Asian Financial Crisis," NBER Working Paper No. 6680, August 1998.
- <sup>11</sup> R. P. Flood and N. P. Marion, "Perspectives on the Recent Currency Crisis Literature," NBER Working Paper No. 6380, January 1998; R. P. Flood and N. P. Marion, "Speculative Attacks: Fundamentals and Self-Fulfilling Prophecies," NBER Working Paper No. 5789, October 1996; M. Obstfeld, "Destabilizing Effects of Exchange-Rate Escape Clauses," NBER Reprint No. 2168, February 1998, and "Models of Currency Crises with Self-Fulfilling Features," NBER Working Paper No. 5285, February 1997; A. Velasco, "When Are Fixed Exchange Rates Really Fixed?" NBER Working Paper No. 5842, November 1996.
- <sup>12</sup> G. Corsetti, P. Pesenti, and N. Roubini, "Paper Tigers? A Model of the Asian Crisis," NBER Working Paper No. 6783, November 1998, and "What Caused the Asian Currency and Financial Crisis? Part I: A Macroeconomic Overview," NBER Working Paper No. 6833, December 1998; J. Aizenman and A. Powell, "Volatility and Financial Intermediation," NBER Working Paper No. 6320, December 1997.
- <sup>13</sup> M. P. Dooley, "A Model of Crises in Emerging Markets," NBER Working Paper No. 6300, December 1997.
- <sup>14</sup> M. D. Chinn, M. P. Dooley, and S. Shrestha, "Latin America and East Asia in the Context of an Insurance Model of Currency Crises," NBER Working Paper No. 7091, April 1999; C. Burnside, M. S. Eichenbaum, and S. Rebelo, "Prospective Deficits and the Asian Currency Crisis," NBER Working Paper No. 6758, October 1998, and "Hedging and Financial Fragility in Fixed Exchange Rate Regimes," NBER Working Paper No. 7143, May 1999; J. Aizenman, "Capital Mobility in a Second Best World - Moral Hazard with Costly Financial Intermediation," NBER Working Paper No. 6703, August 1998.
- <sup>15</sup> R. Chang and A. Velasco, "Financial Crises in Emerging Markets," NBER Working Paper No. 6606, June 1998, and "Liquidity Crises in Emerging Markets: Theory and Policy," NBER Working Paper No. 7272, July 1999.
- <sup>16</sup> J. Levinsohn, S. Berry, and J. Friedman, "Impacts of the Indonesian Economic Crisis: Price Changes and the Poor," NBER Working Paper No. 7194, June 1999.
- <sup>17</sup> R. J. Gordon, "The Aftermath of the 1992 ERM Breakup: Was There a Macroeconomic Free Lunch?" NBER Working Paper No. 6964, February 1999.
- <sup>18</sup> K. Forbes and R. Rigobon, "No Contagion, Only Interdependence: Measuring Stock Market Co-movements," NBER Working Paper No. 7267, July 1999; A. Drazen, "Political Contagion in Currency Crises," NBER Working Paper No. 7211, July 1999; G. Corsetti, P. Pesenti, N. Roubini, and C. Tille, "Competitive Devaluations: A Welfare-Based Approach," NBER Working Paper No. 6889, January

- 1999; P.-R. Agenor and J. Aizenman, "Contagion and Volatility with Imperfect Credit Markets," NBER Working Paper No. 6080, July 1997; S. Edwards, "Interest Rate Volatility, Capital Controls, and Contagion," NBER Working Paper No. 6756, October 1998; P. R. Agenor, J. Aizenman, and A. Hoffmaister, "Contagion, Bank Lending Spreads, and Output Fluctuations," NBER Working Paper No. 6850, December 1998; B. Eichengreen, A. K. Rose, and C. Wyplosz, "Contagious Currency Crises," NBER Working Paper No. 5681, July 1996; R. Rigobon, "On the Measurement of the International Propagation of Shocks," NBER Working Paper No. 7354, September 1999.
- 19 S. Edwards, "Crisis Prevention: Lessons from Mexico and East Asia," NBER Working Paper No. 7233, July 1999; "Capital Inflows into Latin America: A Stop-Go Story?" NBER Working Paper No. 6441, March 1998; and "Capital Flows, Real Exchange Rates, and Capital Controls: Some Latin American Experiences," NBER Working Paper No. 6800, November 1998.
- 20 L. Bartolini and A. Drazen, "Capital Account Liberalization as a Signal," NBER Working Paper No. 5725, July 1997, and "When Liberal Policies Reflect External Shocks, What Do We Learn?" NBER Working Paper No. 5727, March 1998.
- 21 K. K. Lewis, "Are Countries with Official International Restrictions 'Liquidity Constrained'?" NBER Working Paper No. 5991, April 1997.
- 22 K. Rogoff, "International Institutions for Reducing Global Financial Instability," NBER Working Paper No. 7265, July 1999; A. O. Krueger, "Whither the World Bank and the IMF?" NBER Working Paper No. 6327, December 1997.
- 23 M. S. Feldstein, "Self-Protection for Emerging Market Economies," NBER Working Paper No. 6907, January 1999; R. J. Caballero and A. Krishnamurthy, "Emerging Market Crises: An Asset Markets Perspective," NBER Working Paper No. 6843, December 1998.
- 24 T. Ito and Y. N. Sasaki, "Impacts of the Basle Capital Standard on Japanese Banks' Behavior," NBER Working Paper No. 6730, September 1998; T. Ito and M. T. Melvin, "Japan's Big Bang and the Transformation of Financial Markets," NBER Working Paper No. 7247, July 1999; J. Peek and E. S. Rosengren, "Determinants of the Japan Premium: Actions Speak Louder than Words," NBER Working Paper No. 7251, July 1999.
- 25 D. S. Bates, "Financial Markets' Assessment of the EMU," NBER Working Paper No. 6874, January 1999; M. Obstfeld, "A Strategy for Launching the Euro," NBER Working Paper No. 6233, March 1999, and "The EMU: Ready or Not?" NBER Working Paper No. 6682, August 1998; P. M. Garber, "Notes on the Role of TARGET in a Stage III Crisis," NBER Working Paper No. 6619, June 1998; C. Favero, F. Giavazzi, and L. Spaventa, "High Yields: The Spread on German Interest Rates," NBER Working Paper No. 5408, February 1998; W. H. Buiter and A. C. Sibert, "Transition Issues for the European Monetary Union," NBER Working Paper No. 6292, November 1997.
- 26 M. Obstfeld, "Open-Economy Macroeconomics: Developments in Theory and Policy," NBER Working Paper No. 6319, December 1997; and Obstfeld and G. Peri, "Regional Nonadjustment and Fiscal Policy: Lessons for the EMU," NBER Working Paper No. 6431, February 1998.
- 27 M. S. Feldstein, "The Political Economy of the European Economic and Monetary Union: Political Sources of an Economic Liability," *Journal of Economic Perspectives*, 11, no. 4 (Fall 1997), pp. 23-42.
- 28 R. Dornbusch, C. A. Favero, and F. Giavazzi, "The Immediate Challenges for the European Central Bank," NBER Working Paper No. 6369, January 1998; and C. A. Favero, F. Giavazzi, and L. Flabbi, "The Transmission Mechanism of Monetary Policy in Europe: Evidence from Banks' Balance Sheets," NBER Working Paper No. 7231, July 1999.
- 29 L. E. O. Svensson, "Open-Economy Inflation Targeting," NBER Working Paper No. 6545, May 1998; "Monetary Policy Issues for the Eurosystem," NBER Working Paper No. 7177, June 1999; and "Price Stability as a Target for Monetary Policy: Defining and Maintaining Price Stability," NBER Working Paper No. 7276, August 1999.
- 30 R. Portes and H. Rey, "The Emergence of the Euro as an International Currency," NBER Working Paper No. 6424, February 1998.
- 31 M. B. Devereux, C. M. Engel, and C. Tille, "Exchange Rate Pass-through and the Welfare Effects of the Euro," NBER Working Paper No. 7382, October 1999.
- 32 A. Casella, "Tradable Deficit Permits: Efficient Implementation of the Stability Pact in the European Monetary Union," NBER Working Paper No. 7278, August 1999; and W. H. Branson, J. Braga de Macedo, and J. von Hagen, "Macroeconomic Policy and Institutions during the Transition to European Union Membership," NBER Working Paper No. 6555, May 1998.
- 33 J. F. Helliwell and R. McKittrick, "Comparing Capital Mobility across Provincial and National Borders," NBER Working Paper No. 6624, June 1998; and M. Obstfeld, "The Global Capital Market: Benefactor or Menace?" NBER Working Paper No. 6559, May 1998.
- 34 M. T. Jones and M. Obstfeld, "Saving, Investment, and Gold: A Reassessment of Historical Current Account Data," NBER Working Paper No. 6103, July 1997; A. M. Taylor, "International Capital Mobility in History: The Saving-Investment Relationship," NBER Working Paper No. 5743, September 1996, and "Argentina and the World Capital Market: Saving, Investment, and International Capital Mobility in the Twentieth Century," NBER Working Paper No. 6302, December 1997; M. Obstfeld and A. M. Taylor, "The Great Depression as a Watershed: International Capital Mobility over the Long Run," NBER Working Paper No. 5960, May 1999.
- 35 M. D. Bordo, B. Eichengreen, and J. Kim, "Was There Really an Earlier Period of International Financial Integration Comparable to Today?" NBER Working Paper No. 6738, September 1998; and M. D. Bordo, B. Eichengreen, and D. A. Irwin, "Is Globalization Today Really Different from Globalization a Hundred Years Ago?" NBER Working Paper No. 7195, June 1999.
- 36 C. M. Engel and C.-J. Kim, "The Long-Run U.S.-U.K. Real Exchange Rate," NBER Working Paper No. 5777, September 1996; M. Obstfeld and A. M. Taylor, "Nonlinear Aspects of Goods-Market Arbitrage and Adjustment: Heckscher's Commodity Points Revisited," NBER Working Paper No. 6053, June 1997; C. M. Engel, M. K. Hendrickson, and J. H. Rogers, "Intra-National, Intra-Continental, and Intra-Planetary PPP," NBER Working Paper No. 6069, June 1997; J. M. Campa and H. C. Wolf, "Is Real Exchange Rate Mean Reversion Caused by Arbitrage?" NBER Working Paper No. 6162, September 1997.
- 37 P. G. J. O'Connell and S.-J. Wei, "The Bigger They Are, the Harder They Fall': How Price Differences across U.S. Cities Are Arbitrated," NBER Working Paper No. 6089, July 1997; and C. M. Engel and J. H. Rogers, "Violating the Law of One Price: Should We Make a Federal Case Out of It?" NBER Working Paper No. 7242, July 1999. O'Connell and Wei find that fixed costs of transportation are integral to an understanding of law-of-one-price

deviations. Engel and Rogers find that the distance between U.S. cities accounts for a significant amount of the variation in prices between pairs of cities, but that nominal price stickiness plays an even more significant role.

<sup>38</sup> S. Edwards, "The Determinants of the Choice between Fixed and Flexible Exchange-Rate Regimes," NBER Working Paper No. 5756, September 1996.

<sup>39</sup> A. R. Ghosh, A.-M. Gulde, J. D. Ostry, and H. C. Wolf, "Does the Nominal Exchange Rate Regime Matter?" NBER Working Paper No. 5874, January 1997.

<sup>40</sup> P. Bacchetta and E. Van Wincoop, "Does Exchange Rate Stability Increase Trade and Capital Flows?" NBER Working Paper No. 6704, August 1998.

<sup>41</sup> O. Jeanne and A. K. Rose, "Noise Trading and Exchange Rate Regimes," NBER Working Paper No. 7104, April 1999.

<sup>42</sup> J. A. Frankel, "No Single Currency Regime Is Right for All Countries or at All Times," NBER Working Paper No. 7338, September 1999.

<sup>43</sup> M. B. Devereux and C. M. Engel, "Fixed vs. Floating Exchange Rates: How Price Setting Affects the Optimal Choice of Exchange Rate Regime," NBER Working Paper No. 6867, December 1998, and "The Optimal Choice of Exchange Rate Regime: Price-Setting Rules and Internationalized Production," NBER Working Paper No. 6992, March 1999; E. G. Men-

doza and M. Uribe, "The Business Cycles of Balance-of-Payment Crises: A Revision of Mundellian Framework," NBER Working Paper No. 7045, March 1999.

<sup>44</sup> J. A. Frankel and A. K. Rose, "The Endogeneity of the Optimum Currency Area Criteria," NBER Working Paper No. 5700, August 1996, and *Economic Journal*, 1998.

<sup>45</sup> R. H. Clarida and J. Prendergast, "Fiscal Stance and the Real Exchange: Some Empirical Estimates," NBER Working Paper No. 7077, April 1999; and M. D. Chinn, "Sectoral Productivity, Government Spending, and Real Exchange Rates: Empirical Evidence for OECD Countries," NBER Working Paper No. 6017, April 1997.

<sup>46</sup> T. Ito, R. K. Lyons, and M. T. Melvin, "Is There Private Information in the FX Market? The Tokyo Experiment," NBER Working Paper No. 5936, February 1997; M. D. D. Evans and R. K. Lyons, "Order Flow and Exchange Rate Dynamics," NBER Working Paper No. 7317, August 1999; K. M. Dominguez, "The Market Microstructure of Central Bank Intervention," NBER Working Paper No. 7337, September 1999.

<sup>47</sup> S. Burgess and M. M. Knetter, "An International Comparison of Employment Adjustment to Exchange Rate Fluctuations," NBER Working Paper No. 5861, December 1996; J. M. Campa and L. S.

Goldberg, "Employment versus Wage Adjustment and the U.S. Dollar," NBER Working Paper No. 6749, October 1998; P.-O. Gourinchas, "Exchange Rates and Jobs: What Do We Learn from Job Flows?" NBER Working Paper No. 6864, December 1998.

<sup>48</sup> C. M. Engel, "A Model of Foreign Exchange Rate Indetermination," NBER Working Paper No. 5766, September 1996; and P. F. Rowland and L. L. Tesar, "Multinationals and the Gains from International Diversification," NBER Working Paper No. 6733, September 1998.

<sup>49</sup> G. M. Bodnar and G. Gebhardt, "Derivatives Usage in Risk Management by U.S. and German Nonfinancial Firms: A Comparative Survey," NBER Working Paper No. 6705, August 1998; and S.-J. Wei, "Currency Hedging and Goods Trade," NBER Working Paper No. 6742, September 1998.

<sup>50</sup> M. Obstfeld and K. Rogoff, "Risk and Exchange Rates," NBER Working Paper No. 6694, August 1998; G. Meredith and M. D. Chinn, "Long-Horizon Uncovered Interest Rate Parity," NBER Working Paper No. 6797, November 1998; C. M. Engel, "On the Foreign-Exchange Risk Premium in Sticky-Price General Equilibrium Models," NBER Working Paper No. 7067, April 1999.

