

NOTES

The Monetary Fifth Column: The Eurodollar Threat to Financial Stability and Economic Sovereignty

ABSTRACT

Eurodollars are dollar-denominated deposit liabilities of banks outside the United States. Even though estimates of the size of the Eurodollar market exceed \$5 trillion, these instruments are virtually unregulated. Legal scholarship has very little to say about Eurodollars, and the economic literature on the subject is geared toward economists and banking professionals rather than policy makers and attorneys. Furthermore, the economic scholarship is focused on describing the way Eurodollar markets function rather than critical examination of their nature and attendant risks. This Note is an attempt to get to the bottom of this ubiquitous yet mysterious financial instrument. It describes the nature and history of the Eurodollar and discusses potential challenges the Eurodollar market poses to financial stability and monetary sovereignty. It then examines the evolution of international bank regulation, pointing out why current measures are insufficient to address the risks posed by the Eurodollar. Finally, it considers possible solutions to these problems and proposes an approach to regulating the Eurodollar market consisting of a scheme of international reserve requirements.

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I. INTRODUCTION

In 2008, at the height of the financial crisis, the biggest beneficiaries of the Federal Reserve's emergency loans were not American banks but European ones.¹ By means of an interbank transfer called a foreign central bank liquidity swap, the U.S. central bank lent nearly \$600 billion to foreign central banks.² The Federal Reserve reopened these dollar-liquidity swap lines during the Eurozone crisis, loaning ailing foreign institutions an additional \$109 billion.³ At the center of these foreign bank bailouts was a financial instrument called the Eurodollar.

Outside of the world of traders and economists, little is spoken of the Eurodollar. For most attorneys, indeed for most people, the words *Eurodollar* or *Eurocurrency* probably bring to mind the transnational currency introduced in 1999 and currently used as the medium of exchange in eighteen European nations.⁴ However, a Eurocurrency need not have any relation to Europe or the Euro. A Eurocurrency is a deposit liability issued by or "held by"⁵ a bank located in one

1. Bradley Keoun & Craig Torres, *Foreign Banks Tapped Fed's Secret Lifeline Most at Crisis Peak*, BLOOMBERG (Apr. 1, 2011), <http://www.bloomberg.com/news/2011-04-01/foreign-banks-tapped-fed-s-lifeline-most-as-bernanke-kept-borrowers-secret.html> [<http://perma.cc/Q8R4-YLMB>] (archived Feb. 14, 2014); see *infra* Part II.E.

2. *Central Bank Liquidity Swaps Held by the Federal Reserve: All Maturities (SWPT)*, FED. RESERVE BANK OF ST. LOUIS, <http://research.stlouisfed.org/fred2/series/SWPT> [<http://perma.cc/34R9-ZD2R>] (archived Feb. 15, 2014) (last updated Dec. 26, 2013, 3:47 PM) (showing \$583,135,000 in liquidity swaps held by the Federal Reserve during the week of December 17, 2008) [hereinafter *Liquidity Swap Chart*].

3. *Id.*

4. *The Euro*, EUR. COMM'N, http://ec.europa.eu/economy_finance/euro/index_en.htm [<http://perma.cc/PQ5Z-QSPU>] (archived Feb. 15, 2014) (last visited Mar. 10, 2014).

5. An important note on terminology: in day-to-day speech, people often describe banks as "holding" deposits for customers. This terminology implies that commercial banking is a bailment-based system. However, this is not an accurate analogy. See Peter S. Smedresman & Andreas F. Lowenfeld, *Eurodollars, Multinational Banks, and National Laws*, 64 N.Y.U. L. REV. 733, 737 (1989) (explaining that a depositor's funds become the property of the bank and may be used by the bank as it sees fit); see also discussion *infra* Part II.A. As Morgan Ricks explains, a bank deposit is an instrument that is "issued" by a bank. It is an IOU from a bank to a depositor—a short-term loan that is called whenever a depositor makes a withdrawal. See Morgan Ricks, *Regulating Money Creation After the Crisis*, 1 HARV. BUS. L. REV. 75, 78–79 (2011) (discussing the nature of a banking deposit); Morgan Ricks, *A Former Treasury Adviser on How to Really Fix Wall Street*, NEW REPUBLIC (Dec. 17, 2011), <http://www.newrepublic.com/article/politics/98659/wall-street-term-out-panic> [<http://perma.cc/CK6T-YSNY>] (archived Feb. 15, 2014) (describing deposits as "short-term IOUs [that] are the economy's primary medium of exchange"). Thus, the bank is not "holding" anything for the depositor; the depositor is holding an IOU from the bank. Deposits are thus most accurately described as "deposit liabilities of banks," but where sources describe banks as "holding" deposits, I will maintain the terminology used by the source.

country but denominated in units of another country's currency.⁶ A *Eurodollar*, for example, is a type of Eurocurrency consisting of a U.S. dollar-denominated deposit in a bank outside the United States.⁷ While this is a benign enough definition, Eurodollars comprise an estimated \$5 trillion market⁸ and present all the attendant risks of such a large market.⁹

Despite their prevalence, Eurodollars are some of the least understood financial instruments. Describing them in 1969, decades after their initial creation,¹⁰ the preeminent economist Milton Friedman wrote that Eurodollars were “the latest example of the mystifying quality of money creation to even the most sophisticated bankers, let alone other businessmen.”¹¹ After recounting a story where a “high official of an international financial organization” gave an explanation of Eurodollars that was “almost complete nonsense,” Friedman went on to refer to them as nothing more than the creation of a “bookkeeper’s pen.”¹²

Given this lack of understanding, it should come as no surprise that the Eurodollar market is largely unregulated.¹³ This presents a number of problems. First, due to the sheer size of the Eurodollar market, its failure poses systemic risk.¹⁴ A second obstacle is equally problematic. Because Eurodollars represent a market for dollars that is not controlled by the Federal Reserve, it has the potential to affect or even undermine the Federal Reserve’s ability to control the supply of U.S. dollars. Thus, the Eurodollar represents a potential

6. Smedresman & Lowenfeld, *supra* note 5, at 743; *Eurocurrency*, OXFORD DICTIONARIES, <http://oxforddictionaries.com/definition/english/Eurocurrency> [<http://perma.cc/X4PM-LTEC>] (archived Feb. 15, 2014).

7. Robert C. Effros, *The Whys and Wherefores of Eurodollars*, 23 BUS. L. 629, 629 (1968). “Eurodollar” refers to deposits of U.S. dollars in foreign banks; Eurocurrency is the more general term that can be applied to any deposit liability of one country’s bank in denominations in another country’s currency. *Id.*

8. Dong He & Robert McCauley, *Eurodollar Banking and Currency Internationalisation*, BIS Q. REV., June 2012, at 38, 39 tbl.1; see ROBERT J. CARBAUGH, INTERNATIONAL ECONOMICS 531 (13th ed. 2011) (estimating the actual size of the Eurocurrency market at \$5 trillion in the late 2000s); Ben Protess, Landon Thomas Jr. & Chad Bray, *U.S. Investigates Currency Trades by Major Banks*, N.Y. TIMES, Nov. 14, 2013, at A1, available at <http://dealbook.nytimes.com/2013/11/14/u-s-investigates-currency-trades-by-major-banks/> [<http://perma.cc/76MB-QPGW>] (archived Feb. 15, 2014) (noting that the currency market dwarfs other securities markets).

9. See *infra* Part III.

10. See *infra* Part II.B.

11. Milton Friedman, *The Euro-Dollar Market: Some First Principles*, MORGAN GUARANTY SURV., Oct. 1969, at 4.

12. *Id.*

13. CARBAUGH, *supra* note 8, at 531; Smedresman & Lowenfeld, *supra* note 5, at 743.

14. See Smedresman & Lowenfeld, *supra* note 5, at 743–44 (estimating the size of the Eurocurrency market as of 1988).

abrogation of national monetary sovereignty.¹⁵ This threatens not only the financial markets, which rely on the effectiveness of Federal Reserve controls, but also the ability of the United States to set its own monetary policy.

This Note analyzes the economic and sovereign risks posed by the continued lack of regulation of the Eurodollar market. Its purpose is to demystify the Eurodollar in hopes that a greater understanding of this instrument will encourage the legal community to assume a larger role in creating rules governing such financial instruments. Part II provides relevant background on the emergence and current state of the Eurodollar market, including a description of the U.S. Federal Reserve bailout of foreign banks during and in the wake of the financial crisis. Part III discusses the Eurodollar market's potential threat to financial stability and analyzes the implications of the Eurodollar market on national sovereignty. Part IV analyzes potential remedies by analogy, examining schemes used to address earlier problems in international finance, specifically, the Breton Woods Agreement and the Basel Accords. Part V discusses possible solutions and recommends that the United States advance an international scheme imposing reserve requirements on institutions holding Eurodollars and provide for an international clearinghouse for Eurodollar transactions. Part VI concludes that global financial stability demands prudent regulation of the Eurodollar market.

II. BACKGROUND

A. *What Is a Eurodollar?*

In order to understand what a Eurodollar is, it is important first to understand the nature of a bank deposit. A bank deposit (or “demand deposit” because it is available on demand) is not, in fact, a bailment.¹⁶ The bank is not “holding” the depositor's cash as a parking garage would hold one's car. When a depositor makes a deposit, the funds become the property of the bank, and, in exchange, the depositor receives a claim against the bank for the amount of the deposit.¹⁷ The bank “buys” the cash in exchange for a short term IOU (representing the bank's deposit liability).¹⁸ Thus, the relationship

15. This Note will analyze the issue largely from the perspective of the United States, but the same could be said of any nation whose currency is the subject of a Eurocurrency.

16. Smedresman & Lowenfeld, *supra* note 5, at 737.

17. *Id.*

18. See Ricks, *A Former Treasury Adviser on How to Really Fix Wall Street*, *supra* note 5 (describing deposits as short term IOUs from banks).

between the bank and depositor is more like a contractual relationship than a relationship between a bailor and bailee.¹⁹

A certificate of deposit (CD) is a type of deposit that serves as a good demonstration of this concept. A CD is a deposit, evidenced by a certificate, which matures after a specific amount of time (which is why it is called a time deposit).²⁰ The purchaser of the CD can redeem their certificate for its value at the maturity date, but the bank is not simply holding the money of the CD owner. The deposit itself is an instrument of value, not just a log of the amount of money given to the bank.²¹ The same principle applies to basic deposits, albeit without the maturity date or actual certificate.

At the most basic level, Eurodollars are “deposit liabilities, denominated in dollars, of banks outside the United States.”²² In other words, they are short term IOUs for dollars that are issued by banks outside the United States. This means that even though these banks are in other countries, there is no exchange rate (a Eurodollar is worth the same as any other dollar), and, at least in theory, a cash payment of dollars will satisfy a bank’s Eurodollar liability.²³ They are very close substitutes for U.S. dollars.

Like CDs, virtually all Eurodollars are time deposits.²⁴ These time deposits mature at various rates, ranging from overnight to several years (maturities greater than a year are technically Eurobonds), but most mature between one week and six months.²⁵ Thus, a more precise definition of Eurodollars is that they are dollar-denominated time deposit liabilities of non-U.S. institutions.²⁶

19. Smedresman & Lowenfeld, *supra* note 5, at 737, 739.

20. See MARCIA STIGUM, *THE MONEY MARKET* 1210, 1233 (3d ed. 1990) (defining *certificate of deposit* and *time deposit*).

21. See Smedresman & Lowenfeld, *supra* note 5, at 739–41 (“A CD, as seen by the drafters of the U.C.C., is thus a combination of receipt and an evidence of debt, similar in the latter respect to a promissory note.”).

22. Friedman, *supra* note 11, at 5; STIGUM, *supra* note 20, at 199; Effros, *supra* note 7, at 629.

23. Effros *supra* note 7, at 629. In practice, banks that hold Eurodollars are rarely called upon to discharge deposit obligations in cash. Friedman, *supra* note 11, at 6.

24. Marvin Goodfriend, *Eurodollars*, in *FED. RESERVE BANK OF RICHMOND, INSTRUMENTS OF THE MONEY MARKET* 48, 51 (1993); W.P. HOGAN & I.F. PEARCE, *THE INCREDIBLE EURODOLLAR* 3 (1982); Friedman, *supra* note 11, at 6; see STIGUM, *supra* note 20, at 202 (explaining the effect of transfers on foreign and domestic balance sheets).

25. Goodfriend, *supra* note 24, at 51; see Friedman, *supra* note 11, at 5 (discussing the difference between Eurodollars and other dollar-denominated claims). Friedman notes that all Eurodollars are “short-term obligations,” but that the precise definition of “short-term” is up for debate. However, the definition of short-term is neither important for analyzing the instrument, nor this Note. *Id.*

26. Ronald David Greenberg, *The Eurodollar Market: The Case for Disclosure*, 71 CALIF. L. REV. 1492, 1493 (1983).

Eurodollars are created when dollar balances are transferred from a bank branch in the United States to a bank branch abroad.²⁷ For example, suppose an investor, John, wants to open an account at Citibank in London and funds the account with a \$1,000 check from his Chase account in New York.²⁸ John is essentially exchanging his deposit in New York for an equivalent deposit in London. Functionally, the two assets are the same to John, but while John's deposit at Chase was a demand deposit, his deposit at Citibank in London is a Eurodollar deposit.

Furthermore, even though John makes his deposit in London, no actual cash leaves the United States. When John deposits his check, Chase transfers \$1,000 to Citibank. However, Chase transfers the money to Citibank in New York. More accurately, Chase transfers \$1,000 in reserves from its own account at the New York Federal Reserve to Citibank's account at the New York Federal Reserve.²⁹ As a result, Citibank New York "owes" money to Citibank London.³⁰ This "debt" is settled by adding \$1,000 to Citibank London's New York dollar account (essentially a checking account that the London branch holds at the New York branch).³¹ At the end of the transaction, Citibank London has a \$1,000 Eurodollar liability to John with an offsetting credit from Citibank New York, and Citibank New York has an additional \$1,000 in its account at the Federal Reserve.³² Notably, no funds ever leave the Federal Reserve in New York; they just move from Chase's account to Citibank's.

In the example above, the bank accepting John's check has branches in both countries implicated in the transaction. However, this is not required. Had John chosen a foreign bank without a Federal Reserve account, the transaction would have been virtually the same. The only difference would be that the foreign bank would use a New York bank as a clearinghouse for the transaction. Or, to extend the analogy above, the foreign bank would need a checking account at a bank in New York (filling the role of Citibank New York in the example above).³³

Furthermore the "depositor" need not be a nonbank. In the example above, instead of being John's assets, suppose the Eurodollars were assets of "JohnBank LLC." JohnBank could use

27. See Effros, *supra* note 7, 629–30 (noting the importance of the transfer to the creation of Eurodollars); *Dollars That Go Abroad—But Not Really*, THE MORGAN GUARANTY SURV., Dec. 1961, at 4, 5 ("The simple act of transfer to a foreign depository is what makes just plain dollars into Euro-dollars.")

28. See examples in Friedman, *supra* note 11, at 7–8, and STIGUM, *supra* note 20, at 199.

29. STIGUM, *supra* note 20, at 201.

30. *Id.* at 202.

31. *Id.*

32. *Id.*

33. See, e.g., Friedman, *supra* note 11, at 7–9. In Friedman's hypothetical, "Bank H" is a London based bank that has a deposit account at Morgan Guaranty.

Eurodollars to loan to other banks and to nonbank customers, either directly as dollars or after conversion into another currency, or use the Eurodollars as money market instruments.³⁴ Once created, Eurodollars can be exchanged among banks without any connection to the United States.³⁵ Functionally then, it is also possible to think of Eurodollars not as funds, but as decisions: Eurodollars are created when a banker abroad decides to assume a dollar-denominated deposit liability, regardless of whether a single cent leaves the Federal Reserve.

Finally, a note on nomenclature: Eurodollars, defined as dollar-denominated bank deposit liabilities outside the United States, are a type of Eurocurrency, which is the umbrella term for deposits of currencies transferred to banks outside of their respective home countries.³⁶ Other types of Eurocurrencies include Euroyen, Eurosterling or Europound, and formerly Euromarks.³⁷ Since the creation of the Euro (i.e. the currency), there are even Euroeuro deposits. All these terms are, in fact, misnomers.³⁸ A Japanese bank with dollar-denominated deposit liabilities would still have Eurodollar liabilities. The names are the result of the history of the instruments rather than their function.³⁹ At the inception of the market, most of the banks seeking dollar deposits were European institutions.⁴⁰ By moving dollars to a European bank, a depositor was said to have made a “Euro-dollar deposit,” hence the term *Eurodollars*.⁴¹

B. A Brief History of the Eurodollar

Shortly after the start of the Cold War, Communist Bloc banks became hesitant to store their dollar balances in the United States for fear that the U.S. government might freeze their assets.⁴² Instead, these banks looked to Western European financial institutions as both a place to store dollar-denominated assets and as a source of

34. Effros, *supra* note 7, at 633–35. Robert Effros describes the three principle uses for Eurodollars as: financing international trade, financing in the domestic economy as an alternative to financing in local currency, or use by the bank itself as a money market instrument. *Id.*; see *infra* Part II.C.

35. See STIGUM, *supra* note 20, at 202–04 (describing a hypothetical Eurodollar loan from Citi London to *Electricité de France*).

36. Greenberg, *supra* note 26, at 1493 n.8; see DILEEP MEHTA & HUNG-GAY FUNG, *INTERNATIONAL BANK MANAGEMENT* 81 (2008).

37. STIGUM, *supra* note 20, at 271–72.

38. *Id.* at 200.

39. See *infra* Part II.B; Smedresman & Lowenfeld, *supra* note 5, at 743 n.26.

40. STIGUM, *supra* note 20, at 199–200.

41. *Id.* For the purposes of this Note, I will use the terms Eurodollar and Eurocurrency interchangeably.

42. Effros, *supra* note 7, at 637; Dong He & Robert N. McCauley, *Offshore Markets for the Domestic Currency: Monetary and Financial Stability Issues* 4 (Bank for Int'l Settlements, Working Paper No. 320, 2010).

credit.⁴³ As tensions with the United States heightened, Eastern Bloc central banks moved dollar balances from New York to London, and these balances became the seed funds of the Eurodollar market.⁴⁴ Once established, the market for Eurodollars grew quickly because of certain advantages it enjoyed over the traditional sources of dollar financing. First, European banks were willing and able to operate on narrower margins than American banks, meaning that depositors enjoyed higher returns and borrowers benefitted from lower interest rates.⁴⁵ Second, because the European banks were not subject to certain Federal Reserve regulations, they were able to offer interest on a broader range of deposits.⁴⁶ Finally, regulations of the British Pound in 1957 forbade British banks from lending the pound sterling to overseas customers; London banks found they could avoid losing business by offering dollar-denominated financing.⁴⁷

The Eurodollar market matured in the 1960s as the United States invested heavily in Europe.⁴⁸ By the late 1980s, the size of the market for all Eurocurrencies was estimated over \$4.5 trillion.⁴⁹ Recent estimates place the size of the Eurodollar market at approximately \$5 trillion,⁵⁰ which represents approximately 60 percent of the total market for all Eurocurrencies.⁵¹

The rapid growth of the Eurodollar market did not go unnoticed. As early as 1979, Congress investigated placing potential controls on the Eurodollar market.⁵² In 1979, Representative James Leach introduced H.R. 3962, “The Euro-currency Control Act of 1979,” in order to “establish reserve requirements on certain Eurocurrency liabilities.”⁵³ The bill was motivated by “the excessive growth in the Eurocurrency market, a disproportionate share of which [was] comprised of U.S. dollars, requir[ing] the Congress to assess the

43. See Effros, *supra* note 7, at 637 (describing Communist banks’ use of Western European banks to store dollars).

44. See STIGUM, *supra* note 20, at 207–09 (discussing the history of the Eurodollar market).

45. Effros, *supra* note 7, at 637; CARBAUGH, *supra* note 8, at 531.

46. See Effros, *supra* note 7, at 629 (noting that European banks were not subject to Regulation Q and could pay interest on sight deposits); Friedman, *supra* note 11, at 6 (“Without Regulation Q and the exchange controls . . . the Euro-dollar market, though it might still have existed, would not have reached anything like its present dimensions.”).

47. Effros, *supra* note 7, at 638.

48. Greenberg, *supra* note 26, at 1494.

49. Smedresman & Lowenfeld, *supra* note 5, at 743–44.

50. He & McCauley, *supra* note 8, at 38, 39 tbl.1; CARBAUGH, *supra* note 8, at 531.

51. MEHTA & FUNG, *supra* note 36, at 84.

52. HOGAN & PEARCE, *supra* note 24, at 106.

53. Congressional Research Serv., *Summary: H.R. 3962—96th Congress (1979–1980)*, CONGRESS.GOV, <http://beta.congress.gov/bill/96th-congress/house-bill/3962?q=%7B%22search%22:%5B%22H.R.%203962%20%22%5D%7D> [http://perma.cc/34Z5-4UAD] (archived Feb. 14, 2014) (last visited Feb. 20, 2014).

impact of the Eurodollar market on the conduct of domestic monetary policy, particularly as it relates to investment and credit conditions.”⁵⁴ The bill was referred to the Subcommittee on Domestic Monetary Policy and the Subcommittee on International Trade, Investment, and Monetary Policy for hearings, where it died.⁵⁵ In the years since, the United States has not attempted to pass any significant controls on the Eurodollar market.

C. Eurodollar Uses

Eurocurrencies allow investors to take a long position in a country's currency without keeping the deposit in that country.⁵⁶ This practice enables the depositor to avoid the potential economic and political risks of keeping deposits in the country of origin.⁵⁷ The ability to avoid such risks is precisely why the Soviets chose the Eurodollar as their instrument of choice after the Second World War.⁵⁸ These features of Eurocurrencies mean that the instruments can be employed to a number of ends.

There are three basic uses of Eurodollar balances by commercial banks outside the United States: 1) lending to nonbanks in dollars, 2) lending to nonbanks after conversion into the local currency or a different foreign currency, and 3) placing funds in the U.S. money market.⁵⁹ There are several reasons that institutional borrowers and depositors (essentially lenders) are attracted to the Eurodollar. From the perspective of the depositor, Eurodollar deposits provide interest rate premiums over deposits or CDs in U.S.-based banks.⁶⁰ From the borrower's perspective, Eurodollars provide an alternate avenue of credit for those seeking dollars.⁶¹ Indeed, the deposit interest rate on Eurodollars is typically higher than the corresponding rate on dollars, and the loan interest rate is typically lower than the U.S. rate.⁶²

54. *The Eurocurrency Market Control Act of 1979: Hearing on H.R. 3962 Before the Subcomm. on Domestic Monetary Policy and the Subcomm. on Int'l Trade, Inv., & Monetary Policy of the Comm. on Banking, Finance, & Urban Affairs*, 96th Cong. 1 (1979) (statement of Rep. Mitchell, Chairman, H. Subcomm. on Domestic Monetary Policy).

55. Congressional Research Serv., *Summary: H.R. 3962*, *supra* note 53.

56. MEHTA & FUNG, *supra* note 36, at 81. A long position is simply when an investor owns an asset outright, as opposed to a short position where the investor has a net deficit of that asset in the hopes it will decline in value. THOMAS P. FITCH, *DICTIONARY OF BANKING TERMS* 276, 419 (Irwin L. Kellner & Donald G. Simonson eds., 6th ed. 2012).

57. MEHTA & FUNG, *supra* note 36, at 81.

58. *Id.*; *see supra* Part II.B.

59. BANK FOR INT'L SETTLEMENTS, *THIRTY-FOURTH ANNUAL REPORT* 132 (1963-64).

60. *Id.* at 136.

61. *See* Effros, *supra* note 7, at 634-36 (discussing principal uses for Eurodollars).

62. MEHTA & FUNG, *supra* note 36, at 83.

For example, suppose a contractor in Brazil wants to finance an infrastructure project in dollars because of favorable exchange rates; he or she can use a Eurodollar loan.⁶³ Alternatively, perhaps a borrower already knows he or she wants a dollar-denominated loan, and he or she can get a more favorable interest rate through a bank in his or her own country than from one in New York.⁶⁴ This is another reason to prefer Eurodollar financing. Relatedly, the lower interest rate a borrower can secure on a dollar-denominated loan sometimes justifies a Eurodollar loan that is subsequently converted to the local currency.⁶⁵

These uses notwithstanding, the principle driver of the expansion of the Eurodollar market has been their use as instruments of the international money market.⁶⁶ Financial institutions are able to use the Eurodollar market just as they use the traditional money market or the market for commercial paper.⁶⁷ As a result, many Eurodollars are never actually lent out to nonbank borrowers but are simply traded as commodities.⁶⁸ Furthermore, this action is not cabined to foreign loans; American banks can effectively offer the same deal to their domestic customers through arbitrage.⁶⁹

D. *Expanding Balance Sheets and Clearinghouse Concerns*

The most common Eurodollar transactions are loans between and among different banks, usually by way of intermediary banks.⁷⁰ In *Citibank, N.A. v. Wells Fargo Asia Ltd.*, the Singapore subsidiary of Wells Fargo attempted to make a loan to the Manila subsidiary of Citibank.⁷¹ In order to accomplish this, Wells Fargo in Singapore transferred funds to Wells Fargo in New York, which made a loan to Citibank in New York, which then transferred the funds to Citibank in Manila.⁷²

63. *Id.*

64. *See id.* (describing Eurodollars as directly competitive with more traditional forms of financing).

65. *See* Oscar L. Altman, *Euro-Dollars: Some Further Comments*, 12 IMF STAFF PAPERS, Mar. 1965, at 1, 2–3 (describing situations in which borrowing dollars and subsequently converting them to local currency might be economically preferable to borrowing local currency directly).

66. Edward J. Frydl, *The Eurodollar Conundrum*, FED. RESERVE BANK N.Y. Q. REV., Spring 1982, at 11–12.

67. Effros, *supra* note 7, at 635.

68. *Id.* at 636–37.

69. Frydl, *supra* note 66, at 11.

70. *See* *Citibank, N.A. v. Wells Fargo Asia Ltd.*, 495 U.S. 660, 663 (1990) (concerning a transaction between two foreign banks using banks in the United States as intermediaries).

71. *Id.* at 664.

72. *Id.*; *cf. supra* Part II.A.

New York plays an important role in these transactions as the clearinghouse for interbank loans.⁷³ This raises one of the initial challenges of Eurodollar transactions: because New York is the clearinghouse, whenever there are large overdrafts (as there inevitably are in any large interbank transaction), it is up to the Federal Reserve Bank to serve as the lender of last resort.⁷⁴ In other words, the overnight window of the Federal Reserve Bank of New York is potentially implicated in every interbank Eurodollar transaction.

Another principle consequence of the proliferation of Eurodollar transactions is the expansion of balance sheets without an attendant expansion of reserves in the United States.⁷⁵ For example, if an American bank transfers \$1,000 to a foreign bank (FB1), the American bank has \$1,000 in new assets and FB1 has \$1,000 in new liabilities. If that bank subsequently loans that \$1,000 to another bank (FB2) for lending to a customer, FB1 now has an additional \$1,000 on the asset side of its balance sheet and FB2 has an additional \$1,000 in liabilities. Finally, FB2 lends to the customer and gains \$1,000 on the asset side of its balance sheet. In this scenario, there has been no net quantitative change in the assets and liabilities of the American bank, yet the balance sheets of the European banks have expanded with each subsequent loan.⁷⁶ In aggregate, a single \$1,000 loan has increased total assets and liabilities by \$3,000, even though there is still ultimately only \$1,000 in reserves backing these loans. As such, the financial system has expanded simply by means of multiple transactions. This effect, known as the credit multiplier,⁷⁷ is particularly acute where reserve requirements are lower and is a principle reason why the Eurodollar market is so large.⁷⁸

73. Smedresman & Lowenfeld, *supra* note 5, at 745.

74. *See id.* (discussing the role of the Federal Reserve in Eurodollar transactions).

75. Effros, *supra* note 7, at 630; Greenberg, *supra* note 26, at 1494; *see also* Effros, *supra* note 7, at 630–33 (describing transactions where the transfer of funds expanded balance sheets without additional capital); Friedman, *supra* note 11, at 9 (demonstrating the expansion of balance sheets through Eurodollar transactions).

76. Effros, *supra* note 7, at 630–31.

77. Greenberg, *supra* note 26, at 1494–95. For a more accurate description of the Eurodollar multiplier, *see* Friedman, *supra* note 11, at 9–10.

78. TORBEN JUUL ANDERSEN, *EUROMARKET INSTRUMENTS: A GUIDE TO THE WORLD'S LARGEST DEBT MARKET* 7 (1990). Torben Anderson and others suggest that the credit multiplier might in fact be self-regulating, based on factors such as financial institutions' "internal prudency measures." *Id.*; *see also* MEHTA & FUNG, *supra* note 36, at 86 ("Although Eurobanks are not required to maintain reserves, they do maintain prudent reserves (often in excess of mandatory reserves)."). However, Guido Carli called such presumptions "dangerous fallac[ies] both in theory . . . and in practice." Guido Carli, *Eurodollars: Policy Analysis*, in *EURODOLLARS AND INTERNATIONAL BANKING* 139, 145 (Paolo Savona & George Sutija eds., 1985).

Additional problems arise because foreign banks holding Eurodollars are not subject to the regulations the U.S. Federal Reserve imposes on domestic banks.⁷⁹ Eurodollars are subject to neither the Federal Reserve's reserve requirements nor the Federal Deposit Insurance Corporation's insurance premiums that are imposed on domestic banks with outstanding dollar liabilities.⁸⁰ This freedom from regulatory constraints is the "*raison d'être* for the Euromarket."⁸¹ It is, in large part, why foreign banks are able to operate on narrower margins and offer favorable interest rates on Eurodollar deposits and loans.⁸² However, it also means that the Federal Reserve has no assurance of the stability of trillions of dollars' worth of instruments that are ultimately supposed to be backed by dollars.

E. *The Eurodollar and Foreign Bank Bailouts*

In late 2008, the Federal Reserve acted to unfreeze credit markets and shore up the stability of the largest banks. The program that garnered the most press and sparked the most outrage was the expansion of the Federal Reserve's discount window to troubled banks. European banks accounted for at least 70 percent of the \$110.7 billion borrowed during the peak of the program in late 2008.⁸³ Even banks with very little presence in the United States received huge loans: over the course of the program, the Irish-German bank Depfa and the Belgian bank Dexia SA received combined loans worth more than \$60 billion.⁸⁴

However, the Federal Reserve completed a much larger and less well-publicized foreign bank bailout during the financial crisis. Through central bank liquidity swap lines, the Federal Reserve lent \$600 billion to banks all over the world.⁸⁵ According to the Federal Reserve, the extraordinary measures were justified by "severe strains

79. CARBAUGH, *supra* note 8, at 531; Smedresman & Lowenfeld, *supra* note 5, at 743.

80. Smedresman & Lowenfeld, *supra* note 5, at 744.

81. ANDERSEN, *supra* note 78, at 9.

82. CARBAUGH, *supra* note 8, at 531; ANDERSEN, *supra* note 78, at 9–10.

83. Keoun & Torres, *supra* note 1.

84. Gretchen Morgenson, *The Bank Run We Knew So Little About*, N.Y. TIMES, Apr. 2, 2011, § BU, at 1, available at <http://www.nytimes.com/2011/04/03/business/03gret.html> [<http://perma.cc/LUP5-3ZC8>] (archived Feb. 14, 2014); Bob Ivry, *Fed's Biggest Foreign-Bank Bailout Kept U.S. Municipal Finance on Track*, BLOOMBERG (Apr. 7, 2011), <http://www.bloomberg.com/news/2011-04-06/fed-s-biggest-foreign-bank-bailout-kept-u-s-municipal-finance-on-track.html> [<http://perma.cc/794M-KU6V>] (archived Feb. 14, 2014).

85. See *Liquidity Swap Chart*, *supra* note 2 (showing \$583,135,000 in liquidity swaps held by the Federal Reserve during the week of December 17, 2008).

in global short-term dollar funding markets.”⁸⁶ In other words: Eurodollars.

In the years leading up to the financial crisis, foreign banks—especially European banks—were attracted to Eurodollars because of the low perceived risk and attractive returns of dollar-denominated assets.⁸⁷ Banks loaded their balance sheets with Eurodollar liabilities.⁸⁸ At the time of the crisis, the magnitude of foreign banks’ exposure to dollar-denominated instruments was enormous. By mid-2007, the major European banks had a U.S. dollar funding gap of at least \$1.0–1.2 trillion and as possibly as high as \$6.5 trillion.⁸⁹ In the precrisis economic environment, these large gaps had been funded by interbank loans, borrowing from central banks, currency swaps, and money market funds.⁹⁰

During the crisis, the sources that the banks had used to sustain their dollar-funding gap dried up.⁹¹ Interbank funding slowed because of risk and liquidity concerns; money market funds, facing large redemptions following the failure of Lehman Brothers, withdrew from bank-issued paper; and foreign central banks withdrew their U.S. dollar reserves from commercial banks.⁹² In order to prevent a global run on financial institutions, the Federal Reserve stepped in and made billions of U.S. dollars available to foreign central banks, which then loaned them to commercial institutions in their respective countries.⁹³ Essentially, the Federal Reserve became the lender of last resort for every major bank in the world.⁹⁴

86. *Regulatory Reform: Central Bank Liquidity Swap Lines*, BD. OF GOVERNORS OF THE FED. RESERVE SYS., http://www.federalreserve.gov/newsevents/reform_swaplines.htm [<http://perma.cc/S9DL-8GH8>] (archived Feb. 14, 2014) (last updated Aug. 2, 2013).

87. Patrick McGuire & Götz von Peter, *The US Dollar Shortage in Global Banking and the International Policy Response* 1–2 (Bank for Int’l Settlements, Working Paper No. 291, 2009).

88. *Id.* at 2.

89. *Id.* at 15. The wide discrepancy between the upper and lower bounds of the funding gap is due to varying calculations of which dollar-denominated positions were short term vs. long term. *See id.* (explaining differences in calculation methods and results).

90. *Id.*

91. Tyler Durden, *How the Federal Reserve Bailed Out the World*, ZERO HEDGE (Oct. 19, 2009), <http://www.zerohedge.com/article/how-federal-reserve-bailed-out-world> [<http://perma.cc/8R4H-PACN>] (archived Feb. 14, 2014).

92. McGuire & von Peter, *supra* note 87, at 16–17.

93. *See id.* at 19–21 (describing the opening of swap lines).

94. *Id.* at 20. It is worth noting that foreign central banks also opened swap lines with the Federal Reserve, making their currencies available to U.S. banks. However, these lines were never actually tapped. *See Credit and Liquidity Programs and the Balance Sheet*, BD. OF GOVERNORS OF THE FED. RESERVE SYS., http://www.federalreserve.gov/monetarypolicy/bst_liquidityswaps.htm [<http://perma.cc/XY9L-F5W3>] (archived Feb. 14, 2014) (last updated Nov. 30, 2011)

Moreover, during the Greek banking crisis in the spring of 2010, the whole process repeated itself. In response to “the re-emergence of strains in short-term dollar funding markets abroad,” the Federal Reserve reopened the swap lines.⁹⁵ European banks borrowed over \$9 billion from the Federal Reserve in 2010, and, as the Eurozone crisis peaked in early 2012, the extension of dollar availability to foreign banks topped \$109 billion.⁹⁶

III. STABILITY AND SOVEREIGNTY ISSUES

A. Central Banks and Control

Eurodollars complicate Federal Reserve policy for a number of reasons.⁹⁷ The first is that such instruments engender growth of dollar-denominated credit without a commensurate increase in the conventionally defined money supply.⁹⁸ In a very real sense then, foreign banks create unsanctioned American money when they create Eurodollars.⁹⁹ Because Eurodollars are not subject to reserve requirements, to the extent they can, banks are incentivized to shift deposits from noninterest bearing reserves to Eurodollars.¹⁰⁰ Effectively this creates a very large pool of dollar-denominated assets abroad ready to be lent out. According to the Bank of International Settlement, a quarter of the U.S. dollar balance sheet is located outside the United States.¹⁰¹ This asset pool undermines the ability of the United States to manage inflation by restricting its money supply, because a large pool of dollar liquidity abroad is beyond the control of the Federal Reserve.¹⁰²

To the extent that the Federal Reserve is no longer in control of the supply of dollars, the monetary sovereignty of the United States is diluted. If foreign banks can lend dollars at unregulated interest

(“Since their initial establishment in 2009, the Federal Reserve has not drawn on any of the foreign-currency liquidity swap lines.”).

95. *Regulatory Reform: Central Bank Liquidity Swap Lines*, *supra* note 86; Sewell Chan, *Fed Intervenes in European Debt Crisis*, N.Y. TIMES (May 10, 2010), <http://www.nytimes.com/2010/05/10/business/global/10swap.html> [<http://perma.cc/X2JG-59S8>] (archived Feb. 14, 2014).

96. *Liquidity Swap Chart*, *supra* note 2.

97. Frydl, *supra* note 66, at 12; *see also* Greenberg, *supra* note 26, at 1495 (explaining how the reserve requirements help the Federal Reserve control the money supply and restrict inflation).

98. Frydl, *supra* note 66, at 12.

99. *See* Morgan Ricks, *A Simpler Approach to Financial Reform*, REGULATION, Winter 2013–2014, at 36, 38 (discussing monetary sovereignty and comparing the Eurodollar creation to overseas “counterfeiters of U.S. dollars”).

100. Frydl, *supra* note 66, at 12.

101. He & McCauley, *supra* note 8, at 37.

102. Frydl, *supra* note 66, at 12; Greenberg, *supra* note 26, at 1495; He & McCauley, *supra* note 42, at 8.

rates, then the interest rate set by the Federal Reserve is, at least to some extent, made less effectual. Indeed, the Bank of International Settlement has noted that it matters little whether a central bank buys a U.S. Treasury note held in custody in the United States or one held abroad.¹⁰³ Generally speaking, arbitrageurs will take advantage of differences in interest rates until returns on the various sources of dollars are equalized.¹⁰⁴ Nevertheless, the Federal Reserve's prerogative to control the money supply and interest rate is undermined by the alternative sources of dollars.

Under the concept of monetary sovereignty, "each country has the exclusive authority to regulate every aspect of its currency, including any factor that may affect it internally or externally."¹⁰⁵ As an idea, monetary sovereignty predates political sovereignty.¹⁰⁶ While it would be a stretch to call monetary sovereignty more important than political sovereignty, such a comparison is ostensibly meaningless: the two concepts are inextricably intertwined. As the continuing crisis in the Eurozone demonstrates, running a modern nation-state without the ability to control its monetary policy is a difficult, perhaps impossible, task.¹⁰⁷

The principle way Eurocurrencies undermine monetary sovereignty is demonstrated by the credit multiplier effect discussed in Part II.D.¹⁰⁸ Because Eurocurrencies give private financial institutions the unrestricted ability to expand the availability of a particular currency, the country whose currency is the target of the Euroinstrument no longer has exclusive control over its money supply. For example, the expansion of dollar-denominated credit increases the availability of dollars and can result in inflation of the dollar.¹⁰⁹ Furthermore, the lack of reserve requirements on

103. Robert McCauley, *Distinguishing Global Dollar Reserves from Official Holdings in the United States*, BIS Q. Rev., Sept. 2005, at 57, 59.

104. Niall Coffey et al., Fed. Reserve Bank of N.Y., *The Global Financial Crisis and Offshore Dollar Markets*, 15 CURRENT ISSUES IN ECON. & FIN., Oct. 2009, at 3.

105. Gloria Patricia Gaviria Blanco, *Monetary Sovereignty and the Dollarization of Latin-American Economies*, CURRENTS: INT'L TRADE L.J., Winter 2009, at 4 (Diana M. Faraclas trans.).

106. See Robert A. Mundell, *Monetary Unions and the Problem of Sovereignty*, 579 ANNALS AM. ACAD. POL. & SOC. SCI. 123, 128 (2002) (tracing political sovereignty to Jean Bodin in 1576 and monetary sovereignty to the Romans or even to "ancient empires of Sumer, India, Babylon, and Egypt").

107. The monetary crisis in the European Union is evidence that even partial abrogation of monetary policy without an attendant delegation of political authority can lead to tremendous difficulties. See Paul Krugman, *Apocalypse Fairly Soon*, N.Y. TIMES (May 17, 2012), <http://www.nytimes.com/2012/05/18/opinion/krugman-apocalypse-fairly-soon.html?ref=paulkrugman> [<http://perma.cc/7ZHQ-LVJC>] (archived Feb. 16, 2014) (discussing the problems of monetary union without political union).

108. See *supra* Part II.D.

109. See Greenberg, *supra* note 26, at 1495 ("Inflation results when the expansion process increases the supply of money, without a corresponding increase in the production of goods and services."); EUGENE SARVER, THE EURO CURRENCY MARKET HANDBOOK 447, 452 (2d ed. 1990) (discussing the reasons that Eurocurrencies can lead

Eurodollars creates a potentially infinite money multiplier, potentially leading to an infinite degree of inflation, all without the input of the Federal Reserve or the U.S. Treasury.¹¹⁰ Thus, the power to control the number of dollars (or dollar-equivalent instruments) in the market has been taken out of the exclusive control of U.S. authority and diffused among foreign banking institutions.

While this is a distillation of a complicated process, the end result is that—to a certain extent—the Federal Reserve’s power to control the money supply, and thus manage inflation, is undermined by an alternate and potentially unlimited supply of dollars. Recently this has not been a major concern because of very low inflation rates since the recession.¹¹¹ However, in periods of high inflation, monetary controls like increasing interest rates or purchasing treasuries are less effective if there is an easy alternate source for dollars.¹¹²

B. Global Financial Stability: Eurocurrencies Pose Systemic Risk

The Eurodollar market provides an alternate channel of financing and interest rate premiums over dollar deposits in American banks but has potentially dire consequences with respect to world financial markets. Because foreign banks are not subject to reserve requirements,¹¹³ they can operate with large amounts of leverage.¹¹⁴ Given the size of the Eurodollar market, overleveraged

to inflation). Eurocurrencies also increase the velocity of money. *Id.* at 452. This is a concept that describes how fast a given unit of a particular currency travels through the economy—i.e. how fast money is spent. See P.H. COLLIN, DICTIONARY OF ECONOMICS 212 (Kathy Rooney ed., 2003) (defining *velocity of circulation*).

110. SARVER, *supra* note 109, at 452. *But see* Friedman, *supra* note 11, at 10 (arguing that the multiplier is naturally limited “because only a small part of the funds acquired by borrowers from Euro-dollar banks would end up as additional time deposits in such banks”).

111. See *U.S. Inflation*, FED. RESERVE BANK OF CLEVELAND, <http://www.clevelandfed.org/research/data/us-inflation/chartsdata/> [http://perma.cc/ES32-NYZH] (archived Feb. 16, 2014) (last visited Feb. 28, 2014) (chart showing the Consumer Price Index); Jim Tankersley, *No, Inflation Still Isn't a Problem*, WASH. POST WONKBLOG, (Jan. 16, 2013, 9:38 AM), <http://www.washingtonpost.com/blogs/wonkblog/wp/2013/01/16/no-inflation-still-isnt-a-problem/> [http://perma.cc/DB97-PNW5] (archived Feb. 16, 2014) (reporting that consumer prices were unchanged in December 2012); *Economy Ended the Year with Factory Output Up and Inflation Low*, N.Y. TIMES (Jan. 16, 2013), <http://www.nytimes.com/2013/01/17/business/economy/consumer-prices-unchanged-in-december.html> [http://perma.cc/4QEL-TVW9] (archived Feb. 16, 2014) (noting low inflation in 2012).

112. Fred H. Klopstock, *The Euro-Dollar Market: Some Unresolved Issues*, ESSAYS IN INT'L FIN., Mar. 1968, at 1, 20; see SARVER, *supra* note 109, at 452 (describing the absence of reserve requirements for Eurodollars).

113. *E.g.*, Frydl, *supra* note 66, at 12.

114. “Leverage” refers to the amount of borrowed money that banks invest in order to turn a profit. FITCH, *supra* note 56, at 263.

Eurodollar lenders threaten global financial stability.¹¹⁵ For example, the financial crisis of 2007 started in the housing market, but the housing bubble simply revealed that the underlying infirmities with the financial system were overleveraged banks and a lack of liquidity.¹¹⁶ These two factors were the principle source of the credit crunch.

Due to the sheer size of the Eurodollar market, widespread default could send the world economy into recession. This risk stems from the high degree of integration in interbank markets.¹¹⁷ If a particularly important bank or series of banks in the Eurodollar market were to fail, the resulting contagion could trigger a domino effect resulting in the failure of the global market.¹¹⁸ Eurodollars have the potential to export what, in a less integrated market, would be damaging only to a single country or sector. Thus, a run on a single currency could trigger bank runs around the world.¹¹⁹

Given these risks, the lack of regulation of Eurodollars is particularly startling. Of the five major centers of Eurocurrency transactions, all five either have ways to effectively eliminate reserve requirements on Eurocurrencies or lack such requirements entirely.¹²⁰ New York and London are the largest of these centers, and neither the Bank of England nor the Federal Reserve has reserve requirements on Eurocurrency deposits.¹²¹ The Cayman Islands, a favorite offshore location for shell branches of U.S. banks, similarly lacks reserve requirements.¹²²

115. See Greenberg, *supra* note 26, at 1504 (“Even though the Eurodollar market has survived and grown for over two decades, there remains a serious risk of a substantial economic upheaval if the market were to undergo severe strains.”).

116. See, e.g., FIN. CRISIS INQUIRY COMM’N, THE FINANCIAL CRISIS INQUIRY REPORT, at xix (Official Government ed. Jan. 2011) (noting 40-to-1 leverage ratios of the large banks).

117. See Greenberg, *supra* note 26, at 1502 (discussing the integration of financial institutions in the Eurodollar market).

118. *Id.*; MEHTA & FUNG, *supra* note 36, at 87; see Effros, *supra* note 7, at 644 (questioning the safety of Eurodollar chains).

119. See Greenberg, *supra* note 26, at 1501 (discussing liquidity problems in the event of a large number of withdrawals of deposits, especially when banks borrow short and lend long); see also Ricks, *A Former Treasury Adviser on How to Really Fix Wall Street*, *supra* note 5 (discussing the desirability of “termining out”).

120. MEHTA & FUNG, *supra* note 36, at 87. The five major Eurocurrency centers are: Western Europe (mostly London), the Caribbean and Central America (especially the Cayman Islands), the Middle East, Asia (Tokyo, Singapore, and Hong Kong), and the United States (mostly New York).

121. *Id.*; *Reserve Requirements*, BD. OF GOVERNORS OF THE FED. RESERVE SYS., <http://www.federalreserve.gov/monetarypolicy/reservereq.htm> [http://perma.cc/PTS3-BVCL] (archived Feb. 16, 2014) (last updated Oct. 26, 2012).

122. MEHTA & FUNG, *supra* note 36, at 87.

IV. INTERNATIONAL REGULATORY REGIMES: BRETTON WOODS AND THE BASEL ACCORDS

A. *International Monetary Agreements: From Bretton Woods to Basel II*

International agreements seeking to regulate financial markets have been successful in a variety of contexts. The first of these modern agreements, and perhaps the most famous, is the “Bretton Woods system,” which came into existence during the Second World War.¹²³ In 1944, forty-four nations agreed to an international basis for currency exchange, which helped pave the way for the U.S.-financed reconstruction of Europe after the war.¹²⁴ The agreement essentially consisted of countries fixing their respective currencies to the dollar, which was itself fixed to the price of gold.¹²⁵ The system, named for Bretton Woods, New Hampshire, where the conference was held, also led to the creation of the International Monetary Fund and the World Bank.¹²⁶ The fixed exchange rate system established at Bretton Woods lasted until the 1970s when President Nixon pulled the dollar off the gold standard, resulting in many of the signatory nations allowing their currencies to have floating exchange rates.¹²⁷

Since Bretton Woods, the most important international monetary agreements have been signed in Basel, Switzerland. Right around the time that the Bretton Woods system was failing, a confluence of additional economic factors prompted the G-10 nations to take further action to regulate international markets.¹²⁸ The cut in oil production by the Arab states during the Arab-Israeli Yom Kippur War in October 1973 and the June 1974 failure of the West German bank Bankhaus Herstatt resulted in significant disturbances in international currency and banking markets.¹²⁹ The drastic consequences of the failure of the bank Bankhaus Herstatt in Cologne, Germany, were particularly alarming. Although the bank

123. M.J. Stephey, *A Brief History of Bretton Woods System*, TIME (Oct. 21, 2008), <http://www.time.com/time/business/article/0,8599,1852254,00.html> [<http://perma.cc/L6LY-258Q>] (archived Feb. 16, 2014).

124. *Id.*

125. *Id.*

126. *Id.*

127. *Milestones: 1937–1945, Bretton Woods-GATT: 1941–1947*, U.S. DEPT OF STATE, OFFICE OF THE HISTORIAN, <http://history.state.gov/milestones/1937-1945/BrettonWoods> [<http://perma.cc/YRA8-62VZ>] (archived Feb. 16, 2014) (last visited Mar. 1, 2014).

128. BANK FOR INT’L SETTLEMENTS, BASEL COMM. ON BANKING SUPERVISION, HISTORY OF THE BASEL COMMITTEE AND ITS MEMBERSHIP 1 (Aug. 2009).

129. Christopher Alessi, *The Basel Committee on Banking Supervision*, COUNCIL ON FOREIGN RELATIONS (July 11, 2012), <http://www.cfr.org/banks-and-banking/basel-committee-banking-supervision/p28694> [<http://perma.cc/9W8D-PH9X>] (archived Feb. 14, 2014).

was very small, due to its extensive foreign exchange dealings, the consequences of its failure rippled across the globe.¹³⁰ As a result, the G-10 gathered in Basel and formed the Committee on Banking Regulations and Supervisory Practices (Basel Committee)¹³¹ whose purpose was to improve the quality of bank supervision around the world.¹³²

While the Basel Committee lacked formal supervisory authority, its creation led to a multitude of substantive reforms.¹³³ Its purpose is to formulate “broad supervisory standards and guidelines and [to] recommend[] statements of best practice in the expectation that individual authorities will take steps to implement them through detailed arrangements—statutory or otherwise—which are best suited to their own national systems.”¹³⁴ Through this committee participating nations have negotiated a series of agreements known collectively as the Basel Accords.¹³⁵

In 1988, the Basel Committee agreed to the Basel Capital Accord, often referred to as *Basel I*, which was intended to address the capital adequacy at large international banks.¹³⁶ This was motivated both out of a concern for stability, as noted above, and international competitiveness.¹³⁷ Different nations had different capital requirements for their banking institutions, and the hope was that a uniform system would both shore up risk and create international competitive equality.¹³⁸ Accordingly, the Basel Committee adopted a uniform system of capital requirements for banks.¹³⁹

A capital adequacy ratio, or capital requirement, is “an amount of money which a bank has to have in the form of shareholders’ capital, shown as a percentage of its assets.”¹⁴⁰ In other words, the amount of capital a bank has in relation to its risky assets.¹⁴¹ The

130. Marc Levinson, *Faulty Basel: Why More Diplomacy Won't Keep the Financial System Safe*, 89 FOREIGN AFF., May–June 2010, at 77–78.

131. The committee was subsequently renamed the Basel Committee on Banking Supervision. *Id.* at 78.

132. Alessi, *supra* note 129.

133. See HISTORY OF THE BASEL COMMITTEE AND ITS MEMBERSHIP, *supra* note 128, at 1 (“The Committee does not possess any formal supranational supervisory authority.”).

134. *Id.* at 1.

135. See *id.* at 2–6 (discussing accords reached in the 1980s and 1990s).

136. *Id.*

137. *Id.*

138. *Id.*

139. Alessi, *supra* note 129.

140. COLLIN, *supra* note 109, at 25.

141. One of the principle goals of the Basel Accords is to define, precisely, what constitutes “capital” for the purposes of bank regulation. See *infra* notes 140–43 and accompanying text. However, broadly defined, capital includes traditional equity and surplus as well as other assets of a bank. Michael P. Malloy, *U.S. International Banking and the New Capital Adequacy Requirements: New, Old and Unexpected*, 7

method of calculating these ratios was provided for in various appendices to *Basel I*.¹⁴²

The G-10 project was not a static one; efforts at greater protection continued to evolve as markets became more sophisticated.¹⁴³ The original Basil Accord was updated in 1998 to include capital requirements for “the market risks arising from banks’ open positions in foreign exchange, traded debt securities, equities, commodities and options.”¹⁴⁴ However, even under this amendment, banks were allowed to use internal models, subject to regulatory standards, for measuring the market risk for capital requirements.¹⁴⁵ Furthermore, the increasing use of innovative financial instruments represented another gap in the existing framework.¹⁴⁶

Recognizing the shortcomings of *Basel I*, in the late 1990s and early 2000s, the Basel Committee investigated a new capital framework to address the gaps in their efforts to bolster bank stability.¹⁴⁷ Approved in June 2004, the New Capital Framework, known as *Basel II*, divided banking regulation into three “pillars:” minimum capital requirements, supervisory review, and market discipline.¹⁴⁸ The first pillar sought to expand on the 1988 Basel Accord, making capital requirements more risk sensitive. The second pillar was intended to increase regulatory supervision of financial institutions’ risk management and capital adequacy. The third pillar was intended to use disclosure and market forces to pressure banks to behave more prudently.¹⁴⁹

ANN. REV. BANKING L. 75, 75 n.1 (1988). For example, in its definition of capital, the Office of Thrift Supervision includes: “(i) Common stockholders’ equity (including retained earnings); (ii) Noncumulative perpetual preferred stock and related surplus; (iii) Minority interests in the equity accounts of the subsidiaries that are fully consolidated . . . ; (iv) Nonwithdrawable accounts and pledged deposits of mutual savings associations . . . ;[and] (v) The remaining goodwill . . . resulting from prior regulatory accounting practices . . .” 12 C.F.R. § 567.5 (2010) (footnotes omitted).

142. BANK FOR INT’L SETTLEMENTS, BASEL COMM. ON BANKING SUPERVISION, INTERNATIONAL CONVERGENCE OF CAPITAL MEASUREMENT AND CAPITAL STANDARDS 8 (July 1988); *see id.* at 17–18 (Annex 2 describing “risk weights by category of on-balance-sheet asset”).

143. *See* HISTORY OF THE BASEL COMMITTEE AND ITS MEMBERSHIP, *supra* note 128, at 3 (“The new Framework is designed . . . to better address the financial innovation that has occurred in recent years . . .”).

144. *Id.*

145. *Id.*

146. *Id.*

147. *Id.*

148. *Id.*; BANK FOR INT’L SETTLEMENTS, BASEL COMM. ON BANKING SUPERVISION, INTERNATIONAL CONVERGENCE OF CAPITAL MEASUREMENT AND CAPITAL STANDARDS: A REVISED FRAMEWORK ¶ 4 (June 2004).

149. HISTORY OF THE BASEL COMMITTEE AND ITS MEMBERSHIP, *supra* note 128, at 3; Levinson, *supra* note 130, at 80–81.

B. *Basel Failures*

Despite the best efforts of the Basel Committee and the participating nations, *Basel II* failed to prevent the global financial crisis and thus proved woefully inadequate as a comprehensive regulatory framework. The crisis exposed many of the shortcomings of the agreement. Among the faults with *Basel II* were: implementation failures,¹⁵⁰ the lack of control extending to entities that conduct business across borders,¹⁵¹ the lack of rules dictating minimum liquidity,¹⁵² and the inadequacy of provisions geared toward the regulation of derivatives.¹⁵³ Implementation failures are inherent in any nonbinding multinational agreement.¹⁵⁴ The Basel Accords, like any multinational agreements, are only effective insofar as they achieve actual compliance from banks.

Relatedly, the effectiveness of the third pillar of *Basel II*—the use of market forces to reign in leverage—was called into question by the realities of the financial crisis. Before the crash, investors favored institutions with riskier portfolios, incentivizing banks to increase risk.¹⁵⁵ Given this experience, it is unlikely that self-policing will be effective in managing large scale risk such as that posed by the Eurodollar market; regulatory solutions must be imposed by nonmarket actors.

The next two problems, the gaps in oversight of transnational trading and the regulation of derivatives, both have direct bearing on the Eurocurrency market. The lack of oversight for large-scale, cross-border transactions means instruments like Eurocurrencies are essentially unregulated. Generally speaking, the regulator in charge of imposing rules on any particular financial institution is the

150. HISTORY OF THE BASEL COMMITTEE AND ITS MEMBERSHIP, *supra* note 128, at 3–4.

151. Levinson, *supra* note 130, at 83.

152. *Id.* at 81–82. Liquidity is an entity's ability to marshal resources. Cash is the most liquid asset. Securities are generally considered illiquid.

153. See CME GROUP, CAPITAL REQUIREMENTS IN A BRAVE NEW WORLD 7 (2012) (discussing the lack of capital requirements for exchange traded derivatives under *Basel I* and *Basel II*.)

154. See, e.g., U.N. Framework Convention on Climate Change, Status of Ratification of the Kyoto Protocol, available at http://unfccc.int/kyoto_protocol/status_of_ratification/items/2613.php [<http://perma.cc/77CZ-WXTF>] (archived Feb. 14, 2014) (chart showing that the United States, a major emitter of greenhouse gas, has not ratified the treaty).

155. Levinson, *supra* note 130, at 83; see Dominic Crossley-Holland, *Lehman Brothers, The Bank That Bust the Boom*, THE TELEGRAPH (Sept. 6, 2009), <http://www.telegraph.co.uk/finance/newsbysector/banksandfinance/6143297/Lehman-Brothers-the-bank-that-bust-the-boom.html>, [<http://perma.cc/KG3D-N7AW>] (archived Feb. 16, 2014) (noting that Lehman Brothers share price rose from \$4 in 1994 to \$82 in 2007 and that the bank's leverage ratio may have reached as high as 44-to-1 before the crash).

government of the country where that institution is based.¹⁵⁶ This practice, known as home country regulation, is insufficient protection in situations where the risks created by the practices of one financial institution are borne by the economies and financial institutions of other countries.¹⁵⁷ For example, the failure of Icelandic banks led to losses by depositors in the Netherlands and the United Kingdom and had ripple effects on the global economy,¹⁵⁸ but the Icelandic government was not accountable to the citizens of those foreign nations. Thus, the Icelandic government did not face political pressure to either satisfy the claims of foreign depositors nor to enact safeguards in proportion to the multinational risk posed by their national institutions.¹⁵⁹

The Lehman Brothers collapse reveals another failure of home country regulation. Lehman Brothers was subject to both U.S. and U.K. regulators and posed systemic risk to both countries' financial systems.¹⁶⁰ However, in September 2008 neither country mustered the political will to bailout the failing bank, hoping the other country might take on the risk of the bad assets, resulting in a "free rider" problem.¹⁶¹ Furthermore, after the bankruptcy, creditors on both sides of the Atlantic were competing for priority in collecting their debts.¹⁶² The American venue of the bankruptcy proceedings may have allowed the Federal Reserve to recover its investments before creditors—both foreign and domestic—who legally had priority.¹⁶³

It is precisely such free rider problems that are posed by several aspects of the Eurodollar market. First, because the reserve bank of the clearinghouse location is the lender of last resort in Eurocurrency transactions, banks that are not subject to the regulations or reserve requirements of that reserve bank are still eligible for discount window loans.¹⁶⁴ Next, foreign banks that borrow Eurodollars from other foreign banks could conceivably have large Eurodollar balances without having any branch in the United States, thus having no

156. Levinson, *supra* note 130, at 83–84.

157. *Id.* at 84.

158. *See id.* at 84 (“[T]he Icelandic government refused to repay Dutch and British depositors.”).

159. *See id.* (“Iceland’s citizens rejected a plan to make the [foreign] depositors whole.”).

160. *Id.*

161. *Id.*

162. *E.g.*, Jonathan D. Glater & Gretchen Morgenson, *Lehman Creditors Scramble for Position*, N.Y. TIMES (Sept. 16, 2008), http://www.nytimes.com/2008/09/16/business/worldbusiness/16iht-bankruptcy.4.16202470.html?pagewanted=all&_r=0 [<http://perma.cc/8BYD-CC2C>] (archived Feb. 16, 2014).

163. *See* Jeffrey McCracken & Mike Spector, *Fed Draws Court’s Eyes in Lehman Bankruptcy*, WALL ST. J. (Oct. 5, 2009), <http://online.wsj.com/article/SB125443891097957691.html> [<http://perma.cc/XY6J-X7VQ>] (archived Feb. 16, 2014) (describing the possibility that the Federal Reserve may have gotten preferential treatment over other creditors during the Lehman Bankruptcy).

164. STIGUM, *supra* note 20, at 286; *see supra* Part II.D.

connection with the American regulatory scheme.¹⁶⁵ Such banks would thus hold large Eurodollar liabilities on their balance sheets without being subject to any financial controls.

Finally, and perhaps more consequentially given the circumstances leading to the financial crisis, *Basel I* and *Basel II* failed to address the risk posed by the lack of liquidity of major financial institutions.¹⁶⁶ Even institutions with sufficient capital could not meet immediate cash needs because of the freezing of the credit markets.¹⁶⁷ Even if an institution is sufficiently capitalized, large Eurodollar obligations can undermine liquidity because foreign banks do not normally have access to the Federal Reserve discount window, yet have dollar-denominated obligations.

C. Basel III: Another Half-measure

In response to the financial crisis, the Basel Committee proposed additional reforms at the end of 2010.¹⁶⁸ Implementation of this third agreement, known as *Basel III*, began at the beginning of 2013.¹⁶⁹ Like *Basel II*, the new agreement further increases banks' capital requirements, but unlike the previous accords, *Basel III* also imposes liquidity requirements on banks. According to the president of the Basel Committee, the hope is that "higher levels of capital, combined with a global liquidity framework, will significantly reduce the probability and severity of banking crises in the future."¹⁷⁰

Basel III fills several of the holes of the previous agreements but is an evolution rather than an overhaul of the system. First, the new agreement requires an increase of the minimum capital adequacy ratio.¹⁷¹ Other gaps the new regime attempts to fill reflect some of the

165. For example, "FB2" in the example provided *supra* Part II.D.

166. Claire Jones, *The Basel Committee on Banking Supervision*, FIN. TIMES (Oct. 23, 2011), <http://www.ft.com/intl/cms/s/2/3e5af5f6-fb51-11e0-8df6-00144feab49a.html#axzz1zDOG2dPu> [<http://perma.cc/3B76-GN4J>] (archived Feb. 16, 2014) (book review); see BANK FOR INT'L SETTLEMENTS, BASEL COMM. ON BANKING SUPERVISION, BASEL III: A GLOBAL REGULATORY FRAMEWORK FOR MORE RESILIENT BANKS AND BANKING SYSTEMS ¶¶ 1–4 (Dec. 2010) (rev. June 2011) [hereinafter *BASEL III*] (discussing the rationale behind the adoption of *Basel III*).

167. Levinson, *supra* note 130, at 81.

168. See *id.* at 86 (noting potential regulations as part of a new framework).

169. Press Release, Basel Comm. on Banking Supervision, Implementation of the Basel III Framework (Dec. 14, 2012), *available at* <http://www.bis.org/press/p121214a.htm> [<http://perma.cc/A4Y4-8DEJ>] (archived Feb. 14, 2014).

170. Press Release, Basel Comm. on Banking Supervision, Basel III Rules Text and Results of the Quantitative Impact Study Issued by the Basel Committee (Dec. 16, 2012), *available at* <http://www.bis.org/press/p101216.htm> [<http://perma.cc/K2M5-EB4T>] (archived Feb. 14, 2014).

171. *BASEL III*, *supra* note 166, ¶ 94. Specifically, new capital requirements will be phased in over the course of three years: Tier 1 requirements rose to 4.5 percent in January 2013, will rise to 5.5 percent in January 2014, and finally to 6 percent in January 2015. *Id.* Previous Tier 2 ratios remain unchanged at 8 percent under *Basel III*. Press Release, Basel Comm. on Banking Supervision, Group of Governors and

principle themes of the financial crisis. *Basel III* implements a new scheme for monitoring banks' leverage ratios¹⁷² and adds financial instruments such as derivatives and other "off balance sheet" items into the calculus for determining capital adequacy and risk assessment.¹⁷³

However, the major innovation in *Basel III* is the adoption of new standards to govern banks' short- and long-term minimum liquidity.¹⁷⁴ These liquidity ratios are distinct from the capital adequacy ratios found in the previous two agreements.¹⁷⁵ Liquidity requirements dictate the amount of liquid assets banks must have relative to their total assets.¹⁷⁶

Basel III imposes two distinct liquidity standards. The first of these ratios, called the liquidity coverage ratio (LCR), is intended "to promote short-term resilience of a bank's liquidity risk profile by ensuring that it has sufficient high quality liquid resources to survive an acute stress scenario lasting for one month."¹⁷⁷ The LCR is a ratio of highly liquid assets in relation to possible short-term outflows (short-term debt). It dictates the amount of liquid assets that a bank must maintain in order to survive a liquidity crisis—i.e. bank runs—lasting thirty days. The longer-term ratio, the net stable funding ratio, "has a time horizon of one year and has been developed to provide a sustainable maturity structure of assets and liabilities."¹⁷⁸ Ostensibly, this is the same idea applied over the course of a year: it dictates the percent of a bank's assets that must be liquid enough for the bank to survive a run in the case of a yearlong liquidity crisis.

These liquidity ratios are important innovations because they seek to mitigate short-term liquidity crises in global markets like the one that precipitated the recent financial crisis.¹⁷⁹ During the initial phase of the crisis, even banks that had adequate capital faced difficulties because they did not have assets that were readily convertible to cash.¹⁸⁰ The LCR¹⁸¹ seeks to mitigate such crises by

Heads of Supervision Announces Higher Global Minimum Capital Standards (Sept. 12, 2010), www.bis.org/press/p100912.htm [<http://perma.cc/AH5A-XW8E>] (archived Feb. 17, 2014).

172. BASEL III, *supra* note 166, ¶ 151.

173. *Id.* ¶¶ 12–13.

174. *Id.* ¶¶ 34, 37.

175. *Id.*

176. See BANK FOR INT'L SETTLEMENTS, BASEL COMM. ON BANKING SUPERVISION, BASEL III: THE LIQUIDITY COVERAGE RATIO AND LIQUIDITY RISK MONITORING TOOLS 1–2 (Jan. 2013), available at <http://www.bis.org/publ/bcbs238.htm> [<http://perma.cc/9R7E-WQNT>] (archived Feb. 17, 2014) [hereinafter LCR FRAMEWORK] (noting that the main goal of the LCR is to ensure that banks have an adequate stock of highly liquid assets).

177. BASEL III, *supra* note 166, ¶ 38.

178. *Id.*

179. LCR FRAMEWORK, *supra* note 176, ¶¶ 1–2.

180. *Id.*

requiring the bank maintain enough “high quality liquid assets” (HQLA)¹⁸² to cover net cash outflows during any 30 day period of market stress.¹⁸³ Among the assets that count as HQLA are cash, central bank reserves and debt, certain marketable securities, certain corporate securities, and other commodities.¹⁸⁴ Net cash outflows are calculated by subtracting a bank’s expected inflows generated by lending and other dealings from outflows generated by deposits and other funding.¹⁸⁵

Furthermore, the calculus of the LCR *does* take into account the potential that banks might hold assets in denominations of foreign currencies. According to the Basel Committee, “[w]hile the LCR is expected to be met and reported in a single currency, banks are expected to be able to meet their liquidity needs in each currency and maintain HQLA consistent with the distribution of their liquidity needs by currency.”¹⁸⁶ Foreign banks are required to hold HQLA in to accommodate net cash outflows in each currency and jurisdiction they have obligations.¹⁸⁷ Additionally, the framework forces banks to hold a higher proportion of HQLA in foreign currencies to account for foreign exchange risk.¹⁸⁸

Despite all of the sensible inclusions in *Basel III*, it does not adequately address the risks posed by the Eurodollar. The focus of *Basel III*, like its predecessors, has been on maintaining the health of financial institutions. The stated mission of the Basel Committee is to “enhanc[e] financial stability” by achieving “prudential regulation” and supervision of banks around the world.¹⁸⁹ However, the Eurodollar market is only indirectly affected by general liquidity and capital requirements. The risks posed by the proliferation of Eurodollars have as much to do with monetary sovereignty as bank

181. As the Basil Committee has released guidance only on the LCR, this discussion is similarly focused on only this liquidity ratio.

182. There are seven characteristics of high quality liquid assets. Four are “fundamental characteristics,” (1) low risk, (2) ease and certainty of valuation, (3) low correlation with risky assets, (4) listed on a developed and recognized exchange, and three are “market-related characteristics,” (5) an active and sizable market for the asset, (6) low volatility, and (6) flight to quality. LCR FRAMEWORK, *supra* note 176, ¶ 24.

183. *Id.* ¶ 22. The Basel Committee expresses LCR as, “Stock of HQLA/Total net cash outflows over the next 30 calendar days \geq 100%.” *Id.*

184. *See id.* at Annex 4 (listing items that qualify as HQLA and their weights for purposes of LCR calculation).

185. *Id.* ¶ 69; *see id.* at Annex 4 (listing categories of cash inflows and cash outflows and their weights for purposes of LCR calculation).

186. *Id.* ¶ 24; *see id.* ¶ 173 (“As indicated in the LCR, the currencies of the stock of HQLA should be similar in composition to the operational needs of the bank.”).

187. *Id.* ¶ 24.

188. *Id.* ¶ 60 (noting that major currencies that are active in global foreign exchange markets are subject to a minimum haircut of 8 percent); *see id.* ¶ 81 (describing treatment of foreign currency retail deposits).

189. BANK FOR INT’L SETTLEMENTS, BASEL COMM. ON BANKING SUPERVISION CHARTER ¶ 1. (Jan. 2013).

stability. The Basel Accords simply do not account for these sovereignty issues. At best, then, the Basel Accords represent half-measures to the structural risks presented by the Eurodollar market.

V. POSSIBLE SOLUTIONS

A. *Introduction: Action vs. Inaction*

The three possible responses to the current state of the Eurodollar market are: country-level controls, international regulations, and inaction. The regulatory options, whether in the form of unilateral controls imposed by the United States, or an international agreement, should attempt to control the size of the Eurodollar market. Unilateral action is easier to implement but may be less effective given the global nature of the financial system.¹⁹⁰ Conversely, an international approach might be more effective but would require the cooperation of the international community. The final option is inaction.¹⁹¹ After all, “[t]he mere presence of risk . . . does not require a full-fledged regulatory response.”¹⁹² Nevertheless, the most prudent course of action is an international regulatory scheme.

190. Compare Robert M. Morgenthau, *These Islands Aren't Just a Shelter from Taxes*, N.Y. Times (May 5, 2012), <http://www.nytimes.com/2012/05/06/opinion/sunday/these-islands-arent-just-a-shelter-from-taxes.html> [<http://perma.cc/K5SG-34BH>] (archived Feb. 17, 2014) (describing the use of offshore shelters to circumvent tax laws, hide financial fraud, and fund rouge actors), and Charles Duhigg & David Kocieniewski, *How Apple Sidesteps Billions in Taxes*, N.Y. Times (Apr. 28, 2012), <http://www.nytimes.com/2012/04/29/business/apples-tax-strategy-aims-at-low-tax-states-and-nations.html> [<http://perma.cc/FZW7-B5VN>] (archived Feb. 17, 2014) (describing the use of an accounting technique called a “Double Irish With a Dutch Sandwich,” which helped Apple, Inc. avoid \$2.4 billion in taxes in 2011), with Katharina Bart & Oliver Hirt, *Swiss Banks Agree to U.S. Tax Deal, More Expected to Follow*, Reuters (Dec. 10, 2013), <http://www.reuters.com/article/2013/12/10/us-tax-switzerland-idUSBRE9B80S320131210> [<http://perma.cc/4JHV-UHTF>] (archived Feb. 17, 2014) (outlining an agreement between U.S. authorities and Swiss banks enabling a crackdown on tax cheats).

191. Milton Friedman, perhaps unsurprisingly, argued that regulation was not required in the Eurodollar market because banks would naturally keep prudent reserves, and the potential multiplier would not pose any risk to the financial system. See Friedman, *supra* note 11, at 18, 21. The financial crisis provides reason to believe that at least the former of those two assumptions may not be correct. See FIN. CRISIS INQUIRY COMM'N, *supra* note 116, at xix (noting 40-to-1 leverage ratios of the large banks).

192. Greenberg, *supra* note 26, at 1504.

B. Unilateral Action

1. Unilateral Elimination of the Eurodollar

Theoretically, the United States could prohibit the creation of Eurodollars. This was the approach taken by the United Kingdom after the Second World War¹⁹³ and by the Japanese through the mid-1980s.¹⁹⁴ By means of the Exchange Control Act of 1947, the United Kingdom prohibited residents from exporting domestic assets without first securing permission from the treasury and required nonresidents to secure permission in order to operate sterling-denominated bank accounts.¹⁹⁵ Additionally, residents were not allowed to lend sterling deposits on the Eurosterling market without permission of the Bank of England, which was rarely granted.¹⁹⁶ Finally, the exchange controls forbade residents from holding foreign currency bank deposits.¹⁹⁷ The aggregate effect of these restrictions was to limit the growth of the Eurosterling market.¹⁹⁸

While the United States would be able to control the market simply by virtue of its elimination, such an uncompromising approach poses significant obstacles. Given the current degree of integration of global markets, it is doubtful that this approach is feasible. First, it would be very costly and take years to accomplish.¹⁹⁹ Second, it is an isolationist action in an increasingly interdependent world.²⁰⁰ Finally, a ban might have wide-ranging unintended consequences.²⁰¹ Eurodollars represent an important source of financing and credit;

193. See HEATHER D. GIBSON, *THE EUROCURRENCY MARKETS, DOMESTIC FINANCIAL POLICY AND INTERNATIONAL INSTABILITY* 90–92 (1989) (discussing the Exchange Control Act of 1947).

194. MEHTA & FUNG, *supra* note 36, at 82.

195. GIBSON, *supra* note 193, at 91.

196. *Id.* at 92.

197. *Id.* at 94.

198. *Id.* at 92. Note, however, that nonresidents were allowed to use the London market to hold foreign currency in London banks. This meant that while the Bank of England was restricting the growth of the Eurosterling market, it was facilitating the growth of the Eurodollar market. *Id.*; see *supra* Part II.B (discussing the growth of the Eurodollar market in London).

199. See Greenberg, *supra* note 26, at 1507 (discussing costs of regulation). For the sake of comparison, it took three and a half years for Lehman Brothers to go through bankruptcy, and will not finish liquidating its assets until 2017. Nick Summers, *Welcome to Lehman Brothers. We're Open for Business*, BLOOMBERG BUSINESSWEEK (Sept. 21, 2012), <http://www.businessweek.com/articles/2012-09-21/welcome-to-lehman-brothers-dot-were-open-for-business> [<http://perma.cc/3MX2-JSK7>] (archived Mar. 1, 2014). The debt obligations of a single bank, even a large one, are orders of magnitude smaller than the entire Eurocurrency market. For example, the debt obligations of Goldman Sachs are in the billions rather than trillions. See *The Goldman Sachs Group, Inc.: Key Statistics*, YAHOO FINANCE, <http://finance.yahoo.com/q/ks?s=GS+Key+Statistics> (last visited Mar. 18, 2014).

200. Greenberg, *supra* note 26, at 1506.

201. See *id.* at 1504 (discussing the costs of regulation).

the disruption of a \$5 trillion credit market might lead to a global credit crisis, one of the principle evils that regulation is trying to prevent.²⁰²

Moreover, past examples are inappropriate models for the contemporary market. Unlike the pound in the first half of the twentieth century or yen in the 1980s, the dollar is the world's reserve currency.²⁰³ The market for Eurodollars is huge and already a major instrument of global trade.²⁰⁴ The example of the United Kingdom represents an *ex ante* solution because the British were not attempting to unwind an existing market.²⁰⁵ The Eurodollar market is an *ex post* problem. Finally, early controls imposed by the United Kingdom stem from an era before the collapse of the gold standard and are inapposite given the current state of the global monetary system.

2. Host Country Regulation

A possible solution to the problems caused by home country regulation is, paradoxically, a variation of home country regulation. Host country regulation, the approach advocated by Marc Levinson, involves "each country taking responsibility for regulating the financial institutions that operate within its borders, no matter where they are based."²⁰⁶ The United States could unilaterally impose its own system of reserve requirements on American institutions that are heavily involved in the Eurodollar market, in addition to the imposition of reserve requirements to secure Eurodollar liabilities held by the U.S. branches of foreign banks. This approach is similar to that of the Basel Accords but is enacted at a national rather than supranational level.

Such a system has several advantages. First, tighter restrictions imposed by the United States would be subject only to U.S. government policy rather than international agreements. Next, these regulations would extend to a much larger number of financial institutions because it would encompass banks that have branches or operations in the United States rather than simply being based here. This would presumably give U.S. authorities purview over a greater

202. See Ricks, *supra* note 99, at 3 ("It is sometimes suggested that securities dealers and other nonbank financial firms 'need' to fund short—that they somehow cannot conduct their businesses without short-term wholesale funding.").

203. See Francesco Guerrera, *The Dollar Is Still King, For Now*, WALL ST. J. (Nov. 5, 2012), <http://online.wsj.com/article/SB10001424052970203347104578100872305029246.html> [<http://perma.cc/LKZ-57JQ>] (archived Feb. 28, 2013) ("[M]ore than 60% of foreign-exchange reserves are in dollars.").

204. See He & McCauley, *supra* note 42, at 2–3 (discussing the dollar's "dominant position" in international finance).

205. Cf. *supra* notes 197–99 and accompanying text.

206. Levinson, *supra* note 130, at 87.

share of the Eurodollar market. Finally, if the United States were to set a baseline of regulatory controls, other G-10 countries might be encouraged to follow suit.²⁰⁷

3. Shortcomings of Unilateral Regulation

Unilateral regulation of an international market has inherent drawbacks, regardless of whether the method pursued is home country regulation or host country regulation. One of the main problems with unilateral requirements is the likelihood that deposits would be driven into foreign banks.²⁰⁸ If the Federal Reserve acted independently to increase reserve requirements for Eurodollar liabilities, other banking centers would be at a competitive advantage.²⁰⁹ The market risks would remain, but the capital would simply be driven into foreign institutions. This was precisely what spurred the initial growth of the Eurodollar market in the 1950s and 1960s.²¹⁰ Furthermore, such competitive disparities are among the problems that the Basel Committee was created to prevent.²¹¹

The effectiveness of unilaterally imposed reserve requirements would also depend on further regulation to split the onshore and offshore money markets.²¹² Otherwise, foreign investors would be able to deal in “foreign exchange contracts that embody the difference between domestic and [offshore] money rates,” which would simply encourage arbitrage and further movement of funds to offshore banks.²¹³

Additionally, there is the problem of preexisting dollars owned by foreign nations and foreign banks without operations in the United States.²¹⁴ Because the U.S. dollar is the world reserve currency, foreign nations own significant reserves of dollars.²¹⁵ Thus, there is

207. See Stavros Gadinis, *The Politics of Competition in International Financial Regulation*, 49 HARV. INT'L L.J. 447, 456 (2008) (explaining that race to the top scenarios occur when regulations promote efficiency).

208. See Frydl, *supra* note 66, at 15; Gadinis, *supra* note 202, at 456 n.31 (explaining that race to the bottom scenarios occur when “increased compliance costs do not correspond to the additional protection ensured”).

209. See GIBSON, *supra* note 193, at 215 (noting the difficulty of competing in international credit markets in the face of regulation).

210. See *supra* note 42 and accompanying text.

211. HISTORY OF THE BASEL COMM. AND ITS MEMBERSHIP, *supra* note 128, at 1; see *supra* Part IV.A.

212. He & McCauley, *supra* note 42, at 11.

213. *Id.* at 11–12.

214. Greenberg, *supra* note 26, at 1507.

215. *Currency Composition of Official Foreign Exchange Reserves (COFER)*, INT'L MONETARY FUND, <http://www.imf.org/external/np/sta/cofer/eng/index.htm> [<http://perma.cc/4TNM-WF3M>] (archived Feb. 17, 2014) (last updated Dec. 30, 2013) (showing that U.S. dollars represented 61.4 percent of foreign exchange reserves in the third quarter of 2013 for a total of \$3,803,731,000,000); Bill Conerly, *Future of the Dollar as World Reserve Currency*, FORBES STRATEGIES BLOG (Oct. 25, 2013, 12:27 PM),

the risk that a unilateral effort by the United States to control the overseas trade of dollars would be ineffective.²¹⁶

Finally, in 1979 Congress tried and failed to enact unilateral regulation on the Eurodollar.²¹⁷ While this has no bearing on whether regulation would fail today, the huge competitive disadvantage that unilateral controls would place on the domestic banking industry suggests that there would be strong opposition to such a proposal. The banking industry vigorously opposed simple risk management rules like *Basel III*²¹⁸ and the “Volcker Rule.”²¹⁹ A proposal splitting American banks from the offshore money market means the transformation, or even destruction, of an entire industry. It stands to reason that New York, a global banking center, would likely oppose a measure that cut it off from currency markets. It would also represent a 180-degree reversal from past policy whereby the United States took significant steps to repatriate Eurodollar business from overseas.²²⁰

C. International Agreements

Italian economist Guido Carli, who wrote about the Eurocurrency market in the 1970s and 1980s, posited that, “[i]f we do not accept an [international] ‘authority’, the problem cannot be solved.”²²¹ Carli envisioned a “more orderly organisation of the international monetary system with supernational authority exercising: (a) supervisory function, to give common directions, and (b) as a lender of last resort, to intervene and regulate any runs on deposits.”²²²

available at <http://www.forbes.com/sites/billconerly/2013/10/25/future-of-the-dollar-as-world-reserve-currency/> [<http://perma.cc/HXE9-VRSC>] (archived Feb. 28, 2014).

216. Greenberg, *supra* note 26, at 1507.

217. See Congressional Research Serv., *Summary: H.R. 3962, supra* note 53 (describing Congress’s failed attempt at enacting such legislation).

218. See, e.g., Chrystia Freeland, *Sheriff of Global Banking Rides into Town*, N.Y. TIMES (Jan. 18, 2013), <http://www.nytimes.com/2013/01/19/world/europe/19iht-letter19.html> [<http://perma.cc/D5L2-9TMK>] (archived Feb. 28, 2014) (highlighting the complaint of U.S. banks that *Basel III* regulations are anti-American).

219. See, e.g., Ben Protess, *Behind the Scenes, Some Lawmakers Lobby to Change the Volcker Rule*, N.Y. TIMES (Sept. 20, 2012), <http://dealbook.nytimes.com/2012/09/20/behind-the-scenes-a-lawmaker-pushes-to-curb-the-volcker-rule/> [<http://perma.cc/RQ5E-DWAA>] (archived Feb. 17, 2014).

220. See GIBSON, *supra* note 193, at 215 (describing the establishment of International Banking Facilities in New York in 1981 as an attempt at such repatriation).

221. Carli, *supra* note 78, at 149–50; see generally Guido Carli, *Eurodollars: A Paper Pyramid?*, 24 BANCA NAZIONALE DEL LAVORO Q. REV. 95 (1971) (discussing various problems created by Eurocurrency markets and concluding that there is a need for comprehensive regulation).

222. Carli, *supra* note 78, at 156–57.

Ironically, Carli attributed a preoccupation with monetary sovereignty as a barrier to solutions to problems caused by Eurocurrencies.²²³ After all, an international agreement is a voluntary abrogation of sovereignty and theoretically undermines a country's own ability to set its monetary policy.²²⁴ However, such theoretical objections have not stood in the way of past agreements. The international community successfully weaned itself off the gold standard at Bretton Woods and has agreed to three rounds of Basel Accords with an express purpose of making the international banking system safer. Furthermore, the risks posed by the failure of the market represent a much greater affront to monetary sovereignty than a voluntary political agreement or set of transnational rules. Given this balance, the best possible solution to manage the risks posed by the Eurodollar market is an international one.²²⁵

1. Multilateral Agreements Imposing Reserve Requirements

A simple but effective way of managing the Eurodollar market would be for various nations to ensure that their banks' reserve requirements are distributed in proportion to the denomination of their foreign currency liabilities. For example, Country X could adopt a system requiring their banks to hold reserves in U.S. dollars in proportion to the amount of Eurodollar liabilities on their books. Such a requirement would mitigate the risk of foreign banks lending dollars that their respective central banks cannot insure and reduces the likelihood that such banks would have to turn to the Federal Reserve's discount window in the event that their dollar-denominated debts were called. Furthermore, the Federal Reserve would be able to manage the dollar-denominated credit given to foreign central banks, thus cutting off the spigot of reserve dollars that foreign commercial banks would need access to in order to meet reserve requirements. Instead of lending dollars to mitigate a crisis,²²⁶ the Federal Reserve could choose to lend dollars—or not lend them—prophylactically.

This structure could be applied to banks across the world and could be implemented by international treaties or ad hoc bi- and multi-lateral agreements. For example, in exchange for imposing a dollar-denominated reserve requirement on Japanese banks, the Federal Reserve would impose a yen-denominated reserve requirement on American banks.²²⁷

223. *Id.* at 145–46.

224. *Cf. id.* (noting that “this sovereignty can only be practised in the context of international agreements establishing a reference framework” as opposed to, presumably, a binding agreement).

225. *See* Frydl, *supra* note 66, at 11 (advocating for an international agreement).

226. Via central bank liquidity swap lines, for example. *See supra* note 85.

227. *Cf. He & McCauley, supra* note 42, at 10 (discussing the “strangeness” of just such a requirement).

A regime of *quid pro quo* reserve requirements would effectively address the underlying problem posed by the Eurodollar market: the large credit multiplier. First, banks' willingness to lend Eurodollars would be diminished due to the desire to avoid increasing their own reserves. Next, reserve requirements would undermine the principle motivation for borrowers or traders to prefer Eurodollar financing over traditional financing by reducing the spread between Eurodollar and traditional interest rates. Increased costs would eliminate banks' ability to offer preferential rates, which would be reduced or eliminated.²²⁸ With the preferential rates eliminated, the Federal Reserve's monetary controls would have restored effectiveness.

2. Elimination of the Eurodollar by International Agreement

Many of the problems associated with the United States attempting to unilaterally forbid the creation of Eurodollars could be mitigated by an international agreement prohibiting financial institutions from creating Eurocurrencies. First, an international agreement would make it much easier to wind down the market. Second, as explained by Morgan Ricks, there is no reason that nondepository financial institutions (e.g. hedge funds and investment banks) need to fund themselves with short-term deposits.²²⁹ Their cost of borrowing would probably increase, but there is no reason to assume that the financial industry would fail without cheap short term IOUs.²³⁰ Investors and borrowers would just turn to longer-term debt instruments. Furthermore, such an approach is internally consistent. So long as governments regulate which institutions may fund themselves with run-of-the-mill demand deposits, Why not also regulate which institutions can fund themselves with Eurocurrencies, which are fundamentally equivalent instruments?²³¹

3. Obstacles to International Agreements

There are, of course, problems with an international approach to Eurodollar regulation. Perhaps the most obvious is compliance. With respect to reserve requirements, nations would have to voluntarily assent to what, in all likelihood, would be measures that reduced the profitability of their banking industries. The United States might have the ability to coerce smaller economies into agreeing to the

228. See *supra* note 65 and accompanying text. Interest rate parity would presumably also make the Eurodollar market less attractive to arbitrageurs, further reducing the volume of transactions. Cf. *supra* note 104 and accompanying text.

229. Ricks, *A Simpler Approach to Financial Reform*, *supra* note 99, at 38.

230. Ricks, *A Former Treasury Adviser on How to Really Fix Wall Street*, *supra* note 5.

231. See *id.* ("Instead of focusing narrowly on deposits, we should address short-term IOUs as a class, on a functional basis.").

scheme, but such behavior would violate international norms and ultimately be ineffective unless other major economies also assented.²³²

The next challenge is the possibility of nations trying to gain a competitive advantage by intentionally flouting international controls.²³³ Countries could profit by taking business away from the current financial centers just as London profited from having a regulatory advantage over the United States in the 1960s.²³⁴ Nations whose currencies are not subject to large Eurocurrency markets are mostly likely to attempt to game the system as they have less to gain by quid pro quo reserve requirements. Thus, without widespread voluntary cooperation an international scheme would be vulnerable to significant leakages.

However, these obstacles presuppose that other countries have less of an interest in the global financial system than the United States. This is not a safe assumption. After all, Eurocurrencies do not just pose a threat to monetary sovereignty; they pose a threat to global financial stability. We need not look far into the past in order to see that the international community has been able to coalesce around big changes in the international banking system: Bretton Woods, the Basel Accords, and the founding of the Bank of International Settlement all represent the international community coming together to bolster the stability of the global economy. There is no reason to think that the same cannot be accomplished with respect to Eurocurrency markets.

4. Disclosure Requirements

Writing in 1983, Ronald Greenberg eschewed the more traditional modes of regulation discussed above in favor of requiring banks to “disclose the nature and character of Eurodollar loan recipients.”²³⁵ Greenberg thought that the practical obstacles to any sort of market regulation were too large to achieve effective regulation and proposed transparency as an alternative.²³⁶ Disclosure mechanisms would be easier to implement and would in theory allow the market to assess the riskiness of Eurodollar loans made by banks.²³⁷ Additionally, the cost of disclosure requirements is much lower than that of more robust regulation.²³⁸

232. Greenberg, *supra* note 26, at 1507–08.

233. *Id.*

234. *See supra* note 42 and accompanying text; Greenberg, *supra* note 26, at 1508.

235. Greenberg, *supra* note 26, at 1510.

236. *Id.*

237. *Id.* at 1511.

238. *Id.*

There is nothing inherently problematic about Greenberg's proposal, but it is dated. The upheaval in financial markets since 2007 demonstrates the need for regulation with teeth rather than simple oversight. Improved disclosure would not have revealed the extent of the risk posed by mortgage-backed securities because the securities themselves were considered safe investments.²³⁹ Moreover, to the extent that the risk posed by the Eurodollar market is its size, no further disclosure is required. The \$5 trillion Eurodollar market is large enough that its failure would cause catastrophic damage to the financial system.

D. Consequences of Continued Inaction

As long as Eurodollar markets are allowed to continue to operate unregulated, the international community remains at risk of wide-scale panics caused by a disruption in the international market for U.S. dollars, and the Federal Reserve remains on the hook as the global lender of last resort. In 2008, global Eurodollar operations nearly caused an international shortage of dollars.²⁴⁰ The effects of this near panic are still being felt today: as of February 2014, the European crisis is ongoing and the Federal Reserve's central bank liquidity swap lines remain open.²⁴¹ Furthermore, the underlying problems have not been fixed. A default of the European banks would cause a run on money market mutual funds, which have trillions of dollars worth of exposure to short-term debt.²⁴² A run on the money market mutual funds is a short step away from a run on dollars.²⁴³ The Eurocurrency markets represent a pile of dry tinder, and until it is fixed, one can only hope it does not go up in flames.

VI. CONCLUSION

The financial system has changed dramatically over the last 50 years. Financial markets are larger and more interconnected than ever. The market for Eurodollars is a microcosm of the challenges posed by these realities: larger and more interconnected systems lead

239. See Paul Krugman, *Berating the Raters*, N.Y. TIMES (Apr. 25, 2010), http://www.nytimes.com/2010/04/26/opinion/26krugman.html?_r=0 [<http://perma.cc/BJ2Y-6M9U>] (archived Feb. 17, 2014) (“[O]f AAA-rated subprime-mortgage-backed securities issued in 2006, 93 percent—93 percent!—have now been downgraded to junk status.”).

240. McGuire & von Peter, *supra* note 87, at 1.

241. *Liquidity Swap Chart*, *supra* note 2.

242. Cf. McGuire & von Peter, *supra* note 87, at 16–17 (“Money market funds, facing large redemptions following the failure of Lehman Brothers, withdrew from bank-issued paper, threatening a wholesale run on banks.”) (internal citation omitted).

243. After all, a money market fund is just a pool of short-term debt like treasuries and CDs. FITCH, *supra* note 56, at 295.

to larger and more interconnected crises. However, it is hard to imagine a solution that eliminates Eurodollars entirely. Ultimately this would not be a problem if: (1) the market for Eurocurrencies was not so large that it posed systemic risk if it failed, and (2) Eurocurrencies were not completely beyond the control of the Federal Reserve. The reversal of either one of these realities would mitigate concerns regarding both U.S. monetary sovereignty and global financial stability.

This Note has been an attempt to demystify the Eurodollar and describe the risks these instruments present. It has also described why regimes intended to safeguard the financial system are inadequate to deal with the problems presented by the Eurodollar market. Consequently, it argued for the need for an international framework governing the Eurodollar market, not only for the sake of global financial stability but also because of the unique challenges to monetary sovereignty caused by foreign lenders creating dollars without regard to U.S. authorities. The main challenge to such a plan is international cooperation. However, if the international community can successfully implement three rounds of Basel Accords, it seems that an additional implementation of reserve requirements for Eurodollars is not outside the realm of possibility. Sensible reform can and should be implemented to manage risk. After all, such controls are preferable to global market failures.

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