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Abstract

U.S. banks have substantial exposure to foreign markets such as Europe and Latin America. In this paper, we show how the amounts and forms of these exposures have evolved over time and note the changes in embodied risks taken through banks' cross-border activity, local claims, and derivative positions. Our findings vary with the type of U.S. bank. Compared with other banks, money-center banks tend to have a greater share of their assets in foreign exposures. Some of money-center banks' exposure to riskier countries, particularly Latin American countries, is achieved through the activities of local branches and subsidiaries that take on liabilities as well as assets, a strategy that reduces their bank transfer risk accordingly. As a share of total international exposures, the transfer risk assumed by money-center banks tends to be significantly lower than that of other banks.

Key words: bank, foreign exposure, cross border, lending, capital, claims, derivatives, business cycle, interest rates

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I. Introduction

U.S. banks carry substantial exposures to foreign markets, occurring through cross-border activities, through the local activities of their subsidiaries or branches, and through positions they take in derivatives markets. The amounts and forms of these exposures have evolved dramatically over time, as have the associated risks. In this paper, we focus on this evolution and, of particular interest, on the differences in exposures across types of banks, specifically very large banks versus smaller ones. We contrast the risks in these exposures across respective types of U.S. banks and show how these risks and their capitalization have changed over time. Such differences are the result of the diverse strategies pursued (or perhaps simply attainable) by large and small banks in expanding their exposure in countries characterized by varying risk profiles.

The paper looks at this set of risk issues, taking the perspective of the home country banks. Many studies on other home country and host country themes are explored elsewhere [BIS (2004), Hawkins and Mihaliek (2001), Goldberg (2005), and Litan et al. (2001)]. Riskiness of positions and associated bank capital reserves, the focus of our paper, has been established as centrally important for financial system stability in Basel II.

Our analysis begins with detailed data contained in quarterly reports filed by U.S. banks or bank holding companies as part of the bank supervisory process. Each reporting bank provides a country-by-country delineation of its foreign claims¹ and of the form of these claims, i.e. whether they are cross-border, extended by their local affiliates, or valuations of derivative positions held. The report also contains some information on maturity composition and broad categories of recipients of U.S. claims by destination market, distinguishing borrowers among foreign banks, public entities or private sector ones.

Haupt (1999) and Palmer (2000) initially used these data to examine trends over the 1980 and early to mid 1990s. Haupt provided an especially clear comparison of different concepts of risk embedded in U.S. bank foreign exposures. Goldberg (2002, 2005) provided a perspective on key trends in this data and the underlying reporting banks. U.S. banks engaged in international lending have become more diverse since the 1980s, with fewer banks overall, and the remaining banks increasingly polarized in terms of size and portfolio allocations.

Starting from highs of 185 reporting banks in the mid 1980s, the number of US banks with foreign exposures declined to 140 by the mid 1990s and further declined to 71 banks in 2004. In the 1980s banks were broadly distributed across small, medium, and large asset ranges. By 2004 the distribution was more bimodal.

A few very large banks increasingly dominate overall external claims of U.S. banks. By the late 1990s, many of the other U.S. banks reporting foreign exposures were smaller banks with a strong focus on European and Latin American markets. Lending by the smaller banks, especially with respect to Latin American and Asian markets, was more volatile than the lending by larger banks, a pattern we also observe with the additional years of data reported in the present paper.²

In this paper, we extend this analysis, and highlight a number of important risk-related features of U.S. bank foreign exposures. First, despite consolidation in the number of reporting banks, overall exposure has continued to grow. The trend is driven by the growth in foreign exposures of a small number of Money Center Banks (MCBs).

The country composition of total foreign exposure has been fluctuating over time. Especially for MCBs, there has been a shift in recent years away from Asia and the Middle East and towards positions in the “safest” countries - where degrees of safety or riskiness of countries are proxied by Fitch ratings - or towards less risky forms of exposure. Honing in on the geographical composition of exposure, we highlight the increasing importance of industrialized Europe for the average MCB and the changing role of Latin America, after significant withdrawals in the previous decade. Interestingly, the recent run up in Latin American exposure for the average MCB was achieved mainly as a result of a significant increase in local claims.

We present analysis of the distribution of transfer risk across investment grade and speculative grade countries over time, and differences across MCBs and non-MCBs. Exposure to the riskiest countries has been trending down for MCBs. This trend is not observable for the average non-MCB, which has a much larger relative transfer risk exposure in speculative grade countries than the average MCB.

¹ This process also informs the Federal Deposit Insurance Corporation and state banking regulators. The use of the term “U.S. banks” in this paper generally includes U.S. owned banks and U.S. subsidiaries of foreign banks.

² For details from the host-country perspective, see Crystal, Dages and Goldberg (2001).

When paired with an analysis of these positions relative to bank-specific assets and capital, we show that while levels of foreign exposure are increasing, exposure as a share of total bank assets has been declining recently for MCBs and, to a lesser extent, non-MCBs. With capital to asset ratios rising for average banks, the result is that foreign exposure as a fraction of banks' equity capital is less than 200 percent for non-MCBs, versus over 500 percent for MCBs. On average, only MCBs have increased their foreign exposure's weight on banks' equity capital in recent years. Simultaneously, these banks have reduced the incidence of transfer risk and raised the share of investment grade countries in their international exposures.

The body of this paper is divided into three sections. Section II discusses the broad patterns in U.S. bank foreign exposure data, and shows the composition of these exposures by type, meaning cross-border or locally generated, and geography. Section III explores the risk features of these exposures, showing implied transfer risk and combining the exposures with measures of country risk. Section IV offers concluding remarks.

II. Broad patterns in U.S. Bank foreign exposures

A Federal Financial Institutions Examinations Council (FFIEC) report 009 must be filed by every U.S. chartered insured commercial bank in the 50 States of the United States, the District of Columbia, Puerto Rico, and US territories and possessions, provided that the bank has, on a fully consolidated bank basis, total outstanding claims on residents of foreign countries exceeding \$30 million in aggregate. In these reports, bank claims are itemized by country, and separately encompass credit extended to foreign country banks, public entities, and other recipients including individuals and businesses. In addition to direct international flows, bank claims also include revaluation gains on interest rate, foreign exchange, equity, commodity and other off-balance sheet contracts. Banks provide some details on time remaining to maturity (one year and under, 1 to 5 years, and over five years). Other quarterly reports filed by banks contain information on bank total assets located in the United States and abroad. There have been changes over time in reporting conventions, but much of this data is consistently available by bank, starting with reports from 1986 and continuing to the present time (2005). Aggregate data are published in the Country Exposure Lending Survey (E.16) statistical release (<http://www.federalreserve.gov/releases/>) and are made available to staff at

the BIS for their statistical publications on the overall indebtedness of various countries throughout the world. Microdata, which are what we use in this paper, are confidential.

As shown in Table 1, the total foreign exposure of U.S. banks has grown from \$355 billion in 1990 to \$1.25 trillion in 2005. Fifty percent or more of this exposure is through cross-border claims. Currently the share to non-bank, non-public sector borrowers is 43 percent. MCBs represent 80 percent of the total exposure and nearly 90 percent of the holdings of foreign derivatives.

We report statistics and trends for Money Center Banks (MCBs) and for all other banks. Each *Country Exposure Lending Survey* lists banks classified as MCBs. As of the third quarter of 2005, four organizations comprised the group of Money Center Banks: Bank of America Corp., Taunus Corp., J.P. Morgan Chase & Co., and Citigroup.³ Although MCBs are not necessarily the largest U.S. banks by asset size, they do represent the majority of total foreign exposure of all U.S. banks. As indicated in Table 1, there were 9 banks classified as MCBs in 1990 controlling a total market share of about 70 percent. As a result of mergers, that number declined to 4, and their market share increased to 80 percent. Table 1 provides these data, and a range of summary statistics for U.S bank foreign exposures at four different dates, starting in 1990 and extending to the third quarter of 2005, the latest observation available.

There are different ways of presenting and analyzing data of foreign exposure of banks. Publicly available sources add up exposures across all banks and then report the total amounts of U.S. bank exposures in each country or in each type of claim. Such figures correspond to what we call “totals” across the exposures of all U.S. banks. Alternatively, we can discuss the data in a way that reflects the average portfolio of a bank in each category, MCB or non-MCB, without regard for the actual size of the bank. We present this type of analysis as “unweighted” averages across banks.

³ Another category, called Other Large Banks, includes data from: Bank of New York Co., Wachovia Corp., HSBC Holdings PLC, and State Street Corp. As of June 30, 2005 the capital and assets in these categories are reported, http://www.ffiec.gov/PDF/E16/E16_200506.pdf, as follows.

Banking Organization Category	Tier 1 Capital	Total Assets
All Reporting Banks	\$ 417.5 billion*	\$ 7,110.0 billion
Money Center Banks	\$ 208.3 billion*	\$ 4,138.2 billion
Other Large Banks	\$ 61.2 billion	\$ 1,062.4 billion
All Other Banks	\$ 148.0 billion	\$ 1,909.4 billion

We report cross-border exposure adjusted on an ultimate risk basis and use this figures in calculating total exposure and transfer risk. Reporting on an ultimate risk basis means that loan made to a borrower in one country but guaranteed by an entity in another country is considered a loan to the guarantor's country, not the borrower's country.

Table 1 Summary Statistics on Total U.S. Bank Foreign Exposures

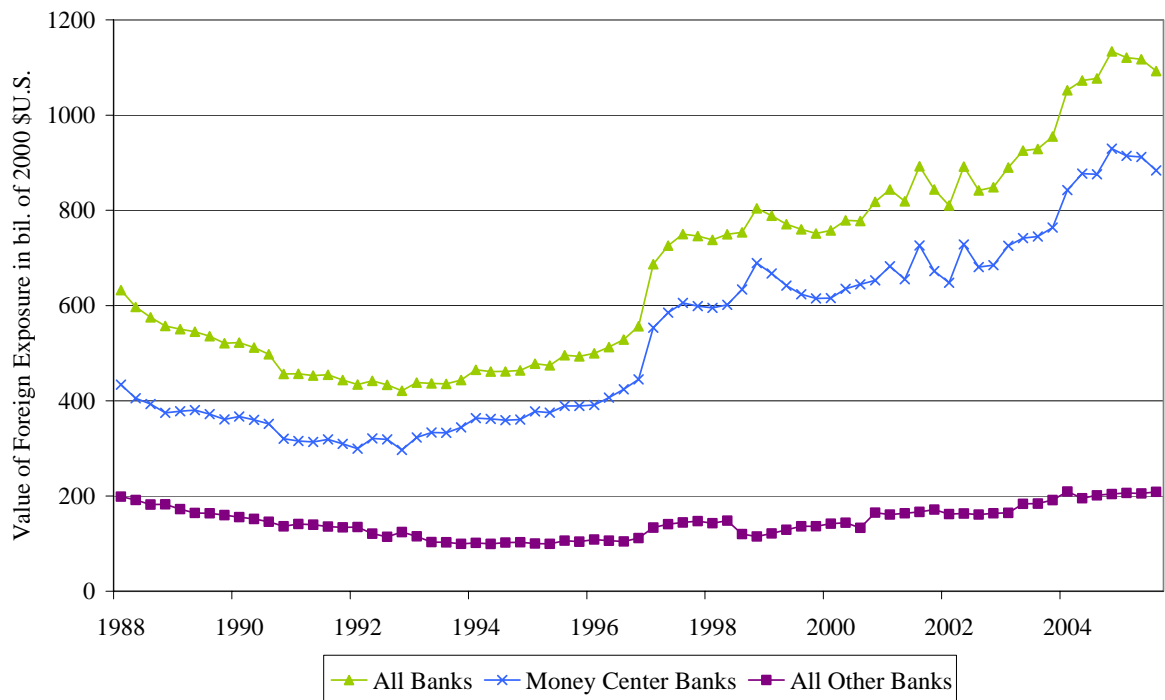
All Banks	1990q4	1995q4	2000q4	2005q3
number of reporting banks	163	137	99	68
	millions of US dollars*			
Total exposure	354,532	440,334	827,553	1,247,655
Cross-border exposure	214,268	255,683	409,733	632,874
Local exposure	140,264	184,651	329,977	515,311
Derivative exposure	--	--	87,843	99,470
Composition of Total Exposure	percent			
Cross-border claims	60.4	58.1	49.5	50.7
Local claims	39.6	41.9	39.9	41.3
Derivatives	--	--	10.6	8.0
Composition of Cross-Border Claims	percent			
To public borrowers	24.0	23.1	28.5	28.7
To banks	50.8	38.4	33.1	28.6
To other private borrowers	25.2	38.6	38.4	42.8

Money Center Banks	1990q4	1995q4	2000q4	2005q3
number of MCBs	9	7	6	4
	Percent of U.S. Total accounted for by MCBs			
Total exposure	70.1	78.9	79.8	80.9
Cross-border exposure	58.2	70.1	75.3	80.1
Local exposure	88.3	91.1	81.7	80.5
Derivative exposure	--	--	93.8	87.5
Composition of Total Exposure	percent			
Cross-border claims	50.2	51.6	46.7	50.2
Local claims	49.8	48.4	40.8	41.1
Derivatives	--	--	12.5	8.6
Composition of Cross-Border Claims	percent			
To public borrowers	34.4	29.1	34.4	32.4
To banks	34.4	28.1	25.6	21.6
To other private borrowers	34.4	29.1	34.4	32.4

Despite consolidation in the number of banks reporting foreign exposures, the overall foreign exposures of U.S. banks have continued to grow. Charts 1 through 3 show, in billions of 2000 \$U.S., the evolution of foreign exposure of U.S. banks, focusing on the totals (Chart

1), and then cross-border (Chart 2) and local claims (Chart 3). After declining over the late 1980s and into the early 1990s, the foreign exposures of U.S. banks have been growing strongly. The charts differentiate between the aggregate over all banks, the amount accounted for by MCBs, and the amount from all other U.S. banks reporting foreign exposures. The amount of total exposure from all other banks has only recently recovered, in real terms, to levels last seen in the mid 1980s. In Chart 2, all of the growth in cross-border lending has been concentrated in money center banks, with flat (in real terms) cross-border claims from all other banks with foreign exposures. Chart 3 shows that MCBs dominate totals in local claims,⁴ although other banks as a group have a low but increasing focus on this form of exposure. This dominance is also shown in the second panel of Table 1, which show that while the MCB dominance of local claims is less than what it was in the 1990s (around 90 percent), it still exceeds 80 percent of the total.

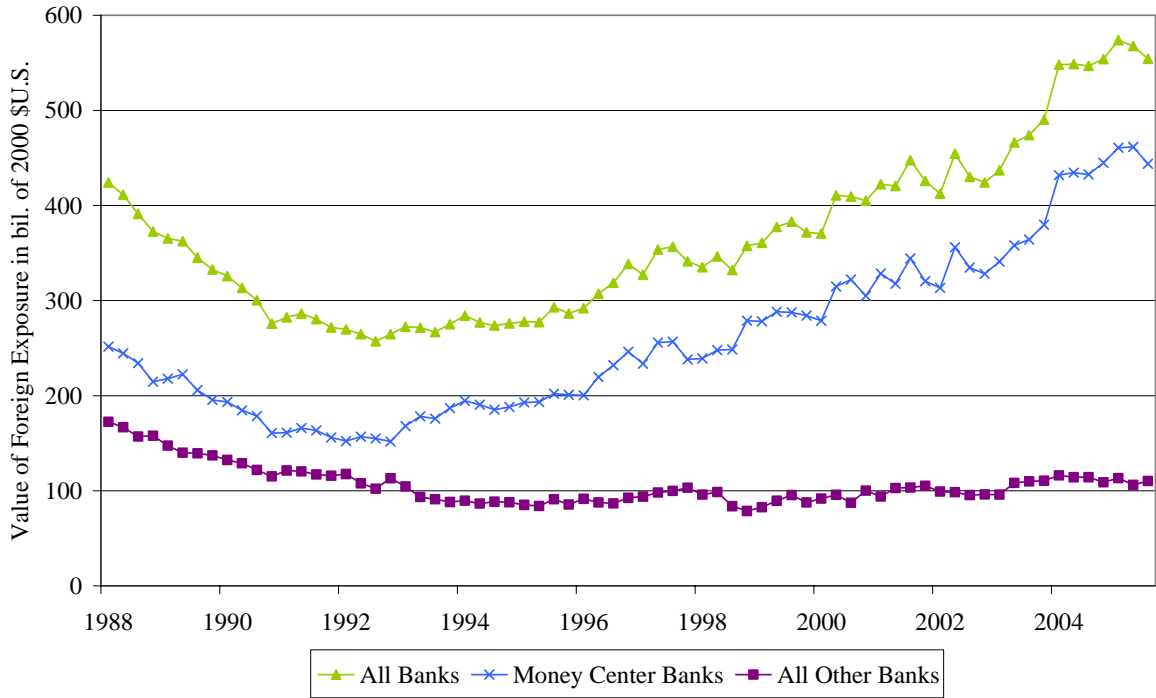
Chart 1: Total Foreign Exposure of U.S. Banks



Quarterly Data

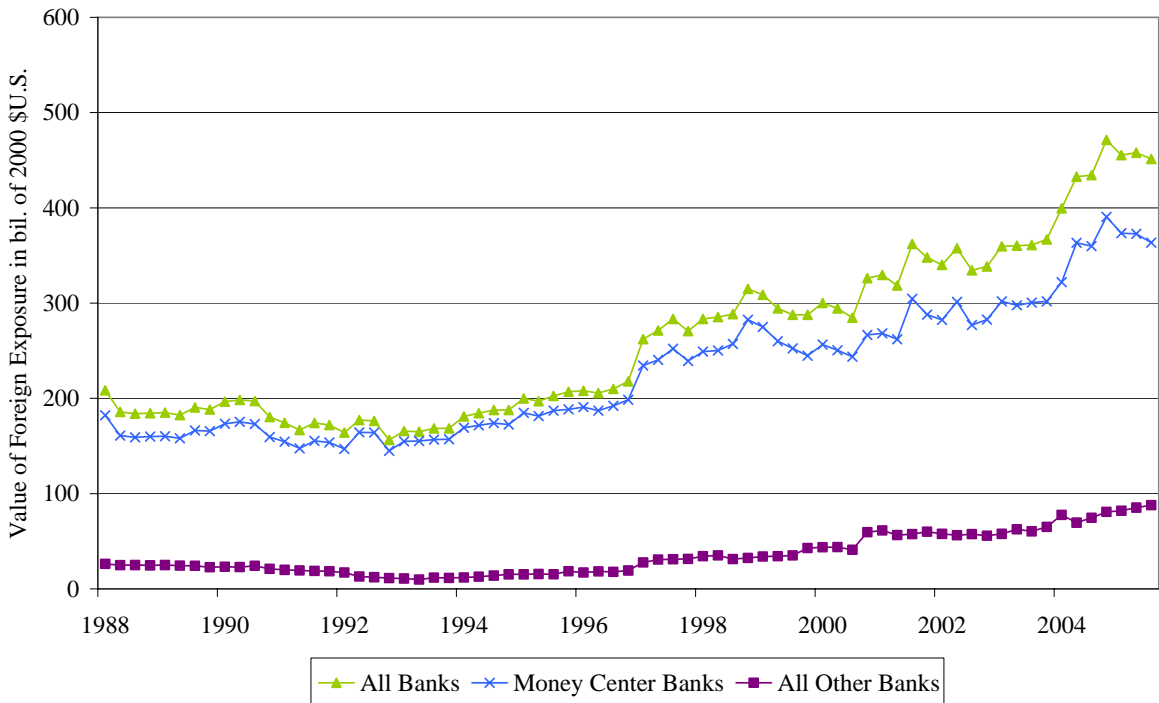
⁴ Local claims are loans issued, in any currency, by a foreign branch of a U.S. bank to borrowers in the country where the branch is located.

Chart 2: Total Cross-Border Exposure of U.S. Banks



Quarterly Data

Chart 3: Total Local Claims Exposure of U.S. Banks



Quarterly Data

Table 2: Geographical Breakdown of Total Exposures Across Banks, Allocated on an Ultimate Risk Basis

Breakdown of Total Exposure (in percent)	MCBs Only				non-MCBs			
	1990q4	1995q4	2000q4	2005q3	1990q4	1995q4	2000q4	2005q3
Industrialized Countries*	65.9	59.7	68.7	64.9	77.6	60.4	69.6	85.7
Emerging Markets*	34.1	40.3	31.3	35.1	22.4	39.6	30.4	14.3
Europe	47.5	42.6	53.8	55.6	39.5	37.2	47.4	59.2
Latin America	16.7	15.5	12.4	14.0	9.1	25.0	21.9	6.3
Asia and the Mid. East	23.7	32.1	24.5	22.2	40.2	26.3	10.7	7.2
Other Regions	12.0	9.8	9.3	8.2	11.1	11.5	20.1	27.4
Breakdown of Cross Border Exposure								
Europe	38.3	42.7	67.9	71.6	39.0	39.0	56.1	70.5
Latin America	27.0	20.9	12.6	10.0	9.1	22.0	18.7	10.7
Asia and the Mid. East	25.6	29.7	13.2	12.2	41.1	29.2	14.6	10.3
Other Regions	9.2	6.7	6.3	6.1	10.8	9.7	10.6	8.5
Breakdown of Local Claims Exposure								
Europe	56.8	42.6	34.4	31.2	42.5	28.9	30.7	43.1
Latin America	6.5	9.8	13.7	20.9	9.1	39.0	28.9	0.8
Asia and the Mid. East	21.8	34.6	40.1	37.5	35.4	12.5	3.9	3.5
Other Regions	14.9	13.1	11.8	10.4	12.9	19.7	36.5	52.6

* Industrialized/emerging classification from IMF.

Table 3: Geographical Breakdown of Exposures, Unweighted averages across banks in each category

Breakdown of Adjusted Total Exposure (in percent)	MCBs Only				non-MCBs			
	1990q4	1995q4	2000q4	2005q3	1990q4	1995q4	2000q4	2005q3
Industrialized Countries*	65.9	62.9	76.7	71.1	73.2	52.8	51.5	54.6
Emerging Markets*	34.1	37.1	23.3	28.9	26.8	47.2	48.5	45.4
Europe	44.5	42.9	62.1	60.5	31.8	33.5	34.8	41.5
Latin America	18.8	14.4	9.6	13.6	14.6	31.9	32.7	28.1
Asia and the Mid. East	26.7	34.0	18.7	17.5	40.7	23.7	19.0	17.2
Other Regions	10.1	8.8	9.6	8.5	12.9	10.9	13.5	13.1
Breakdown of Cross Border Exposure								
Europe	35.3	41.6	70.9	69.3	31.5	33.4	34.3	43.5
Latin America	27.4	19.5	10.4	10.0	14.7	32.1	33.1	27.7
Asia and the Mid. East	28.5	32.6	11.8	12.9	40.8	24.3	20.2	18.3
Other Regions	8.8	6.3	6.9	7.7	13.0	10.3	12.3	10.5
Breakdown of Local Claims Exposure								
Europe	62.4	49.9	40.2	42.9	55.0	40.9	47.6	32.3
Latin America	5.8	8.4	12.9	29.6	7.4	25.6	15.0	20.5
Asia and the Mid. East	20.3	30.1	32.6	20.5	29.5	17.3	11.0	12.2
Other Regions	11.5	11.6	14.2	7.0	8.2	16.2	26.3	34.9

* Industrialized/emerging classification from IMF.

Geographic Distribution on U.S. Bank Foreign Exposures

The geographical distribution of foreign exposures of U.S. banks has evolved over time. Tables 2 and 3 show this distribution, reporting totals across categories of banks and then for the average MCB or non-MCB. Each table presents details at five year intervals since 1990, with distinctions made between money center banks and all other banks. Looking first at the total averages in Table 2, foreign exposures are dominated by other industrialized countries, which make up 65 percent of MCB foreign exposure and 86 percent of non-MCB foreign exposure. Particularly for MCBs, exposures to industrialized countries are increasingly concentrated in Europe. The increasing importance of Europe has been driven by cross-border exposures, at the cost of cross-border exposure to Latin America and Asia. In local claims, Europe's share has declined for MCBs as these banks have expanded their local operations in Latin America. Non-MCBs developed substantial Latin American and Asian local claims in the mid-90s, but have recently returned their focus to Europe and Canada.

A different pattern emerges when we show the geographical breakdown of the average MCB and the average non-MCB. In this (unweighted) approach, the relative importance of industrialized countries for MCBs and non-MCBs are reversed, with industrialized countries making up 71 percent of the average MCB's foreign exposure but only 55 percent for the average other bank. The difference thus underscores a distribution of non-MCBs characterized by the presence of a few banks of large size with significant exposures in industrialized countries and many, smaller size banks with a larger presence in non-industrialized countries. In particular, the average non-MCB has maintained a Latin American share in total exposure of around 30 percent since the mid-90s. For MCBs, the unweighted approach reveals a significant dip in total Latin American exposures in 2000, followed by a recent recovery to mid-90s levels. This recovery has been driven entirely by local claims, with cross-border claims to Latin America remaining at 2000 levels for MCBs. The average MCB and the average non-MCB have both shown decreasing exposure to Asia and the Middle East.

III. Risks in U.S. Bank Foreign Exposures

This section explores the risks in U.S. bank foreign exposures, beginning with the concept of transfer risk and then introducing country risk considerations. While aggregate

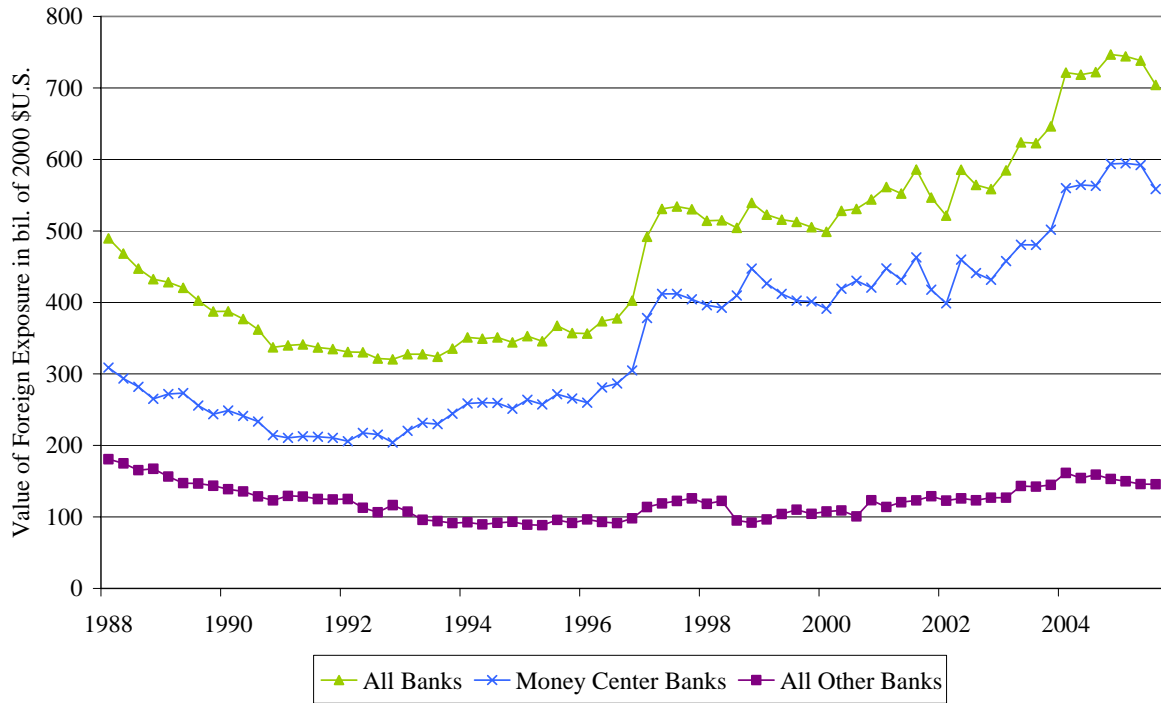
and publicly available reports provide numbers on total transfer risk and breakdowns across countries, we specifically use information on individual bank data to evaluate such risks for the average bank in each category. Through our bank-specific analysis we are able to relate these risks to other bank-specific information, like bank assets and bank capital, thus providing a clearer view of the risks in such U.S. bank foreign exposures, and the extent to which these risks appear to be well capitalized.

Transfer Risk is defined as the portion of a bank's foreign exposure that is vulnerable to default because a country is unable to provide local borrowers with sufficient access to foreign currencies to meet their foreign obligations denominated in a currency other than the local currency of the borrower. Houghton (1999) states that "the supervisory measure of transfer risk has become the sum of cross-border claims, net local country claims, and claims resulting from revaluation gains [i.e., derivative claims]" (p. 9).⁵

As shown in Chart 4, transfer risk displays an increasing trend, following the pattern we observed in Chart 1 on Total Foreign Exposure of U.S. Banks. Over the past five years, total exposure has grown by about 40 percent, in real terms, while transfer risk has grown by just over 30 percent. This slower growth in transfer risk has been a persistent trend. Chart 5 shows the ratio of transfer risk to total exposure for all banks, money center banks, and all other banks. As unweighted averages across individual banks in each category, these figures capture the average increase in importance of local branches and subsidiaries of within types of U.S. banks and the increased importance of netting out with local liabilities the total volume of their local country claims. This pattern is especially relevant for MCBs, which have been able to reduce total exposure by 23 to 30 percent in recent years (making the ratio of transfer risk to total exposure between 77 and 70 percent). The chart indicates a much smaller reduction for all other banks.

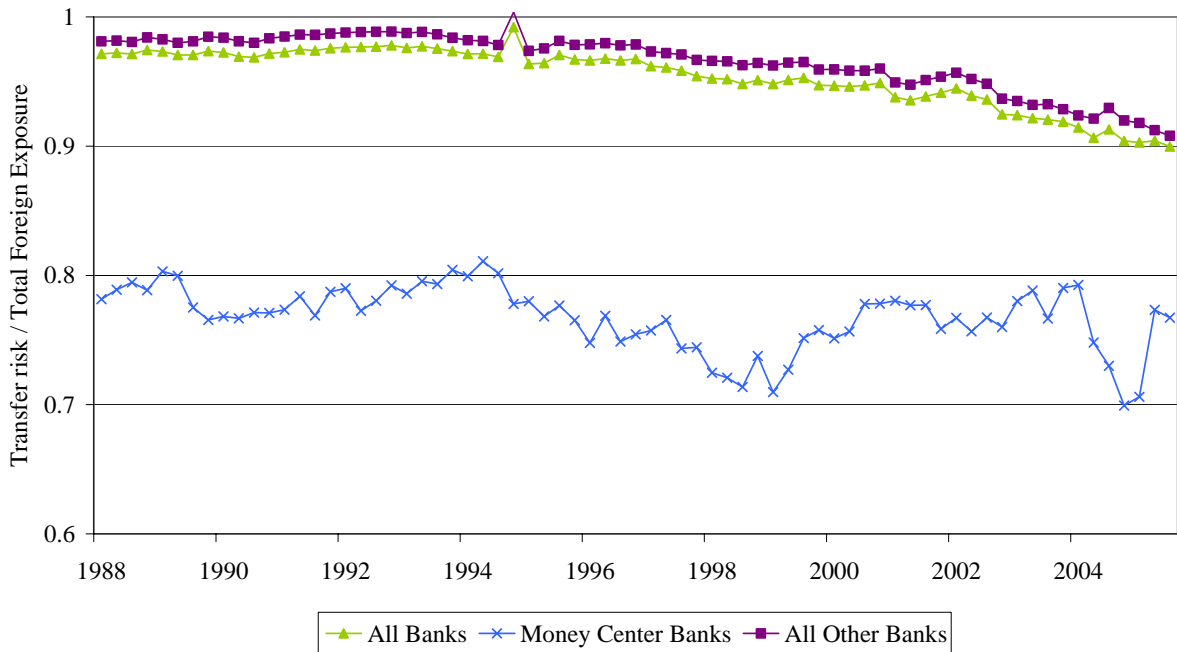
⁵ In our analysis, provided below, we calculate a bank's transfer risk to a specific country as follows, following Houghton's definition. We sum cross border and derivative claims, then add in net local claims (local claims – local liabilities) only if this net balance is positive.

Chart 4: Total Transfer Risk of U.S. Banks



Quarterly Data

Chart 5: Ratio of Transfer Risk to Total Exposure for U.S. Banks



Note: Unweighted average across banks in each category

The money center banks' ability to reduce transfer risk while increasing total exposure is also apparent in Table 3, which shows the capital ratios of the average MCB and non-MCB. For MCBs, the ratios of total exposure and transfer risk to total capital declined during the 1990s, but have reverted to their mid-90s level in more recent years. The ratio of exposure or transfer risk to equity capital is far higher for MCBs than for non-MCBs, typically up to four times as high for exposure and at least three times as high for transfer risk. Part of this discrepancy across types of banks is explained by foreign exposure playing a larger role in bank assets among MCBs as compared with non-MCBs. As the third row of the table demonstrates, on average MCBs are more internationally active as measured by the share of total exposure in total assets. The fifth row of the table shows that overall capital-to-asset ratios are more similar for MCB and non-MCB, though the average non-MCB is increasingly somewhat better capitalized. The fourth row of the table shows that the gap between bank types in transfer risk relative to assets has become far less pronounced than the gap in total exposure relative to assets. MCBs have more exposure, relative to their assets, but the risks associated with every dollar of exposure are lower.

Within this table we also provide standard deviations in each row at each date. The standard deviations are used to illustrate the extent to which bank specific information tends to differ from the mean data that we just discussed. There has been a dramatic rise in the differences across MCBs in their exposure and transfer risks relative to equity capital. The differences in exposure capitalization ratios are mainly driven by differences across banks in equity capital relative to overall assets.

Table 3: Capital Ratios of Exposed Banks (unweighted averages across banks)

Mean	MCBs only				non-MCBs			
	1990q4	1995q4	2000q4	2005q3	1990q4	1995q4	2000q4	2005q3
total exposure / total equity capital	7.72	5.95	4.66	5.17	1.97	1.70	2.05	1.55
<i>standard deviation</i>	3.47	1.99	3.43	4.37	2.59	2.69	3.82	2.80
transfer risk / total equity capital	5.70	4.43	3.58	4.27	1.90	1.66	1.98	1.44
<i>standard deviation</i>	2.33	1.38	2.87	4.63	2.53	2.67	3.81	2.78
total exposure as a share of total assets	0.36	0.37	0.28	0.23	0.13	0.14	0.16	0.14
<i>standard deviation</i>	0.14	0.11	0.21	0.14	0.17	0.19	0.21	0.20
transfer risk as a share of total assets	0.27	0.28	0.21	0.16	0.13	0.14	0.15	0.13
<i>standard deviation</i>	0.09	0.06	0.17	0.08	0.17	0.19	0.21	0.20
total equity capital / total assets	0.05	0.06	0.06	0.06	0.07	0.09	0.10	0.10
<i>standard deviation</i>	0.01	0.01	0.01	0.03	0.03	0.05	0.07	0.05

Total Equity Capital = Common Equity + Preferred Equity + Retained Earnings + Treasury Stocks

Total Assets = Cash + Securities + Federal Funds Sold + Loans + Trading Assets + Fixed Assets & Real Estate + Intangibles

Data are from quarterly Call Reports (banks) and Y-9C filings (bank holding companies).

Definitions of equity and assets are identical for banks and bank holding companies.

Further insights into the composition and degree of risk involved in foreign exposures are gained when we add into our analysis country risk considerations. *Country Risk* ratings are intended to reflect each country's ability to pay back its international debt. Country risk includes assessments of liquidity constraints, sovereign default, political instability, the possibility that the government will confiscate foreign property or refuse to enforce foreign claims on local lenders, and other relevant concerns.⁶ Since country risk covers a variety of features of a country it is generally reported as an index or letter grade. Most published classifications measure sovereign country risk, which is used as a proxy for overall country risk. Moody's, Standard and Poor's, Fitch, and the OECD all publish well-regarded sovereign country risk ratings. In our analysis below we use the Fitch data, which has been published since 1994. Fitch's country coverage has expanded since 1994 and now covers about 90 countries. The Fitch ratings are reported as A through D letter grades, with multiple letters denoting lower risk, so AAA is the best possible credit rating. Fitch groups its country rankings into investment grade, at BBB-rated and above, and speculative grade, at BB and below.⁷

Charts 6 through 8 use the information on the exposures of each bank to specific countries, and present constructed distributions of the risk in portfolios for different types of banks over three dates, 1995 Q4, 2000 Q4, and 2005 Q3. The risks for the average MCB are tracked in Chart 6, for the average non-MCB in Chart 7, and a comparison of relative risks of portfolios in 2005 for both types of banks in Chart 8. A distribution that is skewed more to the right means that a portfolio contains a higher share of exposures in safer countries.

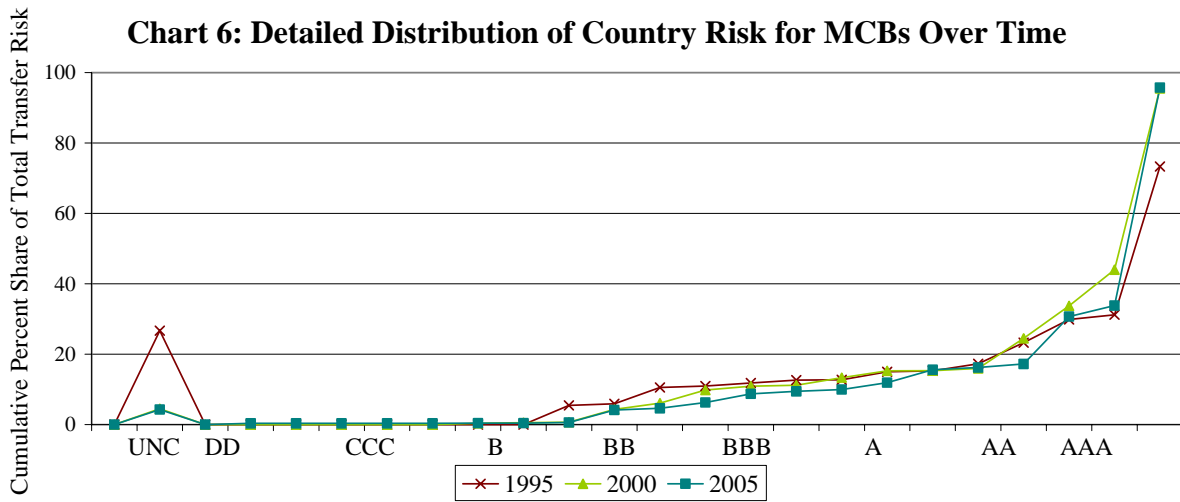
As mentioned in introduction, U.S. banks have produced significant changes in the portfolio composition of total foreign exposure over time, both through changing the form of exposure--via cross-border versus via local claims--and through a change in the proportion of "safer" or "riskier" countries. As shown in Chart 6, MCBs had similar distributions of country risk for 1995, 2000, and 2005. By contrast, Chart 7 shows that the average non-MCB had higher-risk countries in its portfolio in 2000 than in 1995, with this riskier portfolio largely

⁶ Houpt (1999) defines country risk as "all risks from economic, social, legal, and political conditions in a foreign country that may affect the status of loans to parties in that country" (p. 8)

⁷ Further details on Fitch classification details can be found at < http://www.fitchratings.com/corporate/fitchResources.cfm?detail=1&rd_file=ltr>

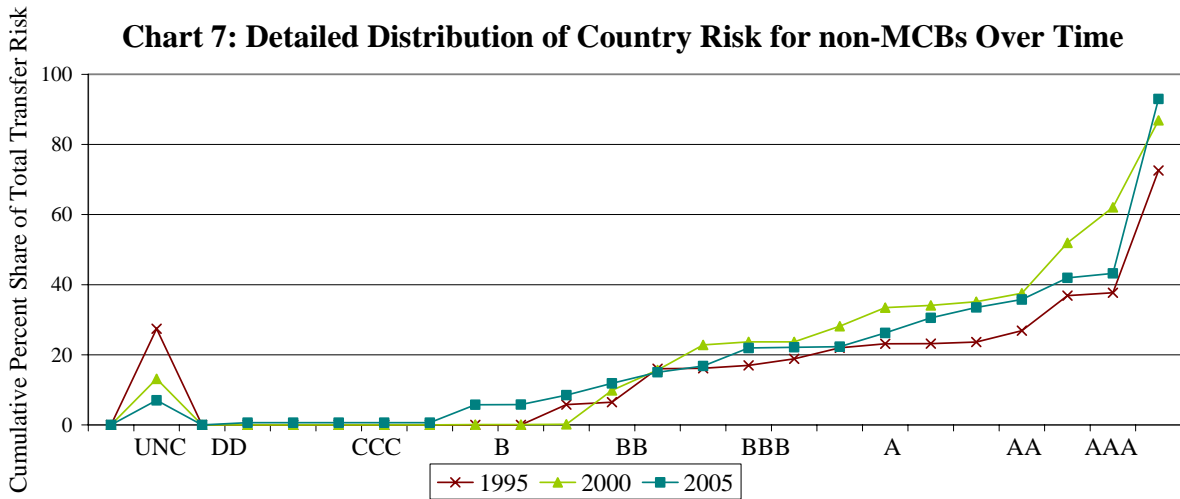
maintained in 2005. Chart 8 shows that in 2005, the non-MCBs had substantially more country risk in their transfer risk than non-MCBs.

Chart 6: Detailed Distribution of Country Risk for MCBs Over Time

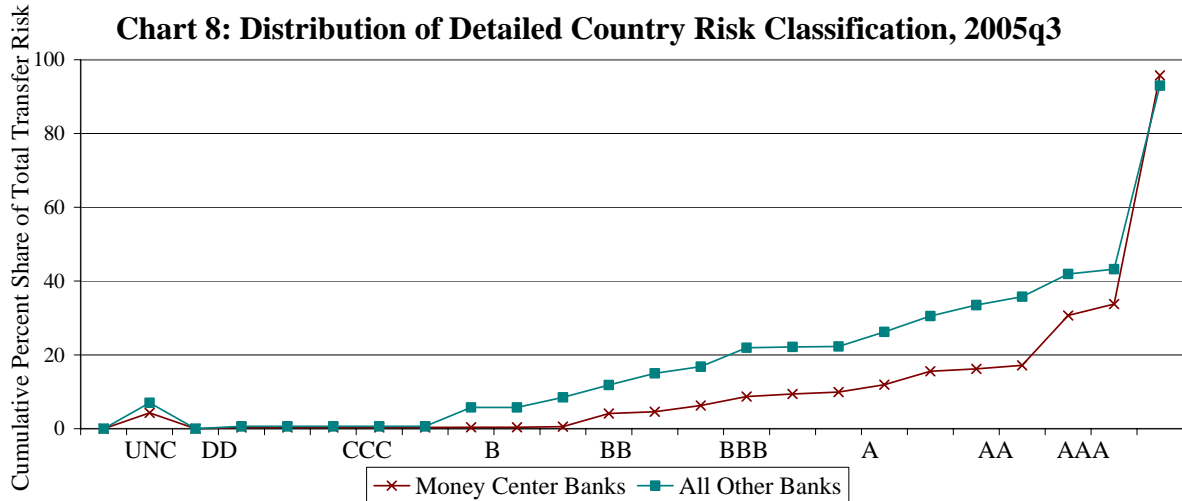


Note: Shares are unweighted averages across all banks in each category.

Chart 7: Detailed Distribution of Country Risk for non-MCBs Over Time



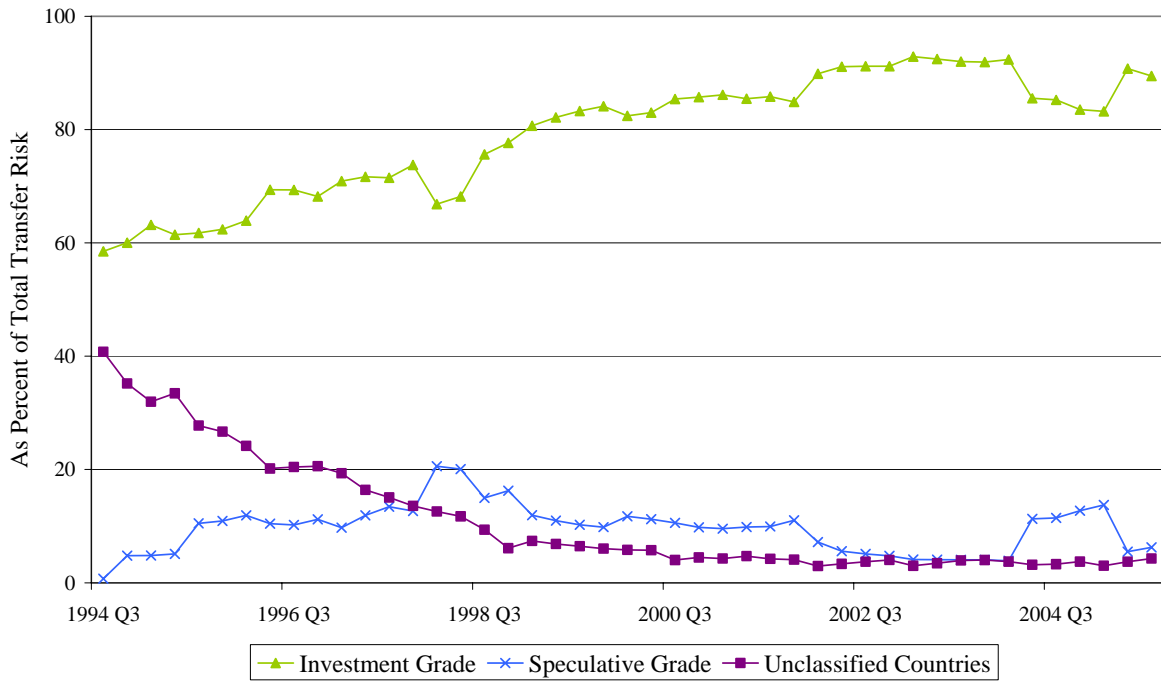
Note: Shares are unweighted averages across all banks in each category.



Note: Shares are unweighted averages across all banks in each category.

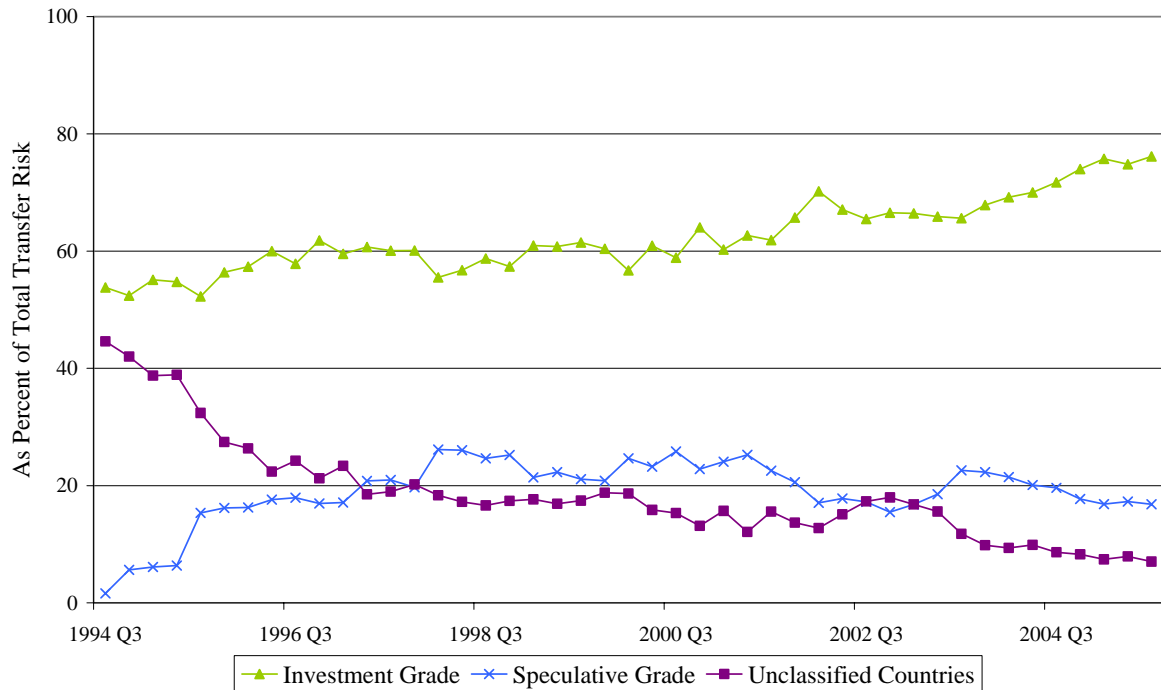
Another way of describing the riskiness of bank portfolios is by considering the shares within transfer risk of investment grade versus speculative grade countries. The shares over time for the average MCB banks and for the average non-MCB banks are presented in Charts 9 and 10. Over the past decade the investment-grade held share of transfer risk has risen for most banks, from 58 to 89 percent for the average MCB and from 54 to 76 percent for the average non-MCB. The increase in the speculative-grade share over the second half of the 1990s is due to absorption into this category of previously “unclassified” countries. By 2005, most of the remaining unclassified foreign exposure is to offshore banking centers, mainly the Cayman Islands, or to regional organizations. Non-MCBs, on average, maintain a much higher share of transfer risk in riskier countries, as compared with the average MCB. As shown in Chart 11, the share of AAA-grade countries in the investment grade part of bank foreign exposures has risen across the average MCB and non-MCB since the late 1990s. Particularly for MCBs, the overall portfolio of foreign exposure has tilted heavily toward investment grade, and toward the safer countries within investment grade.

Chart 9 Country Risk within Transfer Risk for Money Center Banks



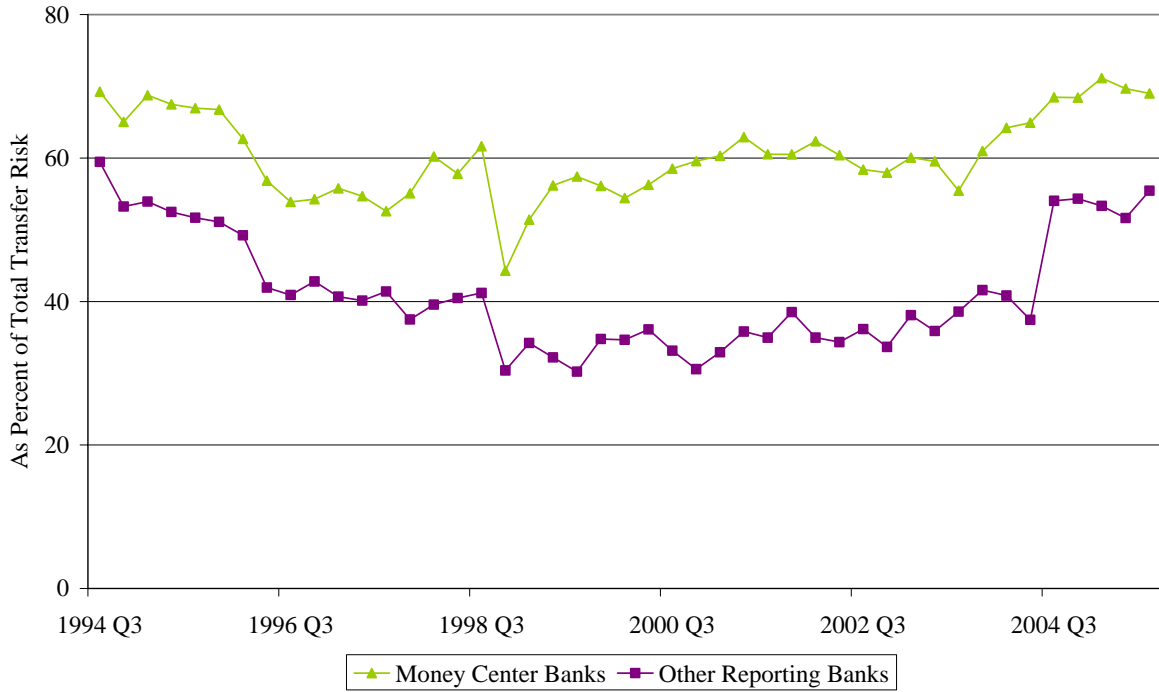
Note: Shares are unweighted averages across all money center banks.

Chart 10 Country Risk within Transfer Risk for non-MCB



Note: Shares are unweighted averages across all non-money center banks.

Chart 11 AAA Grade Exposure within Investment Grade



Note: Shares are weighted averages across all banks

IV. Concluding Remarks

The total foreign exposures of U.S. banks, especially MCBs, have continued to grow over time. On average across MCBs, exposure relative to equity capital has begun to rise toward levels last seen in the mid 1990s. At the same time, the incidence of foreign exposure on banks total asset portfolio has diminished. Non-MCBs reporting foreign exposure have generally improved their overall capitalization, and as a result, on average, foreign exposure has reduced its weight on the average non-MCB’s equity capital.

Both MCBs and non-MCBs have increased their share of foreign exposure towards safer countries. Some of the exposure of MCBs to riskier countries – especially Latin American countries – is now achieved mainly through the activities of local branches and subsidiaries that take on liabilities as well as assets. Hence, MCBs have maintained their exposure to riskier countries while reducing its relative impact on transfer risk. MCBs have now nearly 90 percent of their transfer risk in investment grade countries, with the investment grade share increasingly dominated by the safest countries in this category. While the move

toward a safer portfolio also characterizes the average non-MCB, the tendency is less dramatic and there is more variation across these smaller banks.

References

Bank for International Settlements, Committee on Global Financial Stability, "Foreign direct investment in the financial sector of emerging market economies", working group report #22 March 2004, ISBN 92-9197-666-0

Bomfin, Antulio and William Nelson, "Profits and Balance Sheet Developments at U.S. Commercial Banks in 1998", *Federal Reserve Bulletin* vol. 85 (June 1999) pp. 369-95.

Crystal, Jennifer, B. Gerard Dages, and Linda Goldberg. 2001. "Does Foreign Ownership Contribute to Sounder Banks in Emerging Markets? The Latin American Experience." *Open Doors: Foreign Participation in Financial Systems in Developing Countries*, eds. R. Litan, P. Masson, M. Pomerleano, Brookings Press.

Dages, B. Gerard, Daniel Kinney, and Linda Goldberg. 2000. "Foreign and Domestic Bank Participation in Emerging Markets: Lessons from Mexico and Argentina" in Federal Reserve Bank of New York, *Economic Policy Review* 6(3): 17-36.

Goldberg, Linda. 2002. "When Is Foreign Bank Lending to Emerging Markets Volatile?" in *Preventing Currency Crises in Emerging Markets*, edited by Sebastian Edwards and Jeffrey Frankel (NBER and University of Chicago Press).

Goldberg. 2004. Financial Sector Foreign Direct Investment: New and Old Lessons. NBER working paper, #10441, April.

Hawkins, John and Dubravko Mihaljek. 2001. "The banking industry in the emerging market economies: competition, consolidation and systemic stability: an overview". In *The banking industry in the emerging market economies: competition, consolidation and systemic stability* Bank for International Settlements papers no. 4 (August).

Haupt, J. V. 1999. "International Activities of U.S. Banks and in U.S. Banking Markets", *Federal Reserve Bulletin* (September) pp. 599-615.

Litan, R. 2001 *Open Doors: Foreign Participation in Financial Systems in Developing Countries*, eds. R. Litan, P. Masson, M. Pomerleano, Brookings Press.

Palmer, David. 2000. "U.S. Bank Exposure to Emerging-Market Countries during Recent Financial Crises." *Federal Reserve Bulletin*, February (Board of Governors of the Federal Reserve System) pp. 81-96.

Santor, Eric. 2004. "Contagion and the Composition of Canadian Banks' Foreign Asset Portfolios: Do Crises Matter?" Manuscript, Bank of Canada.

Data Appendix.

Banking exposure data

U.S. FFIEC 009 and 009a reports are filed quarterly by all U.S. banks with significant exposures.

Background: The report was initiated in 1977 as the FR 2036 report and was used to collect data on the distribution, by country, of claims on foreigners held by U.S. banks and bank holding companies. The FDIC and OCC collected similar information from institutions under their supervision. In March 1984, the FR 2036 became a Federal Financial Institutions Examination Council (FFIEC) report and was renumbered FFIEC 009. It was revised in March 1986 to provide more detail on guaranteed claims. In 1995 (1997?), the report was revised to add an item for revaluation gains on off-balance-sheet items and an item for securities held in trading accounts, and several items were combined. Another revision which will, among other changes, make the FFIEC report more directly comparable to the BIS foreign exposure reports will be implemented starting with the 2006q1 report.

Respondent Panel: The panel consists of U.S. commercial banks and bank holding companies holding \$30 million or more in claims on residents of foreign countries. Respondents file the FFIEC 009a if exposures to a country exceed 1 percent of total assets or 20 percent of capital of the reporting institution. FFIEC 009a respondents also furnish a list of countries in which exposures were between 3/4 of 1 percent and 1 percent of total assets or between 15 and 20 percent of capital. Participation is required.

Appendix Table: Country Risk Classifications in 2004q4

Countries Classified as AAA-rated	Countries Classified as other A-rated	Countries Classified as B-rated or below
Austria	Australia	Argentina
Denmark	Bahrain	Azerbaijan
Finland	Belgium	Bolivia
France	Bermuda	Brazil
Germany	Canada	Bulgaria
Ireland	Chile	Cameroon
Luxembourg	China	Colombia
Netherlands	Cyprus	Costa Rica
Norway	Czech Republic	Croatia
Singapore	Estonia	Dominican Republic
Spain	Greece	Ecuador
Sweden	Hong Kong	Egypt
Switzerland	Hungary	El Salvador
U.K.	Iceland	India
	Israel	Indonesia
	Italy	Iran
	Japan	Kazakhstan
	Korea	Lebanon
	Kuwait	Malawi
	Latvia	Mali
	Lithuania	Mexico
	Malaysia	Mozambique
	Malta	Panama
	New Zealand	Papua New Guinea
	Portugal	Peru
	Saudi Arabia	Philippines
	Slovakia	Poland
	Slovenia	Romania
	Taiwan	Russia
		Serbia
		South Africa
		Thailand
		Tunisia
		Turkey
		Uganda
		Ukraine
		Uruguay
		Venezuela
		Vietnam
Share of 2004q4 Countries that were similarly classified in 2000q4		
71.4	72.4	94.9
Share of 2004q4 Countries that were similarly classified in 1994q4		
50	58.6	89.7

Source data: Fitch