

# Japanese Banks in a Global Context

## Is the equity market undervaluing the sector?

### ■ Industry Overview

- Just under a year ago we launched the Global Context series with a report on the banking sector. It seems fitting therefore as we approach our launch anniversary that the tenth report in the series should be a revised version of what was amongst Citi Research Japan's highest read publications in 2011. As well as reassessing again the positioning of Japan's banks the report highlights their current cheapness and the fact that the credit markets and rating agencies see them as amongst the least likely globally to default. This is something we feel that the equity market has yet to recognize. One theme that continues to gather pace is the way Japan's lenders look to increase revenue growth opportunities overseas.

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**Hironari Nozaki, CFA**

+81-3-6270-4849

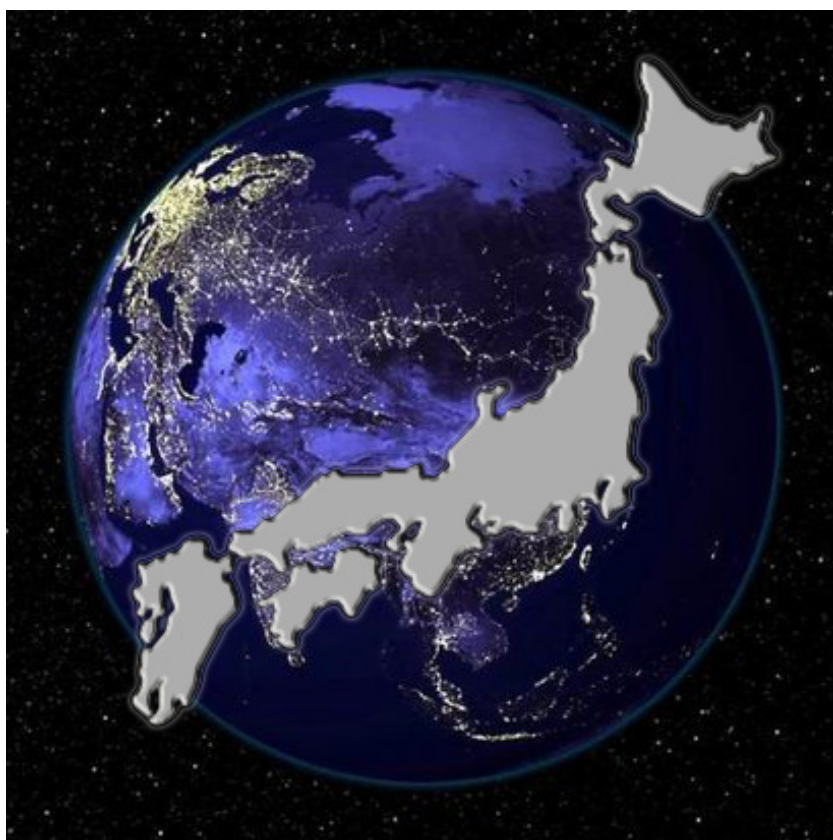
hironari.nozaki@citi.com

**Kana Saito**

+81-3-6270-4857

kana.saito@citi.com

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**See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.**

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Ronit Ghose et al	Global	8/17/2012	<a href="#">Global Banks Insights - KPIs: SBI bad news and Standard Chartered good news</a>
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Source: Citi Research

## Other 'Japan in a Global Context' reports

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Source: Citi Research

## Executive Summary

- **Positioning of Japanese banks** — The global financial landscape is changing due to the financial crisis and sovereign risk, and we think this will accelerate as global financial regulations are tightened. In this report we look into global bank positioning and whether Japanese banks have appeal.
- **Globalization adjustment and Japanese banks** — Financial globalization has progressed rapidly since the start of the 21st century, but we think it entered an adjustment phase with the Lehman Brothers failure. On the other hand, the global presence of Japanese banks, which had been in decline since the 1988 Basel Accord, is slowly climbing again.
- **Is regulatory tightening positive or negative?** — With financial regulations (Basel 3, etc.) getting stricter, financial institutions the world around are facing a significant headwind, and Japanese banks are no exception. However, we think this regulatory tightening could work to the advantage of Japanese banks that hold abundant liquidity. At the same time, several hurdles must be overcome to unlock this added value.
- **Credit market leads equity market** — We think the market capitalizations of Japanese banks are cheap relative to their global peers. In contrast, the rating agencies and credit markets have taken a relatively upbeat view of fundamentals in this sector. We think the shares could move higher if the equity market adopts a position closer to that of the credit market.
- **Overseas opportunities offer a way out** — Japanese banks' liquidity and stable credit ratings in Japan and elsewhere have led to a growing number of overseas business opportunities. We think it is a natural progression for banks to turn away from a punishingly competitive domestic environment and seek revenue growth overseas.

# Chapter 1. The market's assessment

## 1. Two “lost” decades

### (1) Cyclicality in market caps

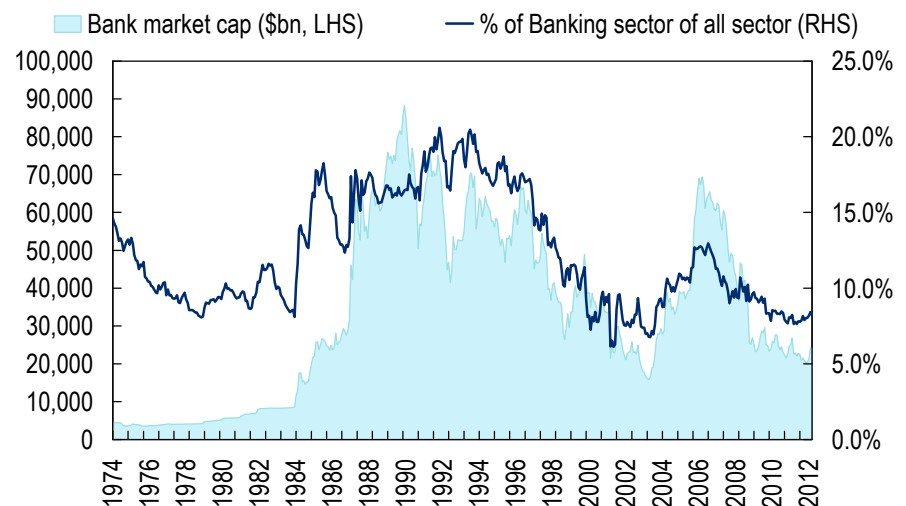
#### Banks' domestic status

Banking is a highly cyclical industry, as illustrated by Figure 1, which shows aggregate market cap for Japan's banking sector as a percentage of total market cap in the country.

Banks' market caps peaked in December 1989 in absolute terms and in July 1993 relative to the broader market before entering a decade-plus downturn. That slide ended in mid-2003 as bank shares rallied, but market caps peaked out again in 2007 and have moved steadily lower since then.

The chart of market cap share over the last six months looks as though it might mark the start of an uptrend, in our view.

Figure 1. Japanese bank's market cap share



Source: Datastream, Citi Research.

#### Position of Japanese banks in the global market

##### Correction in globalization and reemergence of Japanese banks

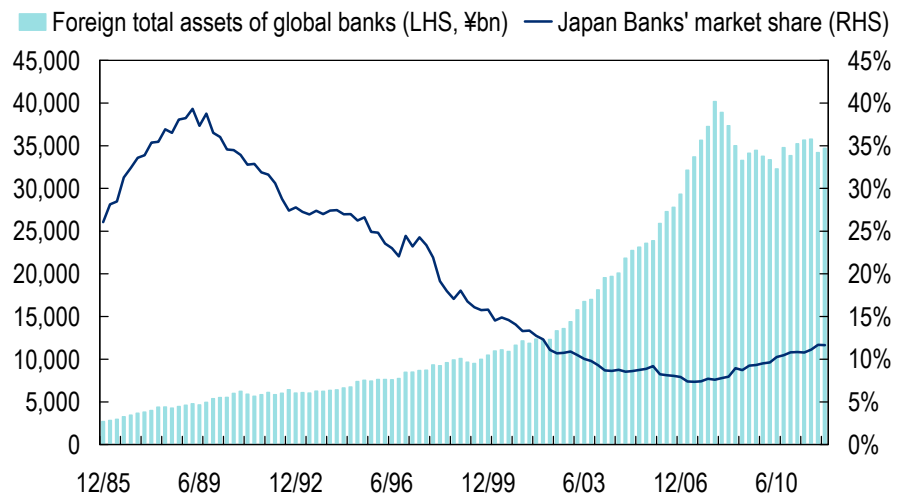
Japanese banks' importance in global financial markets has diminished since the collapse of Japan's bubble and the financial crises that followed. Figure 2 illustrates external assets held by global banks and the percentage of those assets owned by Japanese banks, based on data compiled by the Bank for International Settlements (BIS).

### Japanese banks global presence recovering

As shown in Figure 2, there has been rapid progress in financial globalization as well as growth in financial assets since the turn of the century. The failure of Lehman Brothers in 2008 and the subsequent financial crisis triggered a sharp correction in banks' holdings of external assets after this period of rapid growth. Although holdings of external assets appear to have stabilized, the possibility of further declines and deleveraging cannot be ruled out given the uncertainty surrounding banking regulation and Europe's sovereign debt crisis.

Japanese banks once held 40% of the global banking sector's external assets, but that share figure has steadily fallen. Nevertheless, modest improvements have been made since the Lehman shock and financial crisis of 2008–09. We anticipate more cyclical movements going forward.

**Figure 2. Japanese banks' share of external assets held by global banks**



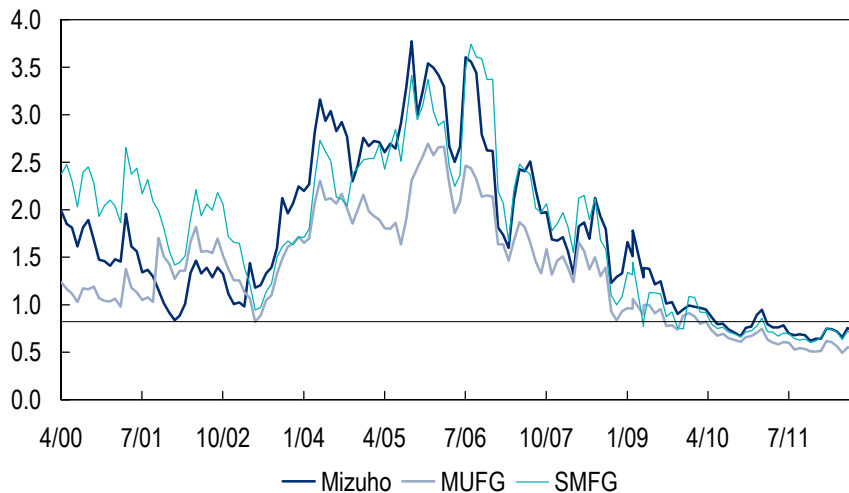
Source: BIS, Citi Research.

## (2) Valuation

### Japanese banks no longer appear overvalued

For many years Japanese bank valuations, expressed in terms of PBR or PER, appeared demanding relative to those of financial institutions in other countries. More recently, however, Japanese bank valuations have lost their richness and actually seem cheap compared with those of overseas banks.

Figure 3. Megabank PBRs, 2000–2011



Source: Datastream, Citi Research.

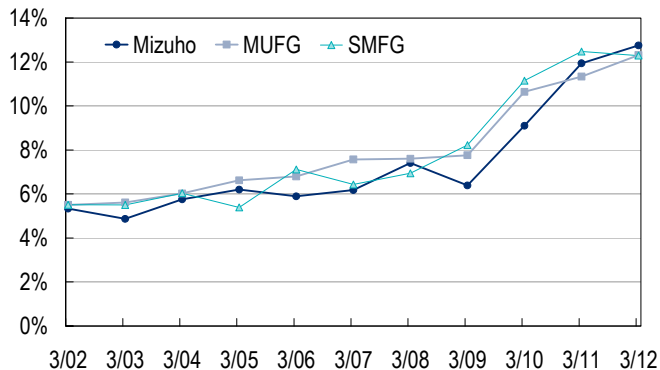
One reason for this shift in valuations is the growing influence on stock price formation of overseas investors using a high risk-free rate to determine expected rates of return. Nor can we rule out the possibility that investors have heavily discounted Japanese bank shares in recent years, citing weak capital bases or (what we think are excessive) concerns about the fundamentals.

### Valuations have dropped below levels of financial crisis

Figure 3 shows the PBRs of Japan's megabanks since April 2000. PBRs have already dropped below the levels seen during the 2003 financial crisis and the subsequent rush to raise capital. In 2003 market participants were concerned about a possible nationalization of the banks, and it was difficult to tell how dilutive new equity issues would be.

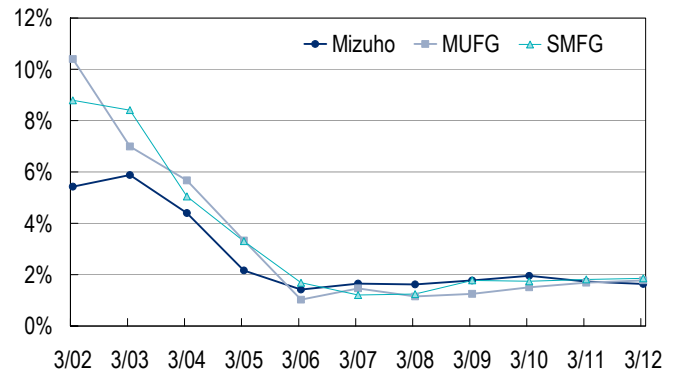
Concerns about banks' financial positions are also evident in Figures 4-7, which show changes in key indicators at the megabanks over time. Tier 1 ratios are currently more than double what they were in 2003. Not only are capital ratios higher, but asset quality has improved markedly. Figure 5 shows the megabanks' bad loan ratios, deferred tax assets, and equity holdings, respectively. Each of these risk factors has improved notably since 2003.

Figure 4. Tier I ratio



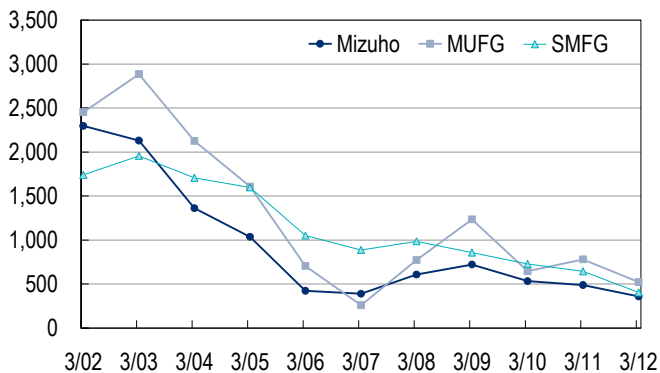
Source: Company data, Citi Research.

Figure 5. NPL ratios



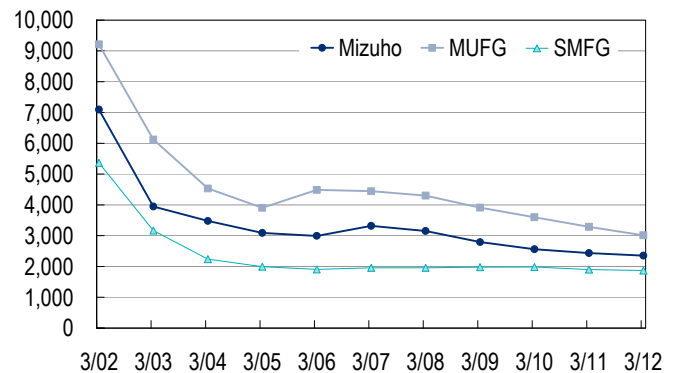
Source: Company data, Citi Research.

Figure 6. Deferred tax assets (¥bn)



Source: Company data, Citi Research.

Figure 7. Equity holdings (acquisition cost basis, ¥bn)



Source: Company data, Citi Research.

Although banking is not the only sector where shares appear undervalued in historical terms, we do not think current valuations have priced in the aforementioned improvements in banks' financial positions.

To be sure, the business outlook for global financial institutions is highly uncertain: there is the sovereign debt issue in Europe and concerns about a recession in the US. But given the paucity of financial risk factors relative to overseas institutions and the negligible risk of book value impairment, we think Japanese bank valuations have overshot to the downside.

### (3) Bank rankings rise and fall

#### Sector dynamics change

It appears the market has taken an increasingly dim view of Japanese banks as their presence in the international financial

landscape has waned. Figure 8 ranks global banks by market cap at the end of 1989, at the height of Japan's bubble.

At that time 19 of the top 20 were Japanese institutions. They included 14 banks, three securities firms, one insurance company, and one real estate firm.

**Figure 8. Global financial institutions (incl. real estate) ranked by market cap (end-1989, \$mn)**

	COMPANY	Country	MCAP (\$mn)
1	Industrial Bank of Japan	Japan	104,162
2	Sumitomo Bank	Japan	71,932
3	Fuji Bank	Japan	67,810
4	Mitsubishi Bank	Japan	63,603
5	Dai-Ichi Kangyo Bank	Japan	62,256
6	Sanwa Bank	Japan	53,592
7	Nomura Securities Co	Japan	46,751
8	Long-Term Credit Bank Japan	Japan	43,293
9	Tokai Bank	Japan	35,286
10	MITSUI TAIYO KOBE	Japan	34,914
11	Taiyo Kobe Bank	Japan	28,159
12	Mitsubishi Trust & Banking Co	Japan	27,514
13	Bank of Tokyo	Japan	26,950
14	Sumitomo Trust & Banking Co	Japan	24,389
15	Tokio Marine & Fire Insurance	Japan	22,239
16	Mitsubishi Estate Co	Japan	21,995
17	Nippon Credit Bank	Japan	21,879
18	Allianz AG Hldg	Germany	21,492
19	Daiwa Securities Co	Japan	20,791
20	Nikko Securities Co	Japan	19,480

Source: S&P Global Equity Indices, Citi Research.

However, conditions changed dramatically as Japanese banks' standing diminished during the nation's two "lost" decades, overseas financial institutions expanded their global presence, and emerging economies arrived on the global stage.

Figure 9 shows the latest ranking by market cap of global financial institutions covered by Citi Research. MUFJ is still the only Japanese bank in the top 20. Although there has been some improvement over the past year, the total market caps of the three Japanese megabanks together would not be enough to rank among the top four banks globally.

Figure 9. Global financial institutions ranked by market cap (\$mn)

2012	Diff vs 2011	Company	Country	Market cap	Diff. vs 2011 market cap
1	-	ICBC	China	202,707	-3.0%
2	+ 2	Wells Fargo	US	182,480	40.0%
3	- 1	CCB	China	169,903	-4.5%
4	- 1	HSBC	UK	160,061	13.4%
5	+ 2	JP Morgan Chase	US	137,383	7.4%
6	- 1	Agricultural Bank of China	China	131,513	0.9%
7	- 1	Bank of China	China	106,191	-17.9%
8	+ 1	Commonwealth Bank	Australia	94,209	30.0%
9	+ 1	Bank of America	US	80,073	12.1%
10	+ 3	Westpac Banking Corp	Australia	75,855	24.7%
11	- 3	Itaú Unibanco	Brazil	72,905	-3.3%
12	+ 5	ANZ	Australia	66,998	27.2%
13	+ 1	MUFG	Japan	66,697	9.9%
14	+ 1	Sberbank RF	Russia	63,895	8.5%
15	+ 6	US Bancorp	US	63,436	40.5%
16	- 4	Bradesco	Brazil	60,891	-3.9%
17	+ 1	National Australia Bank	Australia	60,044	18.3%
18	- 7	Banco Santander	Spain	59,513	-8.9%
19	-	Standard Chartered	UK	58,647	17.9%
20	+ 2	BNP Paribas	France	49,696	11.3%
21	- 5	Goldman Sachs	US	49,670	-6.1%
22	+ 5	SMFG	Japan	42,958	12.5%
23	- 3	UBS	Switzerland	41,475	-13.2%
24	+ 1	Bank of Communications	China	41,338	0.5%
25	+ 4	Mizuho	Japan	40,107	18.4%
26	- 2	China Merchants Bank	China	39,398	-5.6%
27	+ 4	Nordea	Sweden	39,040	25.8%
28	- 2	Royal Bank of Scotland	UK	38,067	-4.5%
29	- 1	BBVA	Spain	35,661	-3.1%

Note: Top 29 banks covered by Citi Research. Market cap data as of 5 August 2012; rankings for previous survey as of 15 September 2011.  
Source: Citi Research.

### Balance sheet adjustments and loss of market's trust

A number of factors contributed to this dramatic shift in the financial landscape. They include the balance sheet adjustments that occurred as Japan's bubble burst and large, highly leveraged borrowers defaulted on their loans; a structural decline in economic growth rates; advances by China and other emerging economies; and the revival of western financial institutions.

We also need to keep in mind that the tables above were compiled using USD-based numbers. The decline in Japanese banks' market capitalization is even more pronounced when we consider that yen was trading above ¥140/\$ at the end of

1989, which means today's yen is worth roughly twice as much in dollars.

However, we think it is fair to question whether market cap accurately reflects underlying fundamentals. Below we attempt to provide an answer from a variety of historical and global perspectives.

## 2. Global comparison of share price trends

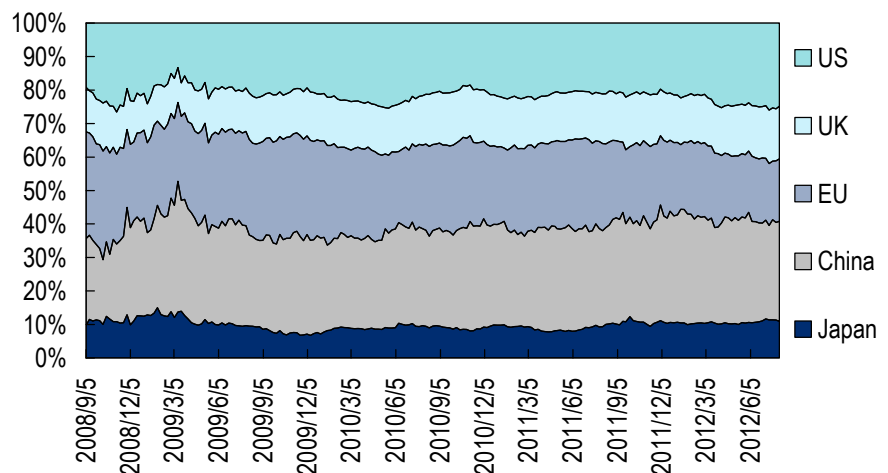
### (1) Share of global bank market cap

#### Japanese banks' share unchanged as European lenders lose ground

Global bank market capitalizations have exhibited heavy volatility since the financial crisis. Figure 10 shows how the market cap shares of banks in various regions have fluctuated since 2008.

US banks now account for a larger portion of the global sector, while European banks' presence continues to diminish as the eurozone crisis continues. Japanese banks' share of global bank market cap is largely unchanged since 2008.

Figure 10. Trends in bank market cap by region



Note: US\$ based  
Source: Citi Research.

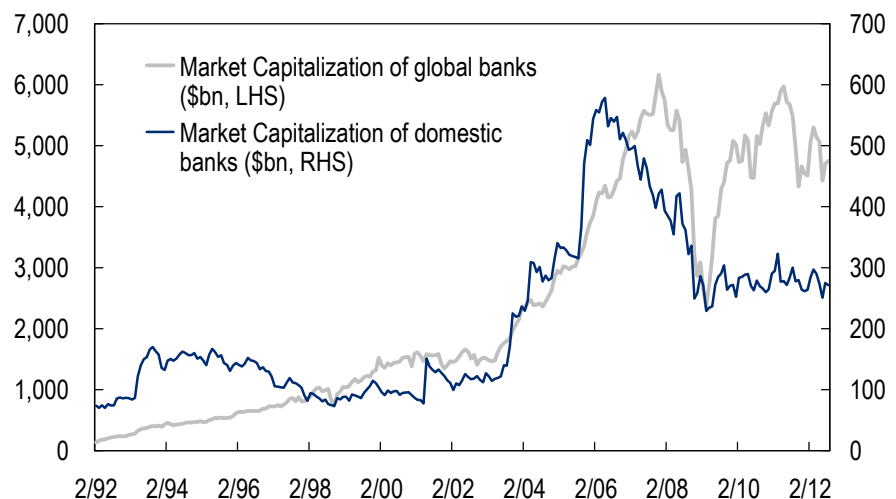
## (2) Global trends in market cap

### Japanese bank market cap largely in line with global banks

We next examined the stock price performance of global banks, including Japanese institutions. We think time-series data based on market capitalization provide a better picture of the market's true assessment, for two reasons. First, share issues make it difficult to determine the market's actual evaluation from individual share prices or bank sector indices alone. Second, many banks around the world issued equity in the wake of the global financial crisis.

Figure 11 compares the market cap of Japanese and non-Japanese banks over a period of almost two decades starting in 1992. While certain periods are characterized by deviations or lags, the two exhibited largely similar movements until the global financial crisis struck in 2009.

**Figure 11. Banking sector market cap: Japan vs. the rest of the world**



Source: Citi Research.

### Disparities have widened since global financial crisis

The market cap of global banks, including Japanese institutions, fell sharply in the wake of the global financial crisis. While the shares of US and European banks as well as emerging market banks subsequently recovered, Japanese bank stocks remained depressed. A driving force behind the recovery in western bank shares was the policy response to the crisis, which helped stabilize the markets. Japanese bank shares did not benefit from this turnaround in sentiment.

Consequently, the market caps of Japanese and non-Japanese bank shares have diverged substantially over the last two years. Does this continued gap reflect an actual disparity in the value of Japanese and non-Japanese banks? In the following sections we consider possible reasons for the disparity.

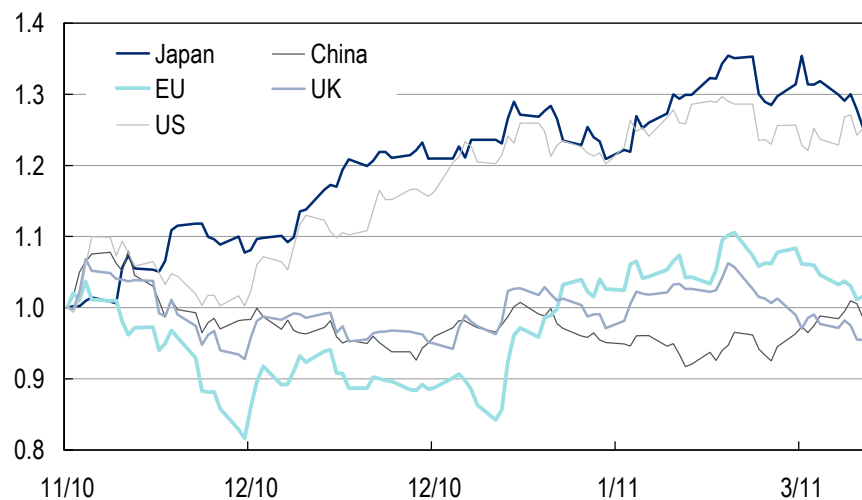
### (3) Trends in market cap at Japanese banks

#### Disparity appeared on verge of correcting in November 2010...

Although Japanese bank shares have been laggards in the two years since the global financial crisis, there was a potential turning point in November 2010.

The performance of Japanese bank shares clearly turned up in mid-November 2010. The shares of Japanese and US banks began to recover while European and Chinese bank shares languished.

Figure 12. Market cap: November 1, 2010 to March 11, 2011

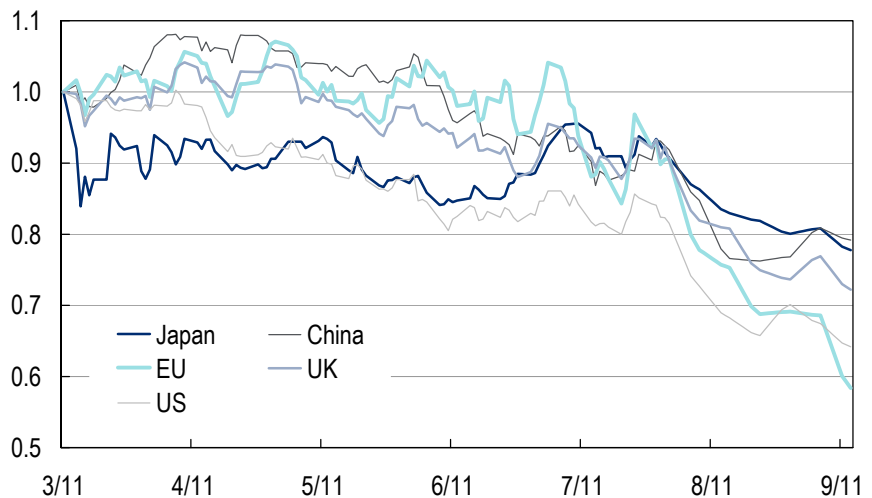


Note: Calculations in US dollars. Starting point indexed to 1.  
Source: Citi Research.

#### But March 2011 earthquake snuffed out correction

This recovery ended when the March 2011 earthquake and tsunami sent Japanese bank shares sharply lower. In addition to the massive economic damage from the disaster, we think statements made by senior government officials regarding banks' exposure to Tokyo Electric Power (TEPCO) helped focus attention on the risks held by Japanese banks.

Figure 13. Market cap: March 1, 2011 to September 30, 2011



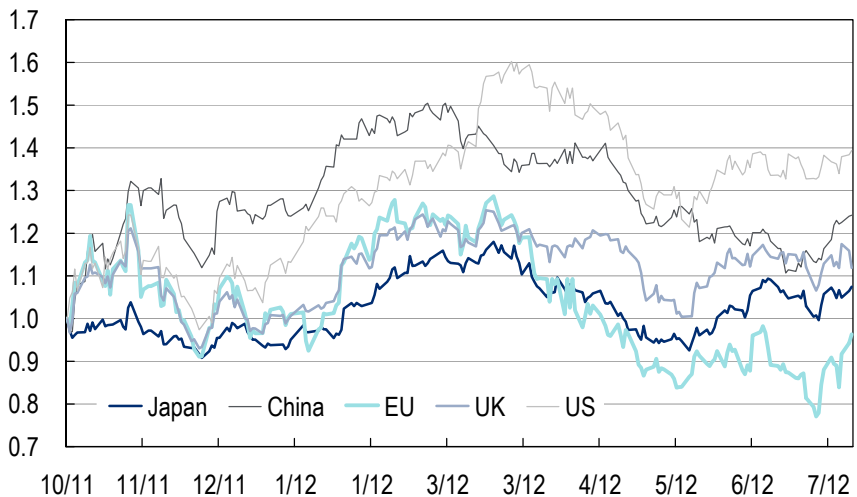
Note: Calculations in US dollars. Starting point indexed to 1.  
Source: Citi Research.

### Performance over most recent year

European bank shares have heavily underperformed over the last year in response to the sovereign crisis. US bank stocks, in contrast, have been strong performers, partly because of a bull market in US equities and partly because some investors appear to be shifting funds from EU banks to US lenders as the eurozone crisis escalates.

Under different circumstances, we think Japanese bank shares would have gained on their solid earnings and limited exposure to European markets. But the lackluster performance over the past year suggests investors have not been overly impressed by their comparatively strong fundamentals.

Figure 14. Market cap: October 1, 2011 to August 30, 2012



Note: Calculations in US dollars. Starting point indexed to 1.  
Source: Citi Research.

### 3. Gap between equity and credit markets

#### (1) Equity market slowly climbing learning curve

##### Concerns about tougher capital rules

We think one reason for the divergence in the market cap of Japanese and non-Japanese banks since the Lehman shock and ensuing financial crisis is the belief that the implication of Basel 3 will be particularly unfavorable to Japanese banks. We were often told by both domestic and overseas investors that Japanese banks lack capital and will be forced to issue more equity. We think this sort of view represented a global consensus of sorts, at least until October 2010.

There has been a strong push for tougher capital adequacy requirements for banks since the London G20 meeting in April 2009. News reports about Basel 3 led to frequent concerns about the capital adequacy ratios of Japanese banks, and the two public share offerings carried out by each of the three megabanks only added fuel to the fire.

##### Concerns have passed their peak

These concerns about capital adequacy peaked in September and October 2010 as investors worried about a possible increase in risk assets under Basel 3. The managements of

leading western banks warned about such a possibility at investor meetings that September, and this cast a shadow over Japanese banks as well.

We frequently heard reports claiming that the increase in risk asset holdings would force Japanese banks to issue several trillion yen or more in additional equity. But market concerns eased somewhat starting November 2010, creating the opportunity for a rethink of the new capital adequacy requirements and conditions in Japan's banking sector.

The catalysts were 1) the agreement on a Basel 3 framework reached at the Seoul G20 meeting in November 2010 and 2) the release in December 2010 of the final Basel 3 document, which painted a clear picture of the new regulatory framework and helped deter unfounded speculation.

We also think Japanese banks' decision to disclose Basel 3-based capital adequacy ratios when releasing first-half financial results in early November 2010 helped correct misconceptions by demonstrating that capital ratios would not fall to the extent many market participants expected. Today there is very little discussion about the potential weakness in the financial positions of Japanese banks.

## **(2) What the equity market is overlooking**

### **Bear market characteristics**

We think the market tends to become less efficient during bearish phases as risk appetite diminishes and firms scale back research expenditures.

At the same time, the credit market becomes more sensitive to information, with participants willing to pay to analyze even subtle changes in companies and industries, suggesting a wide range of information is being efficiently factored into market prices.

Japanese bank shares are evidence of this difference between equity markets and credit markets, in our view. From early on, credit market participants have viewed Japanese banks in a better light than their counterparts in the equity markets.

### **Ratings momentum**

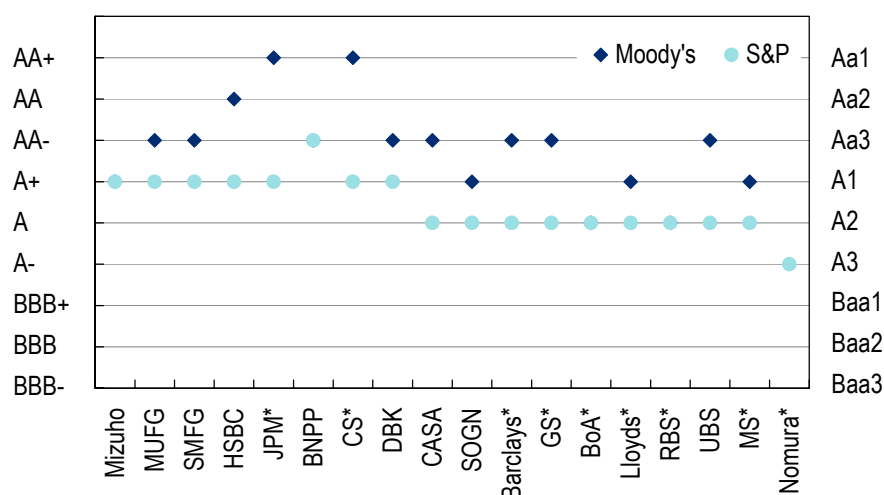
Many Japanese banks had AAA ratings in the 1980s, but Japan's financial crisis resulted in numerous downgrades. A similar phenomenon is now being observed in the west.

Figure 15 compares the current credit ratings of leading global banks. It shows the ratings of Japanese institutions are in the

process of catching up to (or in some cases surpassing) their US and European counterparts. Japanese banks are also characterized by a stable ratings outlook.

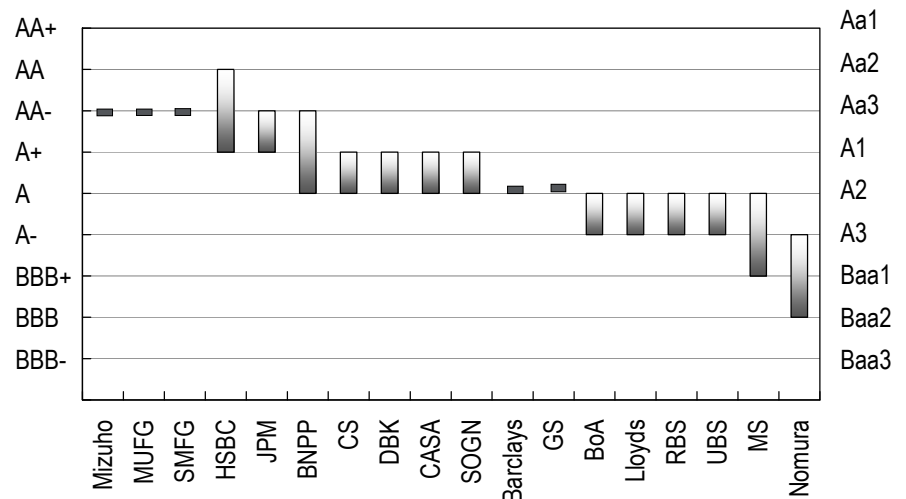
Figure 16 illustrates changes in ratings at the same banks over the last few years. The trend suggests that credit analysts have taken a relatively favorable view of Japanese banks. While ratings are not necessarily a proxy for the credit markets, they are at least an important indicator of views in those markets.

Figure 15. Bank credit ratings (as of end-July 2012)



Note: \*Individual bank ratings based on the ratings of the holding company  
Source: Moody's Investors Services, Standard & Poors, Citi Research.

**Figure 16. Changes in global bank credit rating over time (Moody's long-term ratings)**



Note: Lighter shade portion of bars indicate ratings prior to 2012 rating changes. Darker shade portion represents end-July 2012 ratings.

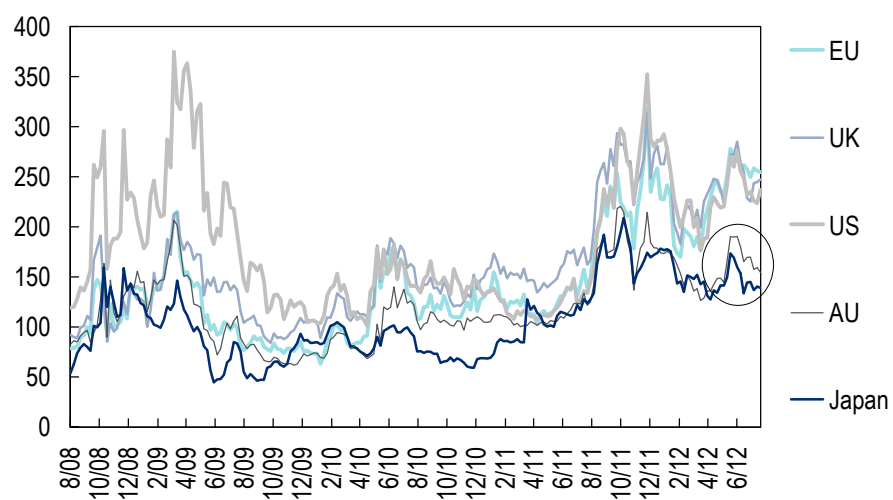
Source: Moody's Investors Service, Citi Research.

## CDS spreads

Credit default swaps (CDS), while characterized by poor liquidity, are another representative indicator of credit market sentiment. Graph 17 compares CDS spreads for major global banks. Here again, the market perceives Japanese megabanks—along with Australian lenders—as being relatively unlikely to default.

In summary, we think equity markets may start to price in the Japanese bank fundamentals that credit market participants have seen for some time.

Figure 17. Bank CDS spreads by country



Source: Bloomberg, Citi Research.

## Chapter 2. Comparing bank financials

### 1. FY11 trends

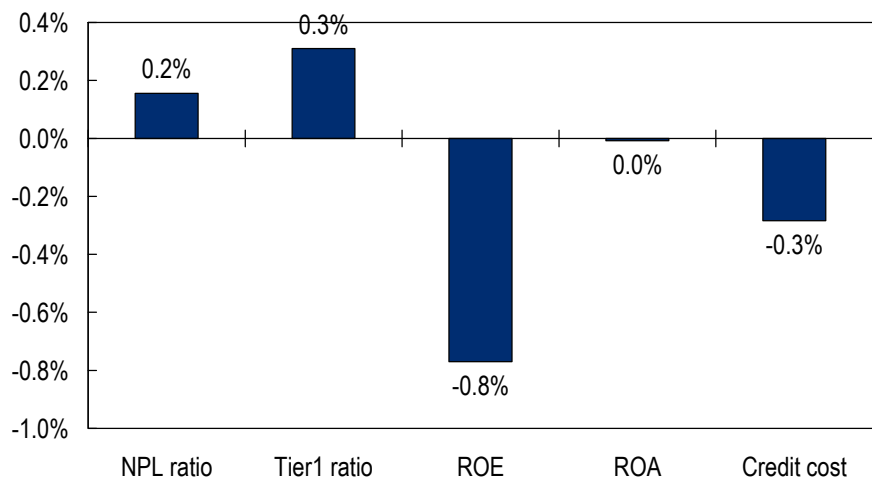
#### De-leveraging

Figure 18 provides a visual summary of key financial indicators at global banks over the last year. On the profitability front, RoA has not changed but RoE has dropped substantially. That, together with the increase in Tier 1 ratios, suggests banks are de-leveraging amid a global shift toward tighter banking regulation.

In terms of asset quality, credit costs increased over the past year in spite of a modest improvement in NPL ratios. While the results differ to some extent by region, these are generally considered signs of a credit cycle downswing.

Below we analyze bank balance sheets and income by region.

**Figure 18. One-year changes in NPL ratios, Tier 1 ratios, ROE, ROA, and credit costs**



Note: Banks covered by Citi Research with market caps of at least \$10bn. Based on FY11 figures. Positive figures for NPL ratios and credit costs represent improvement  
Source: Citi Research.

### 2. Balance sheets

#### (1) Scale

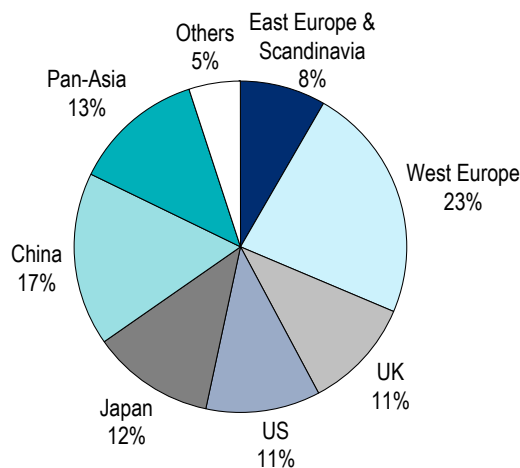
##### Deposits and Loans

We have now established that Japanese banks trail leading institutions in other countries in market cap and valuation. How do they rank in terms of commercial banking operations like

loans and deposits? Figure 2 showed that Japanese banks' share of cross-border lending had dropped from around 40% to about 10%, and as Figure 19 illustrates their share of total lending is about 12%.

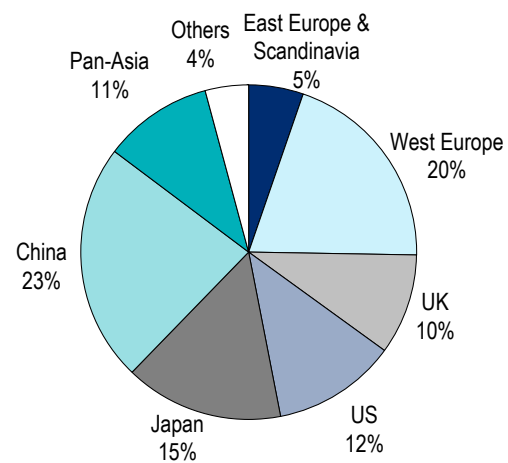
However, they still account for about 15% of worldwide deposits (Figure 20), reflecting Japan's large pool of personal financial assets and the central role of bank deposits in asset allocation strategies.

Figure 19. Breakdown of global lending (end-FY11)



Note: Banks covered by Citi Research (175).  
Source: Citi Research.

Figure 20. Breakdown of global deposits (end-FY11)



Banks covered by Citi Research (175).  
Source: Citi Research.

## Rankings of individual banks

Chinese banks, such as ICBC (Industrial and Commercial Bank of China) top the list for both loans and deposits. Japanese banks are also ranked near the top, and although MUFG did not make the top ten in terms of market cap, it ranks fifth for loans and second for deposits.

Compared with banks in Europe and the US, Japanese and Chinese lenders tend to employ a traditional balance sheet-based commercial banking model and are the largest in the world in terms of loans and deposits.

When comparing the loans and deposits rankings of Japanese banks, it is important to understand that because domestic loan demand has been sluggish and deposits have been steadily growing, Japanese banks generally tend to rank higher in deposits than in loans.

Figure 21. Lending, top 50 (\$mn)

Company	Region	Loans
1 Industrial & Commercial Bank of China	China	1,237,521
2 China Construction Bank	China	1,032,168
3 Bank of China	China	1,007,764
4 Banco Santander	Spain	995,710
5 <b>Mitsubishi UFJ Financial Group</b>	<b>Japan</b>	<b>961,941</b>
6 HSBC Holdings PLC	UK	940,429
7 Bank of America Corp	US	924,010
8 Agricultural Bank of China	China	894,304
9 Lloyds Banking Group PLC	UK	878,860
10 BNP Paribas SA	France	860,249
11 Wells Fargo & Co	US	769,631
12 <b>Mizuho Financial Group</b>	<b>Japan</b>	<b>754,903</b>
13 <b>Sumitomo Mitsui Financial Group</b>	<b>Japan</b>	<b>737,715</b>
14 UniCredit Group	Italy	724,481
15 JP Morgan Chase & Co	US	723,720
16 Royal Bank of Scotland Group PLC	UK	705,577
17 Barclays PLC	UK	671,117
18 Commonwealth Bank of Australia	AU	553,237
19 Societe Generale	France	550,916
20 Deutsche Bank	Germany	539,491
21 Credit Agricole SA	France	537,812
22 Intesa Sanpaolo	Italy	487,732
23 Westpac Banking Corp	AU	483,307
24 Banco Bilbao Vizcaya Argentaria SA	Spain	467,806
25 National Australia Bank Ltd	AU	463,691
26 Nordea	East Europe	433,394
27 Bank of Communications	China	407,018
28 Commerzbank	Germany	395,146
29 Australia and New Zealand Banking Group Ltd	AU	387,726
30 Danske Bank A/S	East Europe	321,593
31 <b>Resona Holdings</b>	<b>Japan</b>	<b>310,883</b>
32 UBS	Switzerland	285,083
33 Standard Chartered PLC	UK	263,765
34 China Merchants Bank	China	260,738
35 Sberbank RF	East Europe	260,282
36 Credit Suisse	Switzerland	249,811
37 <b>Sumitomo Mitsui Trust Holdings</b>	<b>Japan</b>	<b>248,427</b>
38 Svenska Handelsbanken AB	East Europe	230,662
39 China CITIC Bank	China	227,844
40 Banco do Brasil	South America	227,023
41 DNB ASA	East Europe	215,454
42 Itaú Unibanco	South America	213,081
43 US Bancorp	US	195,048
44 China Minsheng Banking	China	191,489
45 Banca Monte dei Paschi di Siena SpA	Italy	189,821
46 KBC	East Europe	185,829
47 Bradesco	South America	185,541
48 KB Financial Group	Korea	182,969
49 Swedbank AB	East Europe	175,621
50 Erste Bank	East Europe	173,732

Note: Banks covered by Citi Research (175), FY2011 results.  
Source: Citi Research.

Figure 22. Deposits, top 50 (\$mn)

Company	Region	Deposits
1 Industrial & Commercial Bank of China	China	1,948,096
2 <b>Mitsubishi UFJ Financial Group</b>	<b>Japan</b>	<b>1,624,643</b>
3 China Construction Bank	China	1,586,833
4 Agricultural Bank of China	China	1,528,774
5 Bank of China	China	1,401,022
6 HSBC Holdings PLC	UK	1,253,925
7 JP Morgan Chase & Co	US	1,127,806
8 <b>Sumitomo Mitsui Financial Group</b>	<b>Japan</b>	<b>1,086,643</b>
9 <b>Mizuho Financial Group</b>	<b>Japan</b>	<b>1,068,833</b>
10 Bank of America Corp	US	951,331
11 Wells Fargo & Co	US	871,800
12 Deutsche Bank	Germany	779,090
13 Banco Santander	Spain	762,579
14 UniCredit Group	Italy	726,833
15 BNP Paribas SA	France	707,301
16 Credit Agricole SA	France	680,521
17 Royal Bank of Scotland Group PLC	UK	643,475
18 Lloyds Banking Group PLC	UK	643,106
19 Barclays PLC	UK	568,722
20 Bank of Communications	China	521,649
21 Intesa Sanpaolo	Italy	462,757
22 Societe Generale	France	440,438
23 <b>Resona Holdings</b>	<b>Japan</b>	<b>428,145</b>
24 National Australia Bank Ltd	AU	389,404
25 Commonwealth Bank of Australia	AU	371,899
26 Banco Bilbao Vizcaya Argentaria SA	Spain	365,344
27 UBS	Switzerland	365,042
28 Westpac Banking Corp	AU	357,818
29 Australia and New Zealand Banking Group Ltd	AU	356,321
30 China Merchants Bank	China	352,729
31 Standard Chartered PLC	UK	342,701
32 Credit Suisse	Switzerland	334,116
33 Commerzbank	Germany	330,607
34 China CITIC Bank	China	312,689
35 <b>Sumitomo Mitsui Trust Holdings</b>	<b>Japan</b>	<b>290,279</b>
36 China Minsheng Banking	China	261,320
37 Sberbank RF	East Europe	246,309
38 Nordea	East Europe	246,122
39 Banco do Brasil	South America	237,433
40 KBC	East Europe	213,926
41 State Bank of インド	India	209,708
42 Banca Monte dei Paschi di Siena SpA	Italy	189,453
43 US Bancorp	US	183,622
44 PNC Financial Services Group Inc	US	183,044
45 Postbank	Germany	175,765
46 Woori Finance Holdings	Korea	167,294
47 KB Financial Group	Korea	164,190
48 Erste Bank	East Europe	153,920
49 Danske Bank A/S	East Europe	147,808
50 Bank of China (Hong Kong)	HK	147,631

Note: Banks covered by Citi Research (175), FY2011 results.  
Source: Citi Research.

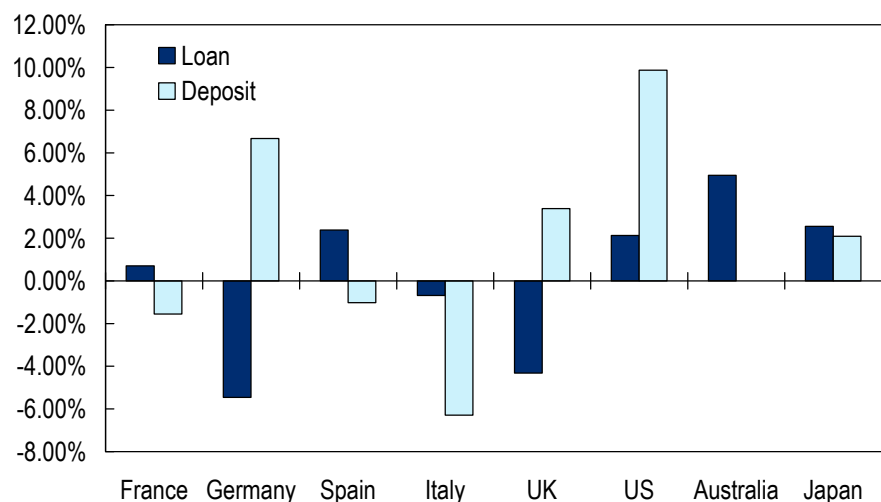
## Comparison of past-year performance

Figure 23 compares growth in deposits and loans at banks covered by Citi Research. Results for each country are based on the local currency to eliminate the effect of exchange rate fluctuations.

One clear trend is that loans and deposits are growing at US and Japanese banks and falling at European institutions. The growth in deposits at US banks was especially pronounced, while Italian banks reported a marked decline in deposits.

In Japan, loan growth exceeded deposit growth for the first time in many years, reflecting both stronger domestic loan demand and increased overseas lending by the megabanks.

**Figure 23. Rate of increase in deposits and loans by country (end-FY11/end-FY10)**



Note: Results are for all banks with head offices in the designated country and therefore include a certain amount of overseas loans and deposits. Does not represent the trends in deposit and loan balances in each area.

Source: Citi Research.

## Huge disparity in market-cap-to-loan-book ratios

Figure 24 ranks banks in terms of the ratio of market cap to loans outstanding. The higher this ratio, the better the market's assessment of a bank's business value relative to the size of its loan book. The rankings are dominated by banks in emerging economies, probably reflecting 1) expectations that strong economic growth will drive lending growth and 2) large spreads attributable to the continued existence of protective regulation.

An extended period of low interest rates, sluggish growth, and low RoAs explain why the market has taken a dim view of Japanese banks relative to the size of their lending and deposit operations.

That noted, we do not expect a further widening of current valuation disparities. We think there are limits to the sustainability of growth in the emerging economies and project that growth will eventually bring financial liberalization and a possible correction in asset prices that have overshot to the upside. We also think that liquidity will come to play a central role—including the direction of regulation—in the post-crisis financial markets. Accordingly, we think the current valuation disparity will eventually be rectified.

Figure 24. Banks ranked by ratio of market cap to loans

	Bank	Area	Market cap/loans	Market cap/deposits
1	Bank Central Asia	Indonesia	87%	56%
2	HDFC Bank	India	68%	53%
3	Bank Mandiri (Persero)	Indonesia	58%	43%
4	Bank Rakyat Indonesia ( Persero )	Indonesia	56%	43%
5	Banorte	South America	50%	48%
6	Hang Seng Bank	HK	43%	28%
7	Bank Pekao SA	East Europe	41%	37%
8	Santander Chile	South America	41%	53%
9	Garanti Bank	Middle East	39%	38%
10	Halkbank	Middle East	39%	33%
11	Bank of China (Hong Kong)	HK	36%	22%
12	ICICI Bank	India	36%	38%
13	Itaú Unibanco	South America	34%	56%
14	Bradesco	South America	33%	52%
15	US Bancorp	US	33%	35%
16	Public Bank	Malaysia	29%	26%
17	PKO BP	East Europe	29%	29%
18	FirstRand Limited	Africa	29%	25%
19	Santander Brasil	South America	28%	46%
20	Isbank	Middle East	28%	26%
21	Maybank	Malaysia	25%	22%
22	OCBC	Singapore	25%	22%
23	Capital One Financial Corp.	US	25%	26%
24	Sberbank RF	East Europe	25%	26%
25	Wells Fargo & Co	US	24%	21%
26	UOB	Singapore	23%	20%
27	Standard Bank Group	Africa	23%	21%
28	Standard Chartered PLC	UK	22%	17%
29	BB&T	US	22%	18%
30	PNC Financial Services Group Inc	US	21%	17%
31	ABSA Group Limited	Africa	19%	16%
32	JP Morgan Chase & Co	US	19%	12%
33	Nedbank Ltd	Africa	19%	18%
34	M&T Bank Corp	US	18%	18%
35	Australia and New Zealand Banking Group Ltd	AU	17%	19%
36	Commonwealth Bank of Australia	AU	17%	25%
37	HSBC Holdings PLC	UK	17%	13%
38	China Construction Bank	China	16%	11%
39	Industrial & Commercial Bank of China	China	16%	10%
40	Westpac Banking Corp	AU	16%	21%
41	Fifth Third Bancorp	US	15%	16%
42	China Merchants Bank	China	15%	11%
43	Agricultural Bank of China	China	15%	9%
44	UBS	Switzerland	15%	11%
45	Banco do Brasil	South America	14%	14%
46	State Bank of India	India	14%	12%
47	China Minsheng Banking	China	14%	10%
48	National Australia Bank Ltd	AU	13%	15%
49	Bank VTB	East Europe	12%	16%
50	Swedbank AB	North Europe	12%	25%
63	Mitsubishi UFJ Financial Group	Japan	7%	4%
70	Mizuho Financial Group	Japan	5%	4%
72	Sumitomo Mitsui Trust Holdings	Japan	5%	4%

Note: Out of the 78 deposit-taking financial institutions covered by Citi Research with market caps of at least \$10bn. Based on FY11 figures.

Market cap as of August 5, 2012

Source: Citi Research.

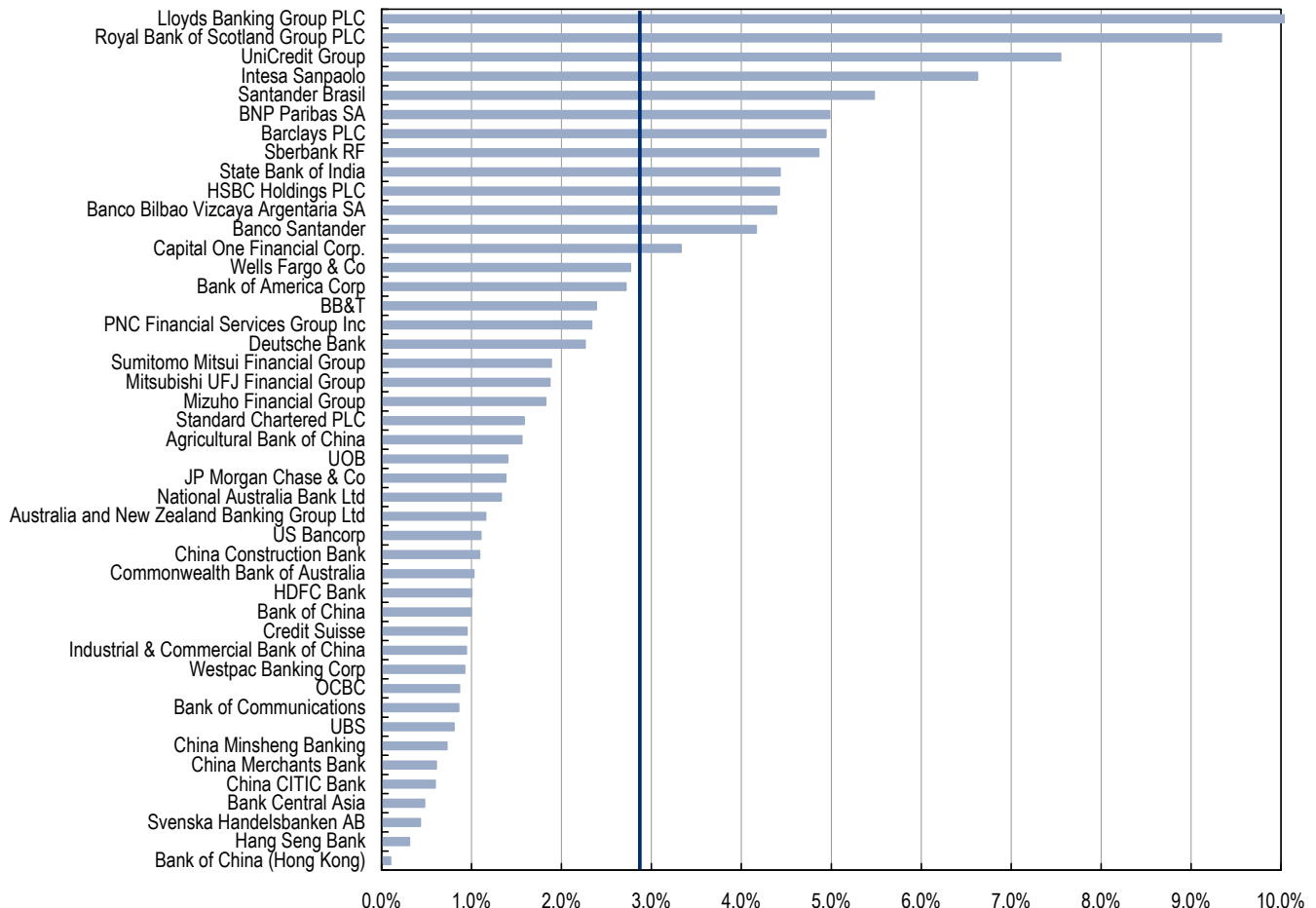
## (2) Stability

### Bad loan ratios vary widely...

Figure 25 ranks banks by bad loan ratios, which varied widely. Nearly 10% of all institutions had bad loan ratios of less than 1%. The bad debt ratios of Japanese banks were substantially lower than the 2.9% average indicated by the bold vertical line in the graph.

Banks in the UK and Italy had particularly high NPL ratios, while Chinese and Australian lenders reported comparatively few bad loans. US and Japanese institutions were located between these two extremes. The NPL ratio for Spanish banks was higher than average, but was not exceedingly high relative to other countries in Europe. That said, we think it may rise further as the nation's banking authorities beef up their inspection regime.

Figure 25. Banks ranked by NPL ratio



Note: Banks covered by Citi Research with market caps of at least \$10bn. Based on FY11 figures.  
Source: Citi Research.

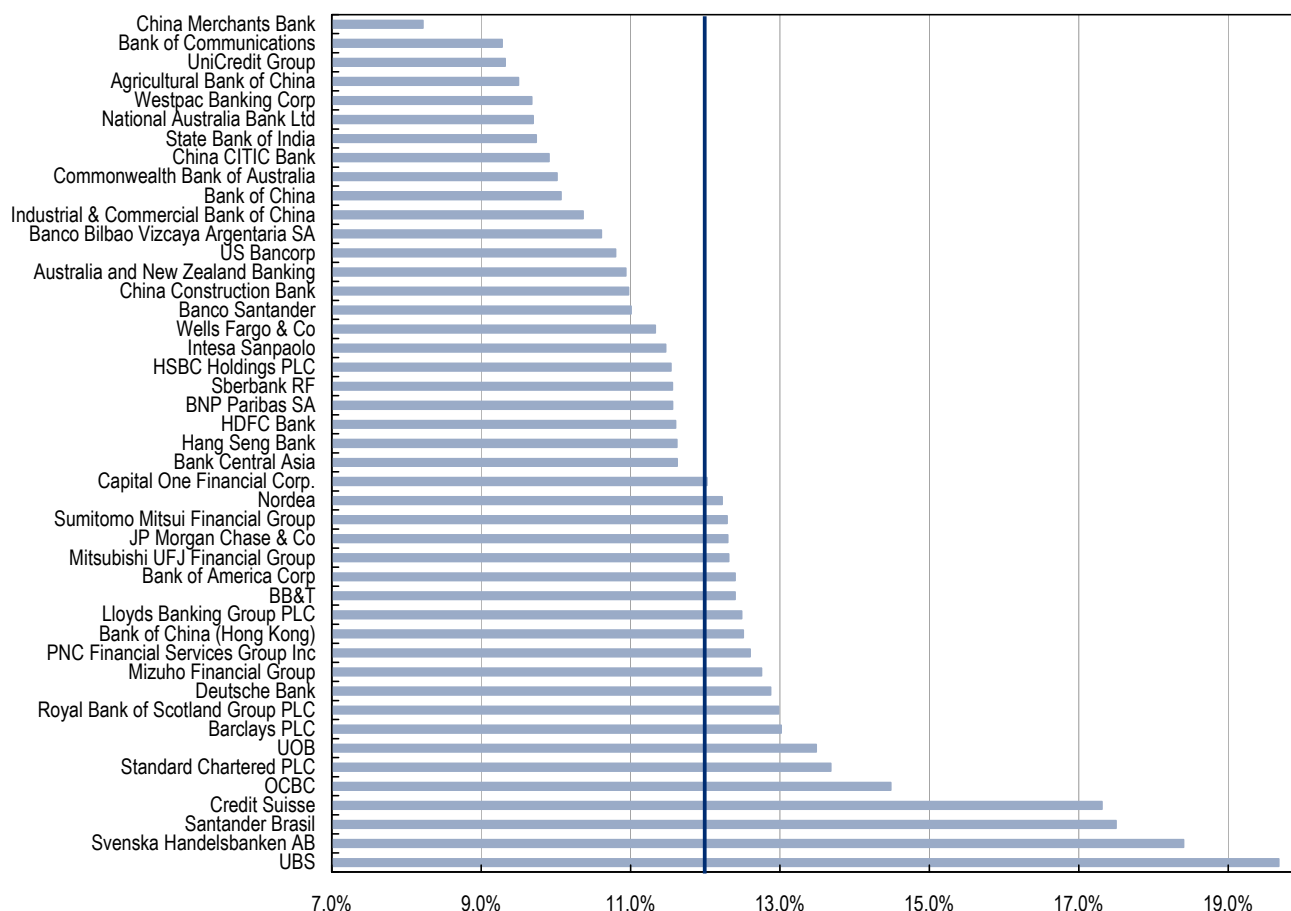
### **...as do capital ratios**

Tier 1 ratios, the most direct indication of a bank's financial stability, also varied widely. The international comparison in Figure 26 places banks in Singapore and Switzerland at the top of the list. The average Tier 1 ratio, shown by the bold vertical line in the graph, was 11.7%. Japanese megabanks exceeded this level.

We think these rankings may change significantly at the end of the current fiscal year. With the introduction of Basel 3 in January 2013, we anticipate a significant rise in risk assets at US and European banks, which have large positions in derivatives and similar financial products.

We therefore forecast an improvement in Japanese banks' relative standing. We think the impact of the regulatory changes on their capital ratios will be relatively light because they hold comparatively few assets with market risk and have little exposure to securitized products (see Section V for details).

Figure 26. Banks ranked by Tier I ratios



Note: Banks covered by Citi Research with market caps of at least \$10bn. Based on FY11 figures.

Source: Citi Research.

### (3) Liquidity

#### Wide disparity in loan-to-deposit ratios persists

The ECB's two LTROs largely defused the funding disruptions in European financial markets. However, liquidity support by the central bank cannot by itself support stable bank funding.

A simple indicator of liquidity is the loan-to-deposit ratio, and overall levels have not changed significantly since last year. The disparity between regions also remains persistently large.

Figure 27, which ranks global banks by their loan-to-deposit ratios, shows that banks in Scandinavia (and to a lesser extent other parts of Europe) and emerging economies tend to have higher loan-to-deposit ratios. Japan's three megabanks, in contrast, are located near the bottom of the list. This is not necessarily good news as it reflects a slump in lending activity,

the primary source of bank earnings. But it also highlights Japanese banks' financial stability at a time of tightening liquidity requirements and growing global funding concerns.

Figure 27. Banks ranked by loan-to-deposit ratio

	Company	Area	Deposit to Loan ratio	Market cap/Deposit
1	Svenska Handelsbanken AB	North Europe	219%	21%
2	Danske Bank A/S	North Europe	218%	11%
3	Swedbank AB	North Europe	216%	21%
4	Nordea	North Europe	176%	16%
5	DNB ASA	North Europe	174%	15%
6	Itaú Unibanco	South America	164%	29%
7	Santander Brasil	South America	162%	45%
8	Bradesco	South America	159%	28%
9	Commonwealth Bank of Australia	AU	149%	25%
10	Lloyds Banking Group PLC	UK	139%	6%
11	Skandinaviska Enskilda Banken AB	North Europe	138%	13%
12	Westpac Banking Corp	AU	135%	21%
13	Banco Santander	Spain	131%	9%
14	Santander Chile	South America	130%	53%
15	Banco Bilbao Vizcaya Argentaria SA	Spain	128%	10%
16	Bank VTB	East Europe	128%	17%
17	Societe Generale	Francee	125%	4%
18	BNP Paribas SA	Francee	122%	7%
19	National Australia Bank Ltd	AU	119%	15%
20	Shinhan Financial Group	Korea	118%	11%
21	Barclays PLC	UK	118%	6%
22	KB Financial Group	Korea	111%	8%
23	Royal Bank of Scotland Group PLC	UK	110%	3%
24	Australia and New Zealand Banking Group Ltd	AU	109%	19%
25	ICICI Bank	India	107%	39%
26	US Bancorp	US	106%	34%
27	Capital One Financial Corp.	US	106%	25%
28	Sberbank RF	East Europe	106%	25%
29	Intesa Sanpaolo	Italy	105%	5%
30	Fifth Third Bancorp	US	102%	16%
31	PKO BP	East Europe	101%	31%
32	UniCredit Group	Italy	100%	3%
33	M&T Bank Corp	US	98%	18%
34	Garanti Bank	Middle East	98%	38%
35	Nedbank Ltd	Africa	97%	18%
36	Bank of America Corp	US	97%	9%
37	Standard Bank Group	Africa	93%	21%
38	Isbank	Middle East	92%	26%
39	Bank Pekao SA	East Europe	92%	40%
40	Public Bank	Malaysia	89%	18%
41	Wells Fargo & Co	US	88%	21%
42	OCBC	Singapore	87%	22%
43	UOB	Singapore	85%	20%
44	Halkbank	Middle East	84%	30%
45	PNC Financial Services Group Inc	US	83%	17%
46	State Bank of India	India	83%	11%
47	BB&T	US	82%	18%
48	Sumitomo Mitsui Trust Holdings	Japan	81%	4%
49	Credit Agricole SA	Francee	79%	2%
50	UBS	Switzerland	78%	11%
62	Mizuho Financial Group	Japan	70%	4%
64	Sumitomo Mitsui Financial Group	Japan	68%	4%
70	Mitsubishi UFJ Financial Group	Japan	61%	4%

Note: Out of the 78 deposit-taking financial institutions covered by Citi Research with market caps of at least \$10bn. Based on FY11 figures.

Market cap as of Aug 5, 2012

Source: Citi Research.

## A comprehensive liquidity indicator

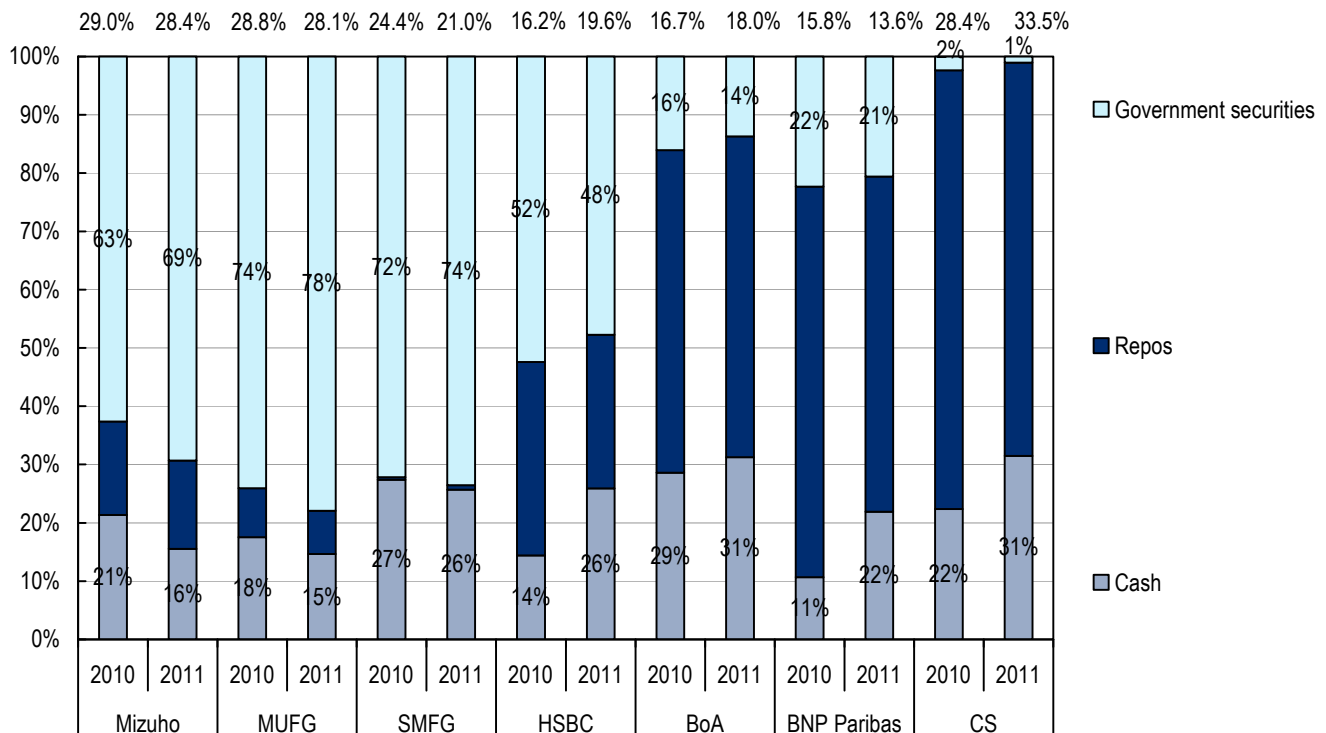
We estimated a simple liquidity indicator used by a number of US and European banks. In the lead-up to the introduction of new liquidity rules under Basel 3, some US and European lenders have begun releasing such indicators as the ratio of liquid assets to total assets and information about liquidity pools. We compared major banks in Japan and elsewhere on the basis of the easily calculated ratio of liquid assets to total assets (Figure 28).

### Liquid assets = cash + repos + government securities

Figure 28 highlights the high liquidity ratios of Japanese banks. Among western institutions, Credit Suisse also has a relatively high liquidity ratio, which may be attributable to its lack of reliance on the loan-and-deposit business and its relatively small total assets. In terms of the liquid asset mix, Japanese banks rely overwhelmingly on government bonds, which account for some 70% of their liquid assets.

US and European banks' holdings of government bonds generally fell over the last year as many scaled back their sovereign bond portfolios and left the proceeds in cash.

Figure 28. Comparison of liquidity indicators



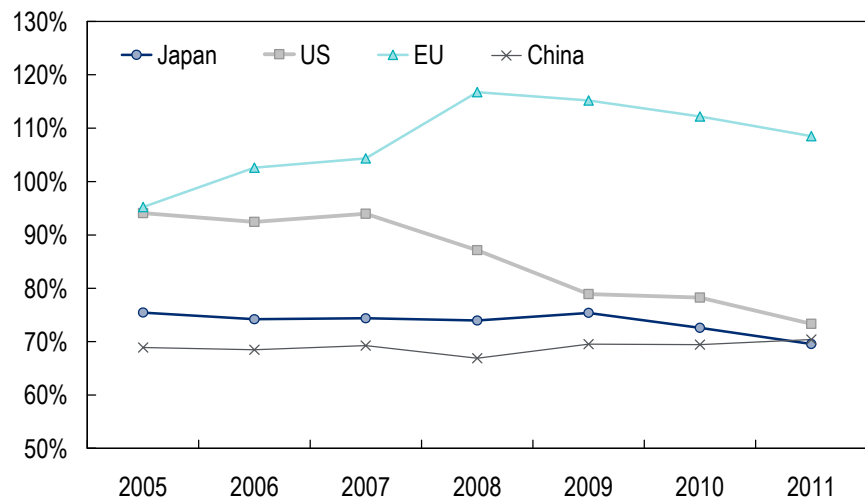
Source: Company data, Citi Research.

## Changes in loan-to-deposit ratios

Loan-to-deposit ratios have changed greatly over the last five years. Japanese and Chinese banks were the exceptions, with ratios remaining steady around 70% (Chinese lenders reported a modest increase in this ratio).

US and European banks had almost identical loan-to-deposit ratios in 2005, but the ratio for US banks later fell to levels near those of Japanese and Chinese institutions. The loan-to-deposit ratio for European banks, meanwhile, peaked at almost 120% around the time that Lehman Brothers collapsed. It subsequently edged lower but remains substantially above the 100% mark.

**Figure 29. Loan-deposit ratios for banks in four regions**



Source: Citi Research.

## 3. Profit and loss

### (1) Profitability

**In ROE terms, banks in emerging economies still significant**

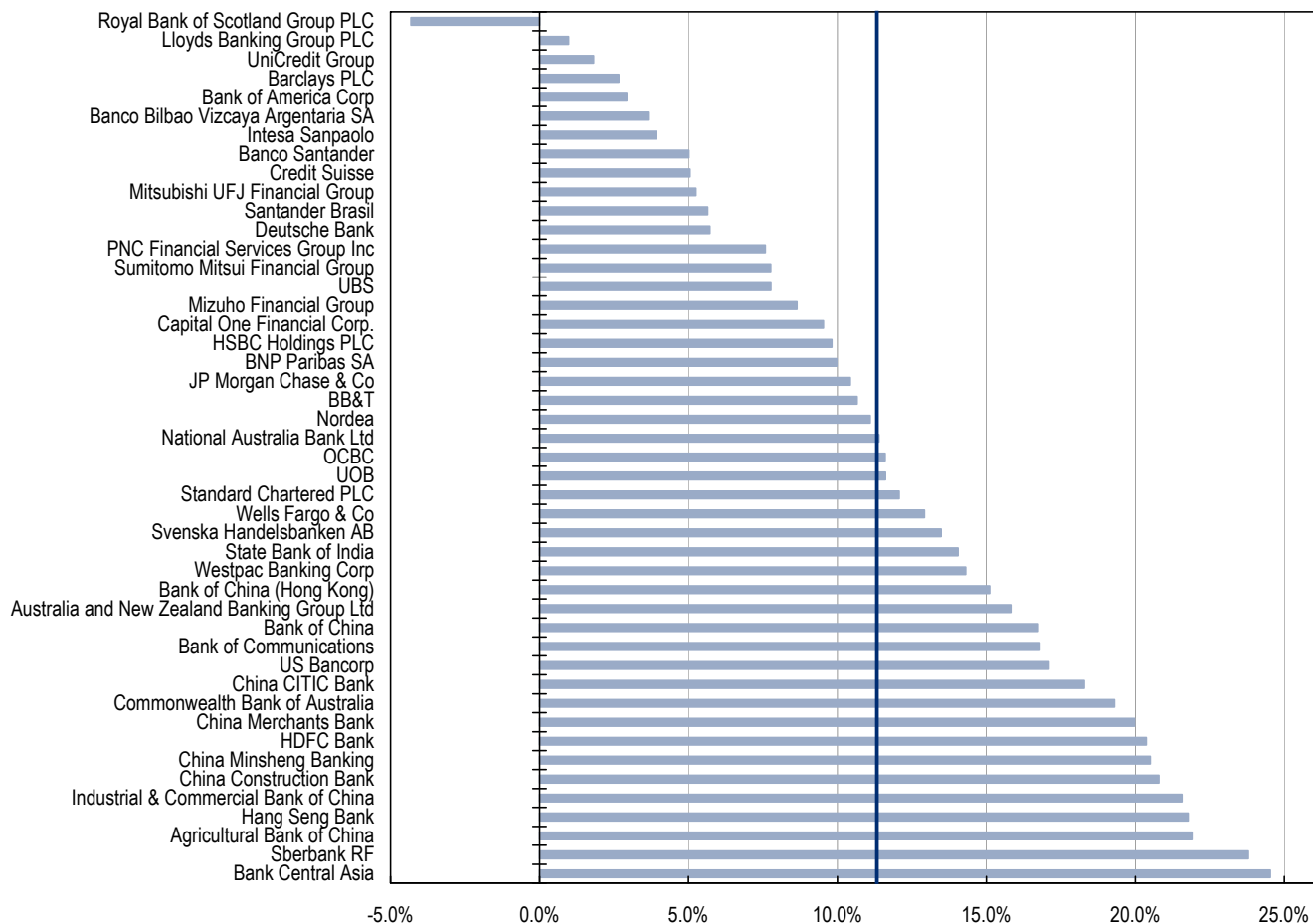
Japanese banks continue to lag behind overseas competitors in terms of RoE. Figure 30 shows our forecasts of global bank RoE in FY12.

The average forecast RoE is a relatively high 11.9%, indicated by the bold vertical line in the graph (13.8% last term), with banks in emerging economies projected to report the highest RoEs. The upper ranks are dominated by institutions in

Indonesia, Brazil, China, and Russia. All told, we forecast nine banks will generate RoEs of more than 20%.

Meanwhile, we expect 18 institutions—including Japan's three megabanks—will report RoEs of less than 10% in FY2012. Although many US and European banks are expected to maintain RoEs of at least 10% despite an uncertain earnings outlook and an unstable financial environment, we anticipate increased earnings volatility going forward and think this indicator bears close monitoring.

Figure 30. ROE (FY2012)



Note: Banks covered by Citi Research with market caps of at least \$20bn.

Source: Citi Research forecasts.

### Japanese banks conspicuous for low RoAs

The profitability metric where Japanese banks fall furthest behind their global competitors is RoA. Figure 31 ranks global banks in terms of RoA. With the exception of a handful of British banks still dealing with the aftermath of the global financial crisis, Japanese banks generally have the lowest

RoAs in the world. Typical RoAs are on the order of 0.3–0.4%, against an average of 1.1% (indicated by bold vertical line in graph).

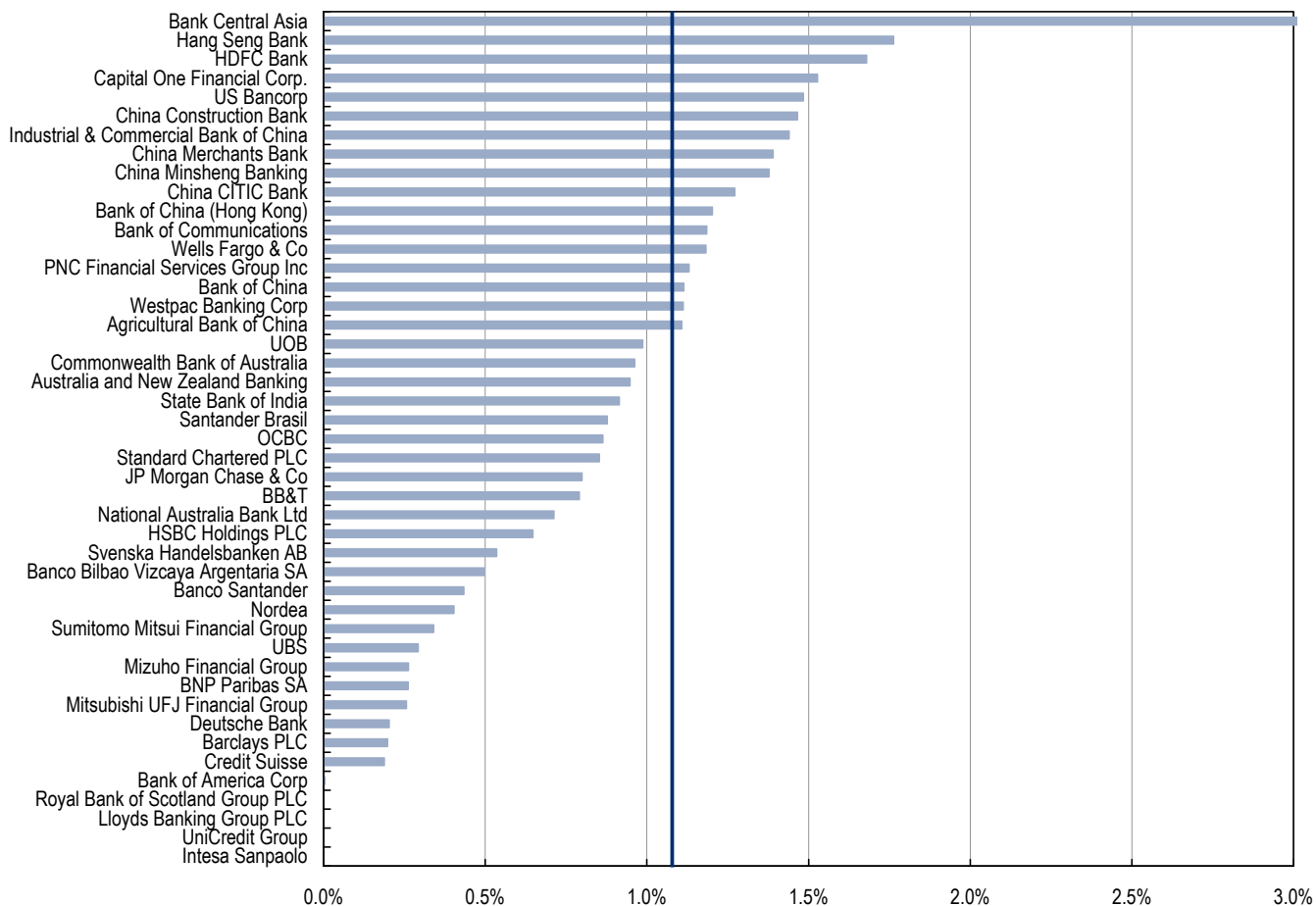
Nearly all banks with above-average RoAs are located in Asia (ex Japan), Australia, Russia, Brazil, and Africa. Among western institutions, only three US banks with domestic franchises reported above-average RoAs.

We attribute Japanese banks' low RoA chiefly to low interest rates. High profitability at US and European banks continues to be supported by sources of earnings other than traditional commercial banking operations.

We worry about a widening rift between banks in Japan, the US and Europe and those in emerging economies as western economies enter a period of chronically low interest rates and tougher regulation, which is expected to squeeze trading profits.

Viewed in terms of RoRA (Return on Risk-weighted Assets), however, Japanese banks are not substantially less profitable than their overseas rivals. In fact, this indicator suggests profitability does not vary much around the world. RoA and RoRA paint different pictures because Japanese banks are characterized by large deposits and little demand for loans, leaving their balance sheets brimming with government bonds. But because the bonds carry a low risk weighting, their risk assets are small as a percentage of total assets.

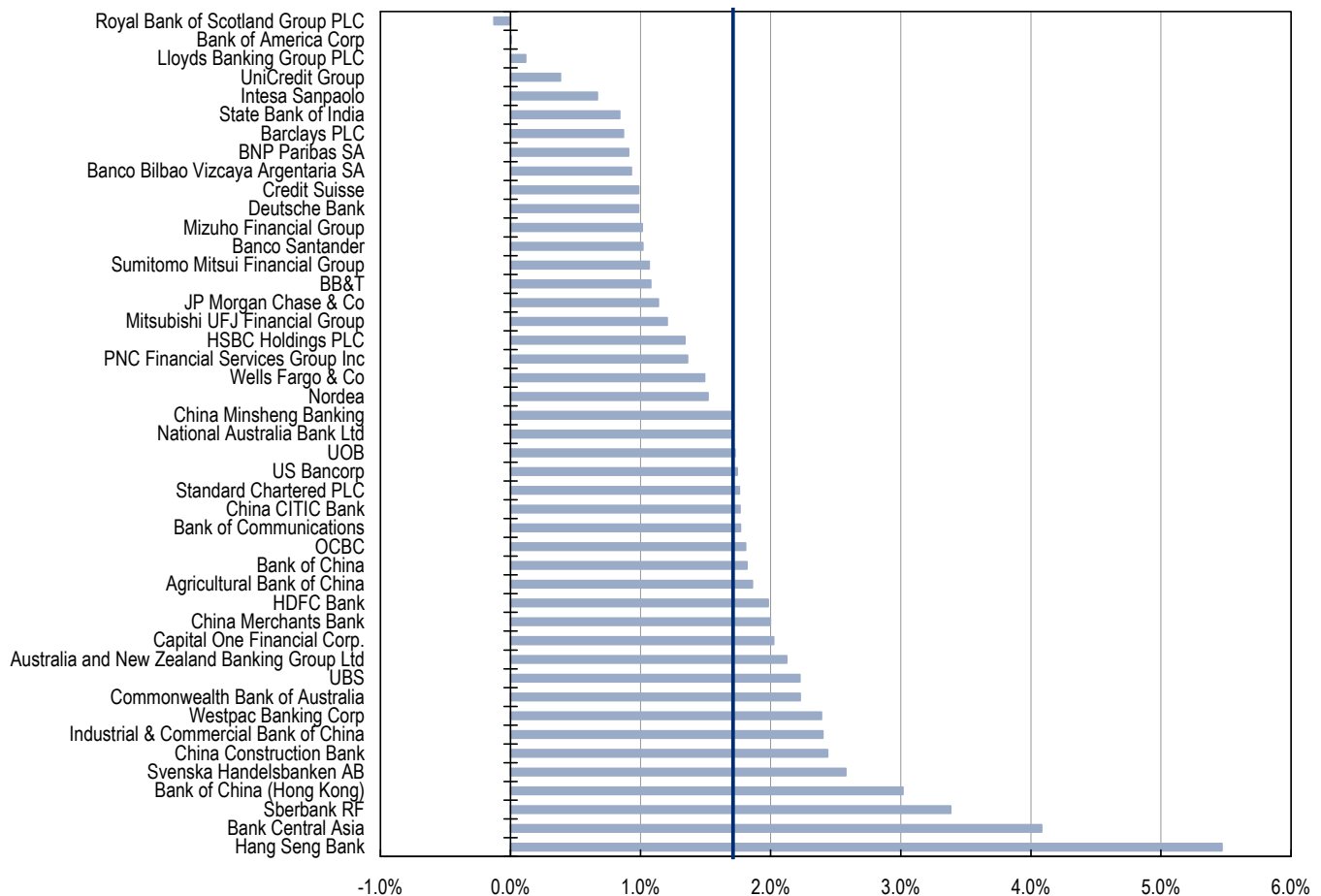
Figure 31. Banks ranked by RoA (FY2011)



Note: Banks covered by Citi Research with market caps of at least \$20bn.

Source: Company data, Citi Research.

Figure 32. Banks ranked by RORA (FY2011)



Note: Banks covered by Citi Research with market caps of at least \$20bn.

Source: Company data, Citi Research.

## (2) Efficiency

### Japanese banks roughly average in terms of efficiency

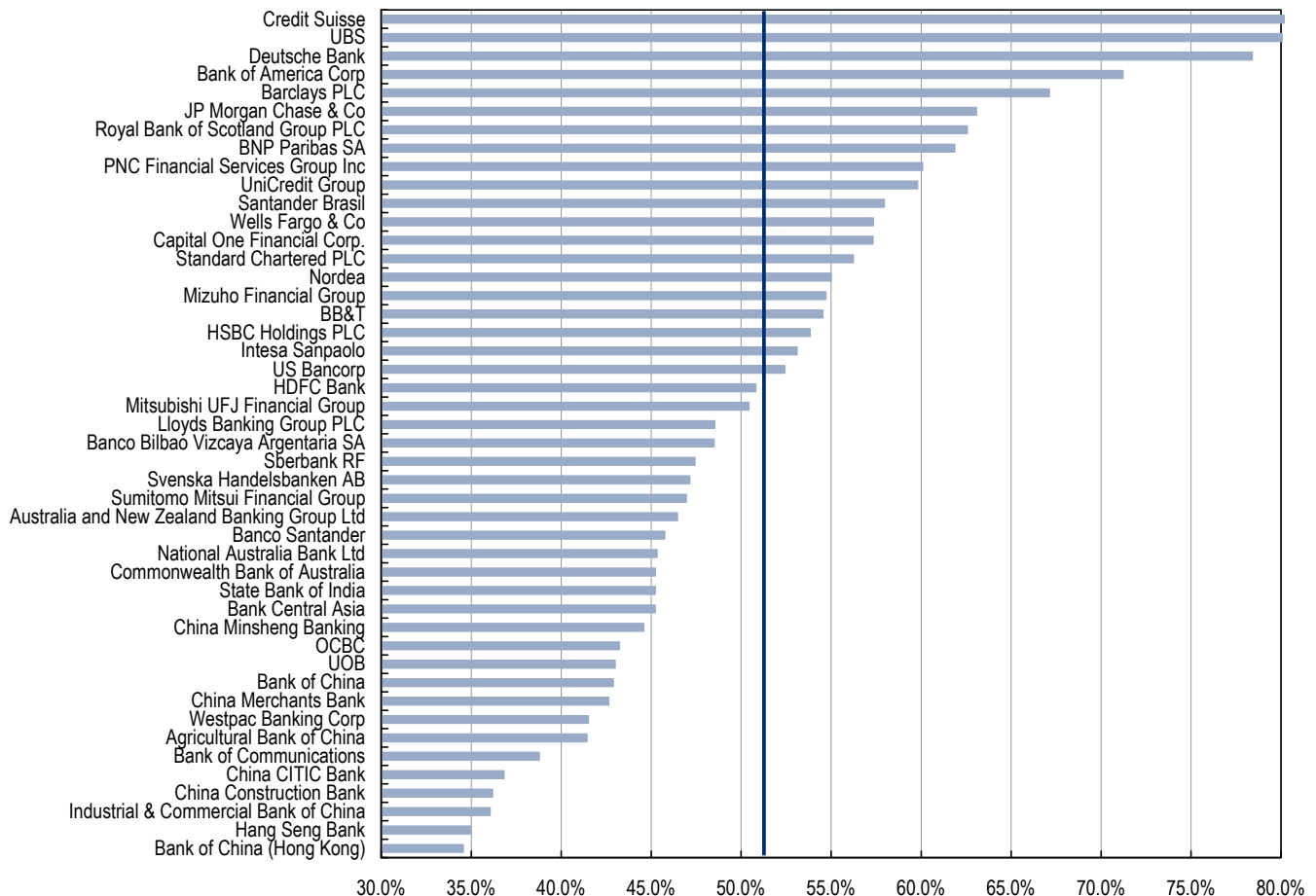
Figure 33 compares banks on the basis of overhead ratios. Here as well the disparities are significant.

Banks with low overhead ratios and high efficiency tend to be based in emerging and resource-driven economies like China, India, Australia, and Brazil. However, our analysis suggests that this is attributable not so much to low costs in absolute terms as to high gross margins boosting the denominator in the overhead ratio (expenses / gross operating profit).

Japanese banks' overhead ratios are clustered around the average of 51.6%, although SMFG, which has the lowest ratio of the three, has a ratio similar to those of the Australian banks. SMFG's cost-cutting measures and other efficiency

improvements have offset its low gross profits and put it on a par with banks reporting high gross profits.

Figure 33. Banks ranked by overhead ratios (FY2011)



Note: Banks covered by Citi Research with market caps of at least \$20bn.

Source: Company data, Citi Research.

### (3) Earnings structure

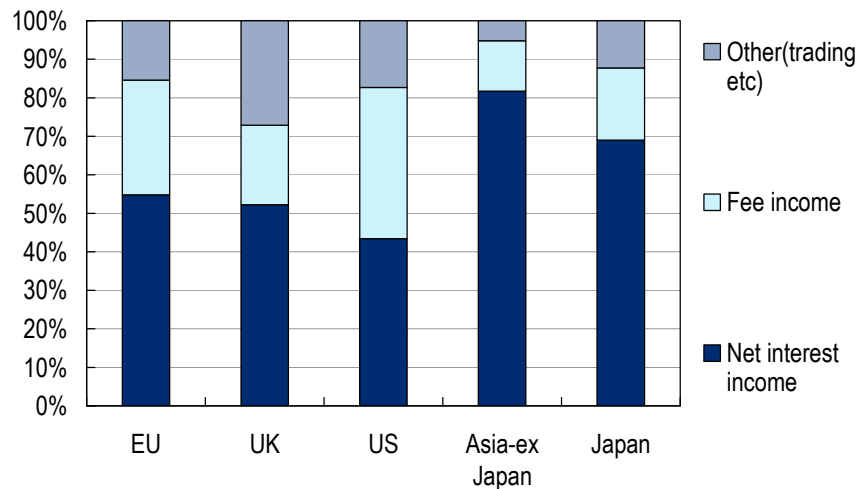
Figure 34 breaks down bank earnings into interest income, fees and commissions income, and other income. Interest income accounts for an extremely high portion of total income at banks in Asia and Japanese banks because they tend to employ a traditional commercial banking model.

US banks are highly dependent on fees and commissions income, which is driven by deposit-related fees and a business model that encourages the removal of residential mortgages and other assets from the balance sheet.

Most trading-related income is classified as “other income,” but we expect the earnings contribution of this category to decline

as new regulations kick in. We also project that the Moody's downgrade of major US and European banks will increase funding costs for these institutions and have an adverse impact on income from derivatives. (See our April 30 report "[Why Credit Ratings Matter - Banks & Impact from Potential Credit Ratings Downgrades](#)" for an analysis of the impact of the downgrades.) Hence we anticipate a possible shift in banks' earnings structure.

**Figure 34. Gross profit breakdown by area (FY2011)**



Source: Company data, Citi Research.

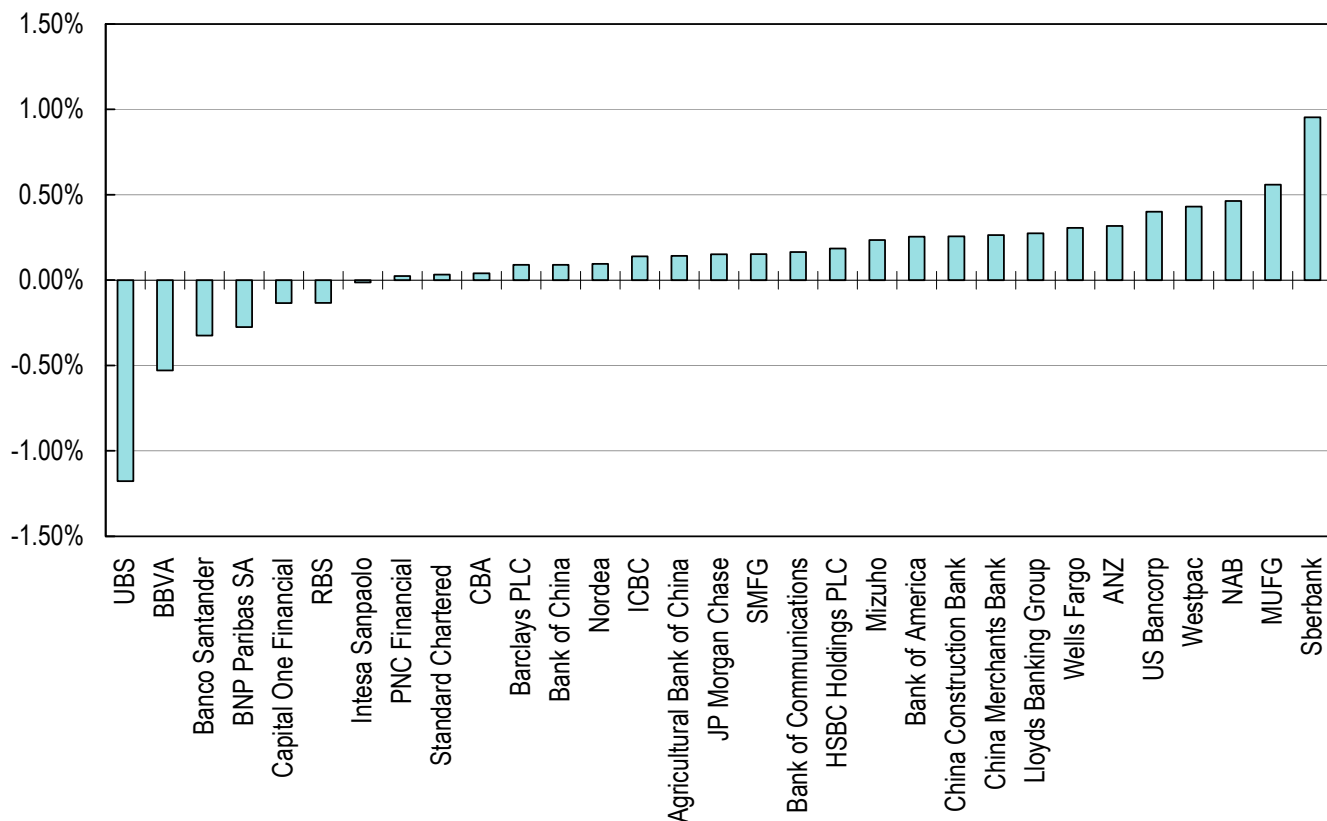
#### (4) Changes in profitability

Figure 35 looks at changes in profitability over the past year viewed in terms of RoRA.

Profitability at the European banks has deteriorated, while lenders in Russia, Australia, Japan, and to some extent the US posted higher RoRAs.

Under Basel 3, a bank's freedom to allocate surplus capital for dividends, share buybacks, acquisitions, or asset growth will be driven to a significant extent by profitability measured against risk-adjusted assets. Hence we think higher RoRAs may eventually lead to higher RoEs.

Figure 35. Change in RoRA from FY2010 to FY2011



Note: Banks covered by Citi Research with market caps of at least \$30bn.

Source: Company data, Citi Research.

## 4. Dupont analysis

A side-by-side comparison of global RoEs reveals a stark contrast between Chinese banks, which remain highly profitable, and lenders in Europe, where profitability has deteriorated sharply on rising credit costs. Outside of these two regions, bank RoEs are converging in the relatively narrow range of 6% to 8%.

Japanese banks are often cited for their low profit margins, and the DuPont analysis shown in Figure 36 confirms that this is attributable to a low ratio of net operating profits to total assets.

In short, they have poor earnings strength. Profits are constrained by the prolonged low interest rate policy, and thus interest income is less than 0.70% of total assets for Japanese banks, versus 1.0–2.5% at major banks in other countries. Similarly, non-interest income is less than 0.40% of total assets at Japanese banks but ranges from 1% to 2.8% at investment banks and other European and US banks.

The ratio of expenses to total assets at Japanese banks was less than half that at banks in other countries, mainly because of lower personnel costs, and credit costs amounted to less than 0.1% of total assets in FY2011, in contrast to banks in other countries where credit costs remain at high levels. For Japanese banks, we think attempts to boost RoE should focus on bolstering the top line.

Figure 36. DuPont analysis

Japan	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Net Interest Income as % of Total Assets:	0.83%	0.79%	0.77%	0.78%	0.79%	0.71%	0.66%
Non-Interest Income as % of Total Assets:	0.53%	0.53%	0.49%	0.35%	0.35%	0.43%	0.43%
Total Income as % of Total Assets:	1.36%	1.32%	1.26%	1.13%	1.13%	1.13%	1.09%
Cost/Total Assets:	0.62%	0.64%	0.64%	0.64%	0.61%	0.58%	0.56%
Pre-Provision Profits as % of Total Assets:	0.75%	0.68%	0.62%	0.49%	0.53%	0.56%	0.53%
NPL Provisions as % of Total Assets:	0.21%	0.10%	0.09%	0.51%	0.19%	0.10%	0.03%
Other provisions (and other) as % of Total Assets:	0.3%	0.06%	-0.11%	-0.11%	-0.06%	-0.06%	-0.10%
Pre-Tax Profit as % of Total Assets:	0.83%	0.64%	0.42%	-0.13%	0.28%	0.40%	0.40%
ROA	0.62%	0.50%	0.28%	-0.27%	0.21%	0.32%	0.29%
Leverage	24.05	19.78	25.09	28.45	21.22	19.77	21.25
ROE	14.88%	9.88%	6.93%	-7.80%	4.43%	6.33%	6.20%
China	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Net Interest Income as % of Total Assets:	2.32%	2.28%	2.57%	2.63%	2.04%	2.10%	2.20%
Non-Interest Income as % of Total Assets:	0.34%	0.30%	0.47%	0.64%	0.65%	0.66%	0.75%
Total Income as % of Total Assets:	2.66%	2.58%	3.04%	3.27%	2.69%	2.76%	2.95%
Cost/Total Assets:	1.25%	1.14%	1.27%	1.25%	1.10%	1.07%	1.12%
Pre-Provision Profits as % of Total Assets:	1.41%	1.44%	1.76%	2.03%	1.59%	1.68%	1.83%
NPL Provisions as % of Total Assets:	0.33%	0.36%	0.42%	0.67%	0.24%	0.22%	0.23%
Other provisions (and other) as % of Total Assets:	0.0%	0.02%	0.04%	0.07%	0.04%	0.03%	0.03%
Pre-Tax Profit as % of Total Assets:	1.07%	1.10%	1.39%	1.43%	1.38%	1.49%	1.62%
ROA	0.73%	0.77%	0.96%	1.09%	1.07%	1.15%	1.25%
Leverage	19.65	15.06	15.02	15.51	16.91	15.82	15.66
ROE	14.31%	11.65%	14.47%	16.94%	18.04%	18.22%	19.58%
EU	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Net Interest Income as % of Total Assets:	0.81%	2.28%	0.78%	0.93%	1.17%	1.18%	1.16%
Non-Interest Income as % of Total Assets:	1.34%	0.30%	1.22%	0.39%	1.08%	1.08%	0.96%
Total Income as % of Total Assets:	2.15%	2.58%	2.00%	1.32%	2.25%	2.26%	2.12%
Cost/Total Assets:	1.39%	1.14%	1.33%	1.19%	1.40%	1.42%	1.39%
Pre-Provision Profits as % of Total Assets:	0.76%	1.44%	0.67%	0.13%	0.85%	0.84%	0.74%
NPL Provisions as % of Total Assets:	0.07%	0.36%	0.12%	0.24%	0.40%	0.28%	0.29%
Other provisions (and other) as % of Total Assets:	0.0%	0.02%	0.01%	-0.04%	-0.08%	-0.07%	-0.27%
Pre-Tax Profit as % of Total Assets:	0.70%	1.10%	0.56%	-0.15%	0.36%	0.50%	0.18%
ROA	0.54%	0.77%	0.41%	-0.08%	0.28%	0.38%	0.11%
Leverage	26.95	15.06	26.41	29.14	22.86	22.28	22.88
ROE	14.68%	11.65%	10.83%	-2.37%	6.29%	8.55%	2.42%
UK	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Net Interest Income as % of Total Assets:	2.16%	1.87%	1.89%	1.59%	1.60%	1.56%	1.53%
Non-Interest Income as % of Total Assets:	1.64%	1.65%	1.91%	1.29%	1.18%	1.22%	1.26%
Total Income as % of Total Assets:	3.79%	3.52%	3.80%	2.88%	2.78%	2.78%	2.79%
Cost/Total Assets:	1.91%	1.77%	1.82%	1.41%	1.39%	1.44%	1.48%
Pre-Provision Profits as % of Total Assets:	1.89%	1.75%	1.98%	1.47%	1.39%	1.34%	1.31%
NPL Provisions as % of Total Assets:	0.37%	0.43%	0.59%	0.83%	1.15%	0.61%	0.47%
Other provisions (and other) as % of Total Assets:	-0.1%	-0.13%	-0.15%	-0.54%	-0.05%	-0.17%	-0.22%
Pre-Tax Profit as % of Total Assets:	1.38%	1.19%	1.24%	0.09%	0.19%	0.56%	0.61%
ROA	1.04%	0.90%	1.02%	0.08%	0.18%	0.38%	0.49%
Leverage	13.10	13.62	15.31	23.04	18.75	17.54	16.71
ROE	13.62%	12.31%	15.59%	1.82%	3.44%	6.74%	8.24%
US	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Net Interest Income as % of Total Assets:	2.49%	2.66%	2.42%	2.28%	2.84%	2.51%	2.28%
Non-Interest Income as % of Total Assets:	2.47%	2.71%	2.39%	1.51%	2.96%	2.81%	2.50%
Total Income as % of Total Assets:	4.96%	5.36%	4.81%	3.79%	5.80%	5.33%	4.78%
Cost/Total Assets:	2.79%	2.76%	2.53%	1.95%	2.86%	3.02%	3.07%
Pre-Provision Profits as % of Total Assets:	2.17%	2.60%	2.27%	1.84%	2.94%	2.31%	1.71%
NPL Provisions as % of Total Assets:	0.50%	0.53%	0.77%	1.88%	2.03%	1.04%	0.50%
Other provisions (and other) as % of Total Assets:	-0.1%	-0.07%	-0.04%	0.27%	-0.21%	-0.51%	-0.33%
Pre-Tax Profit as % of Total Assets:	1.56%	2.00%	1.46%	0.23%	0.70%	0.75%	0.88%
ROA	1.01%	1.32%	0.99%	0.20%	0.56%	0.49%	0.64%
Leverage	8.24	8.68	12.13	11.97	10.81	10.63	10.31
ROE	8.29%	11.48%	12.01%	2.35%	6.02%	5.24%	6.61%

Source: Company data, Citi Research.

## 5. RoE convergence and divergence

### “Japanization” and regulation

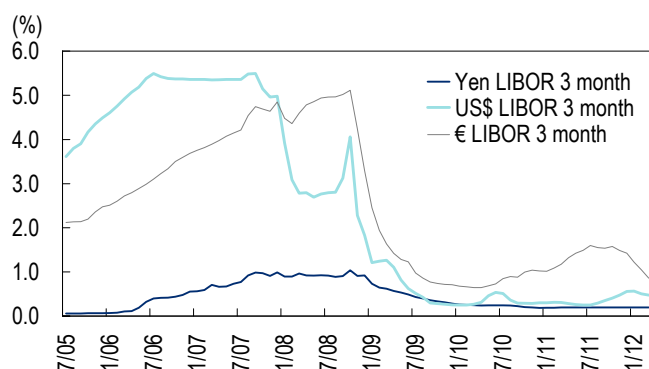
#### “Japanization”

We think it possible that the landscape of bank profitability in major developed markets could change. We see the drivers of this change as “Japanization” and regulation.

In recent years the word “Japanization” has been used in the context of economic and market stagnation. In terms of factors that have a bearing on bank earnings, we see the characteristics of Japanization as deflation, low growth, and a prolonged period of low interest rates.

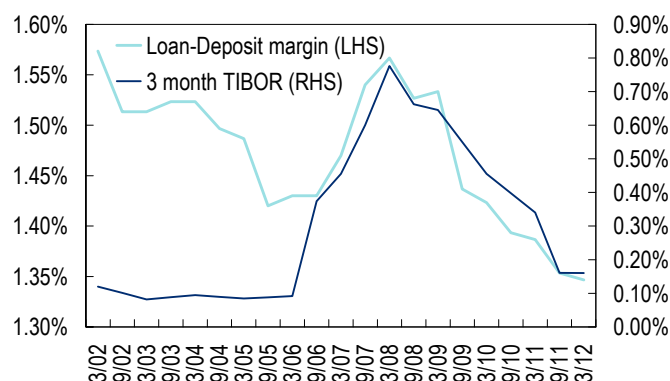
Short-term interest rates for major currencies are low and stable (Figure 37), despite concerns in some quarters (like the eurozone) about inflation. In our view, keeping the policy rate at effectively zero pushed down the loan-deposit spread at Japanese banks over the long term, and this was one factor that offset banks’ earnings power. Figure 38 tracks the loan margin at the three Japanese megabanks, and there is a clear relationship with short-term interest rates.

Figure 37. Term interest rates in different countries



Source: Bloomberg, Citi Research.

Figure 38. Average loan margin at three megabanks and market interest rates



Source: Citi Research.

Starting in 2002, short-term interest rates were held down to near-zero levels (with the policy rate staying at 0.1% until mid-2006). As a result, the loan margin remained weak through 2006, and we believe the relationship between interest rates and the loan margin is easier to see as interest rates move away from zero.

We believe earnings from the deposit spread (difference between interest on deposits and the market interest rate, which shows the advantage of procuring funds via deposits versus procuring funds via the market) at banks in major nations will decline because of prolonged low interest rate policies.

### Regulation

The adoption of Basel III means stricter regulations on quality and quantity of equity capital, financial leverage, and liquidity, and this is impacting bank business models. For example, most derivatives are still done over-the-counter (OTC) rather than on an exchange, but the amount of regulatory capital required for these negotiated transactions has been lifted significantly. In other words, risk assets have increased. Because of this, we think trading profits stemming from derivative transactions will have to decline due to restrictions on regulatory capital.

As we noted in our May 30 report, [Global Banks and Brokers - Sizing Up “The Elephant in the Room” – Regulatory Paradigm Shift and the Impact on Fixed Income Trading](#), we estimate that revenue from FICC (fixed income, currencies, and commodities) trading at major investment banks is likely to take a hit of about 15% to 20% due to the so-called “Volcker Rule” in the Dodd-Frank Act as well as capital levies on market transactions via Basel 2.5.

European banks are more dependent on net interest income than Japanese banks and banks in China and other parts of Asia. We believe the decline in trading-related income via financial regulations (Basel III) and behavioral regulations (Volcker Rule) will dent profits at banks in Europe and the US.

### RoE convergence and divergence

#### RoE convergence

We compare profit outlooks for major banks in each region from a number of standpoints. The sample of major banks in each nation used in Figures 17-19 is laid out below. The figures in each chart are averages for each nation's sample.

EU: BNP Paribas, Credit Agricole, Societe Generale, Deutsche Bank, Commerzbank, BBVA, Banco Santander, UBS, Credit Suisse, UniCredit, Intesa Sanpaolo

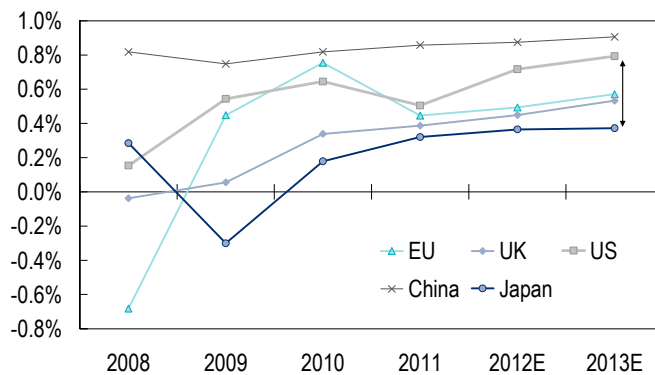
UK: Barclays, HSBC, Standard Chartered, RBS, Lloyds Banking Group

US: Bank of America, BONY Mellon, Goldman Sachs, Wells Fargo, Morgan Stanley

China: China Construction Bank, Industrial and Commercial Bank of China, Agricultural Bank of China, Bank of China, Bank of Communications

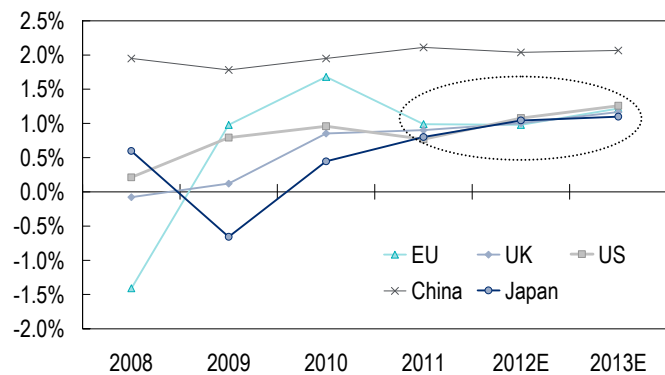
Japan: Mizuho Financial Group, MUFG, SMFG

Figure 39. ROA



Source: Company data, Citi Research.

Figure 40. RORA (Return On Risk weighted Assets)



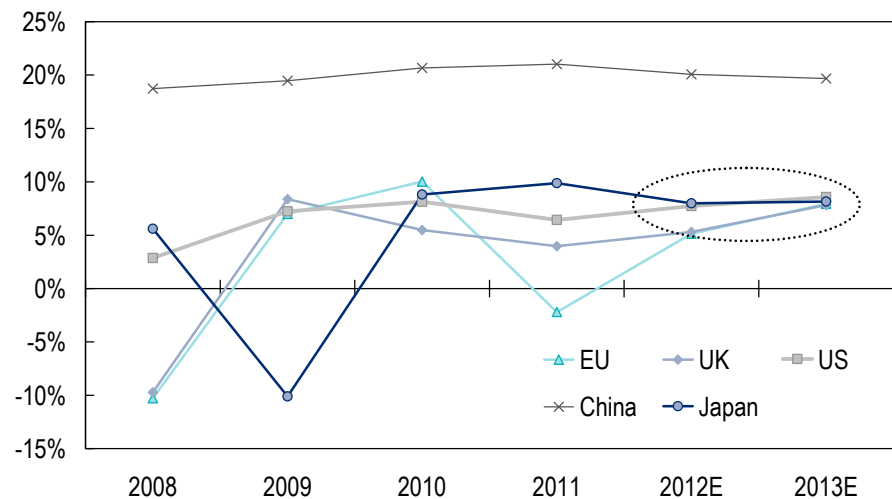
Source: Company data, Citi Research.

First of all, a comparison of RoA shows Japan's profitability is notably low. There are many opportunities to note that profitability at Japanese banks is low, and the gaps in profitability are not eliminated in our outlooks either.

However, a comparison of profitability based on risk assets shows a trend toward convergence for profitability (except in China).

What the differences in RoA and RoRA make clear is that while Japanese banks are bloated with abundant deposits, domestic lending needs are limited. Therefore, Japanese banks park their surplus capital in short-term JGBs where spreads are basically impossible to secure.

Figure 41. ROE



Source: Company data, Citi Research.

With the introduction of Basel 3, procuring capital via hybrid securities like preferred stock and preferred securities does not count toward Tier 1 capital. Therefore, the only things that will improve the Tier 1 ratio are equity financing or amassing retained earnings. This makes risk asset-based profitability extremely important from a variety of standpoints, including building up capital and utilizing surplus capital (shareholders' return, amassing earning assets).

As one can see in Figure 41, we expect convergence for RoE. This is because we believe Japanization and regulation will impact earnings at banks in the US and Europe in such a way that risk asset-based profitability becomes more homogeneous. This is RoE convergence.

### RoE divergence

On the other hand, volatility in profitability has increased over time. In Figure 42 we calculate standard deviations in RoE at major banks globally over the same time period.

Between 1994 and 2010 the average standard deviation was high at 13% to 14%. However, a comparison among banks shows that this significant volatility is due to large swings at Japanese banks.

**Figure 42. Standard deviations for RoE**

	(a) 1994-2010	(b) 2001-2010	(b1) 2001-2005	(b2) 2006-2010	(b2)-(b1)
Bank of America	6.3%	8.1%	2.9%	7.6%	4.7%
BONY Mellon	8.9%	8.6%	2.9%	11.1%	8.2%
JP Morgan Chase	5.0%	4.2%	4.6%	3.9%	-0.7%
PNC Financial	6.0%	6.6%	5.0%	8.5%	3.5%
US Bancorp	4.8%	5.6%	5.3%	6.2%	0.9%
Wells Fargo	7.3%	5.4%	2.9%	6.2%	3.3%
BNP Paribas	4.5%	3.8%	2.1%	4.3%	2.2%
Credit Agricole	3.8%	4.6%	3.3%	5.8%	2.5%
Natixis	7.7%	9.8%	4.3%	11.8%	7.6%
Societe Generale	6.6%	7.0%	4.7%	7.2%	2.6%
Commerzbank	11.1%	13.1%	13.9%	13.5%	-0.4%
Deutsche Bank	11.1%	9.4%	5.2%	12.7%	7.5%
BBVA	4.5%	5.3%	5.8%	5.2%	-0.5%
Banco Santander	2.8%	2.8%	2.4%	2.8%	0.4%
UniCredit	5.9%	5.5%	2.7%	5.6%	2.9%
Intesa Sanpaolo	5.1%	5.7%	5.2%	6.8%	1.6%
Nordea	6.9%	4.4%	4.0%	4.8%	0.8%
Credit Suisse	62.5%	15.3%	11.9%	19.0%	7.1%
UBS	22.2%	27.7%	11.0%	34.1%	23.1%
Barclays	4.6%	4.9%	2.4%	7.0%	4.6%
HSBC	4.9%	4.4%	2.5%	5.4%	2.9%
Lloyds Banking	11.5%	11.1%	6.9%	12.5%	5.6%
RBS	19.4%	19.4%	2.4%	24.0%	21.6%
Standard Chartered	5.1%	2.8%	4.1%	1.1%	-3.0%
Mizuho	24.1%	31.1%	42.1%	16.6%	-25.5%
MUFG	10.4%	12.2%	15.5%	5.4%	-10.1%
SMFG	12.2%	12.9%	14.6%	11.5%	-3.2%
Resona	83.4%	108.1%	134.8%	12.8%	-122.1%
SMTH	16.4%	14.3%	19.3%	6.8%	-12.5%
Average	13.3%	12.9%	11.9%	9.7%	-2.2%

Source: Company data, Citi Research.

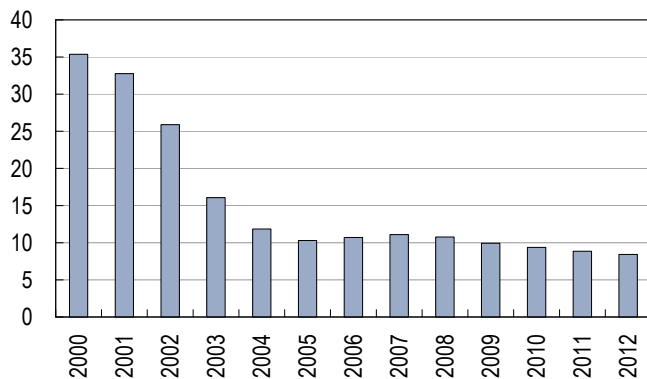
We believe the significant volatility at Japanese banks is due largely to their struggles during Japan's lost two decades. During that time, there were occasional years in which Japanese banks posted huge credit expenses during the deleveraging process, and periods when a stock market decline resulted in the writing down of losses on equities not infrequent. Therefore, there was huge volatility in Japanese bank earnings due to 1) after-effects of the bubble bursting and 2) a changing industrial structure.

However, dividing the second of the two lost decades (2000-2010) into five-year periods (b1 and b2) shows that volatility has declined sharply. Although volatility was still high in

absolute levels, over the past two to three years at least earnings have grown more stable.

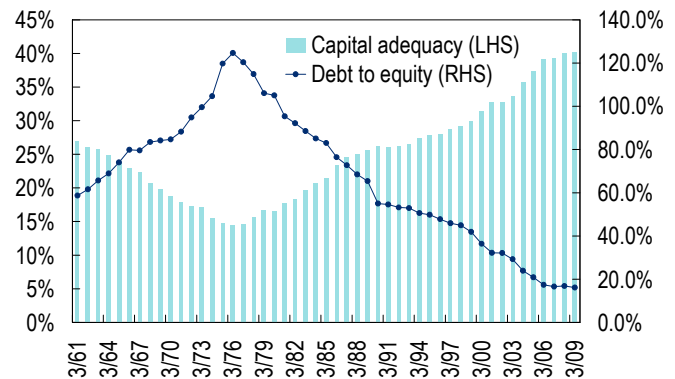
Two reasons for this are 1) a shrinking of equity holdings (Figure 43) and 2) deleveraging, not only at banks but also at corporations in general (Figure 44), resulting in lower and more stable credit expenses.

**Figure 43. Shareholdings at major banks (acquisition price, ¥trn)**



Source: Company data, Citi Research.

**Figure 44. Capital adequacy at Japanese companies (ex-financials)**



Source: Company data, Citi Research.

The Sharpe Ratio is the easiest-to-use measure of risk-reward. In this ratio (Figure 45) average RoE is the numerator and the RoE standard deviation is the denominator. We can thus test whether a decline in earnings volatility results in improvement for this risk-reward indicator at Japanese banks.

**Figure 45. RoE Sharpe ratio (average RoE/standard deviation)**

	(a) 1994- 2010	(b) 2001- 2010	(b1) 2001- 2005	(b2) 2006- 2010	(b2)-(b1)
Bank of America	2.12	1.52	6.15	0.87	-5.28
BONY Mellon	1.94	1.50	5.75	0.83	-4.92
JP Morgan Chase	2.25	2.01	1.60	2.40	0.80
PNC Financial	2.49	2.05	2.93	1.48	-1.45
US Bancorp	3.53	2.97	3.46	2.47	-0.99
Wells Fargo	2.38	2.81	6.11	2.00	-4.11
BNP Paribas	2.79	3.54	7.28	2.67	-4.61
Credit Agricole	2.07	1.70	2.68	1.16	-1.53
Natixis	0.62	0.41	2.05	-0.06	-2.11
Societe Generale	1.81	1.70	3.37	1.12	-2.26
Commerzbank	0.34	-0.02	-0.19	0.15	0.35
Deutsche Bank	0.86	0.80	1.07	0.73	-0.33
BBVA	3.91	3.52	3.07	3.77	0.71
Banco Santander	5.46	5.02	5.30	5.51	0.21
UniCredit	1.77	2.05	5.42	1.41	-4.01
Intesa Sanpaolo	1.96	1.54	1.69	1.29	-0.40
Nordea	2.56	3.38	3.36	3.32	-0.04
Credit Suisse	0.37	0.53	0.41	0.59	0.18
UBS	0.31	0.21	1.72	-0.22	-1.94
Barclays	3.70	3.65	7.54	2.56	-4.98
HSBC	3.04	2.77	5.67	1.92	-3.75
Lloyds Banking	2.05	1.78	3.63	1.15	-2.48
RBS	0.26	0.26	6.15	-0.12	-6.27
Standard Chartered	3.37	5.19	3.58	13.29	9.71
Mizuho	-0.22	-0.17	-0.30	0.11	0.41
MUFG	-0.18	0.00	-0.33	0.93	1.27
SMFG	-0.13	0.10	-0.14	0.42	0.56
Resona	-0.32	-0.39	-0.73	1.14	1.87
SMTH	-0.18	0.10	-0.13	0.82	0.95
Average	1.76	1.74	3.04	1.85	-1.19

Source: Citi Research.

## Chapter 3. Business lines

### 1. Commercial banking

#### (1) Project finance

##### Strong growth in all markets

After the subprime crisis erupted in 2007, Japan's megabanks made steady inroads into the global loan market at the expense of their rivals in the west. Although their activities nearly shut down in the wake of the 2008–09 financial crisis, they have bolstered their capital bases in preparation for tougher global financial regulation and are once again expanding their overseas operations. Figure 46 ranks project finance book runners based on performance over the last two and a half years.

Figure 46. Global ranking of project finance book runners

	1H CY2012	CY2011	CY2010	Proceeds (1H FY2012)	Deals (1H FY2012)
State Bank of India	1	1	1	6,508.8	21
<b>MUFG</b>	<b>2</b>	<b>2</b>	<b>7</b>	<b>4,838.8</b>	<b>41</b>
<b>SMFG</b>	<b>3</b>	<b>3</b>	<b>10</b>	<b>3,511.2</b>	<b>28</b>
<b>Mizuho</b>	<b>4</b>	<b>7</b>	<b>20</b>	<b>2,906.6</b>	<b>23</b>
Societe Generale	5	5	9	2,354.3	18
Credit Agricole	6	4	6	2,286.6	20
Commonwealth Bank of Australia	7	17	31	2,232.7	13
BBVA	8	12	18	2,189.4	27
BNP Paribas SA	9	8	5	2,145.8	16
Korea Development Bank	10	16	27	2,130.0	9
Axis Bank Ltd	11	6	4	1,970.1	5
Gazprombank	12	-	-	1,929.8	2
VTB	13	-	-	1,929.8	2
ING	14	10	12	1,665.2	17
Lloyds Bank	15	25	-	1,653.3	14
National Australia Bank	16	21	28	1,627.6	12
HSBC Holdings PLC	17	15	19	1,580.7	13
RBS	18	14	16	1,466.0	10
ANZ Banking Group	19	13	33	1,451.1	11
China Development Bank	20	-	-	1,446.7	3

Note: Deal value in \$mn

Source: Thomson Reuters, Citi Research.

The three Japanese megabanks, lead by MUFG, ranked second, third and fourth in 2012 1H (Jan–Jun). Until two years ago Japanese megabanks were sitting between seventh and 20<sup>th</sup>, representing a major advance. Figures 47–48 show banks' activity in the United States and Asia. In addition to

MUFG, which continues to be ranked No.1, Mizuho and SMFG have moved up to third and fourth in the US. In Asia, an important region, Japanese megabanks are in the top-tier, vying with State Bank of India, which dominates Indian lending, and the Australian banks that have done well in energy-related projects.

The active involvement of Japanese banks in overseas projects reflects efforts to diversify revenue sources; most of the megabanks have embarked on strategies aimed at generating at least 30% of revenues from sources outside Japan.

Other factors contributing to Japanese banks' strong showing are liquidity (including the prospect for tough new liquidity rules) and reduced activity by US and European banks dealing with sovereign debt problems.

Figure 47. Project finance rankings (US)

	1H CY2012	CY2011	CY20101	Proceeds (1H FY2012)	Deals (1H FY2012)
<b>MUFG</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1,575.4</b>	<b>21</b>
BBVA	2	14	21	863.8	12
<b>SMFG</b>	<b>3</b>	<b>5</b>	<b>9</b>	<b>756.1</b>	<b>8</b>
<b>Mizuho</b>	<b>4</b>	<b>4</b>	<b>7</b>	<b>614.8</b>	<b>9</b>
Citi	5	21	25	492.7	3
Credit Agricole	6	7	2	438.6	7
HSBC	7	16	-	394.7	3
Santander	8	6	-	393.9	4
Morgan Stanley	9	-	-	387.1	2
ING	10	3	4	362.8	4
KeyBanc Capital Markets	11	53	-	354.7	7
BMO Capital	12	28	6	302.4	4
Sovereign Bank	13	-	-	277.0	5
Banobras	14	-	-	273.4	3
RBC	15	13	24	256.2	5
Scotiabank	16	31	-	249.9	5
Rabobank	17	18	17	248.8	6
BNP Paribas	18	17	-	188.8	1
Lloyds Bank	19	19	-	188.5	3
Bayerische Landesbank	20	33	3	157.3	4

Note: Deal value in \$mn

Source: Thomson Reuters, Citi Research.

Figure 48. Project finance rankings (Asia)

	1H CY2012	CY2011	CY20101	Proceeds (1H FY2012)	Deals (1H FY2012)
State Bank of India	1	1	1	6,508.8	21
<b>MUFG</b>	<b>2</b>	<b>10</b>	<b>11</b>	<b>2,106.5</b>	<b>13</b>
Axis Bank	3	2	4	1,970.1	5
<b>Mizuho</b>	<b>4</b>	<b>16</b>	<b>23</b>	<b>1,952.5</b>	<b>11</b>
<b>SMFG</b>	<b>5</b>	<b>12</b>	<b>-</b>	<b>1,906.5</b>	<b>12</b>
Korea Development Bank	6	7	7	1,870.7	6
Commonwealth Bank of Australia	7	19	-	1,563.4	10
National Australia Bank	8	15	-	1,524.9	11
ANZ Banking Group	9	8	9	1,451.1	11
Westpac Banking	10	14	-	1,377.3	10
ICICI Bank	11	5	6	1,348.7	5
Infrastructure Dev Finance	12	6	5	1,251.2	11
IDBI Bank Ltd	13	3	3	1,183.3	4
China Development Bank	14	-	-	1,045.1	2
Oversea-Chinese Banking	15	22	24	953.0	5
Standard Chartered	16	11	-	809.3	3
DBS	17	9	14	773.9	2
Malayan Banking	18	23	-	658.5	2
United Overseas Bank	19	35	-	649.7	3
Bank of China	20	29	-	628.6	2

Note: Deal value in \$mn

Source: Thomson Reuters, Citi Research.

## (2) Loan syndications

Small and mid-sized Japanese firms have been using syndicated loans for many years, and regional banks have now joined their larger rivals in the rankings of book runners for domestic loan syndications (Figure 50).

Japan's megabanks have also made big strides in the global league tables for syndicated lending and are now ranked second only to their US rivals.

Traditionally, much of the loan syndication business in overseas markets in particular depended on whether a bank was invited to participate. But today there are far more opportunities for banks to lead a deal as arrangers rather than as participants.

**Figure 49. Global ranking of syndicated loan book runners**

	1H CY2012	CY2011	Proceeds (1H FY2012)	Deals (1H FY2012)
JP Morgan	1	1	135,350.4	474
BoA	2	2	125,433.3	508
Citi	3	3	88,135.4	254
<b>Mizuho</b>	<b>4</b>	<b>7</b>	<b>72,366.0</b>	<b>313</b>
Wells Fargo	5	4	69,154.2	377
<b>MUFG</b>	<b>6</b>	<b>8</b>	<b>59,441.3</b>	<b>390</b>
<b>SMFG</b>	<b>7</b>	<b>12</b>	<b>50,460.3</b>	<b>317</b>
Barclays	8	5	42,695.9	143
Deutsche Bank	9	9	38,940.7	145
RBS	10	10	32,217.3	156
Credit Suisse	11	11	29,072.1	107
RBC	12	18	25,701.7	102
BNP Paribas	13	6	25,222.9	122
Morgan Stanley	14	13	22,899.8	70
TD	15	25	18,578.0	60
HSBC	16	15	16,206.1	88
PNC Financial	17	28	15,964.8	136
BMO	18	19	15,942.6	96
Goldman Sachs	19	19	15,700.1	61
US Bancorp	20	16	15,613.1	149

Note: Deal value in \$mn.

Source: Thomson Reuters, Citi Research.

**Figure 50. Ranking of syndicated loan book runners in Japan**

	1H CY2012	CY2011	Proceeds (1H FY2012)	Deals (1H FY2012)
<b>Mizuho</b>	<b>1</b>	<b>1</b>	<b>6,508.8</b>	<b>21</b>
<b>SMFG</b>	<b>2</b>	<b>2</b>	<b>4,838.8</b>	<b>41</b>
<b>MUFG</b>	<b>3</b>	<b>3</b>	<b>3,511.2</b>	<b>28</b>
DBJ	4	7	2,906.6	23
Citi	5	4	2,354.3	18
UBS	6	8	2,286.6	20
<b>Resona</b>	<b>7</b>	<b>12</b>	<b>2,232.7</b>	<b>13</b>
<b>Yokohama</b>	<b>8</b>	<b>5</b>	<b>2,189.4</b>	<b>27</b>
<b>Aozora</b>	<b>9</b>	<b>9</b>	<b>2,145.8</b>	<b>16</b>
JP Morgan	10	10	2,130.0	9

Note: Deal value in \$mn.

Source: Thomson Reuters, Citi Research.

## 2. Transactional banking

### (1) Global CMS

#### **Megabanks lag behind in CMS**

While Japanese banks have steadily increased their global presence in the arrangement of syndicated loans and project financing, they lag behind in funds settlement and other areas of transactional banking.

For banks with global operations, cash management services (CMS) are an important tool for supporting the global operations of corporate customers. With CMS, banks provide a platform enabling businesses engaged in cross-border deals to efficiently obtain funding and make settlements in various currencies.

When analyzing CMS, it is difficult to compare the competitiveness of different banks' offerings by tracking deals, as with the finance league tables. The only useful data are the results of surveys conducted by media organizations.

Japanese institutions clearly lag behind their foreign peers when institutions are ranked by CMS users (Figure 51). In CMS surveys conducted in Asia (Figures 52, 53), where many Japanese companies are active, Japanese banks are ranked near the top for yen transactions but do not even feature in the top ten for dollar transactions.

Figure 51. Global CMS survey rankings, overall

2011	2010	Bank	Score
1	2	HSBC	11747
2	1	Citi	9970
3	3	Deutsche Bank	8535
4	4	Standard Chartered	2582
5	5	JP Morgan	2452
6	9	Barclays	2157
7	8	RBS	2112
8	6	Commerzbank	1943
9	7	<b>BTMU (MUFG)</b>	<b>1929</b>
10	10	BoA	1793
11	11	Wachovia	1218
12	12	BNY Mellon	1197
13	13	SMFG	1144
14	14	BNP Paribas	1032
15	15	<b>Mizuho</b>	<b>543</b>
16	16	UniCredit	517
17	17	Societe Generale	511
18	19	ING	398
19	28	UBS	337
20	22	Bank of China	302

Source: Euromoney, Citi Research.

Figure 52. Global CMS survey rankings, Asia (yen deals)

2011	2010	Bank	Score
1	1	HSBC	725
2	3	<b>BTMU (MUFG)</b>	<b>519</b>
3	2	Citi	318
4	4	<b>SMFG</b>	<b>305</b>
5	7	<b>Mizuho</b>	<b>188</b>
6	5	Standard Chartered	116
7	6	Deutsche Bank	111
8	8	Wachovia	71
9	10	BoA	69
10	13	JP Morgan	43

Source: Euromoney, Citi Research.

Figure 53. Global CMS survey rankings, Asia (dollar deals)

2011	2010	Bank	Score
1	1	HSBC	1929
2	2	Citi	1092
3	3	Deutsche Bank	460
4	5	JP Morgan	314
5	4	Standard Chartered	295
6	7	BoA	272
7	6	Wachovia	192
8	8	BNY Mellon	176
9	10	BNP Paribas	106
10	9	RBS	91

Source: Euromoney, Citi Research.

Figure 54. Global CMS qualitative rankings (2011)

Overall client services	Bank	Commitment to CMS	Bank
1	Citi	1	BoA
2	BoA	2	Citi
3	Deutsche Bank	3	Deutsche Bank
4	HSBC	4	BNP Paribas
5	BNP Paribas	5	HSBC
Expertise and knowledge	Bank	Quality of personnel	Bank
1	BoA	1	BoA
2	Citi	2	Citi
3	Deutsche Bank	3	Deutsche Bank
4	BNP Paribas	4	BNP Paribas
5	HSBC	5	HSBC
Competitive pricing	Bank	Liquidity capability	Bank
1	BNP Paribas	1	BoA
2	Citi	2	Citi
3	BoA	3	HSBC
4	RBS	4	BNP Paribas
5	Deutsche Bank	5	Deutsche Bank
Quality of electronic banking security	Bank	Innovative payment	Bank
1	Citi	1	Citi
2	HSBC	2	BoA
3	Deutsche Bank	3	Deutsche Bank
4	BoA	4	BNP Paribas
5	BNP Paribas	5	HSBC

Source: Euromoney, Citi Research.

## CMS key to overseas strategies

Cash management services (CMS) will be extremely important for banks' overseas strategies for at least three reasons.

First, they offer benefits from a funding perspective. Given banks' limited ability to attract personal deposits denominated in the dollar and other foreign currencies, corporate deposits offer a stable and inexpensive source of foreign currency funding. CMS helps businesses with overseas operations manage their fund surpluses or deficits, and surplus funds are placed with the bank as deposits.

Second, most transactional banking involves the generation of fees and commissions with no impact on a bank's risk-adjusted assets. It is therefore an extremely capital-efficient activity.

Third, cash management services offer banks an opportunity to broaden their pipeline of deals with foreign operating companies.

The qualitative assessment in Figure 54 shows that the same banks tend to denominate the rankings year after year, and there would appear to be little room for Japanese banks at the top.

However, we think Japanese institutions have a chance to change this.

First, cash management services are predicated on the creditworthiness of the provider. Few customers will risk entrusting large amounts of money to a bank with shaky credit. We therefore think Japanese banks may have an opportunity to retake loss ground if relative evaluations of their credit improve.

Too, MUFG and the other megabanks are striving to beef up transactional banking operations. MUFG's medium-term business plan designates increased systems investment and efforts to bolster this area as key objectives.

## **(2) Trade finance**

Foreign trade entails a variety of risks, including credit risk, currency risk when the deal is denominated in another currency, and forex risk due to political instability in the trading partner's home country. There is also the need on the partner side for settlement and for financing until the deal settles. The various forms of financial support for foreign trade are typically referred to as trade finance.

Figures 55 and 56 present data from a Euromoney-affiliated magazine that monitors large trade finance deals. They show that Japanese banks' relative position has improved in 1H 2012 compared with 2011.

As electronic transactions become the norm, it is becoming increasingly difficult to separate trade finance from CMS and other settlement functions. We see this as further evidence of the importance of strengthening transactional banking operations.

Figure 55. Trade finance arranger rankings (1H 2012, \$mn)

	Arranger	Proceeds	Deals	Share (%)
1	HSBC	4,962	45	5.3
2	<b>MUFG</b>	<b>4,844</b>	<b>40</b>	<b>5.2</b>
3	BNP Paribas	3,561	35	3.8
4	Citi	3,364	31	3.6
5	JPMorgan	3,346	22	3.6
6	Deutsche Bank	3,191	28	3.4
7	<b>SMFG</b>	<b>2,779</b>	<b>29</b>	<b>3.0</b>
8	ING	2,677	28	2.9
9	Santander	2,490	26	2.7
10	<b>Mizuho</b>	<b>2,476</b>	<b>24</b>	<b>2.7</b>

Source: Trade Finance Magazine, Citi Research.

Figure 56. Trade finance arranger rankings (2011, \$mn)

	Arranger	Proceeds	Deals	Share (%)
1	Citi	4,807	43	10.9
2	HSBC	4,201	40	9.5
3	BNP Paribas	4,160	50	9.5
4	SG CIB	2,868	36	6.5
5	<b>MUFG</b>	<b>2,158</b>	<b>20</b>	<b>4.9</b>
6	Deutsche Bank	2,064	35	4.7
7	<b>SMFG</b>	<b>1,785</b>	<b>18</b>	<b>4.1</b>
8	Bank of China	1,744	6	4.0
9	Credit Agricole	1,740	14	4.0
10	ING	1572	12	3.6

Source: Trade Finance Magazine, Citi Research.

## 3. Investment banking

### (1) M&A

#### Western banks still on top

Although Japanese banks have steadily increased their presence in overseas lending, including project finance and loan syndications, they still lag behind western rivals in the field of investment banking.

**Figure 57. M&A advisory business rankings (\$mn)**

		1H CY2012	CY2011	Fees (\$M)	Share (%)
1	Goldman Sachs	1	3	775	8.4
2	Morgan Stanley	2	2	602	6.5
3	Credit Suisse	3	5	588	6.4
4	JP Morgan	4	1	578	6.3
5	BoA	5	4	415	4.5
6	Barclays	6	8	411	4.5
7	Lazard	7	10	384	4.2
8	Deutsche Bank	8	7	316	3.4
9	Citi	9	9	296	3.2
10	UBS	10	6	289	3.1
11	Evercore Partners	11	16	194	2.1
12	RBC	12	15	192	2.1
13	Jefferies	13	12	191	2.1
14	Rothschild	14	11	177	1.9
15	Houlihan Lokey	15	17	162	1.8
16	Qatalyst Partners	16	45	128	1.4
17	BMO	17	21	124	1.3
18	Moelis & Co	18	25	121	1.3
19	Nomura	19	13	115	1.2
20	Macquarie	20	14	104	1.1

Source: Thomson Reuters, Citi Research.

Figure 57 ranks banks by their involvement in merger and acquisition deals as financial advisors. Nomura Securities was the only Japanese institution to break into the top 20.

## (2) Primary market

Figures 58–60 rank banks on the basis of fees and commissions income for investment banking operations in the primary market.

Although all three megabanks made it into the top 20 for loan deals, SMFG was the only Japanese institution to make the list for equity and bond deals, and Mizuho was the only Japanese firm to feature in the list for bond deals.

The dominance of US banks in bond deals is attributable to the fact that Fannie Mae and Freddie Mac are the main sources of fees in this category.

**Figure 58. Equity deals (\$mn)**

		1H CY2012	CY2011	Fees (\$M)	Share (%)
1	JP Morgan	1	1	516	6.9
2	Morgan Stanley	2	8	484	6.5
3	Goldman Sachs	3	6	430	5.8
4	BoA	4	2	425	5.7
5	Citi	5	5	408	5.5
6	Deutsche Bank	6	3	338	4.5
7	UBS	7	10	288	3.9
8	Credit Suisse	8	4	252	3.4
9	Barclays	9	7	242	3.2
10	RBC	10	13	193	2.6
11	Wells Fargo	11	14	143	1.9
12	Nomura	12	18	122	1.6
13	CITIC	13	59	104	1.4
14	Guosen Securities	14	280	99	1.3
15	Raumont James	15	49	88	1.2
16	BMO	16	29	82	1.1
17	HSBC	17	11	81	1.1
18	<b>SMFG</b>	<b>18</b>	<b>28</b>	<b>79</b>	<b>1.1</b>
19	TD	19	15	77	1.0
20	CIBC	20	33	74	1.0

Source: Thomson Reuters, Citi Research.

**Figure 59. Bond deals (\$mn)**

		1H CY2012	CY2011	Fees (\$M)	Share (%)
1	JP Morgan	1	1	861	8.5
2	BoA	2	2	716	7.1
3	Citi	3	5	647	6.4
4	Deutsche Bank	4	3	656	6.4
5	Barclays	5	7	563	5.6
6	Morgan Stanley	6	8	536	5.3
7	Goldman Sachs	7	6	481	4.8
8	Credit Suisse	8	4	481	4.7
9	HSBC	9	11	380	3.8
10	Wells Fargo	10	14	363	3.6
11	UBS	11	10	328	3.2
12	RBS	12	9	316	3.1
13	RBC	13	13	300	3.0
14	BNP Paribas	14	12	281	2.8
15	<b>Mizuho</b>	<b>15</b>	<b>20</b>	<b>143</b>	<b>1.4</b>
16	Nomura	16	18	132	1.3
17	Credit Agricole	17	16	127	1.3
18	TD	18	15	116	1.1
19	Societe Generale	19	17	106	1.0
20	Scotiabank	20	25	102	1.0

Source: Thomson Reuters, Citi Research.

**Figure 60. Loan deals (\$mn)**

		1H CY2012	CY2011	Fees (\$M)	Share (%)
1	JP Morgan	1	1	545	8.0
2	Bank of America	2	2	518	7.6
3	Citi	3	3	331	4.9
4	Wells Fargo	4	4	294	4.3
5	Credit Suisse	5	5	263	3.9
6	<b>MUFG</b>	<b>6</b>	<b>13</b>	<b>259</b>	<b>3.8</b>
7	Deutsche Bank	7	7	256	3.8
8	Barclays	8	6	249	3.7
9	<b>Mizuho</b>	<b>9</b>	<b>12</b>	<b>243</b>	<b>3.6</b>
10	<b>SMFG</b>	<b>10</b>	<b>11</b>	<b>205</b>	<b>3.0</b>
11	RBS	11	14	174	2.6
12	RBC	12	20	169	2.5
13	Goldman Sachs	13	10	154	2.3
14	Morgan Stanley	14	9	137	2.0
15	BNP Paribas	15	8	122	1.8
16	UBS	16	22	120	1.8
17	HSBC	17	16	116	1.7
18	Sun Trust	18	24	105	1.5
19	GE	19	18	101	1.5
20	BMO	20	33	95	1.4

Source: Thomson Reuters, Citi Research.

## Chapter 4. Analysis of bank attractiveness in different regions

### 1.SWOT analysis

#### (1) Quantitative assessment

We conducted a broad overview of bank financials and operating environments to assess the attractiveness of banks in different regions. Figure 61 shows the results of our comparison of five regions<sup>1</sup>: Japan, China, the EU (ex UK), the UK, and the US. Banks were compared on the basis of four quantitative indicators—profitability, growth, financial soundness, and national strength—and four qualitative indicators: strengths, weaknesses, opportunities, and threats.

#### Emerging economies still lead in growth prospects

The five regions studied can be divided into emerging nations (China) and mature nations (the rest). From a perspective of bank financials, including growth prospects and profitability, China remained on top with double-digit annual growth in both loans and deposits (loans are growing slightly faster than deposits). China also had a big lead over other regions in profitability and financial soundness indicators.

Lending growth finally turned positive at Japanese banks while slowing at UK and European institutions. Banks in Europe, the UK, and the US posted double-digit growth in net profits as impairments on sovereign debt holdings and mortgage-related losses dropped out. However, near-zero lending growth implies that profit gains were not driven by a fundamental expansion of the earnings base.

#### Goodwill in mature nations

Earnings disparities in regions outside China are gradually narrowing. RoRA, an indicator we think will receive greater emphasis as regulation tightens, is similar across all four regions. We think convergence will gain momentum as regulation tightens and the financial and economic environments become increasingly homogeneous.

In terms of financial soundness, Japanese banks are operating in a more stable environment than global rivals when viewed in terms of such indicators as liquidity, NPLs, and credit costs.

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<sup>1</sup> Stocks used for the SWOT analysis were those listed in Figure 63.

## Comparison of national (regional) strength

Finally, we looked at the macroeconomic environment of each region with the category “national strength.” In addition to GDP growth rates, we examined national debt, sovereign credit ratings, and interest rates (which affect bank earnings).

Europe ranked last on this measure for its poor growth outlook and low sovereign ratings. The spread between long- and short-term interest rates, a driver of bank earnings, was actually smaller in Europe than in Japan despite the latter’s zero-interest-rate policy.

Figure 61. SWOT analysis of five regions

		Japan	China	EU	UK	US
<b>Size</b>						
Assets	FY2011, USD bn	8,037.2	6,290.0	15,488.3	5,755.4	5,708.7
-YoY (own currency)	-	3.9%	14.0%	3.1%	4.2%	1.2%
Deposits	FY2011, USD bn	5,075.5	4,936.0	5,514.2	2,365.1	2,950.9
-YoY (own currency)	-	2.1%	11.1%	0.9%	3.3%	10.9%
Loans	FY2011, USD bn	3,433.5	3,277.5	5,543.3	2,138.5	2,417.4
-YoY (own currency)	-	2.6%	13.8%	0.6%	-2.4%	1.1%
<b>Profitability</b>						
ROA	FY2011	0.4%	1.3%	0.0%	0.3%	0.7%
	FY2012E-2014E Average	0.4%	1.2%	0.3%	0.5%	0.9%
RORA	FY2011	1.0%	1.9%	1.0%	1.0%	0.9%
	FY2012E-2014E Average	0.8%	1.6%	1.2%	1.4%	1.3%
ROE	FY2011	7.2%	21.4%	1.8%	4.1%	7.5%
	FY2012E-2014E Average	6.4%	18.6%	6.8%	6.9%	9.1%
OHR	FY2011	53.1%	38.4%	67.4%	57.7%	63.9%
	FY2012E-2014E Average	54.1%	39.9%	62.6%	56.9%	62.2%
<b>Growth</b>						
Loans	FY2012E	6.0%	13.0%	1.7%	0.5%	-1.1%
Net profits	FY2012E-2014E Average	4.3%	7.4%	22.6%	18.7%	18.1%
GDP	FY2012E	2.7%	7.9%	-0.6%	-0.6%	2.2%
<b>Soundness</b>						
NPL ratio	FY2011	2.9%	1.0%	4.4%	6.1%	2.3%
Credit cost	FY2011	0.1%	0.4%	0.8%	1.1%	1.2%
Loan to deposit ratio	FY2011	67.6%	66.4%	100.5%	90.4%	81.9%
Core Tier 1 ratio	FY2012 E	6.6%	10.5%	8.3%	9.8%	8.1%
Tier 1	FY2011	12.1%	10.5%	12.6%	12.7%	12.0%
<b>National power</b>						
GDP (YoY)	FY2012 E	2.7%	7.9%	-0.6%	-0.6%	2.2%
Short term rate	FY2012 E	0.10%	3.16%	0.69%	0.50%	0.25%
10 year government bond yield	FY2012 E	0.90%	2.72%	1.50%	1.70%	1.75%
Lon-short term yield gap	FY2012 E	0.80%	-0.44%	0.81%	1.20%	1.50%
Government debt (vs GDP)	FY2012 E	235	16	96	88	107

Figure 61. SWOT analysis of five regions (Continued)

	Japan	China	EU	UK	US
Credit rating					
Long term rating	Aa3	Aa3	Aaa~Baa3	Aaa	Aaa
Outlook	STA	POS	STA~NEG	NEG	NEG
<b>Strength</b>	1) Financial soundness 2) Stable top-line	1) High profitability 2) High growth	1) Diversified revenue 2) High capital ratio	1) Diversified revenue 2) High CET1 ratio	1) Diversified revenue 2) Hefty margins
<b>Weakness</b>	1) Slower loan growth in Japan 2) Low profitability	1) Dependence on loan-deposit business 2) Low fee income	1) Low operational efficiency 2) Vulnerable financials such as loan to deposit ratio	1) High loan to deposit ratio 2) High NPL ratio	1) Low operational efficiency 2) High credit costs
<b>Opportunities</b>	1) Overseas profits and their contribution 2) Build up new businesses (transaction banking)	1) Strong domestic loan growth 2) Loan growth in emerging countries	1) Rebounding profits after restructuring 2) Retrieval of Italy and Spanish banks	1) Deleverage through shedding non-core businesses 2) Retrieval of weak banks such as RBS	1) Raise profits by buying subsidiaries sold by EU financial institutions 2) Settlement of mortgage litigations
<b>Threats</b>	1) Dependence on JGBs in asset management and impact when interest rates raise 2) Credit deterioration	1) Political risks 2) Credit deterioration	1) Sovereign risks 2) Credit deterioration	1) Uncertainty about political regulations, such as the white paper 2) Credit deterioration	1) Uncertainty about regulations such as the Volcker Rule 2) Credit deterioration

Note: Global economic outlook from Viewpac, "Global economic outlook and investment strategies" [Japanese], 24 August 2012; credit ratings from Moody's Investor Service, 6 August 2012.

Source: Citi Research.

## (2) Qualitative perspectives

### Regional strengths and weaknesses differ sharply

In the qualitative comparisons, the strengths of western banks differed greatly from those of Japanese banks. The latter were characterized by low profitability and growth potential but had stable financials and a stable credit outlook.

### Opportunities on the horizon for Japanese banks?

In terms of opportunities and threats, we think Japanese banks have been given opportunities in areas where they traditionally lagged behind, such as overseas operations and transactional banking, at a time when opportunities in many regions are limited.

In Europe and the US, meanwhile, banks' trading gains and other income may be squeezed as sovereign risk and economic weakness lift credit costs and global financial regulation grows more onerous, with Basel 3 and a variety of

new national regulatory initiatives on tap. Lending growth has also peaked in China, sparking concerns about a possible rise in NPL ratios for small business loans.

We present a quantitative evaluation of these threats below and then assess the relative attractiveness of the five regions.

### **(3) Credit risk**

#### **Ability to withstand rising credit costs**

Credit costs are one of the indicators with the greatest impact on bank earnings. We see the potential for further increases in credit costs in Europe and the UK, which are already characterized by high NPL ratios, and in China, which we think could face NPL problems going forward. We calculated each region's credit cost "buffer" by estimating break-even credit costs and then comparing that figure with credit costs for the previous financial year.

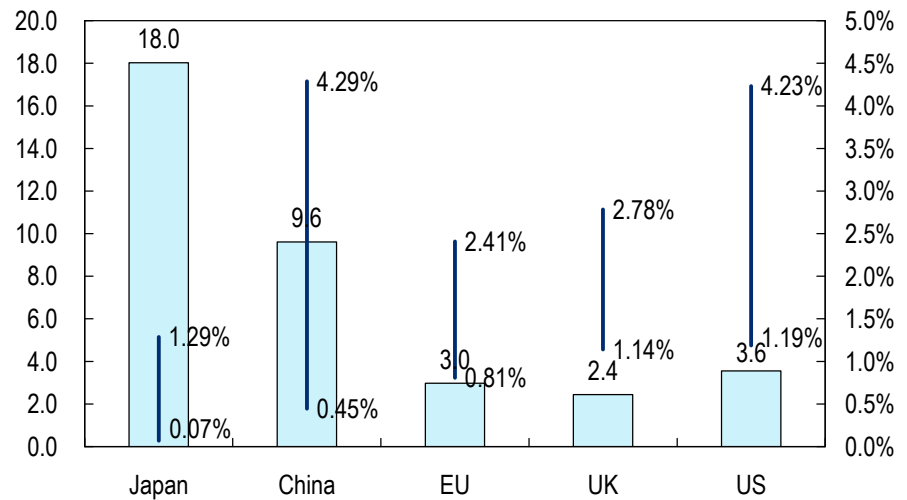
Formula for calculating break-even credit costs:

$$(\text{net business profits} - \text{break-even credit costs}) \times (1 - \text{tax rate}) = 0$$

Using the break-even figure derived from this equation, we analyzed the ability of banks in each region to withstand future increases in credit costs. For net business profits we used the forecast average over the three years from 2012 to 2014.

Figure 62 illustrates our estimates of break-even credit costs as a multiple of current credit costs and used this as an indicator of banks' ability to withstand potential stresses. The larger the numbers in the bar graph, the more resistant banks in that region are to various stresses.

**Figure 62. Break-even credit costs as multiple of current credit costs**



Note: Top end of vertical lines in graph indicates break-even credit cost ratio; bottom end shows the actual credit cost ratio in previous financial year.

Source: Citi Research.

Our findings suggested that Japanese banks are best positioned to withstand rising credit costs, followed by Chinese institutions.

Regions where banks are heavily dependent on the loan-and-deposit business tend to have large buffers because loans—the denominator in the credit cost fraction—tend to be relatively large, resulting in a lower estimate of break-even credit costs. In contrast, western banks tend to derive a significant portion of their income from fees and commissions, as a result of which the net business profits divided by loans tends to be high.

### Sovereign risk

The authorities have injected capital into banks in Greece, Portugal, and Spain, and the banks themselves are recognizing impairments on their sovereign debt holdings. Figure 63 shows this has had an extremely large impact on the Tier 1 capital of some European banks. The direct effect of sovereign debt holdings on banks in China, Japan, and the US is likely to be modest in comparison.

Figure 63. Sovereign risk

Sovereign bonds		Unit	Greece	Ireland	Italy	Portugal	Spain	Total	Tier 1	Total/Tier1
Mizuho	12/3	bn yen	0.0	0.0	0.0	0.0	0.0	0.0	6,397.8	0.0%
MUFG	12/3	bn yen	280.0	0.0	0.0	0.0	0.0	280.0	10,522.2	2.7%
SMFG	12/3	bn yen	0.0	0.0	0.0	0.0	0.0	0.0	6,274.4	0.0%
Resona	12/3	bn yen	0.0	0.0	0.0	0.0	0.0	0.0	1,627.0	0.0%
SMTH	12/3	bn yen	0.0	0.0	0.0	0.0	0.0	0.0	2,125.5	0.0%
Shinsei	12/3	bn yen	0.0	0.0	0.0	0.0	0.0	0.0	537.1	0.0%
Aozora	12/3	bn yen	0.0	0.0	0.0	0.0	0.0	0.0	587.3	0.0%
Average										0.4%
CCB	11/12	RMB	0.0	0.0	0.0	0.0	0.0	0.0	924.5	0.0%
ICBC	11/12	RMB	0.0	0.0	0.0	0.0	0.0	0.0		0.0%
BoC	11/12	RMB	0.0	0.0	0.0	0.0	0.0	0.0		0.0%
Average										0.0%
BNP Paribas	12/6	bn EUR	0.2	0.3	11.5	0.7	0.4	13.1	73.3	17.9%
Credit Agricole	12/3	bn EUR	0.0	0.2	4.3	0.6	0.2	5.2	61.7	8.5%
Commerzbank	12/6	bn EUR	0.0	0.0	7.8	0.8	2.6	11.2	27.9	40.1%
Deutsche Bank	12/6	bn EUR	0.0	0.6	2.6	0.3	0.9	4.3	50.6	8.5%
Intesa Sanpaolo	12/6	bn EUR	0.0	0.3	130.0	0.0	1.1	131.5	37.0	355.0%
UniCredit	12/6	bn EUR	0.0	0.1	40.7	0.0	1.9	42.7	49.0	87.1%
BBVA	12/6	bn EUR	0.0	0.0	3.7	0.3	57.8	61.9	35.9	172.3%
Santander	11/12	bn EUR	-	-	-	3.7	32.3	36.1	62.3	57.9%
Credit Suisse	12/6	bn EUR	0.2	0.0	3.4	0.2	0.0	3.8	38.6	9.9%
UBS	12/6	bn EUR	0.0	0.0	2.0	0.0	0.1	2.1	41.2	5.2%
Average										76.2%
HSBC	12/6	bn USD	0.1	0.2	2.1	0.7	1.3	4.4	146.9	3.0%
Barclays	12/6	bn pound	0.1	0.2	2.6	0.6	2.2	5.6	52.0	10.9%
RBS	12/6	bn pound	0.0	0.7	0.7	0.1	4.6	6.2	65.4	9.5%
Lloyds BG	12/6	bn pound	0.0	0.0	0.0	0.0	0.0	0.0	43.2	0.1%
Standard Charter	12/6	bn USD	0.0	0.0	0.0	0.0	0.0	0.0	38.3	0.0%
Average										4.7%
Bank of America	12/6	bn USD	0.0	0.0	0.5	0.0	0.0	0.5	164.6	0.3%
JP Morgan Chase	12/6	bn USD	0.1	0.1	2.8	0.1	0.4	3.5	132.0	2.7%
Wells Fargo	12/6	bn USD	0.0	0.1	0.0	0.0	0.0	0.1	117.9	0.1%
Average										1.0%

Source: Citi Research, based on company data.

#### (4) Comprehensive rankings of five regions

In addition to the four quantitative characteristics noted above (profitability, growth, financial soundness, and national strength), we replaced “threats” with “risk resilience” and ranked banks in the five regions from these five perspectives.

Each region was rated on a scale of 1 to 5 for each characteristic. For those indicators (such as credit costs) where a lower reading is better, we reversed the sign so that the bank with the lowest number would receive the highest score. We then calculated average scores for each of the five characteristics, with the sum of those averages representing the region's comprehensive score.

Figure 64. Comprehensive scores (on scale of 1 to 5, where 5 is best)

		Japan	China	EU	UK	US
<b>Profitability</b>		<b>3</b>	<b>5</b>	<b>1</b>	<b>3</b>	<b>3</b>
ROA	FY2011	3	5	1	2	4
-	FY2012E-2014E Average	2	5	1	3	4
RORA	FY2011	4	5	2	3	1
-	FY2012E-2014E Average	1	5	2	4	3
ROE	FY2011	3	5	1	2	4
-	FY2012E-2014E Average	1	5	2	3	4
OHR	FY2011	4	5	1	3	2
-	FY2012E-2014E Average	4	5	1	3	2
<b>Growth</b>		<b>3</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>2</b>
Loans	FY2012E	4	5	3	2	1
Net profits	FY2012E-2014E Average	1	2	5	4	3
GDP	FY2012E	4	5	1	2	3
<b>Soundness</b>		<b>3</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>2</b>
NPL ratio	FY2011	3	5	2	1	4
Credit cost	FY2011	5	4	3	2	1
Loan to Deposit ratio	FY2011	4	5	1	2	3
Core Tier 1 ratio	FY2012 E	1	5	3	4	2
Tier 1	FY2011	3	1	4	5	2
<b>National power</b>		<b>3</b>	<b>4</b>	<b>2</b>	<b>4</b>	<b>4</b>
GDP(YoY)	FY2012 E	4	5	1	2	3
Lon-short term yield gap	FY2012 E	3	1	2	4	5
Government debt( vs GDP)	FY2012 E	1	5	3	4	2
Credit rating		2	3	1	4	4
<b>Risk tolerability</b>		<b>5</b>	<b>5</b>	<b>2</b>	<b>2</b>	<b>3</b>
Breakeven credit costs		5	4	2	1	3
Sovereign vs Tier 1		4	5	1	2	3
<b>Total = Charm points</b>		<b>16</b>	<b>21</b>	<b>10</b>	<b>13</b>	<b>14</b>

Source: Citi Research.

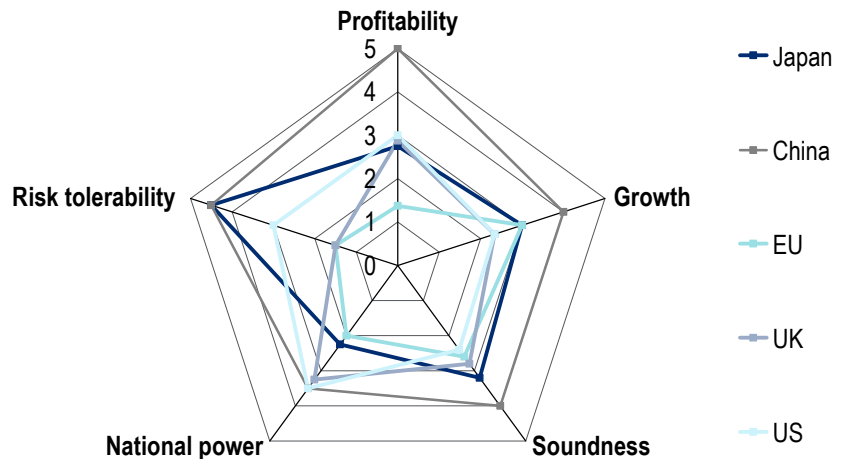
Chinese banks were ranked highest in this exercise, followed by Japan, the US, the UK and Europe, in that order.

China received high scores for all indicators, and its radar chart came close to being a regular pentagon (Figure 65). While Japan lagged behind on profitability and national strength, it received high scores for risk resilience and financial soundness. Given the potential for earnings growth in the

business areas Japanese banks are currently emphasizing, such as transactional banking, we think the current chart could develop into a more regular pentagon over time.

We next compared valuations and sought to determine the attractiveness of current share prices in light of these scores.

Figure 65. Comprehensive scores



Source: Citi Research.

## 2. Valuation

### (1) Valuations have fallen

Financial sector shares have been depressed since the global financial crisis. While it is not uncommon to see stocks trading for less than net asset value in other sectors, the valuations of European banks have been hit particularly hard.

Figure 66 provides an overview of global bank valuations. Most banks continue to trade at PERs of less than 10x and PBRs of less than 1x, which we think reflects the continued uncertainty surrounding European financial markets.

### (2) Valuations increasingly polarized

Bank valuations are also growing increasingly polarized within regions.

In the US, banks with strong local roots such as Wells Fargo are characterized by high valuations, while in the UK it is globally diversified institutions—particularly those like HSBC

and Standard Chartered that have Asian franchises—which have attracted relatively high valuations.

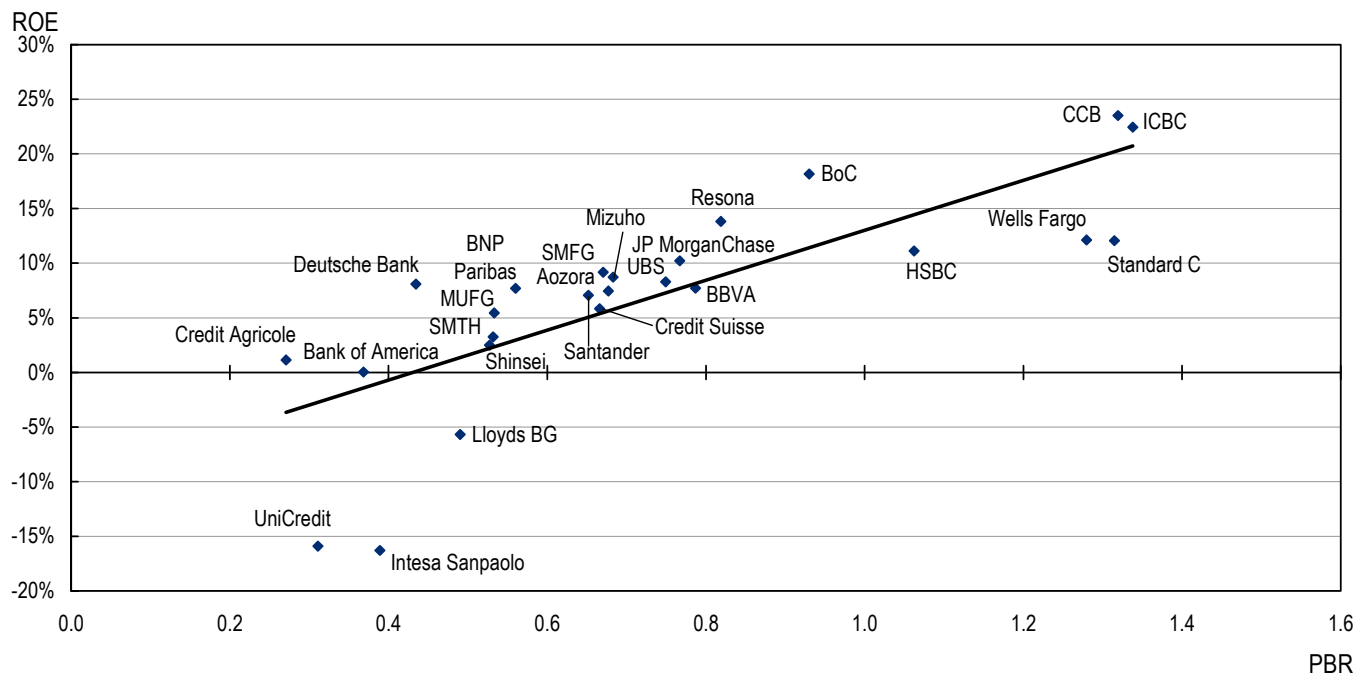
Both PBRs and PERs remain depressed in Japan, where banks once enjoyed perpetually high valuations.

Figure 66. Global bank valuations (\$bn, x)

		Market cap	BV (FY11)	TBV (FY11)	NP (FY12E)	PPP (FY12E)	Deposit (FY11)	PBR	PTBR	PER	PPER	PDR	CT1 (FY12E)
<b>Japan</b>													
Mizuho	JPY	3,325.0	4,867.8	4,447.2	489.4	726.1	90,636.7	0.68	0.75	6.79	4.58	3.7%	5.10%
MUFG	JPY	5,136.1	9,604.4	8,663.1	704.9	1,083.5	137,769.9	0.53	0.59	7.29	4.74	3.7%	9.28%
SMFG	JPY	3,326.7	4,975.1	4,173.5	491.1	788.6	92,722.2	0.67	0.80	6.77	4.22	3.6%	8.64%
Resona	JPY	1,128.6	1,409.2	1,239.8	146.4	245.7	35,861.2	0.80	0.91	7.71	4.59	3.1%	2.18%
SMTH	JPY	934.4	1,717.7	1,414.3	124.2	207.7	25,330.7	0.54	0.66	7.52	4.50	3.7%	5.83%
Shinsei	JPY	246.8	493.2	435.4	40.5	27.6	5,362.4	0.50	0.57	6.09	8.93	4.6%	4.77%
Aozora	JPY	461.2	591.4	540.5	33.3	30.6	2,929.5	0.78	0.85	13.85	15.06	15.7%	10.33%
Average		2,079.8	3,379.8	2,987.7	290.0	444.3	55,801.8	0.64	0.73	8.00	6.66	5.5%	6.59%
Average(weighted)		3,497.7	5,883.4	5,236.9	493.7	762.1	95,079.8	0.63	0.71	7.29	4.96	4.0%	7.36%
<b>China</b>													
CCB	US\$	167.0	128.9	125.3	28.6	44.1	1,586.8	1.30	1.33	5.83	3.79	10.5%	10.8%
ICBC	US\$	195.9	151.5	148.2	35.0	53.0	1,948.1	1.29	1.32	5.59	3.70	10.1%	10.6%
BoC	US\$	103.3	114.9	111.9	20.2	30.9	1,401.0	0.90	0.92	5.12	3.35	7.4%	10.0%
Average		155.4	131.8	128.5	27.9	42.6	1,645.3	1.16	1.19	5.51	3.61	9.3%	10.46%
Average(weighted)		165.0	135.3	132.0	29.4	44.9	1,697.5	1.21	1.24	5.57	3.65	9.6%	10.52%
<b>EU</b>													
BNP Paribas	€	47.4	75.4	64.0	7.1	13.1	546.3	0.63	0.74	6.68	3.63	8.7%	9.10%
Credit Agricole	€	13.3	36.7	10.1	0.3	6.1	525.6	0.36	1.32	43.33	2.19	2.5%	7.70%
Commerzbank	€	8.1	21.4	15.2	0.8	2.8	255.3	0.38	0.53	10.34	2.92	3.2%	7.30%
Deutsche Bank	€	29.1	53.4	28.9	3.1	6.2	601.7	0.55	1.01	9.37	4.70	4.8%	6.88%
Intesa Sanpaolo	€	22.0	47.0	15.5	1.8	8.6	357.4	0.47	1.42	11.97	2.56	6.2%	9.24%
UniCredit	€	21.2	55.8	29.9	1.7	10.8	561.4	0.38	0.71	12.12	1.95	3.8%	9.45%
BBVA	€	35.0	39.2	26.1	1.5	11.6	282.2	0.89	1.34	23.73	3.02	12.4%	NA
Santander	€	60.1	82.0	73.1	3.9	24.2	589.0	0.73	0.82	15.50	2.49	10.2%	8.88%
Credit Suisse	Sfr	26.5	33.7	15.8	1.8	2.7	313.4	0.79	1.68	14.95	9.80	8.4%	7.20%
UBS	Sfr	44.7	53.4	35.2	3.1	4.8	342.4	0.84	1.27	14.42	9.36	13.0%	9.19%
Average	US\$	37.8	61.9	39.1	3.1	11.5	546.0	0.60	1.09	16.24	4.26	7.33%	8.33%
Average(weighted)	US\$	47.6	71.9	51.1	4.0	14.7	580.5	0.66	1.06	14.89	4.32	8.61%	7.55%
<b>UK</b>													
HSBC	US\$	165.2	151.5	114.8	15.4	33.3	1,253.9	1.09	1.44	10.75	4.96	13.2%	8.89%
Lloyds BG	GBP	26.1	45.9	39.4	1.7	8.5	405.9	0.57	0.66	15.30	3.06	6.4%	7.71%
Standard C	US\$	54.6	40.7	32.8	5.2	8.7	342.7	1.34	1.66	10.56	6.28	15.9%	12.72%
Average	US\$	87.2	88.6	70.2	7.8	18.5	748.8	1.0	1.3	12.2	4.8	11.8%	9.78%
Average(weighted)	US\$	122.4	115.9	89.4	11.2	25.0	967.3	1.1	1.4	11.4	4.9	12.7%	9.50%
<b>US</b>													
Bank of America	US\$	94.8	230.1	128.1	6.5	26.0	951.3	0.41	0.74	14.63	3.65	10.0%	7.30%
JP Morgan Chase	US\$	149.3	183.6	137.7	19.1	39.2	1,127.8	0.81	1.08	7.82	3.81	13.2%	8.75%
Wells Fargo	US\$	184.9	140.2	102.4	17.6	39.5	871.8	1.32	1.80	10.52	4.68	21.2%	8.18%
Average		143.0	184.6	122.8	14.4	34.9	983.6	0.85	1.21	10.99	4.04	14.8%	8.08%
Average(weighted)		152.6	175.2	120.4	15.7	36.4	978.5	0.94	1.32	10.49	4.15	15.9%	8.18%

Note: Data as of 10 September 2012  
Source: Citi Research.

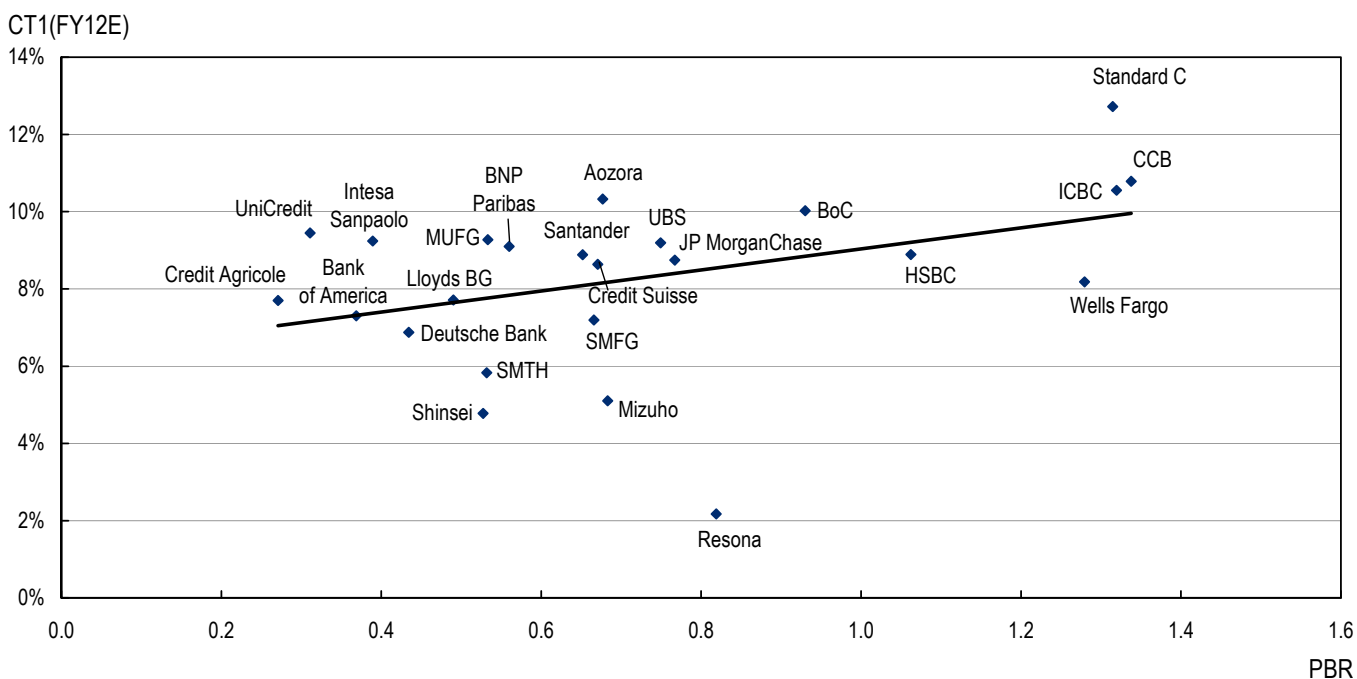
Figure 67. ROE and PBR



Note: RoEs based on FY11 results.

Source: Citi Research.

Figure 68. Core Tier 1 ratios and PBR



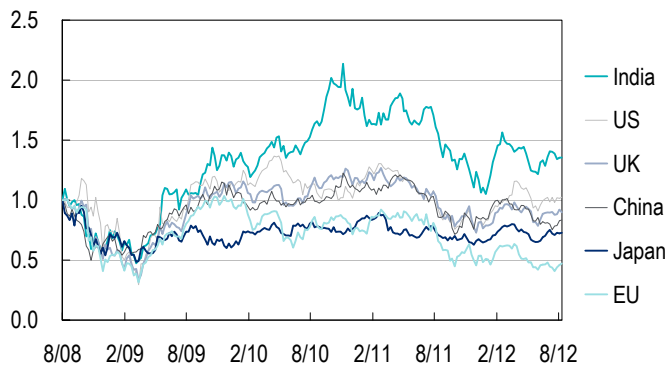
Note: Core Tier 1 ratios based on FY12E

Source: Citi Research.

### (3) Year-to-date performance

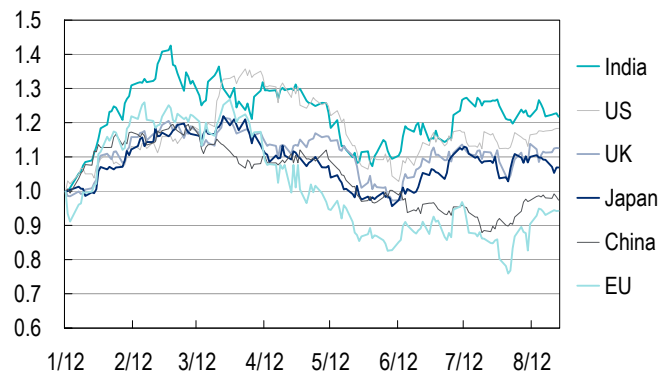
US banks have come out ahead in terms of year-to-date share performance, while European banks were the worst performers among their global peers. The US stock market outperformed most overseas bourses, and we think US banks may also have benefitted from an investor shift away from European lenders on lingering concerns about Greece and Spain. Japanese banks were located somewhere between the two extremes. As noted in Chapter 1 of this report, the credit and equity markets have taken very different views of Japanese banks, and we see substantial scope for share price gains.

Figure 69. Relative market caps since August 2008



Source: Company data, Citi Research.

Figure 70. Market caps year-to-date



Source: Company data, Citi Research.

### (4) Room for re-examination

Japanese banks lag behind their Chinese rivals, which had the highest comprehensive score, in valuation and behind US institutions, with the third-highest comprehensive score, in share price performance. We think it is time for a re-examination of Japanese banks.

Amid a global de-leveraging trend, we think investors may start to recognize Japanese banks' opportunity to enhance both profitability and growth prospects by re-leveraging. That alone warrants a reappraisal of Japanese banks, in our view.

## Reference: HSBC and MUFG

### Overall assessment

Figure 72 compares MUFG and the ten global banks with the largest market cap on the basis of deviation scores for five

indicators—market cap, Tier 1 capital ratio, overhead ratio, RoE, and total assets—selected for the insight they offer on valuation, financial soundness, efficiency, profitability and scale. The results are presented as radar charts.

HSBC's pentagon in the radar chart is almost regular in shape, whereas MUFG's is characterized by low scores for market cap and RoE. The greatest difference between the two banks is in market cap. While MUFG has a somewhat lower RoE score, we think the wide gap in market cap deviation scores points to a possible undervaluation of MUFG.

### Financial soundness

Tier 1 ratios in FY11 were 12.3% at both HSBC and MUFG. MUFG has already achieved a core Tier 1 capital ratio of 9% under Basel III criteria, and we expect this will rise to more than 10% in two to three years. Accordingly, MUFG would easily be able to meet the 9.5% core Tier 1 ratio requirement even if the capital surcharge for G-SIBs is set at 2.5%, the top end of the proposed range.

### Efficiency and profitability

MUFG's overhead ratio of 50% was lower than HSBC's 54%, as personnel costs accounted for just 34% of overhead at MUFG vs. about 55% at HSBC. However, HSBC generated a much higher RoE.

### Total assets

Total assets at the two institutions were roughly equal, with deposits amounting to 49% of assets at HSBC and 63% at MUFG. The higher percentage of deposits and other stable liabilities at MUFG suggests it is probably more resilient to shocks.

### Market capitalization

HSBC's market cap is more than twice that of MUFG. MUFG is trading at a PBR in the 0.5–0.6x range, whereas HSBC is valued at about 1x book. We think the disparity in market caps is greater than the difference in earnings strength warrants.

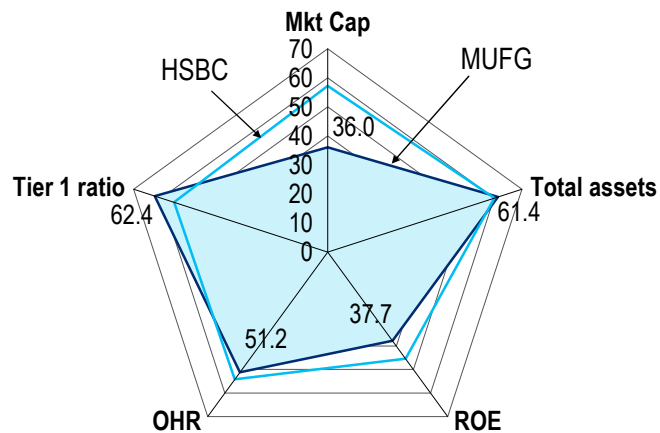
Figure 71. MUFG versus top 10 banks by market cap (\$bn)

	Company Name	Country	Mkt Cap	Total assets	ROE	OHR	Tier 1 ratio	Deposit	Deposit to asset ratio
1	ICBC	China	199.9	2,459.0	24%	36%	10.4%	1,948.1	79%
2	Wells Fargo	US	180.3	1,313.9	12%	57%	11.3%	871.8	66%
3	CCB	China	172.4	1,951.4	22%	36%	11.0%	1,586.8	81%
4	HSBC	UK	161.7	2,555.6	11%	54%	11.5%	1,253.9	49%
5	JP Morgan Chase	US	140.9	2,265.8	10%	63%	12.3%	1,127.8	50%
6	Agricultural Bank of China	China	130.6	1,855.4	20%	41%	9.5%	1,528.8	82%
7	Bank of China	China	106.9	1,879.6	18%	43%	10.1%	1,401.0	75%
8	Commonwealth Bank	Australia	95.4	735.5	19%	46%	10.0%	388.4	53%
9	Bank of America	US	85.5	2,129.0	0%	71%	12.4%	951.3	45%
10	Westpac Banking Corp	Australia	78.0	647.7	18%	41%	9.7%	357.8	55%
13	MUFG	Japan	64.8	2,642.8	5%	50%	12.3%	1,663.6	63%

Note: Share prices as of 16 August 2012; other indicators based on FY11 results.

Source: Company data, Citi Research..

Figure 72. Deviation scores for five key indicators



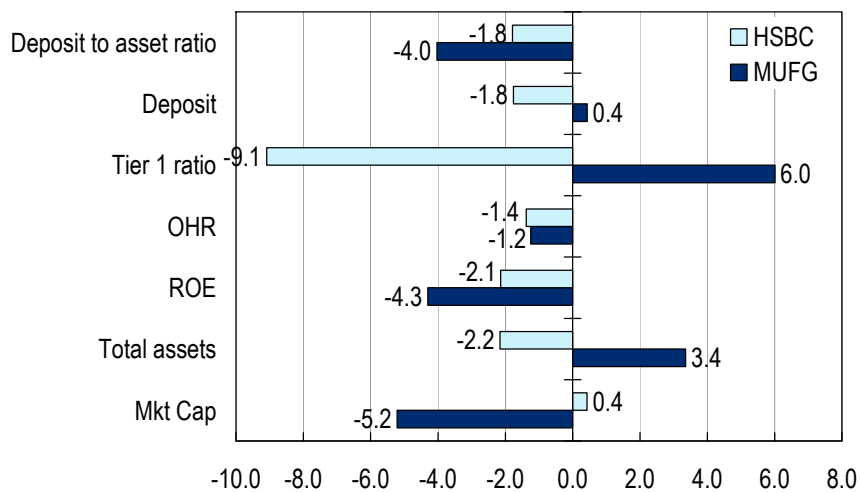
Note: Market caps as of August 16, 2012. All indicators based on FY11 results

Source: Citi Research.

### Changes in deviation scores from previous report

Figure 73 shows changes in deviation scores since the last edition of this report. MUFG's scores fell for market cap, RoE, and overhead ratio but rose for total assets, Tier 1 ratio, and deposits. HSBC's market cap score rose in spite of lower scores for profitability (RoE and overhead ratio) and asset indicators, in sharp contrast to MUFG.

Figure 73. Change in deviation scores from 2010 survey



Source: Citi Research.

## Chapter 5. A way out for Japanese banks

### 1. Changing growth strategies

#### (1) Growth strategy history

##### Regulatory environment

Deregulation since the 1980s has entailed both costs and benefits for Japan's banks. The gradual liberalization of deposit rates that ended in 1994 ate into profits that had been protected by regulated interest rates, but banks were able to find new growth opportunities elsewhere.

Figure 74 provides an overview of changes in the regulatory environment since 1981 and the business strategies that banks have adopted in response. For reference, the Table also provides a view of macroeconomic trends such as GDP growth and aggregate bank market cap as a percentage of nominal GDP.

Figure 74. Long-term trends in regulation and bank strategies

Calendar year	Nominal GDP (¥trn)	YoY (nominal)	Banks market cap (¥trn)	Banks market cap /GDP	Regulation	Growth strategy
1981	261	7.5%	7	2.6%	-	Balance sheet expansion on the back of economic growth
1982	274	5.0%	8	3.0%	-	-
1983	285	4.0%	8	2.9%	(Liberalization of deposit interest completed in US)	-
1984	303	6.3%	16	5.1%	Japan-US Yen-Dollar Committee (currency liberalization/globalization)	-
1985	325	7.4%	27	8.2%	Ban on government bond, etc., dealing lifted	Participation in securities and international businesses
1986	341	4.7%	26	7.7%	Tokyo offshore market opened (making euro-yen financing more flexible)	-
1987	354	4.0%	55	15.6%	-	-
1988	381	7.5%	63	16.5%	Basel Accord	-
1989	410	7.7%	74	18.0%	Issue standards eased (corporate bond issues)	Expanding bank business into the primary market
1990	443	8.0%	74	16.7%	Regulations on total real estate lending	-
1991	469	6.0%	70	14.8%	Committee for Financial System Research (guidelines for insurers, brokers, and banks regarding entry into other markets)	-
1992	481	2.4%	41	8.6%	Laws related to entry into other markets by subsidiaries of banks and brokers revised	Entry into the securities business via subsidiaries in multiple formats
1993	484	0.6%	66	13.6%	Basel regulations implemented	-
1994	488	1.0%	62	12.8%	Liberalization of deposit interest completed	-
1995	495	1.4%	47	9.5%	Broker subsidiaries established	-
1996	505	2.0%	67	13.2%	Financial "Big Bang" concept	-
1997	516	2.1%	55	10.6%	Ban on financial holding companies lifted	Becoming financial conglomerates to beef up overall group capabilities
1998	505	-2.1%	36	7.2%	Ban on bank sales of investment trusts lifted.	Expanding financial product sales by promoting shift from savings to investment
1999	498	-1.4%	38	7.7%	Ban on banks issuing corporate bonds lifted	-
2000	503	1.1%	35	6.9%	-	-
2001	498	-1.0%	23	4.7%	Banks begin selling insurance products (e.g., home loan-related fire insurance)	-
2002	491	-1.3%	23	4.7%	Banks begin selling a broader range of insurance products	-
2003	490	-0.2%	19	3.9%	-	-
2004	498	1.6%	37	7.5%	Ban on securities intermediation by non-brokers lifted (allowing the sale of foreign bonds and stocks via banks)	-
2005	502	0.7%	39	7.8%	Full deposit guarantee system ended	-

Calendar year	Nominal GDP (¥trn)	YoY (nominal)	Banks market cap (¥trn)	Banks market cap /GDP	Regulation	Growth strategy
2006	507	1.1%	64	12.6%	-	-
2007	516	1.6%	59	11.5%	Complete lifting of ban on banks selling insurance products	Developing full line-up of financial products for consumers
2008	504	-2.2%	41	8.2%	-	-
2009	471	-6.6%	29	6.1%	-	-
2010	479	1.8%	24	4.9%	-	-
2011	466	-2.8%	23	4.9%	Thailand and Malaysian central banks accept JGBs as eligible collateral	Expanding overseas businesses
2012	-	-	-	-	Decision taken that regulations on sales of financial products to home loan customers, etc., will be eased	-

Source: Citi Research.

## Costs and benefits of deregulation

Deregulation has had both positive and negative impacts on Japanese bank earnings. The gradual liberalization of deposit rates that started in the 1980s and ended in 1994 fell into the latter category. Regulated deposit rates had helped protect banking sector profitability, and with deregulation those profits were eaten away by competition.

But deregulation also brought numerous benefits. In the mid-1980s Japanese banks began to place a greater focus on overseas business and JGB investments. They responded to the opening of offshore markets in Tokyo and the liberalization of forex transactions, including yen-based loans and investments, by bolstering their global operations. The end of a ban on bank trading of JGBs and other government bonds also led to the accumulation of government securities in banks' portfolios. Thus the banking business increasingly shifted from a traditional focus on domestic lending and deposits to securities and global operations as banks sought new drivers of growth.

In the 1990s, the authorities proceeded with deregulation in an attempt to allow banks, securities firms, and insurance companies to move into each others' businesses, thereby offering customers a one-stop shop for financial products and services. Today all of the megabanks have their own full-line securities firms, but it was during this period that banks began cross-selling securities to their customers.

Around the same time, the ban on sales of investment trusts and insurance products at bank branches was lifted, lending a quick boost to the development of the one-stop-shopping

model. As deregulation proceeded, banks' business strategies shifted from a stock-based model driven by interest income to a model dependent on fees, commissions, and other flows for growth.

## **(2) Growth strategy outlook**

### **Room for additional cross-selling**

We think the sale of investments and other financial products to retail customers has now come full circle and is unlikely to deliver further growth. Globally, however, there are few countries where the banking sector is as well-liked and trusted by both corporate and retail customers as in Japan. We therefore see further room for growth in the cross-selling of products and services by Japanese banks.

As one example, few institutions provide comprehensive consulting services for long-range financial planning, including insurance. We think Japanese banks have yet to take full advantage of the opportunities presented by deregulation.

### **Looking overseas in pursuit of growth**

With demographic changes in Japan, yen appreciation, and rising labor and other costs, the domestic economy is hollowing out and the domestic market for housing and business loans has become hypercompetitive. For these reasons, among others, Japan's banks are looking for roads to growth overseas. Meanwhile, in the arena of global finance, the outlook for Europe is unclear and the trend toward deleveraging continues, partly due to regulatory requirements. In addition, as we have already discussed, we think expansion of overseas business makes sense in terms of potential profitability.

We saw a sharp increase in overseas lending, led by the megabank groups, in FY3/12, and management strategies at a number of banks are increasingly focused overseas, which we attribute to the aforementioned factors.

Across the board, banks are stepping up business in Asia in particular. In addition, many expect their overseas profit weighting to increase to about 30%. If current momentum continues, we do not think it will be hard to achieve such levels.

## 2. Overseas business opportunities

### (1) De-leveraging versus re-leveraging

#### Global cyclicity

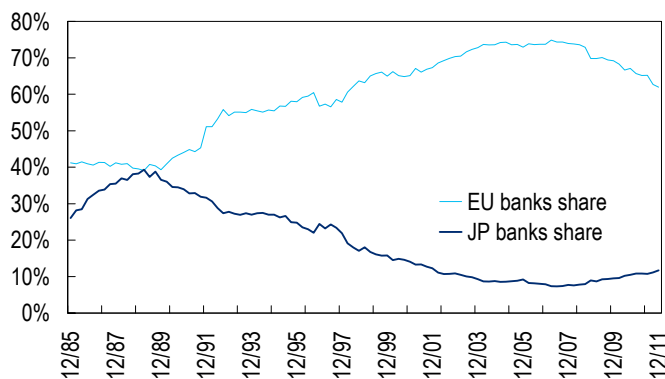
A major shift appears to be under way in global banking, with Japanese and European lenders moving in very different directions. Figure 75 illustrates banks' total assets outside of their home countries as a percentage of all such assets. In other words, it shows their share of the market for cross-border loans and investments.

As this figure makes clear, banks in Europe and Japan are diametrically opposed in terms of trends in overseas lending. In 1989, Japanese banks were among the world leaders, with a share of about 40% at their peak. The same year marked a bottom for European banks, after which time their rose steadily.

Amid the financial crisis precipitated by the subprime lending debacle, the share of loans held by European banks reached a peak, while at roughly the same time loans held by Japanese banks bottomed. Financial history expresses long-term cycles, but the overseas activities of Japanese and European banks show roughly symmetrical cyclicity.

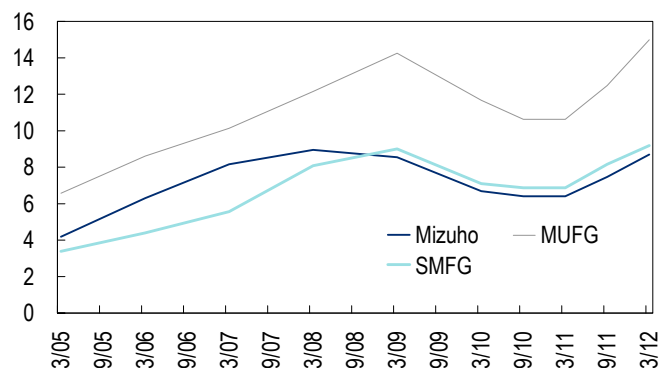
We think this is because while European banks, especially those outside the UK, are deleveraging, Japanese banks on the other hand are moving to re-leverage as they have room to expand overseas business in terms of liquidity, capital sufficiency, and a stabilizing domestic situation.

Figure 75. Share of banks' total overseas assets



Source: BIS, Citi Research.

Figure 76. Megabanks' overseas lending (¥trn)



Source: Company data, Citi Research.

## **(2). Economic potential of overseas strategies**

### **Capital efficiency and profitability**

The question is whether the increasingly aggressive overseas lending by Japanese megabanks is likely to generate greater returns than domestic business.

Figure 77 provides a comparison of data regarding lending to corporations in Japan and abroad. Risk weighting and anticipated loss ratios are part of disclosure requirements under Basel 3, but separate data for domestic and overseas segments are provided only by SMFG. Therefore, the overseas data shown in Figure 29 are 2011 numbers from SMFG.

For Mizuho and MUFG, combined domestic and overseas numbers are used for both risk weighting and expected loss ratios for domestic lending. However, as overseas loans are primarily to high-quality borrowers, we think the risk weighing for overseas lending is probably lower than for domestic business. Therefore, we think we can infer that the actual risk weighting of domestic loans for both banks is probably higher than indicated in the figure.

**Figure 77. Business lending at the megabanks**

	Mizuho	MUFG	SMFG
<b>Features of Overseas Loans</b>			
Average Risk Weight	25.81%	25.81%	25.81%
Assumed Risk Weight for New Loans	22.00%	22.00%	22.00%
Loan Spread	0.97%	1.07%	1.07%
Expected Losses	0.06%	0.06%	0.06%
Net Margin	0.91%	1.01%	1.01%
<b>Features of Domestic Loans</b>			
Average Risk Weight	48.33%	56.04%	31.04%
Loan Spread	0.81%	0.76%	0.94%
Expected Losses	0.42%	0.45%	0.26%
Net Margin	0.39%	0.31%	0.68%

Note: Risk weights and expected loss ratios for overseas lending by MUFG and Mizuho were assumed to be the same as at SMFG. Lending spreads estimated by Citi Research from investor briefing materials. Risk weights for new overseas lending estimated based on data for segments with high internal ratings.

Source: Company data, Citi Research.

As is clear from these comparisons, the risk weighting of overseas loans is lower than domestic loans. Essentially, the regulatory capital requirements are lower, and the shareholders' equity impact from increased lending is limited. Low risk weighting would normally suggest lower profitability. However, net margins after discounting loan spreads and expected loss ratios are substantially greater for overseas loans than domestic loans.

In the end, in the case of lending to corporations, we estimate that overseas lending can provide capital efficiency roughly twice as great as domestic lending, and profitability twice as high. This therefore means RoE at least 4x as high. Accordingly, we consider efforts by Japanese banks to boost overseas lending make a great deal of economic sense.

We think one reason for this situation is hypercompetition for loans in the Japanese domestic market. Due to the mismatch between banks' ample deposits and the limited demand, loan-to-deposit ratios at Japanese banks are unavoidably low, and we think this is one factor in the low profitability of Japanese loans.

### Anticipated profitability improvements

In increasing overseas lending, it is also necessary to consider capital reserves. Figure 78 shows trial calculations of surplus capital based on levels of core Tier I capital under Basel 3 requirements, and the corresponding scope for asset growth.

What is “surplus capital”? That depends on the thinking of management at each bank, so we have come up with definitions to reflect the four different concepts. Specifically, we use a base core Tier I ratio of 7%, then factor in a surcharge level of either 1% or 2% to be required of global SIFIs (Systemically Important Financial Institutions), the different potential timing for phasing these in, and differing potential timing for full enforcement (all items for elimination fully eliminated).

We have also factored in opportunities losses from the decline in domestic lending if overseas loans increase (lower net interest income due to reduced domestic loans).

Figure 78. Estimated earnings impact of overseas lending growth (¥bn)

	Mizuho	MUFG	SMFG
<b>Key Data</b>			
CT1 (Basel 3) (3/13) E	9.37%	10.61%	9.64%
CT1 (Basel 3) (3/14) E	10.10%	11.22%	10.46%
(Full Implementation Basis) (3/13)	6.95%	9.45%	7.90%
(Full Implementation Basis) (3/14) E	7.69%	10.07%	8.72%
Risk Weighted Assets (Basel 3)	54,053.3	84,457.4	50,974.4
NOP (3/13) CoE	753.0	1,015.0	750.0
Overseas Loans	8,693.7	14,987.9	9,193.5
<b>Surplus Capital</b>			
(a) Satisfy 1% Surcharge in 3/13	739.1	2,204.9	835.0
(b) Satisfy 1% Surcharge in 3/14	1,136.7	2,723.2	1,253.6
(c) Satisfy 1% Surcharge in 3/13 (full deduct)	-564.9	1,227.4	-51.2
(d) Satisfy 2% Surcharge in 3/13	198.6	1,360.3	325.2
<b>Room for Asset Growth</b>			
(a) Satisfy 1% Surcharge in 3/13	3,359.7	10,022.1	3,795.3
(b) Satisfy 1% Surcharge in 3/14	5,166.9	12,378.0	5,698.3
(c) Satisfy 1% Surcharge in 3/13 (full deduct)	0.0	5,579.1	0.0
(d) Satisfy 2% Surcharge in 3/13	902.7	6,183.1	1,478.2
<b>Profit growth at annual overseas loan growth at 20%</b>			
(a) Satisfy 1% Surcharge in 3/13	69.4	145.1	66.5
(b) Satisfy 1% Surcharge in 3/14	72.6	147.9	75.7
(c) Satisfy 1% Surcharge in 3/13 (full deduct)	63.4	139.7	48.0
(d) Satisfy 2% Surcharge in 3/13	65.0	140.4	55.2
<b>&lt;&lt;Profit Improvement&gt;&gt;②</b>	9.65%	14.57%	10.09%

Source: Company data, Citi Research.

The results of our calculations indicate that if the current pace of growth (about 20% annualized) is sustained, then two years from now we can expect core net business profit growth of about 10%–15%.

We find modest earnings growth at SMFG, which has greater surplus capital than Mizuho. This is because the gap between risk weighting for domestic and overseas loans is smaller at SMFG than at the other two banks, so the gap in net margin is also smaller. Therefore, if we assume that overseas lending increases faster than surplus capital, the decline in domestic lending is likely to be substantial, and the accompanying opportunity losses considerable.

### **(3) Overseas growth constraints**

#### **Capital adequacy ratios**

Japanese banks need to closely monitor capital and liquidity as they expand their overseas business, with Basel 3 due to set tougher capital standards from 2013.

Figures 79 and 80 show our estimates of banks' core Tier 1 capital ratios under Basel 3. We expect all banks will be able to meet the new requirement at an early stage without raising fresh capital.

MUFG executives have made a number of forward-looking statements on the subject of overseas M&A, but the bank says in its medium-term business plan that it intends to raise its core Tier 1 ratio by just 0.5% over three years. Since that could reasonably be achieved with earnings alone, we think MUFG has effectively factored in capital "consumption" of more than ¥1trn. As this generally relates to positive goodwill generated in acquisitions, we think MUFG's current financial base is capable of supporting a substantial amount of M&A.

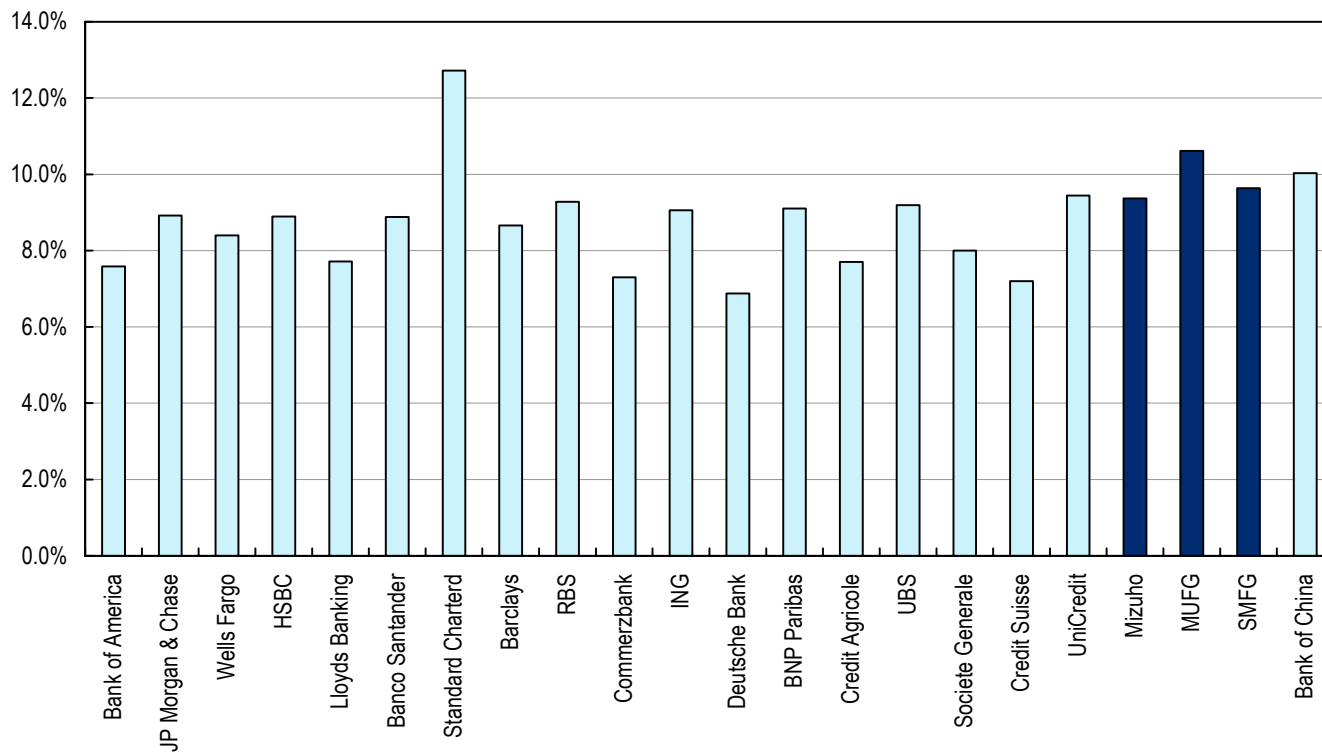
Figure 79. Estimated core Tier 1 ratios versus Basel 3 requirements

	Mizuho	MUFG	SMFG	Resona	SMTH	Shinsei	Aozora	Basel 3 Minimum Requirement	(Including capital conservation buffer)
2012/3	8.97%	10.26%	9.18%	7.42%	8.68%	8.17%	19.38%	NA	NA
(Full deduction basis)	6.49%	9.08%	7.40%	6.91%	6.46%	5.14%	16.25%	NA	NA
2013/3	9.37%	10.61%	9.64%	7.93%	8.99%	8.27%	19.57%	3.500%	3.500%
(Full deduction basis)	6.95%	9.45%	7.90%	7.42%	6.81%	5.42%	16.52%	NA	NA
2014/3	10.10%	11.22%	10.46%	8.55%	9.60%	8.86%	20.12%	4.000%	4.000%
(Full deduction basis)	7.69%	10.07%	8.72%	8.04%	7.41%	6.01%	17.08%	NA	NA
2015/3	10.39%	11.70%	11.06%	9.13%	9.85%	8.96%	20.18%	4.500%	4.500%
(Full deduction basis)	8.46%	10.78%	9.67%	8.72%	8.11%	6.68%	17.75%	NA	NA
2016/3	10.59%	12.10%	11.59%	9.67%	10.03%	9.05%	20.24%	4.500%	5.125%
(Full deduction basis)	9.15%	11.41%	10.56%	9.37%	8.73%	7.34%	18.41%	NA	NA
2017/3	10.87%	12.58%	12.19%	10.25%	10.29%	9.15%	20.30%	4.500%	5.750%
(Full deduction basis)	9.91%	12.12%	11.50%	10.04%	9.42%	8.01%	19.08%	NA	NA
2018/3	11.15%	13.05%	12.79%	10.82%	10.55%	9.24%	20.35%	4.500%	6.375%
(Full deduction basis)	10.67%	12.82%	12.44%	10.72%	10.12%	8.67%	19.75%	NA	NA
2019/3	11.43%	13.53%	13.39%	11.40%	10.81%	9.34%	20.41%	4.500%	7.000%
(Full deduction basis)	11.43%	13.53%	13.39%	11.40%	10.81%	9.34%	20.41%	NA	NA

Note: We assumed that convertible preferred equity would undergo mandatory conversion during the transition period and treated it as core Tier 1 capital based on the special measures for public funds. We also assumed that MUFG's stake in Morgan Stanley would be exempted under the rescue measures.

Source: Citi Research forecasts.

Figure 80. Estimates of core Tier 1 ratios for leading global banks (forecasts for end-FY12)



Source: Citi Research forecasts.

## Foreign currency liquidity

An even more important constraint on growth is access to foreign currency funding. Key methods of obtaining stable access to foreign currency include retail deposits in Japan and corporate deposits by companies (Japanese and otherwise) outside Japan. Other ways for banks to avoid dependence on the interbank market include deposits with central banks in other nations and short-term funding from money market funds and other institutional investors (NCDs and commercial paper), although neither of these offers the same degree of stability. There is also the option of borrowing from the Bank of Japan or other central banks that accept JGBs as collateral.

Another option is to use yen assets for foreign currency funding. Japanese banks find it difficult to use yen funds for overseas business mainly because of currency risk hedging. They typically do not take currency risk when they lend overseas. Even if their overall asset/liability management and trading operations intentionally take on currency risk, we think it is correct risk management to hedge currency risk that arises naturally when pursuing credit risk overseas.

The main means of currency hedging are long-term currency contracts and currency swaps. These hedge trades require a counter-party. When a bank and a counter-party engage in them, they must be carried out within mutual lines of credit. The size of these credit lines will differ substantially, depending on whether the swap is of interest rates swap or the principal.

To cite an example, an interest-rate swap on principal of ¥1trn can often involve an actual transfer of less than ¥10bn because the difference in the interest rates being swapped (e.g., a variable rate and a fixed rate) is at most only a few percentage points. However, a currency swap requires transferring the ¥1trn at term because it involves swapping the principal at a contracted date. Both parties' transaction windows thus narrow subsequently, even if they had the credit lines to support this transaction. In particular, swap costs have a tendency to rise when the financial system is unstable.

To ensure stable access to foreign currency funding, 1) banks need to attract more corporate deposits, and 2) greater liquidity is needed in the currency swaps market. If banks seek to expand their balance sheets by acquiring foreign lenders, there is no need to obtain foreign currency funding as long as the target institutions are able to attract deposits.

### (1) Attracting more corporate deposits

As noted in Chapter 3, efforts to beef up global cash management services and other settlement functions play an important role in attracting corporate deposits overseas. Japan's megabanks have designated the development of deeper relationships with non-Japanese firms—using loans as an entry ticket to a wider range of transactions—as a key element in their overseas strategies, and we think stronger ties will lead to more deposits.

### (2) Enhancing currency swap liquidity

We expect Basel 3 to be the driving force for a breakthrough from this impasse.

One of Basel 3's aims is to stabilize financial markets. To this end, it proposes measures to avert risk growing into broader systemic risk as financial institution infects others with its own operational risk.

One of its proposals is to reduce transactions that financial institutions negotiate among themselves. OTC derivatives became a high-profile issue when Lehman Brothers collapsed. They involved banks that defaulted on derivatives contracts

drawn up among financial institutions without the mediation of the market spreading their risk to other financial institutions. The problem of course included currency swaps.

Basel 3 thus imposes penalties based on both OTC derivatives trading volume and equity capital ratios. Movement in the value of derivatives trades when the market changes is not the only issue: the greater the value involved, the larger the loss can be when a bank defaults on a contract, although this will also depend on credit conditions at the counterparty. Increasing the capital required for these trades is a means of covering this risk. This is one factor behind the growth in risk assets at European and US banks. Shifting OTC trades to a clearing institution, or central counterparty (CCP), allows banks to increase their equity capital ratios without needing to raise fresh capital.

Banks had shunned a unified format because tailored contracts among individual institutions allowed them freedom of action. However, Basel III has for the first time given them the common motivation to use a CCP system.

Although all countries are working to establish the CCP infrastructure and regulations, there are numerous technical issues. However, if the CCP structure spreads to currency hedging, concerns about counterparty and credit risk would disappear and conditions would be in place to convert yen funds to foreign-currency funds.

## Reference: Characteristics of bank strategies

Taken from our June 25 report, [Bank sector - An investment strategy based on circumstances in Europe](#)

### Mizuho Financial Group

While Mizuho's overseas strategy is focused on Asia, it aims to expand globally. For example, over the next five years Mizuho expects to increase its Asian network to 50 offices (from 40 at the moment).

Mizuho's overseas strategy takes a compact approach, focusing on the "super 30" as priority clients are called. That is, Mizuho will select around 30 companies (and not just Japanese firms) in each region (South Asia, Southeast Asia, Europe, and the Americas) based on past relationships and future potential. Mizuho will then focus management resources on these "super 30" in an effort to raise margins.

In addition, we understand that companies headquartered in Europe or the Americas that have strong business franchises in Asia are subject to selection in many cases as multinationals. By bolstering its Asia strategy and improving its competitiveness in Asia in areas like information volume, Mizuho could play the role of core bank for these clients. According to Mizuho Group CEO Yasuhiro Sato, the firm plans to increase its trading leverage by utilizing the knowledge of its industry research department, and at the same time increase the sense of Mizuho's reliability via measures like supplying capital to BP, which was thrown into crisis by the oil spill in the Gulf of Mexico. We believe that this sense of loyalty and duty on the part of management will also help bolster relationships with customers.

The deposit spread is expected to shrink at US banks due to the prolonged low-interest rate policy by the Fed, but we do not believe this is priced into valuations. To this extent M&A in the US cannot be ruled out, a sharp difference from the approach of MUFG.

## MUFG

It would be hard to shake MUFG's position at the top of Japan's banks in terms of depth of overseas business. MUFG is the only Japanese bank to operate a retail bank overseas (Union Bank in the US), and it beats the other megabanks in terms of overseas expansion potential as well.

Part of MUFG's overseas strategy involves bolstering transactional banking. Its global CMS (cash management service) business is perhaps the best known part of this area, and by improving broadly-defined settlement services and siphoning off surplus capital from non-Japanese firms as well as Japanese firms operating overseas, MUFG can procure a significant amount of foreign currency. Also, these operations do not result directly in a rise in risk assets in many cases, while RoE is extremely high. We understand HSBC, UK banks like Standard Chartered, and US banks like JP Morgan earn upwards of ¥1trn in revenue from GTS (global transaction services), and MUFG is at the vanguard of Japanese banks in GTS. It has plans for aggressive expansion in Asia, helped by improvement to its IT systems.

In addition, we understand MUFG intends to further enhance transactions in local Asian currencies and improve its market maker operations in currencies other than US dollars. MUFG aims to expand FICC-related earnings, primarily in Asia, by

accelerating input of management resources (e.g., capital and personnel).

MUFG is also unique in terms of its North American strategy. The Bank of Tokyo-Mitsubishi UFJ and Union Bank are positioned as the two drivers of the North American strategy. Union Bank in the past bought up two failed financial institutions from the FDIC and then in March acquired Pacific Capital, so MUFG's M&A activities are attracting attention. MUFG is the only Japanese megabank to boast non-organic growth in North America, and we will be interested to see where the strategy with Union Bank as its platform goes from here.

## SMFG

SMFG has formed a consortium with Sumitomo Corp. and Sumitomo Mitsui Finance and Leasing to purchase Royal Bank of Scotland's aircraft leasing business. This aggressive move by a Japanese bank in terms of overseas strategy resonated throughout the market like a gunshot.

We think the key characteristic of SMFG's overseas strategy is that it is being deployed based on an overall image of the loan and business portfolio. SMFG acquired the Bank of Ireland's infrastructure financing division last year, which we believe was done to fill in the missing piece in its European project finance operations. It also appears the acquisition of the RBS aircraft leasing business was done to improve the existing aircraft leasing business, which both SMFG and Sumitomo Corp. felt was lacking.

While MUFG is bolstering its transactional banking operations, SMFG has also used CMS as a key strategic tool. According to Asia Money magazine, SMFG was ranked No. 4 in CMS in Asia (and No. 3 for SMEs), putting it tops among Japanese banks. We understand SMFG aims to get into the top three foreign banks in this area.

We will be interested in developments for the group strategy as part of SMFG's overall overseas strategy. Part of this is expanding the functionality of Promise (now a consolidated subsidiary) in the Hong Kong and Chinese retail finance markets as well as that of SMBC Nikko Securities. The first step in attempts by the latter to bolster its US business is acquiring financial holding company status there (which the other two megabanks have already done).

**Figure 81. International divisions of Japan's megabanks (branches, ¥bn)**

	<b>Mizuho</b>	<b>MUFG</b>	<b>SMFG</b>
Network in Asia	42	57	32
Network in EMEA	22	36	18
Network in America	21	30 (Union bank+401)	11
Partnership in Asia (equity acquired)	China CITIC Bank, Shinhan Bank, Vietcombank	Bank of China, BNP (Indonesia), CIMB, Dah Sing Financial Holdings	Kookmin Bank, BEA, Vietnam Exim Bank, Kotak Mahindra Bank
Net business profits in international division (FY2011)	96.4	255.0	132.5
(As a % of total)	18.1%	17.1%	16.3%
Total overseas revenue (FY2010)	376.5	949.7	412.6
(As a % of total)	13.9%	21.0%	10.7%
Overseas loans (FY2011)	8,693.7	14,987.9	9,193.5
(As a % of total)	13.4%	18.7%	16.3%

Source: Company data, Citi Research.

**Figure 82. Loans outstanding by region (end-Mar 2012, ¥bn)**

	<b>Mizuho</b>	<b>MUFG</b>	<b>SMFG</b>
Asia	3,094.8	4,761.2	3,103.2
North America	2,506.2	3,483.5	2,915.1
Central/South America	2,886.4	1,821.8	981.1
West Europe	2,290.6	3,605.2	1,318.0
East Europe	20.8	308.7	352.9
Others	908.1	2,633.2	1,243.8
Total	11,707.2	16,613.6	9,914.1

Source: Company data, Citi Research.

Figure 83. Banks mentioned in this report

Company	RIC	Currency	Rating	Price (Sep 10, 2012)
Mizuho Financial Group	8411.T	JPY	1	131.0
Mitsubishi UFJ Financial Group	8306.T	JPY	1	366.0
Sumitomo Mitsui Financial Group	8316.T	JPY	1	2,478.0
Resona Holdings	8308.T	JPY	1	314.0
Sumitomo Mitsui Trust Holdings	8309.T	JPY	1	227.0
Shinsei Bank	8303.T	JPY	1	94.0
Aozora Bank	8304.T	JPY	2	243.0
Agricultural Bank of China	1288.HK	CNY	1	2.8
Australia and New Zealand Banking Group Ltd	ANZ.AX	AUD	1	24.2
Banco Bilbao Vizcaya Argentaria SA (BBVA)	BBVA.MC	EUR	2H	6.5
Banco Santander	SAN.MC	EUR	2H	6.1
Bank Central Asia	BBCA.JK	IDR	3	7,950.0
Bank of America Corp	BAC.N	USD	2	8.6
Bank of China (Hong Kong)	2388.HK	HKD	1	24.0
Bank of China	3988.HK	CNY	1	2.8
Bank of Communications	3328.HK	CNY	2	5.1
Barclays PLC	BARC.L	GBP	1	2.1
BB&T	BBT.N	USD	2	32.6
BNP Paribas SA	BNPP.PA	EUR	1	38.2
Capital One Financial Corp.	COF.N	USD	1	57.0
China CITIC Bank	0998.HK	CNY	2	3.6
China Construction Bank (CCB)	0939.HK	CNY	1	5.1
China Merchants Bank	3968.HK	CNY	3	12.5
China Minsheng Banking	1988.HK	CNY	3	6.0
Commerzbank	CBKG.DE	EUR	2H	1.5
Commonwealth Bank of Australia	CBA.AX	AUD	1	54.5
Credit Agricole	CAGR.PA	EUR	2	5.5
Credit Suisse	CSGN.VX	CHF	1	20.1
Deutsche Bank	DBKGn.DE	EUR	2	31.8
Hang Seng Bank	0011.HK	HKD	2	112.5
HDFC Bank	HDBK.BO	INR	2	590.9
HSBC Holdings PLC	HSBA.L	USD	1	5.6
Industrial & Commercial Bank of China (ICBC)	1398.HK	CNY	2	4.3
Intesa Sanpaolo	ISP.MI	EUR	2H	1.3
JP Morgan Chase & Co	JPM.N	USD	1	38.8
Lloyds Banking Group PLC	LLOY.L	GBP	1	0.4
National Australia Bank Ltd	NAB.AX	AUD	2	25.0
Nordea	NDA1V.HE	EUR	2	7.5
Oversea-Chinese Banking (OCBC)	OCBC.SI	SGD	3	9.3
PNC Financial Services Group Inc	PNC.N	USD	2	63.9
Royal Bank of Scotland Group PLC	RBS.L	GBP	2H	2.5
Banco Santander	SAN.MC	EUR	2H	6.1
Santander Brasil	SANB11.SA	BRL	2	15.7
Sberbank RF	SBER.MM	RUB	1	94.4
Standard Chartered PLC	STAN.L	USD	1	14.3
State Bank of India	SBI.BO	INR	1	1,861.3
Svenska Handelsbanken AB	SHBa.ST	SEK	2	233.8
UBS	UBSN.VX	CHF	1	11.8
UniCredit Group	CRDI.MI	EUR	1H	3.7
United Overseas Bank	UOBH.SI	SGD	3	19.2
US Bancorp	USB.N	USD	2	33.8
Wells Fargo & Co	WFC.N	USD	2	34.6
Westpac Banking Corp	WBC.AX	AUD	2	23.6

Source: Citi Research.

## Appendix A-1

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