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Between deluge and drought

Liquidity and funding for Asian banks

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Between deluge and drought: Liquidity and funding for Asian banks

Executive summary

Strategic management of funding and liquidity will play an increasingly important role for Asian banks. Management should start preparing now to face future challenges, including maturity mismatches and the overall need for long-term funding to support growth.

A diverse and challenged funding and liquidity situation across Asian countries
Markets and participants in Asia face ongoing challenges, particularly relating to the lack of (wholesale) market depth and structural funding gaps. While Western banks need to continue to deleverage for better management of capital, liquidity, and funding needs, Asian banks are far more comfortable on these fronts. However, they do face a major challenge in how they develop future funding, not least in order to avoid worsening the existing funding gap. Across the subset of eight countries covered in this paper, a comprehensive primary funding gap of $662 billion (as of the end of 2012) is expected to widen further, by about $180 billion, over the course of 2013.

That said, Asia represents a wide and diverse group of countries with different levels of maturity and operating characteristics. We can distinguish between two realities within Asian markets:[1]

- Emerging markets (such as India, Indonesia, Malaysia, Thailand, and Vietnam) are characterized by low banking penetration, relatively high asset growth, heavier reliance on retail deposits, lack of wholesale-funding options, and relatively high interest-rate volatility. Despite their differences, for example, with regard to their stage of evolution, many of their structural market realities (for instance, wholesale-market depth) are similar.

- Mature markets (such as Australia, Hong Kong, and Singapore) are characterized by higher banking penetration, moderate asset growth, and heavier reliance on international wholesale funding.

These markets share a few elements that are largely common:

- Maturity mismatches exist due to short-term funding of long-term assets (in particular with respect to infrastructure in emerging economies). An exception to this is Australia.

Domestic long-term wholesale-funding markets are essentially unavailable or largely nonexistent (as is the case for many developing economies).

- Regulatory requirements are a growing burden; impending Basel III norms could cause a drop of two to five percentage points in overall returns on equity, with liquidity and funding ratios being one of the key drivers.

- Foreign banks, in particular those from the European Union, have made a recent retreat.

- The growing interconnectedness of banking systems increases the risk of systemic contagion. Potential "subsidiarization"[2] requirements from regulators may further curb banks' international-growth aspirations.

1 This working paper focuses on eight Asian markets: Australia, Hong Kong, India, Indonesia, Malaysia, Singapore, Thailand, and Vietnam. China and Japan were deliberately excluded.

2 Subsidiarization refers to the division of global financial institutions into smaller, largely self-standing entities or subsidiaries.

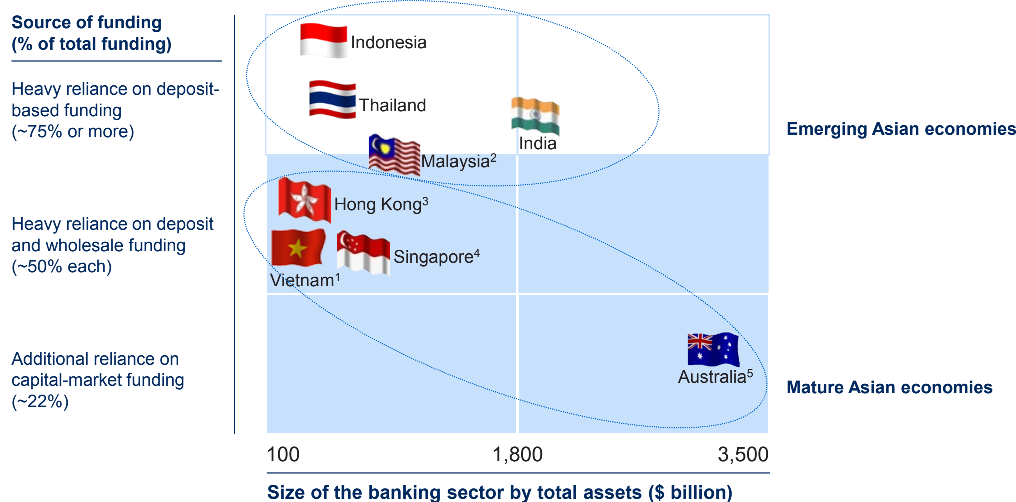
In this context, Asian banks are confronting important challenges that are likely to increase in severity:

- Loan growth is outpacing deposit growth across most economies, albeit with some exceptions, notably Australia.
- Competition is intensifying for deposits (especially given the deregulation of savings rates in countries such as India) and for customers, who are increasingly willing to switch to other products such as funds in search of higher returns. Changes in the interest-rate environment might induce substantial volatility and outflows on deposits.
- There is limited access to international institutional-investor funds; this is caused by the lack of transparency in banks' balance sheets and, in some cases, limited appetite for political and inflation risk—especially in emerging economies, for example, Vietnam.
- The banks' international growth leads to multicurrency and maturity mismatches, and special strategies and capabilities are required to manage these
- Treasury functions are underdeveloped, especially in Asian emerging markets. These typically still maintain a profit-making mind-set, but they often have an unclear role and lack the objectives and capabilities to manage balance-sheet structures, short-term liquidity, and long-term funding. Liquidity management (mostly short-term liquidity steering) and money-market trading constitute the bulk of the division's operations.

What should banks do?

Sustained profitable growth in today's Asian market environment will come in parallel with significantly enhanced frameworks and capabilities for liquidity and funding management. Three initiatives will be particularly important:

Exhibit 1 Sources of funding distinguish two broad categories.



1 Heavy reliance on very short-term deposits; banks run huge liquidity risk.
2 Some reliance on wholesale funding.
3 Mature and active foreign-exchange market; interbank funds are a major source of dollar funding.
4 Heavy reliance on money-market funding (but not long-term capital markets).
5 Diverse funding bases: deposits and wholesale funding; heavy reliance on capital-market funding.

1. Banks must increase the transparency of funding and liquidity positions (both internally and for potential investors) and associated risks (including the contingent liquidity risks).

2. They should develop a clear liquidity and funding risk appetite—that is, a limit structure and steering targets beyond regulatory compliance based on stress tests and bank-relevant scenarios.

3. They must significantly strengthen capabilities in liquidity and funding management

A diverse and challenging funding and liquidity situation across countries

The total banking asset pool in the countries covered in this working paper was around $8.08 trillion as of 2012. The bulk of assets (close to 70 percent on average) are funded by retail and commercial customer deposits. However, the liquidity and funding situation varies across countries, and we can identify two broad categories: emerging Asian economies and mature Asian economies (Exhibit 1). The countries' performance in a variety of dimensions can also be examined in detail (Exhibits 2 and 3).

Exhibit 2 Countries' economic environment and banking sector can be analyzed in detail.

Higher than average | Average[1] | Lower than average

		Asian economies								Western economies		
		India	Indonesia	Thailand	Malaysia	Vietnam	Singapore	Hong Kong	Australia	United States	United Kingdom	Europe
Economic environment												
GDP growth	**2008–2012** % p.a.	7.09	5.89	2.92	4.03	5.76	4.82	2.62	2.51	0.18	–0.25	–0.32
	2013–2016E % p.a.	7.09	5.92	4.91	5.38	6.02	4.32	3.20	3.37	2.41	1.26	1.20
Sovereign-debt level	**2012** % of GDP	49.40	23	44.50	53.50	46	111.41	37.76	29.30	72.48	90.01	N/A
Country credit-default-swap spread	**2012** Basis points	N/A	123.60	71.12	79.90	138.14	60.00[3]	46.22[5]	64.82	39.01	56.31	N/A
Inflation rate	**2012** %	9.31	4.28	3.01	1.66	9.09	4.58	4.07	1.76	2.07	2.82	2.45
Banking sector												
Assets/ nominal GDP	**2012** %	94	31	120	235	107	270	72	241	96	428	303[6]
	2015E %	112	37	124	222	118	268	73	262	95	467	296[6]
Market share, top 3 banks	**2012** %	31.91	48.02	53.81	57.26	56.90	97.80	73.32	69.64	37.00	74.00	30.00
Loan-to-deposit ratio (LDR)[2]	**2011** %	79.22	82.12	123.38	108.31	100.80	87.43	60.10	133.53	181.00	128.00	124.00
Foreign-exchange LDR[4]	**2011** %	99.00	94.00	192.00	58.00	N/A	103.00	51.00	N/A	N/A	N/A	N/A
Loan growth	**2007–2011** % p.a.	15.8	22.1	13.9	14.9	22.6	16.5	14.1	11.2	–1.4	–5.7	2.7[7]
	2012–2015E % p.a.	19.2	17.1	11.8	13.2	17.1	11.1	8.5	1.8	5	2.1	0.6[7]
Deposit growth	**2007–2011** % p.a.	14.6	18.8	8.1	11.1	19.8	9.6	6.3	13.8	5.1	0.02	4.8[7]
	2012–2015E % p.a.	19.3	13.6	14.1	12.3	14.9	8.6	5.8	3.2	1.2	2.7	1.6[7]

1 Average defined as values in the range of +/- 10% of the mean
2 To be analyzed in correlation with loan and deposit growth and the funding philosophy; ideally, LDR <100 is preferred.
3 As of end of 2011.
4 Ratio of foreign-exchange loans to foreign-exchange deposits.
5 2013 averages through May.
6 Excludes select eurozone countries where data were unavailable (for example, Cyprus, Estonia, Luxembourg, Malta, and Slovenia).
7 Excludes Malta and Cyprus because data were unavailable.

Source: Bloomberg; Dealogic; Economist Intelligence Unit; Global Banking Pools; Global Insight; press search; regulators; McKinsey analysis

Exhibit 3 Countries' funding structures can be compared.

Higher than average | Average[1] | Lower than average

		Asian economies								Western economies		
		India	Indo-nesia	Thailand	Malaysia	Vietnam	Singa-pore	Hong Kong	Australia	United States	United Kingdom	Europe
Funding structure												
Funding mix	**Customer deposits, 2012,** %/BS	73.93	91.17	78.20	80.52	52.00[6]	41.99	55.24[6]	59.94	35.40	40.00[5]	34.00
Funding mix	**Bank deposits (including interbank liabilities), 2012,** %/BS	3.83	3.58	8.67	4.53	19.00[6]	46.55	29.30[6]	2.31	48.90	N/A	19.00
Funding mix	**Securities issued, 2012,** %/BS	1.03	1.19	7.51	N/A	9.00[6]	<1	3.36[6]	N/A	9.27	5.00[6]	15.00
Funding mix	**Other funding,[2] 2012,** %/BS	21.21	4.06	5.63	14.95	20.00[6]	10.92	12.10[6]	37.75	6.49	55.00[6]	32.00
Funding mix	**Home-currency funding, 2012,** %/BS	93.00[6]	85	90.00[6]	92	N/A	38.00	39.00[6]	84.06	80–85[7]	N/A	89.00
Funding mix	**Foreign-currency funding, 2012,** %/BS	7.00[6]	15	10.00[6]	8	N/A	62	61.00[6]	15.94	15–20[7]	N/A	11.00
Interbank Lending	**Interbank short-term rate (3 months), 2012,** %	8.9	5.0	2.8	3.2	7.5	0.4	0.4	3.2	0.3	0.5	0.2
Interbank Lending	**Interbank long-term rate (1 year), 2012,** %	8.3	5.8	3.6	3.5	9.5	1.5	1.0	3.4	1.8	1.9	3.1
Bonds	**Average maturity of bonds 2012,** years	6.70	5.90	6.00	7.20	6.00	5.80	6.70	9.03	9.40	9.60	7.60
Bonds	**Bond issuance 2002–12,** % p.a.	29.54	29.29	28.14	15.92	–14.00[4]	27.27	23.99	17.13	–0.64	7.40	5.81
Risk	**Tier 1 capital, 2012,[3]** % of risk-weighted assets (est.)	10.18	13.77	10.70	11.65	N/A	14.70	10.82	11.04	13.20	12.80	12.90
Risk	**Average rating,** Latest country ratings by S&P	BBB–	BB+	BBB+	A–	BB–	AAA	AAA	AAA	AA+	AAA	AA+[8]

1 Average defined as values in the range of +/- 10% of the mean.
2 Includes capital and reserves, provisions, and other liabilities.
3 Average of top 5 banks in each country.
4 2005–10 bond-issuance compound annual growth rate of 14%; close to 83% decline in issuances in 2010–12 alone, which is attributed to new regulations effective Feb 2011 that set clear and more stringent conditions for bond issuances.
5 Including bank deposits as split was not available, data as of Q2 2011.
6 As of 2011; United Kingdom is as of Q2 2011.
7 Rough estimate.
8 Europe's rating as represented by the European Financial Stability Fund (EFSF). The EFSF's mandate is to safeguard financial stability in Europe by providing financial assistance to euro-area member states within the framework of a macroeconomic adjustment program.

Source: Bloomberg; Dealogic; Economist Intelligence Unit; Global Banking Pools; Global Insight; press search; regulators; McKinsey analysis

The first category includes countries with nascent or emerging banking sectors: India, Indonesia, Malaysia, Thailand, and Vietnam. The category is characterized by several factors:

- The banking sector is small compared with GDP (for example, total assets to GDP is about 100 percent for India, Thailand, and Vietnam) and includes no globally systemic banks. However, the banking sector sees extremely high annual growth rates (about 15 percent (in India) to 20 percent (in Vietnam), for instance).

- There is excess liquidity overall, but it is concentrated mostly in top banks, and much of it is parked in state banking institutions (for example in India, state banking institutions and their associates account for 75 percent of total deposits as of March 2012).

- Typically, deposits make up the biggest part of funding (around 75 percent on average), and the loan-to-deposit ratio is quite favorable (as it is in India and Indonesia); however, in most countries—India, Indonesia, Malaysia, Thailand, and Vietnam—loan growth outpaces deposit growth.

- These countries often rely heavily on domestic funding (upward of 90 percent in some cases) though there are a few countries that already rely on foreign funding (notably Thailand and Indonesia, with 10 to 15 percent foreign funding), comparable with Western economies (for example, Europe, at about 11 percent, and the United States, at 15 to 20 percent).

The second category comprises countries with relatively mature banking sectors, such as Australia, and those with established financial centers, such as Hong Kong and Singapore. A number of elements are common:

- Typically, the banking sector is huge compared with GDP (in some countries, such as Singapore, banking assets are close to three times GDP) and includes some globally systemic banks. Growth rates also continue to be high (with typical loan and deposit growth of 10 to 15 percent or more), though the pace of growth is not as fast as in emerging economies.

- There is a high reliance on wholesale funding (50 percent), often in foreign currencies (for instance, 20 percent of Australian liabilities are funded from international capital markets). These countries, in particular Hong Kong and Singapore, have elevated vulnerability to negative external events. On the other hand, loan-to-deposit ratios are generally favorable, and loans and deposits are growing roughly in line (except for Australia).

- The liquidity situation is tightening due to repatriation of funds by foreign banks, in particular in Australia and Hong Kong.

It is also important that the funding and liquidity situation in Asia be viewed within the global context.[3]

Europe. Despite some recent signs of relief, funding markets remain quite difficult due to the ongoing sovereign-debt crisis. The European Central Bank still acts as the liquidity provider of last resort, with a significant amount of long-term refinancing operations still outstanding.

In addition, wide price gaps and the ongoing scarcity of stable funding (long-term debt issuances, stable deposits) are preventing the stabilization of balance sheets; banks are forced to maintain an elevated maturity gap. By way of illustration: the average maturity of outstanding bank debt has decreased since the crisis from an average of ten years to seven years, while the cost of long-term funding has increased by 50 basis points just in the last year, due to deteriorating bank ratings and increasing spreads.

United States. Deposits are currently gaining importance due to a lack of safe alternatives for investors, but the future trend is uncertain. Increasingly, a substantial part of banks' balance sheets is parked in highly liquid assets. This has been encouraged by the expectation that there will be new regulations around the liquidity coverage ratio.

Asia. There is no immediate stress on funding and liquidity across the emerging Asian economies—India, Indonesia, Malaysia, Thailand, and Vietnam—that rely heavily on domestic sources of funding (upwards of 90 percent for several countries). For many of these economies, pricing spreads between short- and long-term funding remain low (in several countries, the difference between one-year and ten-year paper is less than 50 basis points).

3 This paper is part of a series; "Between deluge and drought: The divided future of European bank-funding markets," McKinsey Working Papers on Risk Number 41, was published in March 2013. A third paper on US funding is forthcoming. Some of the global context in this paper is derived from McKinsey's 2012 survey on asset-liability management (ALM) and treasury management, which included a benchmarking of the ALM/treasury function among global banks, including banks in Asia and emerging markets.

While there is also no immediate stress on funding and system-wide liquidity for many advanced economies, changes are afoot. There is a high reliance on wholesale funding in Australia, Hong Kong, Malaysia, and Singapore, though this is less marked than in Western economies. Banks have realized the potential of retail funding and are changing strategies to tap retail markets, linking future asset growth to the growth of retail deposits. We can see some variations across the region.

In Hong Kong, there is slight pressure on system-wide liquidity due to the repatriation of funds to China since the Chinese central bank began to unwind its tight monetary policy. Although renminbi deposits remain a small part of the total funding base of Hong Kong banks, the slow opening up of channels between China and Hong Kong poses long-term risk for the liquidity of the Hong Kong banking system. A number of measures have been taken to promote the development of the local debt market, centered mainly around continual implementation and refinement of the government bond program, including a recent iBond issue designed to spark interest in retail bonds. To meet the growing demand for such bonds for both regulatory and investment purposes, it is proposed that the government bond program be doubled in size to 200 billion Hong Kong dollars over the course of the current financial year.

Singapore and Australia are a different case. Banks, sovereign-wealth funds, and pension funds (mainly in Australia) provide plenty of high-quality funding. Australian banks have been shifting from a lending to a deposit-driven culture. Traditionally, Australian banks had low retail-deposit-based funding (due to robust consumer spending) and relied heavily on tapping debt markets. Now they are cutting back and linking their growth plans to deposit growth (though this may require the local financial system to be overhauled if it is to succeed in the long run). Banks are borrowing more money locally and have also been raising funds via covered-bond issuance.

Additionally, we can see some new activities emerging. Singaporean banks are tapping into the corporate deposit pool and will therefore need to build up their cash-management capabilities. There is also more covered-bond issuance. The Monetary Authority of Singapore is currently collating industry responses to its proposal that banks incorporated in Singapore be allowed to issue covered bonds.

A case for improved liquidity and funding management for Asian banks

At first sight, it might seem that Asian banks face medium-term, rather than short-term, liquidity and funding pressure. However, banks still have a long way to go if they are to become competitively relevant in funding and liquidity management. A peek at Western banks shows that liquidity issues can hijack the entire banking system. In Asia, there is an opportunity to address shortcomings and begin to change before potential liquidity- crunch and funding-shortfall scenarios take place. As we saw in the recent crisis, when trouble comes, it can arrive with great speed.

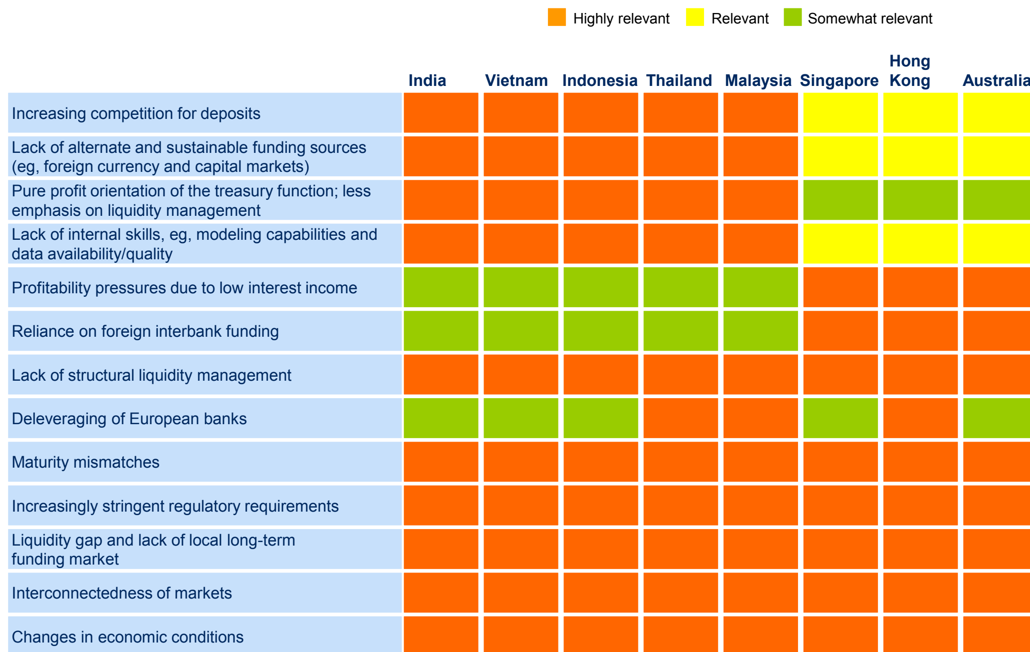
The need for change is exacerbated by specific local conditions. Loan growth is needed to support ongoing GDP growth. The external environment remains highly volatile and uncertain. Regulatory scrutiny and additional demands emanating from Basel III only add to the pressure. Responses from banks will clearly vary across geographies (Exhibit 4).

Key issues in emerging Asian economies

In several emerging Asian economies, forecast disparities between growth in lending and in deposits mean that banks could hit a wall over the next few years. Credit growth (forecast at 25 percent over five years) for these economies is expected to be significantly higher than deposit growth (18 to 20 percent over the next five years).

Consequently, there will be increased competition for deposits: banks are already taking steps to tap deposit sources more systematically and are looking at how they can better manage their funding costs. Any product innovation on the deposit side will likely have to compete for increasingly scarce funding—that is, under the

Exhibit 4 Banks' responses will vary by country.



current scenario, there will be a need to close a comprehensive primary funding gap of $662 billion across the Asian economies we considered (Exhibit 5).[4]

In the case of India, with deposit-rate deregulation, banks have started to attract customers—especially wealthier ones—by offering better choices, including higher interest rates, as well as other innovations and flexible products. From the perspective of each individual bank, however, this has led to increasing and potentially unhealthy competition; customers are encouraged to switch more easily, with the associated dangers that asset-liability mismatches and systematic risk will increase. Moreover, some investors might move their funds toward investments that offer higher liquidity while still protecting the principal amount. Deregulation has reduced banks' ability to source long-term liabilities for long-term projects due to heightened volatility in the wake of an unhealthy rate war. India lacks reliable alternatives in the form of a liquid and well-developed corporate-bond market or easy access for its banking sector to local-currency long-term funding.

Thailand provides another example; the country also started offering differential rates on deposits, thereby intensifying competition for customer deposits. Banks are switching deposit-gathering campaigns to savings rather than fixed deposits in order to acquire new retail customers, hoping that any new customers will support the cross-selling of products. This not only points toward higher costs for banks but also reflects innovation taking place in the banking sector and benefiting depositors and consumers alike.

It is clear that the banking sectors in emerging economies such as India, Indonesia, Malaysia, Thailand, and Vietnam must look beyond deposits to obtain funding (Exhibit 6). Unfortunately, there is no easy way out. On the

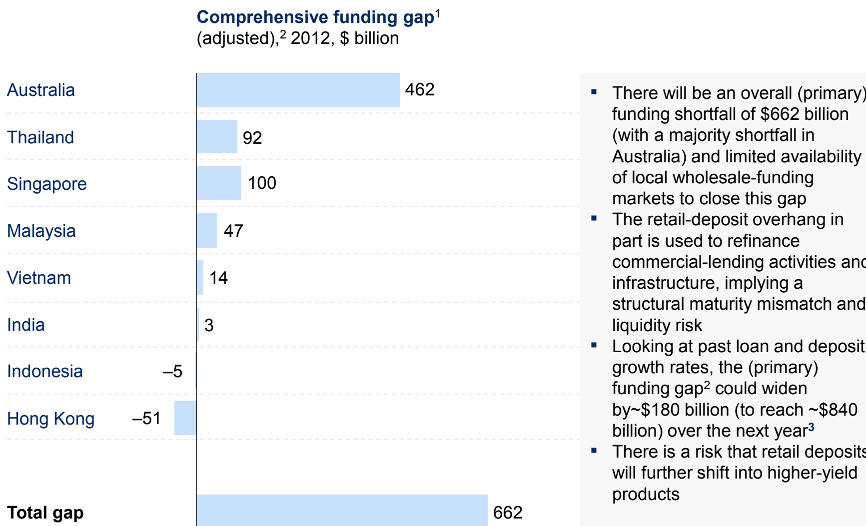
4 Terms are defined as follows: the comprehensive primary funding gap equals the retail funding gap plus the commercial funding gap (excluding interbank transactions). The retail funding gap equals loans to customers (excluding loans to banks) minus deposits from customers. The commercial funding gap (excluding interbank transactions) equals loans to corporates minus deposits from customers.

one hand, banks have little experience in areas such as foreign-currency and capital-market funding. On the other hand, for some countries, there is limited transparency on banks' balance sheets, which affects their rating and hinders investor appetite (Exhibit 7). This is particularly the case for institutional investors, which often have tough internal lending policies. Similarly, perceived political risk and inflation often constrain long- term funding for Asian banks.

Exhibit 5 A primary funding gap of $662 billion will need to be closed.

ESTIMATE

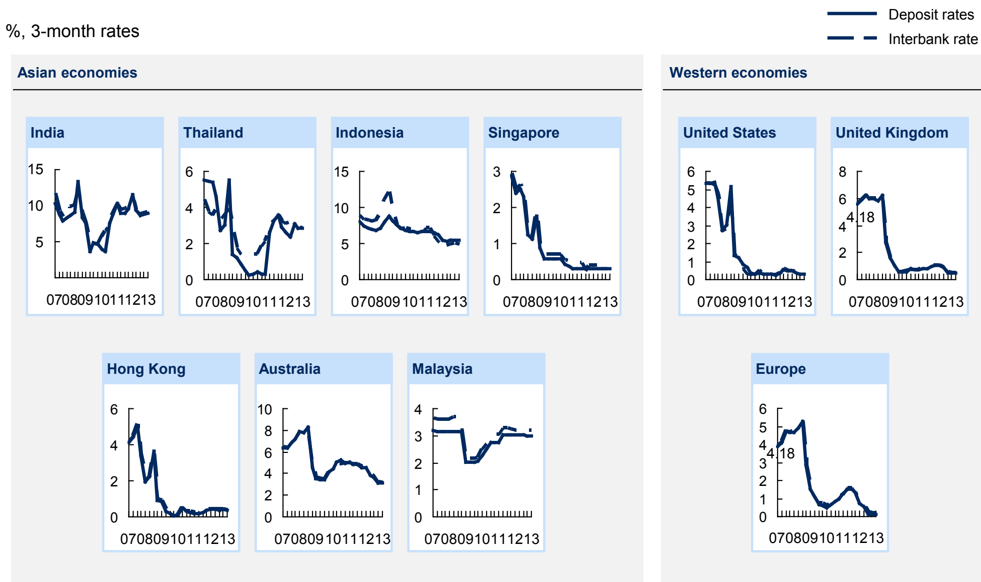
Funding gap



- There will be an overall (primary) funding shortfall of $662 billion (with a majority shortfall in Australia) and limited availability of local wholesale-funding markets to close this gap
- The retail-deposit overhang in part is used to refinance commercial-lending activities and infrastructure, implying a structural maturity mismatch and liquidity risk
- Looking at past loan and deposit growth rates, the (primary) funding gap[2] could widen by~$180 billion (to reach ~$840 billion) over the next year[3]
- There is a risk that retail deposits will further shift into higher-yield products

1 A negative gap denotes a funding surplus. Terms are defined as follows: the comprehensive primary funding gap equals the retail funding gap plus the commercial funding gap (excluding interbank transactions). The retail funding gap equals loans to customers (excluding loans to banks) minus deposits from customers. The commercial funding gap (excluding interbank transactions) equals loans to corporates minus deposits from corporates.
2 Adjusted for statutory reserve requirements on liquidity.
3 Assuming the rate of growth for loans and deposits equals the 2007–11 compound annual growth rate.
Source: Global Banking Pools

Exhibit 6 The development of deposit rates across Asia can be examined.



Source: Bloomberg; Economic Intelligence Unit; McKinsey analysis

Exhibit 7 In some countries, balance-sheet transparency is limited.

ILLUSTRATIVE

✓ Reported
(✓) Reported by some
✗ Not reported

Balance-sheet components[1]	India	Vietnam	Singapore	United States	European Union
	Asian economies			Western economies	
Assets					
▪ Loans and advances	✓	✓	✓	✓	✓
– Banks	✓	✓	✓	✓	✓
– Central and local governments	✗	✗	✗	✓	(✓)
– Public sector (government-owned enterprises)	✓	✓	✗	✓	✓
– Other	✓	✓	✓	✓	(✓)
▫ Nonfinancial corporations	✓	(✓)	✓	✓	(✓)
▫ Households	✓	(✓)	✓	✓	(✓)
▫ Insurance corporations and pension funds	✗	✗	✓	✓	(✓)
▫ Nonmonetary financial intermediaries other than insurance corporations and pension funds	✓	✗	✗	✗	(✓)
▪ Investments in debt and equity instruments (both domestic and foreign)	✓	✓	✓	✓	✓
– Central and local governments	✓	✓	✓	✓	(✓)
– Local financial institutions (banks and insurance companies)	✓	✓	✓	✓	✓
– Foreign governments and business entities[2]	✓	(✓)	✗	✓	(✓)
– Nonfinancial corporations	✓	✓	✓	✓	(✓)
– Other[3]	✓	✓	✓	✓	(✓)
▪ Investments in subsidiaries and joint ventures	✓	✓	✓	✓	✗
▪ Investments in money-market instruments	✓	✗	✓	✓	✓
▪ Fixed assets (property and equipment)	✓	✓	✓	✓	✓
▪ Cash on hand and deposits at central banks	✓	✓	✓	✓	✓
▪ Deposits with other credit institutions	✓	✓	✓	✓	✓
▪ Other remaining assets[4]	✓	✓	✓	✓	✓
Liabilities					
▪ Deposits from customers	✓	✓	✓	✓	✓
– Demand deposits	✓	✓	✓	✓	✓
– Saving deposits	✓	✓	✓	✓	✓
– Term deposits	✓	✓	✓	✓	✓
– Other[5] (eg, noninterest-bearing demand deposits)	✗	✓	✓	✓	(✓)
▪ Repo transaction (funds borrowed and securities sold)	✓	✗	✓	✓	✓
▪ Borrowings	✓	✓	✓	✓	✓
– Debt	✓	✓	✓	✓	✓
– Equity	✓	✓	✓	✓	✓
– Other borrowings	✓	✓	✓	✓	✓
▪ Capital and reserves	✓	✓	✓	✓	✓
▪ Other remaining liabilities and provisions[6]	✓	✓	✓	✓	✓
Total					

- Although central banks broadly have the same objectives and use the balance sheet as their policy tool, there is stark difference in basic reporting
- In some emerging economies such as Vietnam, reporting lacks consistency and timeliness; there is also a lack of clarity on subcomponent/sub category reporting, which leaves room for "window dressing"
- Reporting under the heading "other" always leaves room for minor adjustments since different banks include different items
- In some places, there is also evidence that the size and composition of balance sheets have drastically changed over the years

1 Sample template for balance-sheet reporting; there could be differences in reporting templates/terminology across the globe.
2 Includes banks and corporates.
3 Other includes asset-backed securities, mortgage-backed securities, innovative instruments, mutual-fund units, investment certificates, and so on.
4 Remaining assets includes advance payments, receivables, interest accrued, deferred tax assets, intangible assets, and so on.
5 Also includes margin deposits and deposits for specific purposes, where reported.
6 Remaining liabilities includes interest accrued, bills payable, advances received, deferred tax liabilities, repo transactions, and so on.

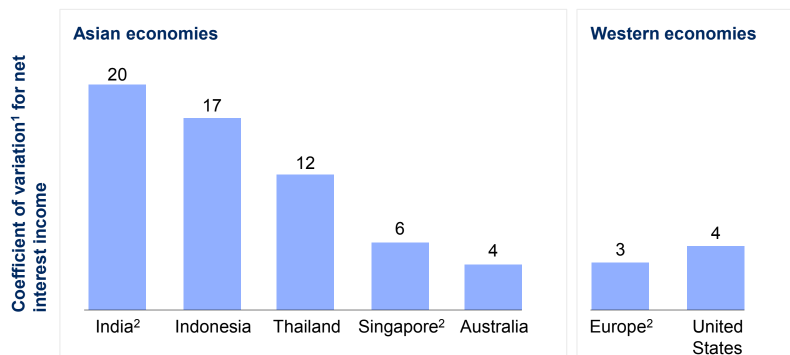
Source: Annual reports and regulatory reporting; McKinsey analysis

In Vietnam, for example, annual reports can be more than a year late, and information can be misleading: for instance, all banks show very low nonperforming loans (NPLs) in their annual reports but some put a sizable amount of bad debt into a separate category that is not factored into the NPL calculation. Different bodies within the State Bank of Vietnam, the banking regulator, come up with different numbers. Consequently, international agencies often make their own calculations and cite much higher figures for NPL than those declared locally.

This situation is aggravated by lack of clarity in the mandate of treasury functions and the specific trade-offs and objectives they have—or don't have—between profit generation and proactive liquidity and funding management. Current volatility in net interest income is aligned with the profit orientation of local treasuries (Exhibit 8). However, the real challenge for local treasurers is to embed a culture of proactive balance-sheet management and funding within the existing profit orientation.

Exhibit 8 Net-interest-income volatility can be examined across economies.

%, based on 2009–2011 quarterly data



1 Normalized measure of dispersion of net interest income around mean; represents the ratio of the standard deviation to mean net interest income.
2 Aggregation of top banks based on quarterly reporting; India includes the top 5, Singapore the top 3, and Europe the top 10.
Source: Annual reports; Bank Explorer; Global Banking Pools; McKinsey analysis

If banks cannot establish a sustainable funding model, GDP growth will stall, curbing the prospects of future generations. There is an additional risk around some of the Asian banks lending in areas such as project finance or infrastructure, where higher nonperforming assets are commonly observed (even though the investments remain within defined regulatory limits). This would pose a real danger of banks running into a liquidity crunch while having a substantial maturity mismatch, as we discuss later.

Problems in Central and Eastern Europe have shown that things can go wrong quite quickly. A notable example is Hungary, where multinational banks channeled savings from Switzerland into the market to fuel credit growth. To protect themselves from exchange-rate shocks, banks gave loans to customers in Swiss francs, so that the bank itself was not exposed. Nevertheless, the exposure trickled through from other areas. In the years after the outbreak of the crisis (in September 2008), the Hungarian forint lost 40 percent of its value against the Swiss franc. Loan installments skyrocketed and, combined with decreasing home values and increasing unemployment, soon led to a jump in nonperforming loans. Even with somewhat prudent banking practices, the NPL ratio rose by eight percentage points in this time frame. To protect homeowners who were about to lose their houses, the government forced the banks to bear the impact of the exchange-rate change themselves.

In general, banks face challenges regarding their internal skills—for example, in ALM modeling (deposit models, asset cash flows, prepayments), FTP schemes, design of limit structures and appropriate escalation mechanisms, trading governance and midoffice skills (particularly in traditional banks), and a robust general liquidity-management framework (plans and scenarios). Moreover, poor-quality data, combined with scarcity of data, means that there is a tendency to rely on historical data and pure extrapolation.

Key issues in mature Asian economies

Banks in more mature economies of Asia face two important challenges relevant to liquidity and funding management.

First, their reliance on foreign interbank funding is a concern. Some countries are heavily reliant on foreign funding (for instance, Hong Kong and Singapore have about 60 percent of total funding from foreign sources, while the comparable figure for Australia is 16 percent). Historical experience shows that this source of funding is highly unstable in crises and cannot be counted on in stress situations. In most of these geographies, the domestic wholesale-banking market is still relatively shallow.

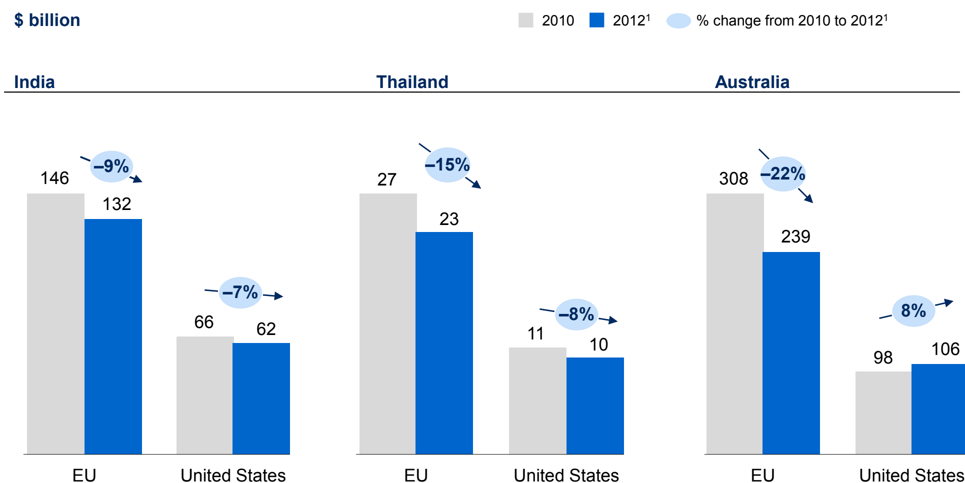
Second, management skills must be addressed. The management of wholesale funding is an even more difficult challenge, owing to the shallowness of domestic wholesale markets and therefore the risk that they might dry up. Although the capabilities of players in mature Asia are more developed than those in emerging Asian markets, it is striking that many banks in more mature Asian markets lack capabilities for active interest- rate risk management and foreign-currency funding management. And while most banks have indicators in place to manage or monitor short-term liquidity, medium- to long-term or structural liquidity management is comparatively neglected. Banks also struggle with the necessary capabilities and skills to manage more and larger transactions as the depth of the markets increases.

Key issues for banks across Asian economies

Some challenges affect all economies, regardless of their stage of development.

Deleveraging of European banks. The eurozone debt crisis has forced some European banks to withdraw massive investments from Asia; the Bank for International Settlements estimates that €100 billion exited Asia in the last two quarters of 2011 (Exhibit 9). Asian banks are concerned that tightening liquidity might force European banks to pull out of Asia as a whole. European banks seem to have lost growth momentum in Asia, even though the European Central Bank offered easy refinancing options via its long-term refinancing operation. European banks' share of lending in Asia dropped to 19 percent in 2011 from 29 percent in 2007. And European banks are also restricting their lending to Asian banks.

Exhibit 9 Claims of EU and US banks are declining in select Asian economies.



1 Data through June 30, 2012.

Source: Bank for International Settlements; press search; McKinsey analysis

As European banks retreat, Asian, Australian, and UK-based banks are rushing in to fill the gaps. There are ready buyers, especially for assets as varied as loans and entire insurance and brokerage operations. A few examples illustrate this: the Royal Bank of Scotland sold some of its Asia-Pacific investment-banking operations to CIMB Group of Malaysia, for instance, and ING has sold its insurance operations in Malaysia and India. Additionally, before the crisis, 9 of the top 20 banks in the Asia-Pacific syndicated-loan market were from Europe; now only two are (HSBC and Standard Chartered). This further boosts loan growth in the Asian banking sector and thus will necessitate more funding. Similarly, banks (for instance, French banks) have retreated from project and trade finance.

Maturity mismatches. Credit growth in emerging economies is particularly strong, which supports the necessary growth of infrastructure. In several countries, notably India, the asset book is fairly long term (for some, more than 30 percent of the book has a duration of over three years); however, it is funded by a shorter- term liability book. The situation is aggravated by the behavior of retail depositors, who are increasingly sensitive to pricing and market rumors and who can easily switch their deposits or even withdraw them from the market altogether. The mismatches in countries vary from 3 months to 10 to 12 months or more (Exhibit 10).

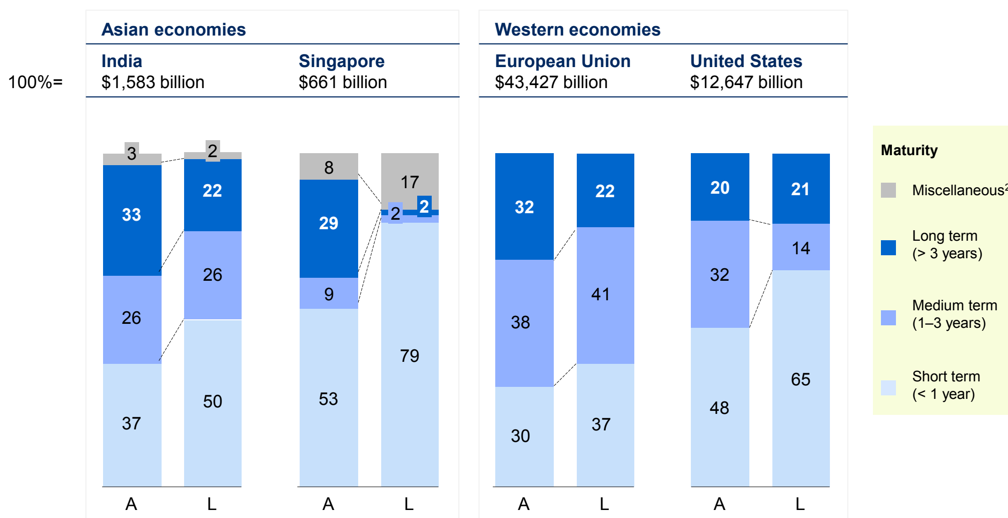
Given the infrastructure-finance imperatives for several countries, this mismatch seems likely to continue. Moreover, many banks are observing rising liquidity and funding costs due to increased competition for deposits and a lack of properly developed funding alternatives (such as covered-bond markets).

In the more advanced economies, banks also often suffer from maturity mismatches as long-term assets are funded with short-term liabilities. Maturity mismatches induce two distinct risks: funding risk and interest-rate risk. And while (re-)funding risk is always considered a pure downside risk, some banks actively seek interest- rate risk as a source of profit generation.

Exhibit 10 Asset and funding maturity mismatch is a major cause of concern.

ESTIMATE

%,[1] 2011



A = Assets
L = Liabilities
1 Figures may not sum to 100%, because of rounding.
2 Includes items for which maturity profile is not available.
Source: Annual reports; press search; regulatory reporting; McKinsey analysis

Increasingly stringent regulatory requirements. In several countries, Basel III requirements for liquidity coverage ratios and net stable funding ratios will pose additional liquidity constraints for the banks. Beyond these two liquidity standards, national regulators are demanding further monitoring tools and metrics. In India, for example, banks are required by the regulator to monitor their interbank liability limit, call-money borrowing limit, call-money lending limit, the asset-liability-management maturity pattern of certain items and limits on maturity mismatches, and so on.

Liquidity gap and lack of local long-term wholesale-funding markets. Given growth expectations and the regulatory need for more long-term funding, the liquidity gap will be difficult to close if local wholesale-funding markets are not further developed. Some countries are starting to address this issue. Regulators in India, Singapore, and South Korea, for instance, are looking to put in place a domestic framework for covered-bond issuance, which could lead to a gradual establishment of a regional market.

Interconnectedness of markets and increased subsidiarization or ring-fencing. A look at the main banks operating in Asia reveals that markets are highly interconnected (Exhibit 11). A majority of the major Asian banks are global—they have an international presence (for example, all major banks in Australia, India, and Singapore have a presence in Europe, the United Kingdom, and the United States, either through branch offices or regional subsidiaries), even though the proportion of assets in the international branches is quite low. Banks that are not present internationally (some of the Indonesian, Malaysian, and Thai banks) have a strong intraregional presence. Most banks are either present in several Asian markets or are part of globally operating banking groups. Thus, the banking system of a given country is prone to contagion from crises in banking systems elsewhere. While subsidiarization may reduce contagion risk, it certainly limits banks' growth potential. In particular, international banks operating in Asia must keep close watch not only on their home country but also on all other relevant countries.

Exhibit 11 Markets are becoming interconnected.

Branch or subsidiary location for top 5[1] banks in each country

	Purely domestic	Largely Asian	Beyond Asia[2]
Malaysia		✓ (60%)	✓ (40%)
India			✓ (100%)
Indonesia	✓ (40%)	✓ (40%)[3]	✓ (20%)
Vietnam	✓ (100%)	×	×
Thailand	✓ (40%)[4]	✓ (20%)	✓ (20%)[5]
Hong Kong	✓ (20%)	✓ (40%)	✓ (40%)[6]
Singapore			✓ (100%)
Australia			✓ (100%)

✓ (%) All/most
✓ (%) Few
× None

1 By total assets, 2011.
2 Considers presence in Asia/Australia, Americas, Europe/Middle East; for many, the proportion of assets in the international branches is quite low.
3 All banks present only in Hong Kong and Singapore.
4 Includes Kasikornbank, which has presence only in Hong Kong.
5 All banks present only in Hong Kong and United States.
6 Includes Bank of China (Hong Kong).
Source: Annual reports; Bloomberg; company Web sites; press search

If anything, regional integration is accelerating, thanks in part to the Association of Southeast Asian Nations and globalization more generally. However, a combination of regional integration and subsidiarization may make it more difficult for banks to grow in the future if they do not find more funding (especially since foreign growth must be funded in foreign countries). Several examples are relevant here:

- Malaysian banks are diversifying into faster-growing countries such as China, Indonesia, and Thailand to position themselves as strong regional banks and to improve their net interest margins. Similarly, cross-border collateral arrangements between Malaysia and Singapore enhance the overall monetary and financial stability of both countries and the confidence of financial institutions in carrying out their business in the two markets.

- Singaporean banks have recently made gestures at expansion: for instance, DBS Group offered $7.2 billion to purchase a 67.5 percent stake in Bank Danamon, Indonesia's sixth-largest lender by assets, and OCBC Bank's Indonesian arm sought to acquire financial companies to expand into Jakarta.

- Regional flows of foreign direct investment (FDI) have been expanding. The share of Asia in India's total FDI flow, for instance, increased to 20 percent from 8 percent over the last five years. FDI flows bring with them foreign capital or funding that can be diverted to capital-intensive areas (for example, infrastructure) and used for economic development or even for reducing the cost of capital.

- While increased financial integration is essential to deepening regional financial markets, it may bring with it a higher risk of contagion from external shocks. In developing a view on the effects of integration on a bank and its strategy, management should try to learn from the history of European integration, examining the reaction of foreign exchange and interest rates to different stages of integration over the past 50 years.

Change in economic conditions. Many Asian economies are strongly concentrated in a few sectors. The current volatility and swings in drivers such as commodity prices (for example, ores and agricultural products) or demand for tourism influence the perspectives of many countries. Moreover, further discontinuities are looming on the horizon. There could be abrupt swings related to trade and perceived political risk. It must be said that although Asia has fared relatively well in the current financial crisis, it is not immune from an economic downturn that might well be imported from other regions—for example, imagine that the euro situation continues to worsen. If the economic situation deteriorates, corporate deposits will decline and thus strain bank funding. All these factors will affect key drivers of banks' business models. Consider, for instance, exchange rates, which cannot always be hedged because there is insufficient market depth for instruments such as swaps or forwards.

The current business model of many Asian banks builds strongly on the sizable difference between interest rates on assets and those on liabilities. As economies become more mature and inflation is brought under control, interest rates are likely to come down. Banks will therefore need to revise and diversify their business models, making it essential that they start thinking about how to manage their funding cost among their different channels.

Imperatives for banks

Although the liquidity and funding situation in Asia seems more benign than in other parts of the world, banks have an opportunity to safeguard their positions for the future. To this end, banks across Asia should consider taking three steps. First, they must create full, unbiased transparency on the current situation. Second, they need to align on a mid- to long-term view of the development of liquidity and funding and initiate measures to deal with it, incorporating some of the structural changes and contingencies that can be expected as Asian banking markets continue to develop. Third, they should build the changes into their organizational models to make them a true part of their enterprise.

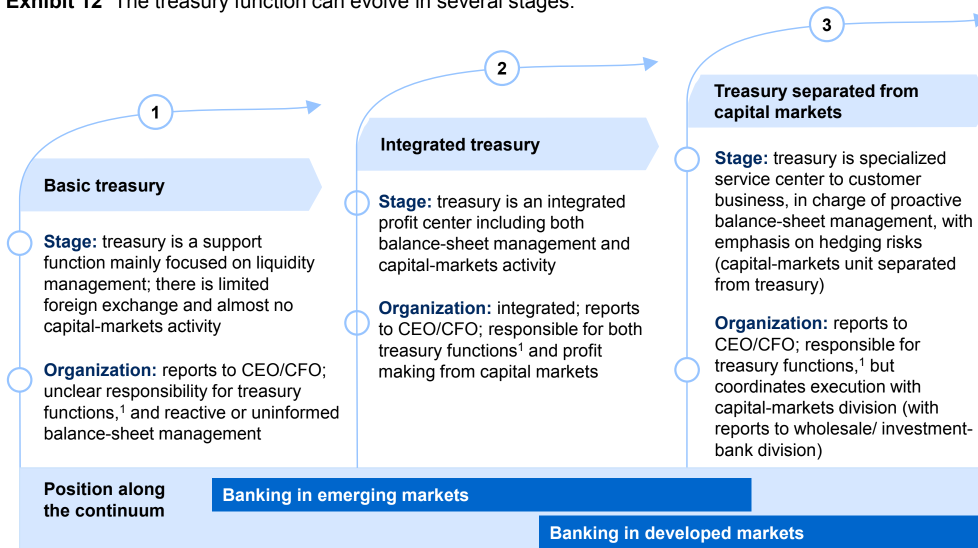
Provide transparency

The first step is to create transparency on the current liquidity situation and provide the means to manage it. In particular, banks in emerging economies (India, Indonesia, Malaysia, Thailand, and Vietnam) must make sure they have full transparency on their underlying liquidity position and costs. But they also need to develop tools that can project the liquidity situation in the future. Stress testing this projection should be done via meaningful, management-oriented stress scenarios. There should be a clear separation of P&L arising from the bank's underlying structural funding and liquidity position (and the risks associated with it) and the elements of tactical execution and risk taking on top of that. To achieve this, banks must enhance their modeling capabilities while incorporating good business judgment (for example, on stress-testing scenarios) and applying tools used by banks in other geographies.

Establishing a maturity ladder can help banks understand potential liquidity gaps and address them early on. To do so, banks need to make explicit assumptions about the development of the deposit base, for example, deposit growth (extrapolating from past trends and overlaying this with realistic assumptions) and the "stickiness" and behaviors of the deposit base. Similarly, players must model the asset side in more detail, looking at the growth of loan volumes and credit prolongations by understanding in more detail the underlying drivers and needs of loan takers. It is important here to differentiate by asset classes—for instance, rollover dates of credits and lines, optionalities, new deal pipelines, special-purpose vehicles, and structured- investment vehicles (for example, direct commitments, reputational risks). It is also important to offer greater transparency on the underlying P&L, for example, by establishing a clear liquidity account for all liquidity- and funding-related transactions. Once banks have established this transparency internally, they must make sure that external stakeholders (and potential investors in particular) are adequately informed. This holds true for banks in India, Indonesia, Malaysia, Thailand, and Vietnam.

Additionally, banks must establish a limit system throughout the organization for liquidity and funding use across business units and products in order to confine the overall use of liquidity and funding within the organization. In setting up these limits, a necessary first step is to review portfolios for unused liquidity and funding potential in order to arrive at realistic limit sizes.

Exhibit 12 The treasury function can evolve in several stages.



1 Asset-liability management, funding, and liquidity management.

Identify weaknesses
Once banks have an unbiased view of their liquidity situation, they must identify and address potential weaknesses.

Rethink the treasury function. Players should more clearly define the treasury function's role and mandate for providing funding and liquidity, managing interest-rate risks, and governing otherwise independent businesses. Banks need to provide appropriate incentives for the function to ensure a sound liquidity and funding position for the bank (including stress situations); they should also provide funding at an adequate cost to the business units instead of focusing purely on profit generation.

Moreover, the treasury organization must be carefully crafted: we see banks struggling to spell out clearly the extent to which they want to centralize their treasury function. While global currencies such as the dollar might be better managed centrally, the market know-how of local staff could make a case for keeping local oversight of smaller currencies. There is no one-size-fits-all solution—but banks should make sure they are actively deciding on an organizational setup, not just letting one happen (Exhibit 12).

Set up a sound funds-transfer-pricing (FTP) mechanism. A solid FTP mechanism is necessary to integrate liquidity premiums and interest-rate risk into business and portfolio steering. This will give businesses an incentive to integrate liquidity and funding considerations in their operations. To establish a sound FTP mechanism, banks need to follow three main steps.

First, they need to estimate the bid/base curve based on the individual bank's marginal cost of funds at different maturities. Banks must think about the reference curves they want to use for this and choose between marginal (wholesale) funding cost and average cost. The absence of long-term funds in the local currency often necessitates the construction of an "artificial" yield curve by adjusting another curve (often the dollar curve) with the cost of foreign-exchange forwards with corresponding maturities.

Next, banks should estimate liquidity premiums for different repricing intervals included in the bid curve at every possible maturity (for example, 30-day repricing maturing on 90 days, 30-day repricing maturing on 180 days, 30-day repricing maturing on 360 days). To get this right, banks need to balance the trade-off between complexity or difficulty of implementation and market conditions and the required granularity for proper implementation. In the absence of liquid capital markets, liquidity premiums often need to be inferred.

Banks can then assemble an offer-rate FTP matrix based on all possible combinations of repricing and maturity. In doing this, they need to decide whether they want to include the cost of capital in the FTP. The matrix should anticipate regulatory developments to monitor regulatory convergence. The final FTP matrix also requires proper modeling of implied optionalities for different products (for example, differentiated by clusters of customers). Depending on the degree of sophistication, there might even be a need for a separate liquidity P&L and hence decisions on how to distribute it across the organization.

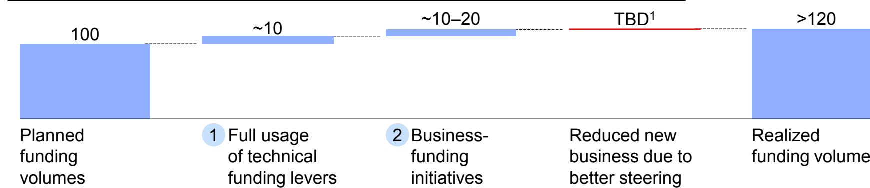
Pursue a focused hunt for liquidity. Emerging-economy banks in particular can learn from Western banks that have gone to great lengths to professionalize deposit gathering. Banks must increase the efficiency of liquidity management and treat liquidity as a scarce resource that is fully integrated into overall bank control processes. A liquidity-optimization program should be established to evaluate all sources of funding, whether long or short term and secured or unsecured; it should also consider deposit strategy, collateral enablement (such as covered-bond pools), and product design and optimization. Evidence reveals that additional liquidity of up to 20 percent (short and long term, as well as secured and unsecured) can be generated with a coordinated approach, and liquidity cost reductions of 20 to 30 percent are feasible (Exhibit 13).

Exhibit 13 A liquidity hunt can increase funding volumes and reduce liquidity costs.

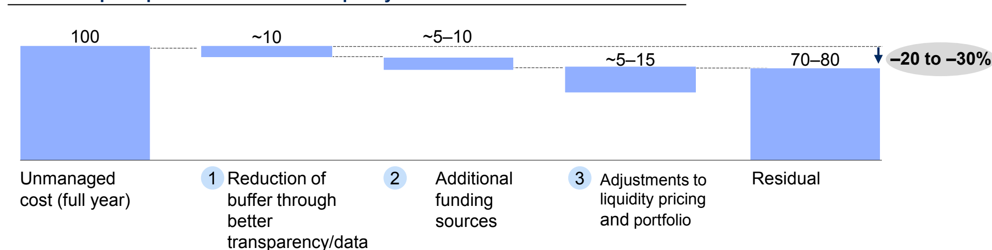
SIMPLIFIED

Indexed

Case example: optimization levers on liquidity volumes



Case example: optimization levers on liquidity cost



1 Not quantified as this is more a strategic decision than a lever.

Banks can pull three main levers in this effort:

- **Products.** This includes the introduction of innovative features for deposits (for instance, abolishing interest in exchange for participation in lotteries) or the bundling of different banking products to supplement deposit accounts (for example, offsetting savings with the interest paid on a mortgage).

- **Customers.** This encompasses the revision of products to address the needs of specific customer groups (tailored offerings for farmers or freelancers, for instance) or offering product bundles for specific customer life stages.

- **Cost and pricing.** This involves the use of dynamic product pricing, in which attractive rates are offered for a limited time to attract new customers, or the variation of prices by segment to maximize margin and limit attrition.

Active rating management

In recent years, banks' credit ratings have been under historic pressure in Europe and the United States, and the ratings and outlook for Asian banks have begun to deteriorate. As wholesale-funding costs and access to funding sources depend heavily on external ratings, rating changes can have significant effects on P&L and market access. In 2013, McKinsey conducted a survey that provided benchmarks on the management of ratings and the experiences of participating banks with rating agencies. The results show significant differences in rating-management practices among the banks, for example, in their use of rating analytics, rating-related KPIs, incorporation of ratings in decision making and development of measures, communication to the rating agencies, and organizational setup and staffing of rating management. The survey results also indicate that active rating management tends to have significant positive effects on a bank's actual rating, making it an important lever for reducing funding costs and improving market access.

Build changes into the business

The last element is establishing a long-term plan to upgrade liquidity and funding in line with the strategy and embedding it more effectively in the overall business model. Banks must think more fundamentally about the role of liquidity management in their operations. Those in Asia need to start diversifying their funding base and consider selectively seeking longer maturities. In defining their optimal mix, banks should assess the trade-offs between higher cost and lower risk for longer maturities. Moreover, they need to be clear on the scenarios and stress tests, as well as the effects of contingency plans they deem realistic for the future, thus linking liquidity and funding closely to their business plan.

Expand funding and liquidity. Banks will need to expand funding and liquidity to diversify away from concentrations and tackle the maturity mismatch. This includes, for example, the design of campaigns for money-market products instead of deposit products, in particular for corporates (to support them in the management of their funds), as well as the placement of bonds with selected private individuals, sovereign-wealth funds, corporates, and pension funds. Full balance-sheet transparency is a necessary precondition for this.

Another important element is establishing, over the long term, deep and functioning capital markets, in particular for covered bonds, which will require focused collaboration among politicians, regulators, and investors. Capital markets must be developed to ensure trust and interest over time. Currently, different economies express varying levels of interest in covered-bond issuances or the associated legal and regulatory framework: in emerging economies, there is no solid evidence of covered-bond issuance to date. India, for example, has poorly developed covered-bond markets, but there are talks on allowing covered bonds as a structured product. In Malaysia, structured covered-bond transactions have stirred major interest among prospective issuers. Overall, Asia might move more toward covered bonds. In more advanced Asian economies, there is evidence of some activity to expand in these markets; there is also a visible strengthening of the associated regulatory frameworks. Australia is the latest entrant to the covered-bond market, although the government has yet to implement the legal framework fully. Some estimates place potential issuance by Australian financial institutions at up to150 billion Australian dollars, even with an issuance cap of 8 percent of their total assets. This would place the market among the top ten globally. New Zealand launched its first covered-bond sale in 2011; the Monetary Authority of Singapore has proposed covered-bond rules for banks incorporated in Singapore.

Other efforts related to expanding funding and liquidity include targeting preferred circles to secure funding in a crisis situation or leapfrogging some steps as bank business models evolve (for example, by building strong debt-capital-markets operations and evaluating originate-to-distribute business models).

Review the strategy. To ensure well-balanced funding of assets, banks should review their strategy. This entails three elements. First, players must obtain a detailed view on potential scenarios for liquidity and funding availability. Top management should actively participate in defining these, and scenarios need to include economic and regulatory developments, as well as idiosyncratic shocks, in their specification. Second, banks should revise growth aspirations and potentially curb growth to reflect a difficult funding situation; similarly, they must manage the maturity profile of the asset side. Third, they need to internationalize the asset and funding base to tackle markets beyond their home country.

Invest in capability building. Banks must build capabilities and hire top talent for treasury and other liquidity- and funding-related functions. In particular, they should build dedicated modeling capabilities to drive accurate product pricing, assign the appropriate FTP rates, integrate stress testing (and related techniques such as war-gaming) across funding and capital, and maintain and develop FTP models to facilitate structural balance-sheet targets. They must also ensure consistency and have an economic rationale for building funding models, complementing these with expert judgment when appropriate. Moreover, banks need to ensure management

in the treasury function is at an appropriate level of seniority. A sizable amount of treasury work is managing perceptions and challenging self-fulfilling prophecies. Credible and senior treasurers are necessary to establish the correct stance in the markets. Finally, many treasuries are simply not yet experienced in managing large volumes of transactions; they will need to add staff to deal with more and larger transactions.

To assess liquidity and funding management prudently and to judge the best order for taking remedial and forward-looking actions, bank managers are well advised to use a self-assessment questionnaire, which can offer a view of their current status and help to define the target blueprint in a structured way.

The global financial crisis has shown the importance of liquidity and funding for keeping the banking system afloat. Although Asian banks were not at the center of the crisis, they need to address the points highlighted in this working paper to prepare for future challenges while they still have time.

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