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Integrating the finances of East Asia[1]

Some observers have recently lamented that East Asia suffers from a lack of financial integration. While financial transactions between economies in East Asia and the rest of the world have increased over time, it is argued that capital is channelled between East Asia, on the one hand, and London or New York, on the other, rather than between East Asian economies themselves.[2] Given the memory of the abrupt withdrawal of funds from the region five years ago, the perception of such a pattern of capital flows contributes to a sense of financial vulnerability. For some observers, the official efforts to further financial cooperation, as exemplified by the network of swaps agreed among the ASEAN Plus Three countries,[3] represent an attempt to lessen such vulnerability.

This special feature seeks to assess financial integration in East Asia in the international bond market and the international syndicated loan market. On this basis, East Asia's finances are more integrated than is often appreciated. While firms headquartered outside the region figure prominently in the roles of bookrunners and loan arrangers, regional funds and banks are very well represented among the underlying investors, in the case of bonds, and among syndicate members, in the case of loans.

Demand for international bonds of East Asian issuers

The easiest evidence to obtain regarding the who's who of those involved in Asian bonds sold on international markets is information on the underwriters. On this evidence, major global banks and securities firms headquartered outside the region predominate among lead managers of international bonds

1 The views expressed in this article are those of the authors and do not necessarily reflect those of the BIS. We wish to thank Denis Pêtre for helping with the bonds data.

2 For example, "East Asian countries have developed stronger financial ties with advanced countries than with one another in the process of financial opening" (Park and Bae (2002)).

3 Including the original ASEAN nations of Indonesia, Malaysia, the Philippines, Singapore and Thailand, subsequent additions (Brunei, Cambodia, Laos, Myanmar and Vietnam), and the Three: China, Japan and Korea. For a review of progress in concluding the swap agreements, see Wang (2002).

issued by East Asian governments, banks and firms.[4] A bond's underwriters, that is, the financial firms that guarantee a price to the issuer and organise the initial distribution, can be readily ascertained. For international bonds issued by East Asian borrowers between April 1999 and August 2002, the shares of bookrunners headquartered in North America and Europe are respectively 54% and 29%, while the share from Asia is 17%.[5, 6] This is not surprising in view of the role that US firms alone play among underwriters of dollar bonds worldwide. For instance, in 1996, three years before the introduction of the euro, US firms led the underwriters for an identical 54% of international dollar issues by non-US borrowers (McCauley and White (1997, p 340)).

While US and European banks dominate as bookrunners of Asian bonds ...

The inference regarding financial integration in East Asia is not so evident. It must be recalled that all the underwriters share a fee that is generally half of 1% or less for such issues. To address the question of regional financial integration with regard to international bonds, therefore, it would be useful to know the nationality of the bonds' holders. Any analysis of the market for international bonds, however, faces limits on what can be known about the source of credit. There is some market information on the initial distribution of international bonds, which is laborious but possible to gather. More interesting perhaps is the distribution of holders at some point in time, but this is impossible to know since it would require access to numerous layers of custodial records.

We rely on the commentary about new bond issues in the trade periodicals *FinanceAsia*, *Asiamoney* and *International Financing Review* to measure the Asian share of the initial allocations of bonds issued by Asian borrowers from April 1999 onwards. Borrowers from China, Hong Kong SAR, Indonesia, Korea, Malaysia, the Philippines, Singapore and Taiwan (China)[7] are included in our sample. A limitation of this approach is that we rely solely on second-hand reports from underwriters that are at best approximations. Moreover, the coverage is incomplete, since it is not possible to obtain details on every bond issue. For the issues covered by the trade press, the share-by-

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4 Park and Bae (2002) analyse the nationality of the firms that underwrote bonds by East Asian issuers in the years 1998–2001 and find that US and European firms run the books for 74% of the issues, and Japanese firms 6%. They conclude that "Western investment banks, in particular American and European ones, have established a monopoly position in … underwriting in the primary market [for international securities and loans]".

5 We treat HSBC and Standard Chartered as Hong Kong banks. Between 1999 and 2002, these two groups' combined share as bookrunners was 10% of bond issues.

6 Before the Asian crisis, a home-grown securities firm headquartered in Hong Kong SAR, Peregrine, had "leapfrogged Jardine Fleming Securities to become Asia's largest independent investment bank" that challenged the major international underwriters in bringing Asian credits to market. The bank was caught during the crisis with a bridge loan to an Indonesian taxi company (Steady Safe) and failed in 1998 as a result (Clifford and Engardio (2000, pp 77 and 211)). Creditors of the largest Peregrine unit have received 35 cents on the dollar from liquidators as of late 2002. There is a parallel to Drexel Burnham Lambert, which underwrote a large share of junk bond issues in the US corporate market in the late 1980s, only to collapse under the weight of its holdings of such bonds and bridge loans when the junk bond market entered a crisis in 1989.

7 Hereinafter referred to as Taiwan.

region figures give a broad geographical split into three regions, namely the United States, Europe and Asia, where "Asia" generally refers to East Asia including Japan. Bear in mind that our sources provide an indication of only the primary market allocations; discussion with market participants suggests that subsequent trading in the secondary market is likely to move more paper into regional portfolios.

Our sample is fairly broad when judged against a popular benchmark. The aggregate value of the bonds in our sample is $41.2 billion (Table 1), as compared with the $60.2 billion of the JP Morgan Asia Credit Index (JACI). Since our sample includes only bonds issued after 1999, it is not surprising that we do not match the JACI portfolio, which includes, for instance, the last Kingdom of Thailand bond, issued in 1996.

... almost half of these bonds are purchased by Asian investors

Analysis of 71 bonds finds that the average Asian share of the primary market distribution is 46%, while the average weighted share is slightly lower at 44%. The Asian shares range from 36% in the case of Singaporean and Korean issuers to 78% for Indonesian issuers (Graph 1). It is not unusual for the primary market to feature the following succession of events. An Asian issuer chooses an affiliate of a North American or European firm as bookrunner, the latter takes the issuer on a roadshow and assembles a syndicate of underwriters, and the underwriters sell about half of the paper to Asian accounts. There are elements of hub and spokes in this scenario, with the funds typically clearing through New York (or in Europe in the case of the euro issues). But at the end of the day, most of the Asian IOUs have finished up in Asian portfolios.

Country and issuer weights of bonds in JACI index and our sample

In percentages

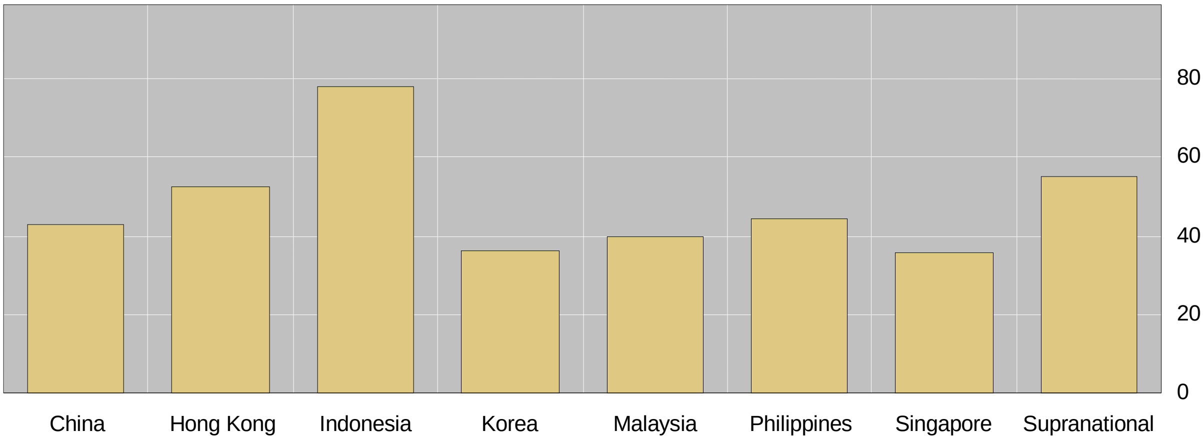
	JACI	Our sample
Country		
China	9.9	8.5
Hong Kong SAR	19.4	18.0
India	1.9	0.0
Indonesia	0.7	1.6
Korea	20.5	12.5
Malaysia	17.7	21.1
Philippines	15.4	13.4
Singapore	12.3	15.3
Thailand	2.2	0.0
Supranational[1]	0.0	9.7
Type of issuer		
Bank	11.6	18.2
Non-bank corporate	28.9	31.0
Supranational	0.0	9.7
Sovereign/quasi-sovereign	59.5	41.1
Memo: Total size[2] (in billions of USD)	*60.2*	*41.2*

[1] Asian Development Bank. [2] Issue size.

Source: JP Morgan Asian Credit Research as of 5 September 2002 (see Li (2002)). Table 1

Regional purchases of international bonds issued by East Asian borrowers, April 1999 to August 2002

Issuer residence along x-axis; shares purchased by Asian investors, in percentages of amounts issued, along y-axis



Sources: *Asiamoney*; *FinanceAsia*; *International Financing Review*; Dealogic; authors' estimates. Graph 1

What are the characteristics of bonds that lead to a larger or smaller initial regional distribution? We regress the Asian share on bond rating, size and maturity, and on dummies for currency and sovereign issuer. While the data convey the suggestion that lower-quality issues attract more Asian demand, the effect of issue size appears more significant. In particular, larger issues are placed outside the region to a larger extent. Longer maturities likewise result in larger placement outside the region. This maturity effect is consistent with the stronger US demand for bonds of 10-year maturity or more, reflecting the importance of pension funds and insurance companies with long-duration liabilities; the maturity effect is also consistent with the importance among buyers of dollar bonds in Asia of commercial banks and central banks, with their preference for intermediate-term issues. Almost 20% more of euro-denominated issues than dollar-denominated issues are placed outside the region in Europe, reflecting the limited appetite of central banks for relatively illiquid euro-denominated bonds and the limited penetration of the euro in foreign currency bank deposits in the region. The weak effect of sovereign status on the locus of placement is consistent with the finding for the effect of rating. The overall goodness of fit is respectable for a cross-sectional analysis.

The initial placement by region of international bonds of Asian issuers varies with bond characteristics ...

A view widely held among market participants, but impossible to verify, is that subsequent trading in bonds of East Asian issuers tends over time to move a larger share of outstanding bonds into Asian portfolios. Two strands of evidence make this view plausible. First, dollar assets of commercial and central banks in the region have grown rapidly since the Asian crisis.[8] Second, in some countries, notably Korea, long-term currency swap markets have

[8] The decline in the loan-to-deposit ratio for most banking systems is often cited (see, for example, Fernandez and Li (2002)), but ample domestic currency liquidity can generally only serve to fund a foreign currency asset with the addition of a currency swap. Thus, the build-up of foreign currency liquidity may be of more immediate relevance. For analyses of the increase of foreign currency deposits in Taiwan and China, see Fung and McCauley (2001) and Ma and McCauley (2002).

developed which permit dollar bonds to be asset-swapped into synthetic local currency paper suitable for life insurance companies and other institutional investors.[9] Offshore issues swapped into local currency sometimes offer duration unavailable locally, and offshore issues of comparable maturity to local issues sometimes offer higher yields.

... such as size, rating and maturity

Syndication of loans for East Asian borrowers

Ideally, one would like to have bilateral consolidated banking data for the East Asian economies in order to ascertain the origin of funds and thus the extent of integration of banking markets in the region. Is it true, as has been claimed, that despite large and growing intraregional trade, there is no correspondingly large and rapidly growing stock of bank claims, including that associated with the financing of international trade? Unfortunately, the data are not available to the BIS at this point to answer this question across the board in East Asia.[10] So our approach is to examine the participation in internationally syndicated loan facilities. In such facilities, banks contractually commit themselves to lend but the borrowers do not always draw down the funds immediately or fully. Under normal circumstances, syndicated loans represent much the same thing as the flows that roughly correspond to changes in the underlying stocks of bank loans (Gadanecz and von Kleist (2002)). Thus, as with bonds above, our analysis of loans relies on the initial distribution in the primary market. However, with the advent of secondary trading with contractual standards set by bodies such as the Asia Pacific Loan Market Association, subsequent trading in the secondary market after initial syndication of loans may move more claims onto regional banks' balance sheets or into regional portfolios.

As with bonds, one must distinguish between the financial firm that puts the deal together and the initial groups of buyers. The arranger of a syndicated loan receives a fee on the entire loan amount to take the responsibility for negotiating the terms, marketing the credit and allocating it to all the participants, including itself.

Arranger league tables obtained from Dealogic Loanware indicate that between 1999 and 2002, 63% of syndicated credit facilities signed by borrowers in East Asia[11] were arranged by East Asian and Japanese banks.

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[9] The BIS (2002, pp 79–81) reports daily activity in currency swaps in April 2001 of $285 million for Hong Kong dollars, $46 million for Korean won, $21 million for New Taiwan dollars, $18 million for Singapore dollars, $13 million for Indonesian rupiahs, and $11 million for Thai baht.

[10] The BIS consolidated banking statistics reported at the time of writing by central banks of the East Asian region show that as of end-June 2002, about a fifth of Hong Kong, Singaporean and Taiwanese banks' consolidated international claims were on borrowers residing in emerging countries of the Asia-Pacific region and in Hong Kong SAR and Singapore. Claims of these banks vis-à-vis industrialised countries represented 74% of their total consolidated claims. The percentages for claims of Japanese banks were respectively 9% and 77%. Euro area banks' cross-border claims on the euro area were higher than the Asian shares mentioned above, at 45%.

[11] China, Hong Kong SAR, Indonesia, Korea, Malaysia, the Philippines, Singapore, Taiwan and Thailand.

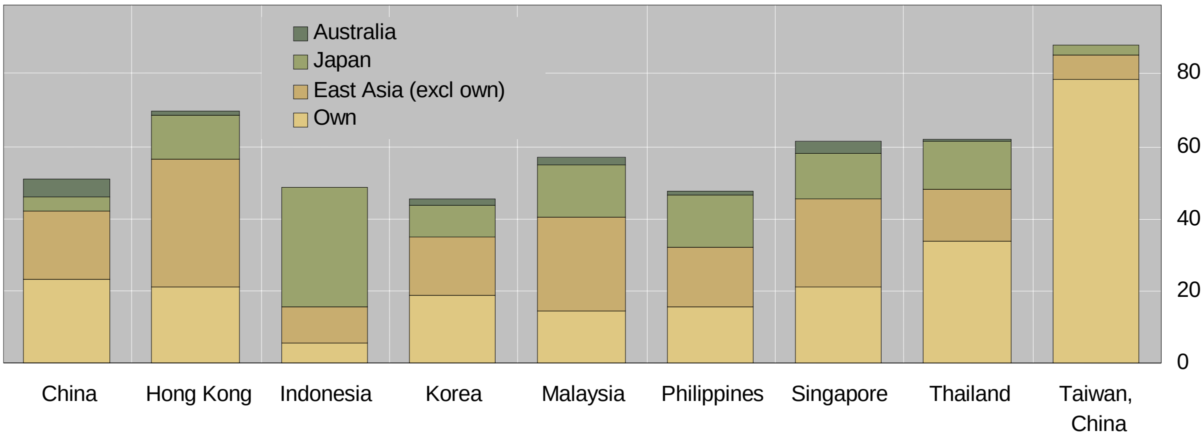
US banks arranged another 12% and European banks 23%. In the internationally syndicated loan market, unlike the international bond market, Asian financial firms take the lead in putting deals together.

Asian banks arrange and fund high percentages of Asian loans ...

Broadening our focus to the participants in syndicates, banks from the East Asia-Pacific region initially provided approximately 40–80% of funds in internationally syndicated loans to borrowers in East Asia (Graph 2).[12, 13] Banks of the same nationality as the borrower have typically provided around 20% of the facility nominal amounts, with the notable exceptions of Indonesia (5% of own nationality banks only because of high Japanese participation)[14] and Taiwan (79%). We surmise that the fragmentation of Taiwan's banking system – only one bank enjoys a market share of over 10%

Regional participation in internationally syndicated loans for East Asian borrowers, January 1999 to August 2002

Borrower residence along x-axis; supply of funds by nationality of banks in percentages along y-axis



Note: Nationality breakdown by ultimate ownership of banks. HSBC and Standard Chartered were considered Hong Kong groups for this exercise. Deals where banks of only one nationality provided funds were excluded from the sample.

Sources: Dealogic Loanware; authors' estimates. Graph 2

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12 This compares with an estimated 55% of funds supplied by US banks during the same period to borrowers issuing international syndicated loans in the United States and about 64% of funds provided by euro area banks to borrowers in the euro area.

13 The exact amount eventually provided by each bank is only available for a small number of deals, so our best approximation for further analysis of who subsequently provided the funds in the syndicated loans concerned is to allocate the total amount of the facilities equally between participating institutions. A comparison with Loanware league tables of institutions providing funds partially based on actual participation amounts where those are known shows that, at an aggregate level, our estimate of the nationality distribution of funds is close to what happens in practice. The absolute value of the difference ranges from 1 to 9 percentage points for all Asian borrower countries except China, where the equal share approach underestimates the share of East Asian banks by 20 percentage points. This possibly reflects the large allocations obtained by the Bank of China in such loans. Unlike in bonds, regional participation in syndicated loans is not much different from the regional share of the arrangers.

14 Several large syndicated loans signed in Indonesia were either granted to subsidiaries of Japanese firms or guaranteed by Japanese export credit agencies, which could explain the high shares of Japanese banks in those facilities.

of the market – results in a large number of small banks obtaining allocations (McCauley and Hobson (2002)). East Asian banks from countries other than the borrower's own country usually provided another 20% of funds. This percentage is much higher in the case of Hong Kong borrowers – 35% – suggesting that they benefit from the presence of so many foreign banks in that financial centre. Japanese banks signed up for another 13% of funds on average.

What are the characteristics of loans that lead to larger or smaller regional syndication? We regress the Asian share on size, maturity, currency, loan purpose, borrower rating,[15] sector and residence[16] and arranger nationality. In order to test the effect of the denomination of a loan in local currency, we included dummies for the four most widely used East Asian currencies (Table 2): the Hong Kong dollar, New Taiwan dollar, Singapore dollar and Korean won. Senior banks such as mandated arrangers or agents play an important role in determining syndicate composition and the identity of institutions providing funds in each syndicate; we hypothesise that local arrangers draw local participants.

... with variations by currency ...

We consider a sample of 1,195 syndicated loan facilities arranged between January 1999 and August 2002 by borrowers in Asia, where banks of at least two different nationalities were committing funds. The distribution of the sample by borrower nationality and type as well as currency of the facility is given in Table 2. The share of loans contracted in US dollars is over 70% for borrowers in China, Korea, Malaysia and the Philippines. In Hong Kong SAR, Singapore, Taiwan and Thailand, 40–80% of international syndicated loan facilities are in local currency.[17]

We find that for larger syndicated loan facilities, the share of Asian banks is significantly lower, suggesting that more participation by non-Asian institutions is required to share more risk, as is the case for bonds. Our findings on the effects of maturity on syndicate composition are mixed. Regarding borrower sector and loan purpose, Asian banks appear to have participated more heavily in loans granted to the construction and property, high-tech, non-bank financial and population-related services sectors, and less so in project,

15 Insofar as it is less of a requirement for a borrower arranging a syndicated loan to be rated than for an entity issuing a bond, we do not consider the effects on syndicate composition of the full ratings scale here. Only the effect of an investment grade rating for the borrower is analysed.

16 This follows standard practice in the empirical literature on syndicated credits (eg Kleimeier and Megginson (2000)).

17 For a discussion of the importance of domestic currency lending by BIS reporting banks, see McCauley et al (2002).

Distribution of countries, borrower types and currencies in syndicated loans sample

In percentages of US dollar facility amounts

Country and local currency	Country weights in total sample	Share of local currency facilities in country total
China	4.0	1.4
Hong Kong SAR	39.4	78.9
Indonesia	1.2	0.2
Korea	15.4	21.1
Malaysia	8.0	20.3
Philippines	6.1	5.9
Singapore	8.7	39.5
Taiwan, China	14.0	81.9
Thailand	3.1	50.0
	Borrower type and currency distribution in total sample	
Type of borrower		
Bank	11.4	
Non-bank financial institution	21.3	
Non-financial corporate	63.6	
Supranational	0.0	
Sovereign/quasi-sovereign	3.6	
Currency		
US dollar	43.0	
Hong Kong dollar	31.9	
New Taiwan dollar	11.4	
Singapore dollar	3.5	
Korean won	3.3	
Japanese yen	1.7	
Australian dollar	1.2	
Euro	0.2	
Pound sterling	0.1	
Other East Asian currencies	3.6	
Memo: Total amount (in billions of USD)	*147.5*	

Source: Dealogic Loanware. Table 2

... size, sector, purpose and rating

shipping and aircraft finance deals. This difference seems broadly consistent with the non-traded versus traded goods sectors, with extraregional banks playing a larger role in the latter. The presence of an investment grade rating for the borrower tends to lower the share of Asian banks, indicating that better-rated borrowers are able to attract more funding commitments from non-Asian lenders. Facilities in Hong Kong dollars, New Taiwan dollars and Korean won, like deals in the borrower's own currency, attract significantly higher Asian participation, suggesting that a shift away from financing in US dollars stimulates regional financial integration. When the borrower and at least one of the senior banks in the syndicate are from the same country, the share of Asian banks is higher, indicating that local senior banks are able to attract more

Asian banks into Asian loans. This may stem from better knowledge of regional banks.

Conclusion

Analysis of bonds underwritten and loans syndicated for borrowers in East Asia since 1999 suggests that East Asian investors and banks have on average committed half of the funds involved. By this measure, the finances of East Asia appear more integrated than recent commentary has suggested. East Asia may therefore be less exposed than is often imagined to sudden and large-scale cessations of the capital flows between the region on the one hand and Europe and the United States on the other. The finding that a higher proportion of better-rated bond issues and loans are sold to non-Asian investors in the first place might also lessen the danger of sudden withdrawals of funds, although the memory of rapid ratings downgrades in 1997–98 makes it hard to push this argument too far. Besides, a better appreciation of the effects of trading of loans and bonds on secondary markets and of other risk transfer mechanisms is needed to better gauge the extent to which East Asian risk ultimately ends up in Asian investors' and banks' portfolios.

Asian banks' relative participation in syndicated loans arranged for East Asian borrowers appears higher than the share of Asian bonds initially purchased by Asian investors. This points to the greater development of bond markets outside Asia and to the predominance of banks in Asia's finances.

Based on these findings, one can entertain another interpretation of the recent moves toward financial cooperation in the region. A widely held view is that they can help lower the vulnerability of the region's finances to decisions made in Europe and North America. But another interpretation is that official financial cooperation is catching up with the considerable integration already evident in private markets.

Asian buyers' share of bonds issued by Asian borrowers

Some empirical results

We ran an ordinary least squares regression on our sample of 71 bonds. We regressed the Asian share of the initial bond allocation on issue size, maturity, credit rating, a dummy for euro-denominated bonds and dummies for the type of issuer. For euro-denominated bonds, the size is converted to US dollars using the contemporaneous exchange rate. Credit ratings are converted into an ordinal scale of 1–19 (S&P: AAA = 19, CCC– = 1; Moody's: Aaa = 19, Caa3 = 1; in cases of inconsistency S&P's rating is used). Unrated issues were excluded.

Empirical results suggest that Asian buyers tend to take a larger share of issues that are smaller in size and shorter in maturity, while their share does not vary significantly by type of issuer, whether it is a bank, non-bank corporate, sovereign or supranational organisation. European shares tend to be higher in euro-denominated issues and accordingly the Asian shares are significantly lower for bonds so denominated. See below for more results.

No of observations: 71, of which 7 are euro-denominated bonds
Average Asian share (unweighted): 46.3%
Average Asian share (size-weighted): 43.9%

The table below shows the variations when we include different variables.

Dependent variable: *AS*

	Constant	*rating*	Ln *size*	*mat*	d_{eur}	d_{sov}	R^2
(1)	76.6	–1.2		–1.7	–18.6	–4.8	0.22
	(8.7)	(–1.9)		(–3.2)	(–2.4)	(–1.0)	
(2)	109.4		–7.9	–1.4	–19.2	–1.8	0.23
	(5.0)		(–2.1)	(–2.6)	(–2.5)	(–0.3)	
(3)	105.1	–0.7	–5.9	–1.5	–19.0	–2.6	0.24
	(4.6)	(–0.9)	(–1.4)	(–2.7)	(–2.4)	(–0.5)	

where

AS	=	Asian share of initial bond allocation (in percentages)
rating	=	Credit rating (1–19)
size	=	Bond size in millions of US dollars
mat	=	Maturity in years
d_{eur}	=	Dummy (=1) for euro-denominated issue
d_{sov}	=	Dummy (=1) for sovereign issuer

Note: 1. t-statistics in parentheses. 2. We include only d_{sov} in this regression; none of the other dummies for bank, non-bank corporate and supranational has a significant impact on *AS* individually.

An F-test shows that the coefficients of *rating* and Ln *size* are not jointly significant (F-statistic = 2.68, probability = 0.076).

Asian banks' share of syndicated loans arranged by Asian borrowers

Some empirical results

Parallel to our analysis of bonds, we ran a similar regression on the syndicated loans sample, for a similar period. Since the breakdown of each bank's share in each loan is unavailable to us, we make the assumption that each participant bank contributes an equal share in each loan. Thus the "Asian share" for each loan is estimated as the number of Asian banks divided by the total number of participants. We classify HSBC and Standard Chartered as Hong Kong banks – these two groups have provided approximately 8% of funds in loans syndicated by borrowers in Asia since 1999. In addition, loans with single-nationality participants are excluded from the sample.

We include borrowers originating in China, Hong Kong SAR, Indonesia, Korea, Malaysia, the Philippines, Singapore, Taiwan and Thailand. Japanese borrowers are excluded but Japanese buyers are included in the Asian share, as for bonds.

Regression results (see next page) suggest that the Asian share tends to decrease with loan size (as for bonds). We find mixed effects for maturity. An investment grade rating for the borrower significantly lowers the Asian share in two model specifications out of five. Whenever the arranger bank is of the same nationality as the borrower, or whenever the facility is in Hong Kong dollars, New Taiwan dollars or Korean won, this systematically raises the Asian share.

Model specifications as follows:

Dependent variables:

ASISHR	=	East Asian share of loan allocation (estimated, in %)
ASIJPSHR	=	East Asian and Japanese share of loan allocation (estimated, in %)

Independent variables:

size	=	Facility size in millions of US dollars
mat	=	Maturity in years
invgrade	=	Dummy (= 1) if the borrower has an investment grade rating from Standard & Poor's at the time of signing

Sectoral dummies (= 1) for construction and property (*constrpty*), financial services – banks (*finservbk*), financial services – non-banks (*finservnb*), high-tech industry (*hightech*), utilities firms (*utilities*), population-related services (*popserv*), government/state services (*state*), traditional industry (*tradind*), transport services (*transport*). The dummy for infrastructure companies was left out of the model as the case by default.

Purpose dummies (= 1) for acquisitions and recapitalisations (*acqrecap*), project finance (*project*), aircraft and shipping finance (*airshp*), standby/backup lines (*backup*), property and mortgage finance (*pty*). The dummies for other loan purposes were left out as the case by default.

Borrower nationality dummies (= 1) for China (*CN*), Hong Kong SAR (*HK*), Indonesia (*ID*), Korea (*KR*), Malaysia (*MY*), the Philippines (*PH*), Taiwan (*TW*) and Thailand (*TH*).

Currency dummies (= 1) for Hong Kong dollars (*HKD*), New Taiwan dollars (*TWD*), Singapore dollars (*SGD*), Korean won (*KRW*) and borrower's home currency (*OWNCUR*).

grpnatmatch	=	Dummy (= 1) if the borrower has its residence where at least one of the senior arranger banks has its ultimate ownership.

Determinants of Asian banks' participation in Asian loans

	ASISHR	*ASIJPSHR*	*ASIJPSHR*		*ASISHR*	*ASIJPSHR*
Constant	53.2	55.5	51.6	Constant	36.8	45.2
	(8.8)	(9.9)	(10.0)		(9.4)	(12.0)
Ln *size*	–5.2	–3.8	–2.3	Ln *size*	– 2.0	–1.0
	(–6.7)	(–5.5)	(–3.4)		(–2.9)	(–1.5)
mat	0.8	0.9	0.3	*mat*	–1.1	–0.7
	(2.5)	(2.8)	(1.0)		(–4.7)	(–2.9)
invgrade	–7.2	–3.7	–1.5	*invgrade*	–8.6	–3.9
	(–1.7)	(–0.8)	(–0.3)		(–2.0)	(–0.8)
constrpty	16.9	21.3	18.4	*CN*	12.5	1.9
	(3.3)	(4.4)	(4.0)		(2.9)	(0.5)
finservbk	–1.5	–1.0	–4.8	*HK*	5.7	4.0
	(–0.3)	(–0.2)	(–1.0)		(2.0)	(1.5)
finservnb	12.9	15.0	9.5	*ID*	–3.8	20.6
	(2.5)	(3.0)	(2.1)		(–0.7)	(3.9)
hightech	9.9	12.1	2.5	*KR*	–2.7	–5.2
	(2.0)	(2.6)	(0.6)		(–0.9)	(–1.8)
utilities	–0.6	4.0	0.7	*MY*	8.3	8.2
	(–0.1)	(0.8)	(0.1)		(2.2)	(2.1)
popserv	12.2	13.0	7.4	*PH*	2.3	1.8
	(2.1)	(2.3)	(1.4)		(0.7)	(0.6)
state	–5.6	6.1	5.0	*TH*	0.9	–0.5
	(–0.9)	(1.0)	(0.8)		(0.2)	(–0.1)
tradind	5.6	10.0	6.2	*TW*	30.4	23.5
	(1.1)	(2.0)	(1.3)		(11.2)	(9.4)
transport	8.7	13.1	10.4	*grpnatmatch*	22.1	19.8
	(1.5)	(2.5)	(2.1)		(14.0)	(13.3)
acqrecap	–5.0	–8.0	–7.5	*OWNCUR*	20.7	17.1
	(–1.1)	(–2.2)	(–2.5)		(10.3)	(9.7)
project	–18.7	–15.3	–12.4	R^2	0.52	0.44
	(–4.4)	(–3.6)	(–3.3)			
airshp	–33.3	–39.3	–33.2			
	(–7.6)	(–9.2)	(–8.2)			
backup	–3.0	–5.8	–8.0			
	(–0.5)	(–1.0)	(–1.7)			
pty	5.0	4.4	3.9			
	(1.1)	(1.0)	(0.9)			
grpnatmatch	28.7	24.1	20.4			
	(16.2)	(14.8)	(13.7)			
HKD			4.0			
			(1.8)			
TWD			32.6			
			(21.0)			
SGD			–1.5			
			(–0.5)			
KRW			7.4			
			(1.9)			
R^2	0.35	0.34	0.47			

Number of observations: 1,195. Total size: $147.5 billion. Average Asian and Japanese share: 61.9% (unweighted). Average Asian and Japanese share: 62.6% (size-weighted). Note: White heteroskedasticity-consistent t-statistics in parentheses.

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