### Glenn Boyle (New Zealand), Roger Stover (USA)

# Home bias in the syndicated loan market

#### **Abstract**

The authors examine the propensity of Australian banks to participate in syndicated loans to corporate borrowers from 12 countries in the Asia-Pacific region. As in other studies of international asset allocation, the authors find that these banks participate more often, and more intensively, in syndicates making loans to Australian firms – despite such loans providing fewer opportunities for international diversification. However, much of this apparent bias can be attributed to differences in familiarity characteristics – a different legal system, no local banking presence and significant distance from Australia all contribute to the preference for local lending. As these characteristics are likely to proxy for information availability, our results provide further support for the view that home bias phenomena are at least partly due to information problems.

**Keywords:** home bias, syndicated loans, banks.

JEL Classification: G11, G15, G21.

#### Introduction

One of the most enduring puzzles in finance is the so-called "home bias" – the observed tendency of individuals, households and fund managers to invest disproportionately in the equity securities of local firms. Although initially focused on the home country bias, subsequent research has documented a similar preference for local assets within countries, e.g., Coval and Moskowitz (1999), Huberman (2001), Grinblatt and Keloharju (2001), and Massa and Simonov (2006).

Research by Carey and Nini (2007) suggests that a preference for local deals may extend even to institutional investors. They report evidence indicating that both borrowers and lenders in syndicated loans are subject to a strong home bias<sup>1</sup>. For example, 91% of United States syndicated lending volume is to domestic borrowers; for European banks, the corresponding figure is a less-marked, but still high, 51%. Because their focus is on pricing issues, Carey and Nini simply note these apparent biases and do not undertake any detailed analysis of their nature or source. Taking up this challenge, Houston et al. (2014) carefully examine the choices of syndicated loan borrowers and confirm the Cary and Nini findings of a preference for domestic lead arrangers. For example, firms from the two countries most active in the syndicated loan market – the United States and Japan – use local lead arrangers at least 80% of the time. They also find that large firms with substantial foreign assets are more likely to utilize a lead bank from a different world region.

In this paper, we take a closer look at the remaining part of the Carey and Nini (2007) puzzle – the preference for same-country borrowers on the part of syn-

dicated loan lenders. Such a preference is puzzling: much bank lending activity is necessarily domestic, so syndicated lending provides an opportunity for diversification. Yet, at least in the Carey and Nini data, syndicate participation of banks appears to reinforce their domestic activities.

To investigate this issue, we examine the propensity of banks from a single country - Australia - to participate in syndicated loans to borrowing firms from 12 countries in the Asia-Pacific region. Our principal objectives are, first, to determine whether or not Australian bank participation in loan syndicates is sensitive to the nationality of the borrowing firm, and second, to investigate whether any such participation differences can be attributed to observable differences in country characteristics. By focusing on the loan participation activities of Australian banks alone, we avoid having to deal with complications created by differences in lender country characteristics. Moreover, Australian banks have a significant presence in the Asia-Pacific region, a geographically dispersed area characterized by major differences in language, culture, and legal and banking systems. Thus, we have an ideal setting for investigating the role of such characteristics on bank participation in loan syndicates.

We find that Australian banks exhibit a marked preference for Australian borrowers: at least one of the four major Australian banks participates in 95% of such loans, as opposed to 7% of loans to borrowers from the other 11 countries. However, this "bias" is by no means uniform across these 11 countries. In particular, Australian banks participate in 96% of loans to firms from Australia's closest neighbor – New Zealand – but in only 3% of loans to the remaining countries. As New Zealand is not only geographically closest to Australia, but also the most familiar to Australian lenders in terms of language, culture, legal framework and banking system, we hypothesize that the apparent bias against Asian borrowers can be explained by these factors, possibly

<sup>©</sup> Glenn Boyle, Roger Stover, 2014.

<sup>&</sup>lt;sup>1</sup> Carey and Nini note that bank risk neutrality calls into question the use of the term "bias". However, banks do appear to be diversified in their lending decisions – across borrowers if not across countries. For this reason, and for the sake of convenience, we use the "bias" terminology throughout.

as proxies for information availability. We find some evidence to support this view: a different legal system, a weaker Australian banking presence, and greater distance from Australia are all associated with less Australian participation and can account for at least some of the bias. After controlling for such factors, Australian banks still participate less often in loans to Asian borrowers, but their average quantity of lending is statistically indistinguishable from that provided to Australia and New Zealand borrowers.

In section 1, we describe the data used in this study and outline some of its properties. Section 2 contains our principal results while the final section offers some concluding remarks.

### 1. Data and introductory results

Our initial sample contains all 17708 syndicated loans listed in Loan Pricing Corporation's Dealscan database as having been made between January 1999 and December 2006 to borrowers from 12 countries in the Asia-Pacific region: Australia, Hong Kong, India, Indonesia, Japan, Malaysia, New Zealand, Philippines, Singapore, South Korea, Taiwan and Thailand<sup>1</sup>. In what follows, we often find it convenient to refer to the group of 10 countries not including Australia and New Zealand as "Asia". We use the 1999-2006 period for two primary reasons. First, we exclude the pre-1999 period because loan volumes were small in many of our sample countries prior to the mid-1990s and because short-term dislocations in several Asian economies during the 1997 currency crisis are likely to have had an idiosyncratic impact on the syndicated loan market in those countries. Second, to avoid complications caused by the 2007-08 global financial crisis, we do not include loans made after 2006.

From our initial example, we delete 9047 loans that have missing data. In addition, as in Houston et al (2014), we exclude 3999 loans made to other financial institutions; this precludes the possible double-counting of loans to ultimate borrowers. Our final sample thus consists of 4661 loans with a total value of \$454.9 billion. For each loan, we measure syndicate size, structure and the identity of loan participants at the deal level<sup>2</sup>.

Table 1 summarizes the geographical spread of these loans by country of borrower: approximately 47% of the total number are made to Japanese firms fol-

<sup>1</sup> Our choice of sample countries is dictated by data availability in Dealscan.

lowed (in descending order) by firms from Taiwan (14.2%), Australia (9.4%), South Korea (8.6%) and Hong Kong (7.8%). Although Japanese and Taiwanese firms also borrow the most by value, their average loan sizes (\$97.2 million and \$83.3 million respectively) are dwarfed by borrowers from Australia (\$217.6 million), Hong Kong (\$209.9 million and New Zealand (\$194.2 million)<sup>3</sup>.

Table 1. Summary of syndicated loans by country of borrower: 1999-2006

| Borrower country | Number of loans | Value of loans<br>(\$ billion) |
|------------------|-----------------|--------------------------------|
| Australia        | 437             | 95.09                          |
| Hong Kong        | 364             | 76.42                          |
| India            | 86              | 10.30                          |
| Indonesia        | 30              | 3.39                           |
| Japan            | 2198            | 213.66                         |
| South Korea      | 401             | 43.14                          |
| Malaysia         | 110             | 19.59                          |
| New Zealand      | 107             | 20.78                          |
| Philippines      | 71              | 7.67                           |
| Singapore        | 146             | 20.35                          |
| Taiwan           | 662             | 55.12                          |
| Thailand         | 48              | 5.25                           |

Note: this table summarizes the geographical spread of loan syndicate borrowing by firms from 12 Asia-Pacific countries between January 1999 and September 2006. For loans denominated in an alternative currency, their value in United States dollars is calculated using the spot exchange rate prevailing at the time of loan activation.

These banks are among the largest in Asia with annual revenues exceeding \$20 billion each. Based on total capital in fiscal 2006, their respective rankings are National Australia Bank (4th), Australia and New Zealand Banking Group (6th), Commonwealth Bank of Australia (7th) and Westpac (9th).

Table 2 provides some preliminary evidence on the geographical preferences of Australian banks. These banks participate in a total of 657 loans (14.1% of the sample), but the rate and level of involvement varies greatly by country. In particular, Australian banks clearly have a strong preference for Australian borrowers. For example, they participate in 95% of loans to Australian firms versus only 3.4% of loans to Asian borrowers. Moreover, they participate in greater numbers (an average of 2.06 for every Australian-destination loan against 0.084 for Asian loans) and hold a greater share (an average of 49% by value for Australian borrowers versus 8.8% for Asian). However, Table 2 also reveals that the strong preference of Australian banks for local assets is not confined exclusively

100

<sup>&</sup>lt;sup>2</sup> In loans where more than one tranche exists, we identify other loan characteristics using the highest-value tranche – see Ivashina (2009) and Maskara (2010). Carey and Nini (2007) treat each tranche as a separate observation, but note that they obtain similar results at the deal level.

<sup>&</sup>lt;sup>3</sup> All loan values are expressed in United States dollars. For loans denominated in an alternative currency, their dollar value is calculated using the spot exchange rate prevailing at the time of loan activation.

to Australian borrowers, as they also participate in 96% of loans to firms from Australia's closest

neighbor – New Zealand – holding 59% of such loans by value.

Table 2. Participation by Australian banks in syndicated loans

| Borrower country | Number of loans | Proportion of loans | Total contribution (\$mill) | Contribution per loan (\$mill) | Loan share | Banks per loan |
|------------------|-----------------|---------------------|-----------------------------|--------------------------------|------------|----------------|
| Australia        | 416             | 0.95                | 45024.69                    | 108.23                         | 0.49       | 2.06           |
| NZ               | 103             | 0.96                | 11944.52                    | 115.97                         | 0.59       | 2.16           |
| Hong Kong        | 44              | 0.12                | 1129.23                     | 25.66                          | 0.05       | 0.13           |
| India            | 13              | 0.15                | 172.82                      | 13.29                          | 0.11       | 0.14           |
| Indonesia        | 2               | 0.07                | 22.65                       | 11.33                          | 0.17       | 0.07           |
| Japan            | 14              | 0.01                | 1093.05                     | 78.07                          | 0.16       | 0.01           |
| South Korea      | 19              | 0.05                | 433.86                      | 22.83                          | 0.11       | 0.05           |
| Malaysia         | 15              | 0.14                | 401.47                      | 26.76                          | 0.08       | 0.15           |
| Philippines      | 9               | 0.13                | 124.27                      | 13.81                          | 0.05       | 0.14           |
| Singapore        | 17              | 0.12                | 830.55                      | 48.86                          | 0.17       | 0.14           |
| Taiwan           | 5               | 0.01                | 154.82                      | 30.96                          | 0.17       | 0.01           |
| Thailand         | 0               | 0.00                | 0.00                        | 0.00                           | 0.00       | 0.00           |
| Asia Region      | 13.60           | 0.034               | 435.13                      | 31.99                          | 0.088      | 0.084          |

Note: this table reports some summary features of Australian bank participation in syndicated loans to borrowing firms from 12 countries. In the first numerical column, each row gives the number of loans (by country) in which Australian banks participate. Proportion of loans expresses this number as a proportion of the total number of loans made to that country. Total contribution is the total investment of Australian banks (\$mill) in these loans. Contribution per loan equals Total contribution divided by Number of loans. Loan share equals Total contribution divided by the total value of country-loans. Banks per loan is the average number of participating Australian banks in each loan.

If borrowers tend to seek out lead banks from the same country (see Houston et al., 2014), then the apparent bias displayed in Table 2 may simply indicate that Australian banks are more likely to be asked to act as lead arranger for loans to Australian borrowers. Table 3 therefore categorizes participation as lead or non-lead and recalculates the relevant

Table 2 statistics. This shows a similar pattern: although Australian banks do contribute greater amounts to Australian and New Zealand borrowers when acting as lead arranger, even their contributions as non-lead participants are still many times greater than their corresponding contributions to Asian borrowers<sup>1</sup>.

Table 3. Loan participation by Australian banks: lead arranger vs participant

| Participation         | Contribution per loan | Loan share | Average loan size | Banks per loan |
|-----------------------|-----------------------|------------|-------------------|----------------|
| Australia-lead        | 119.08                | 0.51       | 233.66            | 2.11           |
| Australia-participant | 65.35                 | 0.37       | 174.90            | 2.35           |
| NZ-lead               | 129.57                | 0.60       | 214.98            | 2.27           |
| NZ-participant        | 99.76                 | 0.57       | 173.65            | 2.21           |
| Asia-lead             | 32.25                 | 0.11       | 282.47            | 1.12           |
| Asia-participant      | 31.81                 | 0.08       | 419.54            | 1.15           |

Overall, these statistics indicate considerable market segmentation. For one class of borrowers – firms from Australia and New Zealand – Australian banks as a group are active loan syndicate participants, providing an average contribution of over \$110 million to 95% of such loans. For another class of borrowers – firms from the wider Asian region – participation is much thinner: an average contribution of \$32 million to less than 14% of loans. The obvious question of interest is why such segmentation should occur. After all, although the usual riskaversion reasons for asset diversification may be less applicable to banks (see Carey and Nini, 2007), it seems unlikely that even a strict risk-neutral pers-

pective could justify the local bias documented in Tables 2 and 3.

One possible clue is provided by the apparent enthusiasm Australian banks display for borrowers from New Zealand. Of all the countries in our sample, New Zealand is not only geographically closest

<sup>&</sup>lt;sup>1</sup> If the apparent bias of Australian banks with respect to Asian borrowers were primarily due to a lack of opportunity, then we would expect them to make up this shortfall in loans where they act as lead arranger, and thus hold a greater proportion of loans where the borrower is Asian. However, in untabulated regressions that control for loan, borrower and country characteristics, we find that the loan percentage retained by Australian lead banks is actually significantly lower if the borrower is Asian.

to Australia, but it also shares a more-or-less identical language and culture, and employs the same English-origin legal system. In addition, the two countries' banking systems overlap to a large extent - the "big-four" Australian banks listed above control over 80% of the banking system assets in New Zealand as well as Australia. Similarities of this kind could result in information problems – from the perspective of Australian banks - being of only very minor relevance with respect to New Zealand borrowers, and hence result in their being treated in the same way as Australian firms. By contrast, the much less familiar environments of the 10 Asian countries could dissuade Australian banks from participating in loans to their firms. This suggests that controlling for variation in these "familiarity characteristics" may at least partly explain the apparent bias against Asian borrowers. We take up this issue in the next section.

#### 2. Regression results

To investigate whether or not country familiarity characteristics can explain the preference of Australian banks for local borrowers, we estimate models of the following general form:

$$Y_{i} = \alpha + \beta X_{i} + \sum_{s} \gamma_{k} Z_{ik} + \sum_{s} \lambda_{s} Z_{is} + \varepsilon_{i},$$
(1)

where,  $Y_i = 1$  if at least one Australian bank participates in loan i, 0 otherwise; or  $Y_i$  is the number of Australian banks participating in loan i; or  $Y_i$  is the percentage share held by Australian banks in loan i,

and:

 $X_i = 1$  if loan i is made to a firm from one of the 10 Asian countries, 0 otherwise,  $Z_{ik}$  is the value of familiarity characteristic k for loan i,  $W_{is}$  is the value of control variable s for loan i.

In equation (2),  $\beta$  represents the additional participation by Australian banks in loans to Asian borrowers over and above their participation in loans to Australian borrowers. In each model, we include four familiarity characteristic variables: geographical distance, legal origin, culture, and Australian bank presence. All are expressed as differences from Australia. The distance between Sydney and the capital city of the borrowing firm's country is calculated using equation (1) in Coval and Moskowitz (1999). Utilizing the information in La Porta et al. (1997), the legal system variable equals 1 if the borrower is from a country with a system whose origin differs from that of Australia (i.e., is non-English) and 0 otherwise. Culture is based on the Hofstede Cultural Dimensions data (available at: www.geert-hofstede.com) covering societal power structure, individualism, values and representative personality. For each country, we aggregate these individual dimension scores and express the result in terms of distance from Australia (see Kogut and Singh, 1988):

Culture difference<sub>j</sub> = 
$$\sum_{i=1}^{4} \frac{[(D_{ij} - D_{iA})^2 / V_i]}{4}$$
, (2)

where  $D_{ij}$  is country j s score for dimension i,  $D_{iA}$  is the Australian score, and  $V_i$  is the sample variance. Finally, Australian bank presence in a country is measured by the number of major Australian banks that carry a full banking license in that country<sup>1</sup>. For use in equation (2), we subtract this number from 4 (the value for Australian borrowers). Because the difference between the extensive branch network operated in New Zealand and the much thinner presence in Asian countries (which typically have only one or two branch offices) is likely to be understated by this variable, we also include its square to allow for any resulting nonlinear effect<sup>2</sup>.

In case the lending policies of Australian banks differ from those in other countries, we also include controls for loan and borrower characteristics. For example, it might be that Australian banks are less concerned about borrowers holding credit ratings than are non-Australian banks. Ex-post, where all loans must be held, this would show up as Australian banks being more likely to participate in loans to unrated borrowers. If, in our sample, the average number of unrated borrowers then differs across countries, this would bias our other coefficient estimates. To alleviate this problem, we use six variables to control for five characteristics: loan size (\$ million at the loan activation date), loan maturity (months from the time of activation), loan purpose, loan type, and borrower type<sup>3</sup>. Loan purpose is captured by two dummy variables – one equal to 1 if the loan is intended to provide working capital and 0 otherwise, the other equal to 1 if the loan is to fund an acquisition and 0 otherwise. Loan type distinguishes between term loans and lines of credit, being set equal to 1 if and only if the borrower takes out a term loan. Finally, a borrower is defined as opaque if it is either (1) private or (2) public but unrated; loans involving such borrowers are set equal to 1 while all others are set to 0

Table 4 contains summary statistics for these variables. On average, Asian borrowers take out smaller loans at a longer maturity than Australian and New Zealand borrowers, are more likely to borrow for working capital purposes but less likely for acquisition purposes, and tend to prefer term loans. Less than 20% of loans made to Asian borrowers are in countries with an English-origin legal system; the average loan to Asian borrowers goes to a country with half the Aus-

<sup>&</sup>lt;sup>1</sup> A less formal presence (e.g., a representative office) is scored as 0.5.

<sup>&</sup>lt;sup>2</sup> For this purpose, we would ideally use a variable that quantifies the extent of each bank's branch network, but we were unable to obtain this information for all countries and years.

<sup>&</sup>lt;sup>3</sup> See Houston et al. (2014) and Sufi (2007) for detailed discussions of the economic rationales for these variables.

tralian bank presence of Australia (or New Zealand) and whose culture index is roughly 19 times more distant from Australia than is New Zealand's.

The final column of Table 4 shows the value of these statistics for the subset of loans in which Australian banks participate. On average, these are relatively large loans made to borrowers from countries that are geographically close to Australia, have a significant Australian bank presence, and follow an Englishorigin legal system. This raises the possibility that the bias against Asian borrowers observed in Tables 2 and 3 may simply be reflecting these more fundamental factors.

Equation (2) is estimated as a Probit model when the dependent variable is the participation dummy; Normal Count models are used to estimate the number of participating banks variable; and the loan share models are estimated with Censored Logistic regressions<sup>1</sup>. In all models, we include year dummies for 2000-2006 and, since some borrowing firms appear more than once in our sample, report Huber-White robust standard errors clustered at the firm level. For each dependent variable, we report two specifications: one that includes only the loan and borrower characteristics and one that adds the country-familiarity variables. This allows us to isolate the effect of the latter.

Table 4. Summary statistics for explanatory variables

|                                      | Full sample ( = 4661) |                 |          |          |  |
|--------------------------------------|-----------------------|-----------------|----------|----------|--|
|                                      |                       | Borrower region |          | ·        |  |
| Variable                             | Australia             | New Zealand     | Asia     |          |  |
| Loan and borrower characteristics    |                       |                 |          | ·        |  |
| Maturity (months)                    | 45.86                 | 41.78           | 47.50    | 46.61    |  |
| Maturity (months)                    | (36.19)               | (56.90)         | (36.50)  | (40.37)  |  |
| Size (\$ mill)                       | 217.60                | 194.21          | 110.49   | 246.63   |  |
| Size (\$ IIIII)                      | (312.66)              | (298.24)        | (340.02) | (463.68) |  |
| Working capital purpose              | 0.15                  | 0.28            | 0.55     | 0.20     |  |
| Acquisition purpose                  | 0.13                  | 0.09            | 0.01     | 0.11     |  |
| Term loan                            | 0.46                  | 0.36            | 0.57     | 0.46     |  |
| Opaque borrower                      | 0.99                  | 0.98            | 0.97     | 0.99     |  |
| Country characteristics              |                       |                 |          |          |  |
| English legal origin                 | 1                     | 1               | 0.18     | 0.93     |  |
| Australian bank presence             | 4                     | 4               | 2.04     | 3.58     |  |
| Culture difference                   | 0                     | 0.15            | 2.90     | 0.64     |  |
| Distance from Australia<br>(km/1000) | 0                     | 2.17            | 7.67     | 1.92     |  |

Note: this table provides summary statistics for the independent variables used in this paper. Working capital purpose = 1 if a loan is intended to raise working capital and 0 otherwise. Acquisition purpose = 1 if a loan is used to fund an acquisition and 0 otherwise. Term loan = 1 if the loan is of that kind and 0 otherwise. Opaque borrower = 1 if the borrowing firm is listed as either private or unrated in the Dealscan database and 0 otherwise. English legal origin = 1 if a country's legal system is based on English legal principles and 0 otherwise. Australian bank presence is equal to the number of Australian banks (0-4) who offer full banking services in each country. Culture difference is an index describing the extent to which a country's culture differs from that of Australia. The first three columns provide sample means or proportions (standard deviations for continuous variables are in parentheses) for the full sample categorized by borrower location. The final column gives these statistics for the sub-sample of loans in which at least one Australian bank participates.

Table 5. Australian bank participation in syndicated loans: regression results

|                      |                               |          | Dependent variable         |          |                                |         |
|----------------------|-------------------------------|----------|----------------------------|----------|--------------------------------|---------|
| Fl                   | Australian bank participation |          | Number of Australian banks |          | Loan share of Australian banks |         |
| Explanatory variable | (1)                           | (2)      | (3)                        | (4)      | (5)                            | (6)     |
| Constant             | -6.11***                      | -5.05*** | -2.14***                   | -2.22*** | -48.27**                       | -0.82   |
|                      | (0.66)                        | (0.69)   | (0.42)                     | (0.43)   | (21.88)                        | (22.62) |
| Asian borrower       | -3.47**                       | -2.48**  | -3 68***                   | -0.14    | -112 89***                     | -51.38  |
|                      | (0.12)                        | (1.00)   | (0.11)                     | (1.51)   | (3.08)                         | (31.95) |
| Log size             | 0.37***                       | 0.34***  | 0.14***                    | 0.14***  | 4.45***                        | 2.08*   |
|                      | (0.03)                        | (0.03)   | (0.02)                     | (0.02)   | (1.01)                         | (1.11)  |
| Log maturity         | 0.11*                         | 0.02     | 0.04                       | 0.04     | 2.87*                          | 1.56    |
|                      | (0.06)                        | (0.06)   | (0.03)                     | (0.03)   | (1.48)                         | (1.45)  |

<sup>&</sup>lt;sup>1</sup> We also estimate the latter two groups of models using Poisson Count and Tobit methods respectively. This yields similar results, but the methods reported in Table 5 fit the data slightly better.

Table 5 (cont.). Australian bank participation in syndicated loans: regression results

|   |        |          | Depende | Dependent variable |        |           |
|---|--------|----------|---------|--------------------|--------|-----------|
| Marking applied number                  | -0.14  | 0.01     | -0.05   | -0.05              | -3.52  | 1.74      |
| Working capital purpose                 | (0.09) | (0.09)   | (0.05)  | (0.05)             | (2.73) | (2.74)    |
|   | 0.44*  | 0.42     | -0.09   | -0.09              | 1.05   | 1.33      |
| Acquisition purpose                     | (0.26) | (0.26)   | (0.08)  | (0.08)             | (4.61) | (4.28)    |
| Towns loon                              | 0.01   | -0.10    | -0.06   | -0.05              | -2.11  | -4.19*    |
| Term loan                               | (0.09) | (0.09)   | (0.05)  | (0.05)             | (2.43) | (2.32)    |
| Opegue herrower                         | 0.51** | 0.32     | 0.06    | 0.06               | 12.79  | 10.71     |
| Opaque borrower                         | (0.23) | (0.27)   | (0.18)  | (0.18)             | (8.98) | (9.63)    |
| Land system difference                  |        | -0.74*** |         | -1.20***           |        | -24.32*** |
| Legal system difference                 |        | (0.20)   |         | (0.23)             |        | (6.90)    |
| Cultura difference                      |        | -0.04    |         | -0.12              |        | -1.42     |
| Culture difference                      |        | (0.11)   |         | (0.21)             |        | (3.45)    |
| Bank presence difference                |        | -0.83    |         | -3.22**            |        | -77.85**  |
|   |        | (1.17)   |         | (1.21)             |        | (35.02)   |
| (Donly processed difference)?           |        | 0.22     |         | 0.74**             |        | 18.67**   |
| (Bank presence difference) <sup>2</sup> |        | (0.27)   |         | (0.38)             |        | (8.12)    |
| Distance from Australia                 |        | 0.02     |         | -0.05*             |        | -2.93**   |
|   |        | (0.08)   |         | (0.03)             |        | (1.43)    |
|   | 0.69   | 0.71     | 0.72    | 0.73               | 0.73   | 0.75      |

Note: This table estimates three measures of the propensity of four multinational Australian banks to participate in 4661 syndicated loans made to borrowers from 12 countries between 1999 and 2006. Australian bank participation equals 1 if at least one Australian bank participates in a loan and 0 otherwise. Number of Australian banks is the number (between 0 and 4) that participate in the loan. Loan share of Australian banks is the percentage of total loan funding provided by Australian banks. Asian borrower equals 1 if the borrowing firm comes from any of the Asian countries listed in Table 2 and 0 otherwise. All "difference" variables correspond to those introduced in Table 4, but redefined so that Australian borrowers equal 0. All other variables are defined in Table 4. Columns (1) and (2) are Probit models and report a Pseudo-R<sup>2</sup>; columns (3)-(4) are Normal Count models and report an Adjusted-R<sup>2</sup>; columns (5)-(6) contain Censored Logistic estimates and also report an Adjusted-R<sup>2</sup>. Huber-White robust standard errors (clustered at the borrowing firm) are in parentheses \*, \*\* and \*\*\* denote statistical significance at the 10%, 5% and 1% levels respectively. All specifications include year dummies.

The results appear in Table 5, and two features stand out. First, the Asian borrower dummy is strongly negative in the specifications that exclude the country-familiarity variables, but becomes economically and statistically less important when these are added, suggesting that familiarity explains at least some of the Australian bank preference for local borrowers. Nevertheless, column (2) indicates that even after controlling for loan, borrower and country-familiarity characteristics, there is a much greater likelihood of Australian participation in loans to Australian and New Zealand borrowers than there is to Asian borrowers. For example, consider the case of an unrated borrower seeking a line of credit of average size and maturity in order to fund an acquisition. If this borrower is from Australia or New Zealand, the estimated probability of Australian participation is almost 97%; but for an otherwise identical Asian borrower the probability is only 26%. By contrast, columns (4) and (6) indicate that the quantity of Australian participation – as measured by the number of participating Australian banks or their total loan share - is statistically no smaller for Asian borrowers once countryfamiliarity characteristics are accounted for: although the loan dummy coefficient remains negative,

it is insignificant at conventional levels. The economic significance is also much weaker: consider again the unrated borrower discussed above. When the country-familiarity variables are excluded, the predicted number of Australian banks participating in such a loan is 1.45 if the borrower is from Australia or New Zealand, but only 0.4 for otherwise-identical Asian borrowers; when those variables are included, the corresponding numbers are 1.45 and 1.26 respectively.

Second, the legal and banking environment appears to be particularly important in explaining the Australian bank preference for local borrowers. A different legal system discourages Australian bank loan participation, as does a weaker Australian banking presence: the former is significant at the 1% level in all specifications while the latter is significant at the 5% level for the number and loan share dependent variables. Geographical and cultural distance from Australia also reduce Australian bank participation, albeit with varying degrees of statistical significance.

Of the control variables, only loan size has a consistently significant effect: Australian banks apparently participate more often, and more extensively, in large

loans. Unsurprisingly, this effect is weakest in column (6) where the dependent variable is loan share.

To assess the robustness of our results, we experiment with a number of different model specifications. In particular, we include additional legal (rule of law, judicial efficiency, legal formalism) and investor protection (corruption, creditor rights) variables, and apply a number of different estimation methods (including OLS). Although these modifications have varying effects on individual coefficient estimates, the overall picture is essentially the same as that outlined above: country-familiarity variables explain most, and sometimes all, of the apparent "bias" against non-local borrowers.

# Concluding remarks

Using a sample of 4661 syndicated loans made to borrowers from 12 countries in the Asia-Pacific region, we find that Australian banks exhibit a significant home bias: they participate more often and more extensively in loans to Australian borrowers than they do in loans to Asian borrowers. Motivated by the observations that (1) participation in loans to New Zealand borrowers is identical to those for Australian borrowers and (2) New Zealand is most similar to, and hence most "familiar", to Australia along a number of dimensions, we investigate the role of country-familiarity characteristics in determining the domestic preference and find that at least some, and sometimes all, of the bias can be attri

buted to these factors, in particular those relating to legal and banking system differences.

As such characteristics are likely to proxy for information availability, our results provide further support for the view that home bias phenomena are at least partly due to information problems: Australian banks perceive themselves to be at an information disadvantage in assessing borrowers located in less familiar countries and thus tend to shy away from participation in such loans.

Of course, country-familiarity characteristics truly "explain" the home bias only to the extent that loans to more familiar borrowers actually provide better average returns to banks. Such a phenomenon has been documented by Coval and Moskowitz (2001), Ivkovic and Weisbenner (2005) and Malloy (2005) for equity investors, so further research on syndicated loan participation could undertake similar investigations for banks, possibly along the lines of Mian (2006).

# Aknowledgement

We are grateful to Laura Hubbard, Nick Jensen and Dongyan Wang for valuable research assistance. None of these, however, is responsible for any remaining errors or ambiguities, Financial support for this project was provided by the Reserve Bank of New Zealand, but the views expressed in this paper are entirely our own.

#### References

- 1. Adler, M. and B. Dumas, (1983). International portfolio choice and corporation finance: A synthesis, *Journal of Finance*, 38, pp. 925-984.
- 2. Black, F. (1974). International capital market equilibrium with investment barriers, *Journal of Financial Economics*, 1, pp. 337-352.
- 3. Carey, M. and G. Nini., (2007). Is the corporate loan market globally integrated? A pricing puzzle, *Journal of Finance*, 62, pp. 2969-3008.
- 4. Champagne, C. and L. Kryzanowski (2007). Are current syndicated loan alliances related to past alliances, *Journal of Banking and Finance*, 31, pp. 3145-3161.
- 5. Coval, J. and T. Moskowitz (1999). Home bias at home: local equity preference in domestic portfolios, *Journal of Finance*, 54, pp. 2045-2073.
- 6. Coval, J. and T. Moskowitz (2001). The geography of investment: informed trading and asset prices, *Journal of Political Economy*, 109, pp. 811-841.
- 7. Esty, B. (2004). When do foreign banks finance domestic projects? New evidence on the importance of legal and financial systems. Harvard University working paper.
- 8. Grinblatt, M. and M. Keloharju (2001). How distance, language and culture influence stockholdings and trades, *Journal of Finance*, 56, pp. 1053-1073.
- 9. Houston, J., J. Itzkowitz and A. Naranjo (2014). Borrowing beyond borders: foreign assets, lender choice, and loan pricing in the syndicated bank loan market. Available at: http://ssrn.com/abstract=2434338.
- 10. Huberman, G. (2001). Familiarity breeds investment. Review of Financial Studies, 14, pp. 659-680.
- 11. Ivashina, V. (2009). Asymmetric information effects on loan spreads, *Journal of Financial Economics*, 92, pp. 300-319.
- 12. Ivkovic, Z. and S. Weisbenner (2005). Local does as local is: information content of the geography of individual investors' common stock investments, *Journal of Finance*, 60, pp. 267-307.
- 13. Kogut, B. and H. Singh (1988). The effect of national culture on the choice of entry mode, *Journal of International Business Studies*, 19, pp. 411-432.
- 14. La Porta, R., F. Lopez-De-Silanes, A. Shleifer and R. Vishny (1997). Legal determinants of external finance, *Journal of Finance*, 52, pp. 1131-1150.
- 15. Malloy, C. (2005). The geography of equity analysis, *Journal of Finance*, 60, pp. 719-755.

- 16. Maskara, P. (2010). Economic value in tranching of syndicated loans, *Journal of Banking and Finance*, 34, pp. 946-955.
- 17. Massa, M. and A. Simonov (2006). Hedging, familiarity and portfolio choice, *Review of Financial Studies*, 19, pp. 633-685.
- 18. Mian, A. (2006). Distance constraints: the limits of foreign lending in poor economies, *Journal of Finance*, 61, pp. 1465-1505.
- 19. Stockman, A. and H. Dellas (1989). International portfolio nondiversification and exchange rate volatility, *Journal of International Economics*, 26, pp. 271-289.
- 20. Stulz (1981). On the effects of barriers to international investment, *Journal of Finance*, 36, pp. 923-934.
- 21. Sufi, A. (2007). Information asymmetry and financing arrangements: Evidence from syndicated loans, *Journal of Finance*, 62, pp. 629-668.