

The development of the Australian financial system:Error!
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An international comparison

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Preamble

This submission examines one aspect of *The Terms of Reference* of the Financial System Inquiry: the international competitiveness of the Australian financial system.

The development status of the Australian financial system - financial institutions and the stock market - in comparison with major Western and Asian countries is assessed in terms of overall international performance of: (i) the stock market (capitalisation, liquidity, and growth); (ii) financial system development (liquid and quasi-liquid liabilities, and domestic credit to private firms); and (iii) the asset size of banks, non-bank financial institutions, private insurance and pension funds. The results draw out the weaker component of the Australian financial system and suggest which policy directions may increase the overall efficiency of the financial sector.

Abstract

An efficient financial system has been identified as an important determinant in achieving long-term economic growth (Walter 1993). Recent research suggests that there may be a correlation between the level of stock market development and that of financial institutions (Demirguc-Kunt and Levine 1995), and that these components are complementary parts of the financial system. Data analysed in this submission shows that the Australian equity market underperforms relative to major European and Asian countries: liquidity is low and international integration measured by asset pricing efficiency is comparatively weak.

If the complementarity of the stock market and financial institutions development proves to be true, the overall performance of the Australian financial system could be improved by increasing the performance of the capital market.

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In this submission, I compile data based on a 1995 World Bank research paper. Bar charts illustrate the comparative performance of the Australian financial system relative to selected European and Asian countries in terms of the development of the stock market and financial intermediation. Asian countries have been included to show the relative strengths of their capital markets. However, a direct comparison between an institutionally mature financial system and those of only recently developed countries is problematic. Moreover, measuring and comparing the development of the financial system is a complex problem. In this analysis, only a given set of quantifiable indicators have been included. The preliminary findings of this submission suggest that the policy focus should be on the stock market as a means to raise the overall performance of the financial system.

The link between the financial system and the economy

It is now widely acknowledged that there is a linkage between the financial system and the economy. Walter Ingo notes that "the structure, conduct and performance of financial systems are highly relevant in setting the agenda of economic growth" (1992: 1). He further points out that "high-performance financial systems are increasingly important as determinants of sustainable economic progress and stability" (1992:1). Economies with a sophisticated financial system seem to be more capable of evaluating assets whose real value is difficult to determine (Thakor: 1996: 925). Thakor draws the inference that "a better developed financial system leads to higher productivity and growth through superior physical capital accumulation and more efficient investments in intangible and human capital" (1996: 925).

More specifically, the role of the stock market in providing risk diversification, liquidity, information processing, and capital mobilisation, may be a factor in promoting economic growth (Demirguc-Kunt and Levine 1995).

The Australian financial system

The Australian financial system seems to be an odd case. The major domestic external source for long-term funding is the stock market (Bruce et al. 1991: 97). Domestic banks do not provide a substantial amount of long-term funding, and there is no deep corporate debt market (daily turnover in 1994/1995 of A\$0.1 billion, while State and Commonwealth bonds turnover was A\$10.7 billion, RBA May 1996:4). Whilst the four largest banks could be classified as universal banks, they are restricted in the amount of equity holding in non-financial firms. This limitation may prevent them from exploiting the information and monitoring advantage that may be achievable with a larger equity stake, which could result in a better risk return trade-off (Steinherr and Huveneers 1994).

Shareholder ownership is concentrated, and the venture capital market is small. Despite being classified as a market-based system (OECD 1995), it is the banking sector which seem to be more developed.

Methodology

The source for comparative data on the stock market and financial intermediation is taken from a World Bank Policy Research Department paper by Ash Demirguc-Kunt and Ross Levine (1995). The authors compiled stock market and financial data for 41 countries over a period of 1986-1993. Their stated goal is "to summarize information about a variety of indicators for stock market development, in order to facilitate research into the links between stock markets, economic development, and corporate financing decisions" (see summary findings).

They observed a high correlation between the level of stock market development and the development of banks and non-bank financial institutions, insurance and pensions funds. This confirms Merton's (1993) findings of the complementarity between financial institutions and markets through the innovation spill-over effect from the market to financial institutions (Thakor 1996: 944).

I make use of the data from the World Bank paper to compare the development of the Australia's stock market and financial institutions to those in a set of developed countries (US, UK, Canada, Switzerland, Germany, France and Japan) labeled the 'Western set', and a set of recently developed Asian countries (Hong-Kong, Singapore, Korea, Thailand, Malaysia). Where relevant, all data is adjusted for size (i.e. divided by GDP).

Stock Market

The development of the Australian stock market is assessed in terms of three indicators: (1) market capitalisation ratio, which equals the market value of listed shares divided by gross domestic product and reflects the size of the stock market in relation to the economy; (2) the total value traded ratio, which measures all organised equity trades divided by GDP and reflects the liquidity of the market in terms of the underlying economy; and (3) turnover, which equals the value of total shares traded divided by market capitalisation (i.e. another indication of market liquidity), and is thought to reflect the level of transaction cost.

In terms of a conglomerate index which combines the three stock market indicators, Australia ranks as third lowest, above only Canada and France (Figure 1).

Figure 1: Modified conglomerate index of three stock market development indicators. This is calculated by adding 1 to the index of Demirguc-Kunt and Levine which represents an average of the three means removed market indicators (the means removed value is computed by subtracting the mean value and dividing by this value). The value of 1 was added for visualisation purposes.

Figures are available only in the hard copy version.

Figures 2 and 3 show the breakdown of the conglomerate index into the three component stock market indicators for the two sets of countries. While Australia's market capitalization is substantial, lying slightly below the middle of the range and being significantly larger than Germany's, the total value traded and turnover are much lower. Australia's total value traded ranks only above France and Canada and share turnover is also low, being equal to Canada and ranking only above Malaysia. Thus, although Australia's stock equity market size is substantial, and the number of listed companies is comparatively high at 1184, the value traded is low which indicates low liquidity. This suggests that transaction costs in Australia may be relatively high.

Figure 2 and 3: Stock market development indicators: Western Set and Asian Set

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Mis-pricing, defined as the degree of international capital market integration (measured as the systematic deviations of expected return on world capital markets, derived by the APT and ICAMP model) is highest in Australia when compared with all countries in the two sets where data was available (the US, UK, Japan, Thailand, Korea and Malaysia). When measures of the capital market (capitalisation, value traded and turnover), including the mis-pricing variable are aggregated into an index, Australia is the lowest performer (Figure 4). Demirguc-Kunt and Levine caution that the APT and ICAMP models have their shortcomings but still consider them to be useful indicators of domestic and international risk diversification.

Figure 4: International capital market integration. *Figures are available only in the hard copy version.*

Between 1986-1993, the Australian stock market exhibited a low growth rate (Figure 5). High growth rates were not restricted to Asian countries. Other OECD countries' stock markets such as those of Germany, the UK and Switzerland also showed substantial growth rates although in the case of Germany, this is partially explained by the German unification. The high rate of economic growth development, and low starting point of the Asian countries has also spurred stock market growth - or vice versa. There seems to be no consensus as of yet on this issue (Thakor).

Figure 5: Stock market growth rates. *Figures are available only in the hard copy version.*

Financial Intermediation

The Australian financial system size, as a GDP adjusted measure of liquid liabilities (M3), quasi-liquid liabilities (M3-M1) and domestic credit to private firms, ranks above the US and Canada in the Western set, while only Thailand and Korea are lower in the Asian set. The overall financial system size includes the financing of government deficit and is therefore not necessarily an indicator of efficient financial intermediation (Figure 6, Findex1).

The size of the Australian banking sector in terms of deposits, including the assets of NBFIs, insurance and private pension companies ranks 2nd highest of the two sets of countries considered (Figure 6, Findex3) and 5th highest of all OECD countries.

Figure 6: Financial Intermediary Development Indicators: Findex 1 is a conglomerate index of the overall size of the financial system and Findex3 combines the information of the size of financial institutions (see Figure 1 for a description of indices calculation). *Figures are available only in the hard copy version.*

Another interesting factor is the measure of domestic credit to private firms divided by GDP which reflects "the provision of efficient financial intermediary services such as acquiring information about firms, monitoring managers, and facilitating transactions and risk diversification" (Demirguc-Kunt and Levine, 1995: 22). According to the data presented in Figure 7, Australia's credit provision ranks above Canada, Thailand and Korea.

Figure 7: Domestic credit to private firms. *Figures are available only in the hard copy version.*

Evaluation

A priori, one would expect the Australian stock market performance to be similar to other countries with market based systems. However, the Australian capital market is underdeveloped when compared to the Western and Asian countries considered. In contrast, Australia's financial institutions are large in terms of assets, this sector being greater in overall size than most countries with bank based systems, while the financing of the private sector is comparable to that of market-based countries.

The data presented in this study implies that international integration of the Australian stock market is the weakest component in the financial system which is reflected by risk-mis-pricing. According to Demirguc-Kunt and Levine, "greater mis-pricing may reflect poor information about firms, high transaction costs and official barriers to international asset trading" (1995:10). That there are no official barriers to international

asset trading suggests that policies aimed at achieving greater integration should focus on firm information and transaction cost.

In summary, the Australian stock market could be characterised as small and rather illiquid and trading might be impeded by high transaction cost.

Earlier research of the national differences in the cost of equity, Richards (1991) compared several approaches, including the CAPM and APT models (1991). He states that "Australian equity returns may be relatively risky when compared with the world market and after leverage consideration" (1991:1). Evidence from national accounts data also suggests that real earnings in Australia may be relatively risky (volatile) when measured against the benchmark of world earnings (1991:2). Richards argues that this higher risk can partially be explained by cyclical risks in the Australian economy, higher concentration of resource stocks, and the fact that those sectors with lower "betas" (firm specific risk), such as services and utilities tend to be government owned.

The Australian stock market composition in 1995 shows a substantially above average concentration in energy and resource companies, 48% compared with 21% of twenty-two major stock exchanges. At 17%, the service sector is close to the international average of 20%. However, shares of the manufacturing industry (capital equipment and consumer goods) make up only 8%, compared with 34% of the major international stock markets (Data: Allen Report 1996: 24). Note that the stock market composition indices only include large companies with liquid shares.

If risk would not equate to return, one may question why foreign investors are willing to acquire Australian shares. Australia's equity market shows the highest concentration of foreign ownership with 32% (RBA 1996) among OECD countries (UK 16%, Germany 12%, France 11% - 1993 data, OECD 1995:17). Further research is required to determine whether Australian investors demand a higher risk premium for Australian companies than foreign investors, or whether it is the resource dominant composition of the stock market which drives both firms and investors off-shore. Firms in the energy and resource sector may have to pay a domestic premium due to market saturation in this sector.

From an international comparative perspective, the Australian stock market has room for improvement. Stagnation of Australia's stock market may result in it being excluded from international institutional portfolio research and reporting (Allen Report 1996: 24). This could greatly reduce the inflow of institutional investment funds, aggravating the problem of market illiquidity.

More research is required to determine why a mis-match between financial sector development and the equity market exists in Australia. Other aspects of the capital markets, such as the absence of a corporate debt market must also be further investigated.

Another approach for assessing financial systems has been taken by Demirguc-Kunt and Makismovic. Instead of focusing on the financial system design for source of funds for companies, they tested whether the financing choices of firms change given the level of development of the stock market and financial intermediation. They found that further development of already developed stock markets will lead large firms to substitute equity for long-term debt (1995b: 23-24). Thus, once the Australian stock market has attained a higher level of development, financial institutions may also benefit by expanding their corporate long-term lending activities.

Conclusion

The apparent complementarity of equity market and financial system development suggests that policies aimed at enhancing Australia's underperforming equity market should be considered as a means to raise the overall performance of the financial system.

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