

A person in a dark suit is walking down a wide set of stone steps. The steps are made of large, light-colored stone blocks. The person is captured in motion, with their legs and feet visible. The background shows the lower part of a classical building with large columns.

SMALL BUSINESS ACCESS TO FINANCE



Introduction

Despite their contribution to employment, productivity and the overall prosperity of Australia, the needs of Australia's small business community are consistently overlooked by policy makers. That's why, during the 2013 Federal Election, the NSW Business Chamber, together with its state and federal counterparts, developed the *Small Business - Too Big to Ignore* campaign. The slogan reflects the frustration felt by business owners across the country, and particularly in NSW, at the level of government antipathy generally shown to our nation's small businesses.

With more than 2 million SMEs in Australia, employing more than 7 million Australians, it's obvious that the health of the nation's economy and the strength of our local communities need a thriving small business sector. Ensuring these businesses have adequate access to finance to allow them to invest, grow and innovate is absolutely critical.

Access to finance however remains a significant concern for many small businesses. Failing to provide small business with adequate finance places a handbrake on the nation's innovation and, in turn, its productivity. In 2010-2011, there were approximately 760,000 innovating firms that identified as SMEs - in fact, small firms account for the largest share of innovating businesses by employment. Unfortunately, however, recent NSW Business Chamber research indicates that around 30% of SMEs felt that they had missed an opportunity due to a lack of credit.

Lack of finance not only constrains small business innovation, it can force smaller firms to shed staff or worse, lead to a bankruptcy. Our research has identified that of SMEs rejected for a loan: around 55% felt that the rejection significantly constrained firm growth; around 21% felt that it significantly increased the chances of bankruptcy; and 18% had to lay off staff.

A commitment to assisting SMEs raise finance is underpinned by strong and compelling evidence that by



Stephen Cartwright CEO
NSW Business Chamber

doing so we can lift Australia's productivity through greater investment, enterprise and innovation.

The NSW Business Chamber's *Thinking Business* program, of which this report forms part, builds on the Chamber's experience of working with leaders across business and government to bring about change that supports growth, development, jobs and lasting prosperity for NSW.

Leveraging our diverse membership, the program identifies existing or emerging issues that are not being sufficiently addressed in public debate and provides a platform for business to put forward its perspective on how these issues might best be resolved.

This report provides an overall analysis of both the theoretical and practical barriers restricting the flow of credit to Australian small business. The report also explores responses to this issue, both domestically and internationally, and details recommendations for government and the finance industry to help small enterprises build their businesses further.

We thank Deloitte Access Economics for the chapter they contributed to this report and the paper prepared by Professor Mark Cowling. We also thank the input provided by the stakeholders who participated in our surveys and our reference group discussions on this important topic.

A handwritten signature in black ink, appearing to read 'Stephen Cartwright'.

Stephen Cartwright
CEO, NSW Business Chamber





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SMILE

SUMMARY



Conservatively, lack of finance affects around

200,000 SMEs.

Access to finance is the most common

barrier to innovation

and third most common barrier to activity according to the ABS.

The challenge is to develop cost effective solutions.

Lenders never have perfect information about a potential borrower's business.

Information gaps have worsened as lenders have moved away from relationship banking.

The Chamber recommends that governments, lenders and business groups work to improve banking advice.

Collateral can help bridge information, but **37%** of rejections are due to lack of collateral.

The Chamber recommends that governments examine the feasibility of the implementation of a partial credit guarantee.

Changes to prudential rules also make it more difficult to lend to small business.

The Chamber recommends that the impact of prudential rules and banking competition more broadly should be investigated as part of a future financial system inquiry.

"Efficiency requires that **talent, not wealth,** should determine who becomes an entrepreneur."



Key points

Although survey results vary, Deloitte Access Economics (DAE) estimates that about 10% of Australian SMEs or around 200,000 businesses have problems accessing finance.

ABS data suggest access to finance is also the most common barrier to innovation (affecting around 400,000 businesses) and the third largest barrier to general activity (affecting around 300,000 businesses).

Information gaps: Since lenders never have perfect information about a potential borrower's business, even the textbook explanation indicates that good businesses will sometimes have problems accessing finance.

In other words, the fact that good businesses miss out on loans is not in dispute. The challenge is to develop cost effective solutions to help these businesses invest grow and innovate.

Traditionally, banking relationships have helped bridge the information gap, but lenders have moved away from relationship banking to a more model based approach that trades a more nuanced understanding of unusual businesses for a cheaper and faster lending process.

DAE observes that the move away from relationship banking has also exposed gaps in financial literacy, networks for banking advice and bank processes, which have placed greater pressure on borrowers to supply the right information.

Lenders and borrowers both have strong incentives to improve information gaps, but as lenders adopt an increased focus on SMEs, more innovative approaches are emerging.

Recommendation 1.

The Chamber recommends that governments, lenders and business groups work together to solve coordination problems in the provision of banking advice and training to businesses.

Lack of collateral: Collateral can help overcome information gaps by reducing the risk of default by giving borrowers more skin in the game and compensating lender's if a default does occur.

However, lack of collateral was the most common reason for being denied access to finance, with Chamber data showing that it was responsible for 37% of rejections.

Professor Marc Cowling argues that if not everyone has collateral, lenders will lend to the businesses with the best collateral, rather than the best businesses. This is commercially unavoidable, but governments can take a broader perspective.

In an analysis of a UK credit guarantee scheme, Professor Cowling found that even in the first two years, when defaults are high, the program delivered benefits worth £1.05 Gross Value Added (GVA) per £1 spent. This includes 75% additional lending, 3,550 to 6,340 jobs, £75m-£150m sales, £33m exports, 17% more innovation, and 24% more cutting edge tech, at a cost of £35m each year (or £23m with revenue gained from the additional sales and employment).

Recommendation 2.

The Chamber recommends that governments examine the feasibility of the implementation of a partial credit guarantee scheme in Australia to support entrepreneurs with good business plans, but insufficient existing wealth.

Regulation: Changes to prudential rules also make it more difficult to lend to small business by forcing lenders to hold more assets on their balance sheet against small business loans.

Recommendation 3.

The Chamber recommends that the impact of prudential rules and banking competition more broadly should be investigated as part of a future financial system inquiry.



Summary report

With access to finance an ongoing concern for the Chamber's 14,000 members, this **Thinking Business** report has been developed to highlight the issue and also examine potential policy approaches to improve small business operators' access to capital.

The NSW Business Chamber engaged Deloitte Access Economics (DAE) and a leading UK expert, Professor Marc Cowling, to investigate the ability of small and medium enterprises (SMEs) to access finance in Australia and what might be done to increase this access to help stimulate growth and new investment.

Problems with SME access to finance

Although survey results vary (as figure 1 shows), DAE estimates that about 10% of Australian SMEs or around 200,000 businesses have problems accessing finance.

The lower bound of SME concerns with access to finance comes from an unpublished, DBM survey, sponsored by NAB, which found that access to finance is a major problem for about 5% of SMEs or 100,000 businesses.

The DBM figure may be lower than others because weak economic conditions have reduced the need for businesses to borrow. NSW Business Chamber surveys also show that the proportion of applicants that had been refused finance in the past two years fell from 24% in mid-2012 to 7% by early 2013 (although the highest reported figure also comes from a survey in early 2013 by East & Partners which found that 44% of SME applicants had been refused finance in the previous 12 months).

An Australian Chamber of Commerce and Industry (ACCI) survey in mid-2013 reported that 14.2% of small businesses and 11% of medium-size firms identified lack of finance as an obstacle to the growth and development of their businesses.

The ABS found that access to finance is the most common barrier to innovation, with concerns reported by 20% of businesses (around 400,000), and the third largest barrier to general business activity.

Possible economic consequences

Lenders cannot – and should not – lend to everyone, so the economic implications of difficulties with SME access to finance depend on the reasons why they were refused. However, there are significant implications for the economy if credit is denied to SMEs when it could have been extended.

The overall economic importance of SMEs is well established. SMEs employ around 7 million Australians (around 70% of employment) and make a significant contribution to the creation of new jobs. SMEs also produce more than half a trillion dollars in output (almost 60% of private sector economic output), make up almost 100% of innovative businesses, and spend almost \$6 billion per year on R&D.

Strikingly, improving access to finance appears to be more important for improving business innovation than knowledge creation and skills development, which have been the traditional targets of the more than \$8 billion the Commonwealth spends each year on science, research and innovation policy. An earlier study by Professor Cowling of UK efforts to improve access to finance through a partial credit guarantee found that program recipients were 17% more likely to be innovative and 24% more likely to produce cutting edge technology than those who did not borrow.

More generally, Dun and Bradstreet data used by the RBA shows that highly leveraged small businesses tend to generate a higher return on assets. Similarly, NSW Business Chamber survey results show that 30% of business felt that they missed an opportunity in the two years to July 2012 due to lack of credit and 50% of those who had loans rejected reported that it significantly constrained their growth.

With forecasts suggesting that the unemployment rate is likely to rise above 6%, problems with access to finance could also have employment implications. NSW Business Chamber survey results showed that 20% of businesses who had loans rejected had to lay off staff or saw their chance of bankruptcy significantly increase. The aforementioned study by Professor Cowling also found that businesses that received support to access finance were more likely to hire staff.

Do good businesses miss out on loans?

Although the 2011 Senate Inquiry into SME access to finance dismissed the concerns raised by businesses as matters of perception, the fact that good businesses miss out on loans is not seriously contested in the academic literature.

Information gaps

Both DAE and Professor Cowling point out that even a textbook explanation of lending decisions indicates that good businesses will sometimes have problems accessing finance because lenders never have perfect information about a potential borrower's business.



**NO
SALE**

Barriers to innovation



19.9%

Lack of access
to additional funds



14.4%

Cost of development or
introduction/implementation



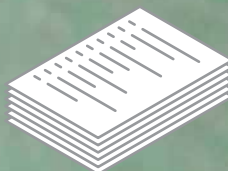
17.8%

Lack of skilled person
in any location



4.2%

Lack of access
to knowledge or technology



13.9%

Government regulations
or compliance



15.9%

Uncertain demand for
new goods or services

(ABS2013)

Is access to finance an issue?

5% Major issue (DBM 2013)

10% Significant constraint (NAB 2013)

13% Obstacle for growth (ACCI 2013)

16% Barrier to activity (ABS 2013)

20% Barrier to innovation (ABS 2013)

24% Major concern (ACCI 2013)

32% Missed opportunities (NSWBC 2012)

What share of loans are rejected?

6% (ABS 2013)

7% (NSWBC 2013)

24% (NSWBC 2012)

44% (East and Partners 2013)

5920

DAE also observes that good businesses cannot simply pay more to offset the risk.

For the lender, simply increasing interest rates to attempt to compensate for the lack of information and its attendant risks is not ideal since:

- increasing the cost of the loan discourages low-risk applicants leading to adverse selection which lowers expected returns to the lender; and
- increasing the cost of the loan reduces returns to the borrower, weakening incentives to re-pay or encouraging higher risk investments in an effort to deliver higher returns ('moral hazard').

DAE explains that banking relationships can help bridge this information gap, but are also costly.

...relationship banking reduces the information gap since the lenders know more about the project through gathering proprietary information. The information can be used to undertake a more accurate analysis of the firm and the entrepreneur, reducing problems of adverse selection. In some sense, the quality of the relationship behaves in a similar fashion to collateral.

...However, there is a cost to gathering information in this manner, namely, the cost of maintaining a team of specialist relationship bankers. Consequently, there will be a trade-off, a point beyond which the cost of obtaining information outweighs the revenues that can be earned from the borrower.

As technology has improved, DAE notes that banks have moved away from relationship banking to a more model based approach that offers a less nuanced understanding of risk, but makes lending to most businesses cheaper.

Traditionally, an evaluation of whether a particular customer is a worthwhile investment for a lender to make would incorporate an in-depth understanding of the nature of the customer's business and an ability to track its progress, traits of a relationship banking model.

Recent decades have seen significant advances in technology, allowing banks to adopt more cost-effective ways to process applications. This has resulted in a shift away from relationship banking and towards a more

model-based approach. That is, banks require applicants to meet various key performance indicators (KPI)—e.g. sufficient collateral, good credit history, low volatility of revenue flows—before credit is extended.

A pure focus on pre-determined KPIs would fail to internalise the idiosyncrasies of a business. Moreover, such a system would tend to favour established, stable businesses that have enough security, cashflow and a credit history. Such a system would be less adept at assessing the potential worth of a start-up (e.g. without tangible assets or cash flow), a business with no credit history (i.e. has not used external finance) or firms with untested products (e.g. an innovation).

The trade-off is a more cost effective way to process the application against a reduced understanding of the business.

The trend towards a more model based approach may have slowed more recently.

In recent years, some banks have expanded their small business loan teams to build better links to the small-business community. However, this is costly; thus a balance must be struck as to how much additional understanding of a business a lender needs to make a decision and how much revenue the borrower will generate for the lender.

Drawing on a NSW Business Chamber workshop, DAE observes that the move away from relationship banking has exposed gaps in the financial literacy of businesses, networks for banking advice and bank processes, which has placed greater pressure on borrowers to supply the right information.

In a NSWBC workshop with small businesses and SME advisers, a key theme was that the shift away from the traditional business banker model means that knowledge of, for example, bank offerings and application processes is harder to come by. That is, if you do not know the right people finance is difficult or expensive to obtain.

Banks have different business strategies and product offerings to differentiate themselves

and this is reflected in different application processes. NSWBC workshop attendees noted not only that applications can be knocked back by one bank but accepted by another –which may reflect business strategy – but could also receive differential treatment within a bank (depending on the bank officer overseeing the application).

DAE points out that this can create significant transactions costs, and notes that NSWBC survey data show that:

10% [of loan rejections] were because of an inadequate business plan [and] around 20% of respondents who reported needing finance did not apply for loans because they found the process too difficult or too time-consuming.

Collateral

Both DAE and Professor Cowling emphasise the central role that collateral plays in overcoming information gaps, but DAE also notes that lack of collateral was reported as the most common reason for being denied access to finance, stating that Chamber surveys found 37% of rejections of applications were due to inadequate security.

Collateral can help overcome information gaps by reducing the risk of default by giving borrowers more skin in the game and compensating for a lender's losses if a default does occur.

Professor Cowling observes that some have argued that collateral can eliminate credit rationing because:

...good risk borrowers will be willing to put up collateral against a loan as they feel confident that they will not default and lose their assets. Bad borrowers, knowing that they are risky, are very reluctant to offer collateral against borrowing as they have a higher probability of losing it.

However, not everyone can access adequate collateral. Professor Cowling notes that this is where the first disagreements emerge in the credit rationing debate. As collateral requirements are based on differences in the riskiness of good and bad borrowers:

...where the good and bad borrowers are sufficiently different in terms of their riskiness, the amount of collateral required from good borrowers may well exceed their wealth (asset) endowment.

Professor Cowling argues that if not everyone has collateral, lenders will lend to the businesses with the best collateral, rather than the best businesses resulting in a proportion of genuinely good, low risk, borrowers becoming unfairly credit rationed. He points out that:

...it is questionable whether entrepreneurial talent is the prerogative of the wealthy or more broadly distributed throughout the population as a whole. Without reasonable access to financing, many talented entrepreneurs may be forced to accept waged employment and contribute less to the economic system. Innovation and business development will become a luxury reserved for the wealthy, and the economy as a whole will suffer.

The economic loss associated with a default is the alternative use of the lender's capital and this is unaffected by collateral. Thus Professor Cowling argues that:

Efficiency requires that talent, not wealth, should determine who becomes an entrepreneur.

Regulation

DAE argues that changes to regulatory rules following the global financial crisis (GFC) also have implications for SME access to finance.

For SMEs the key change affecting bank capital requirements arising from Basel III is the minimum capital adequacy ratio (CAR) increase from 2% to 7% to be phased in by 2015, with an additional 'capital conservation buffer', to be phased in by 2019.

DAE quotes the OECD's concerns about the impact this may have on small business.

"It is beyond serious dispute that loans and other banking services will become more expensive and harder to obtain under Basel III. The real argument is about the degree, not the direction" (Elliott 2010 in OECD 2012).

Although DAE acknowledges that:

...the net impact of Basel III on SMEs is not clear if the putative benefits of a more stable financial system (and less volatile economic

cycle) are considered, since SMEs will share in these benefits.

More recently, analysis by JP Morgan has observed that the former Government's proposed levy on deposits could reduce competition in the banking system by further increasing the divide in funding between major banks and their smaller competitors who are far more reliant on deposits. This could have implications for small business lending by further reducing competition in the banking sector.

Can we do better?

The fact that good businesses miss out on loans is not in dispute, but the challenge is to develop responses that will improve lending to good businesses without creating undue costs elsewhere.

Bridging information gaps

Lenders and borrowers already have strong incentives to improve information gaps, but as lenders adopt an increased focus on SMEs, more innovative approaches are emerging, and there may also be scope for the government, lenders and business groups to work together to solve coordination problems in the provision of banking advice and training to businesses.

Some possible responses are aimed at improving the information available to lenders.

DAE notes that comprehensive credit reporting, which will take effect from March 2014, could open up a much broader range of information on borrowers if they are borrowing against a principal's home. Currently only negative credit history is reported, but under proposed changes positive information will also be provided enabling lenders to more accurately assess credit risk. While this may lead some businesses with poor payment histories to miss out, by reducing uncertainty it should also mean that fewer good businesses miss out on finance. Comprehensive credit reporting could be particularly useful for new businesses, with limited financial history to draw on.

DAE also suggests that technological improvements may offer benefits:

Technology may lessen the extent of asymmetric information, e.g. through dynamic credit modelling of lenders' exposures.

DAE identifies a number of opportunities to improve the capacity of borrowers to provide the right information. DAE notes that:

There are numerous government and industry schemes providing financial information, although SMEs may not be aware of them or easily able to access them.

Indeed part of the problem is that the sheer volume of advice that is available can make it difficult for businesses to find the right information.

Similarly, there is a need to develop better networks to allow businesses to determine when they need access to advice from more sophisticated business advisers and financiers and to develop mechanisms for allowing them to determine how to access that advice.

To bring together these networks DAE suggests that:

Organisations such as the NSWBC or government organisations such as the Office of Fair Trading could provide a list of recommended suppliers.

Conventions that bring together venture capitalists and start-ups could provide a model for other types of finance, including high net worth individuals (HNW).

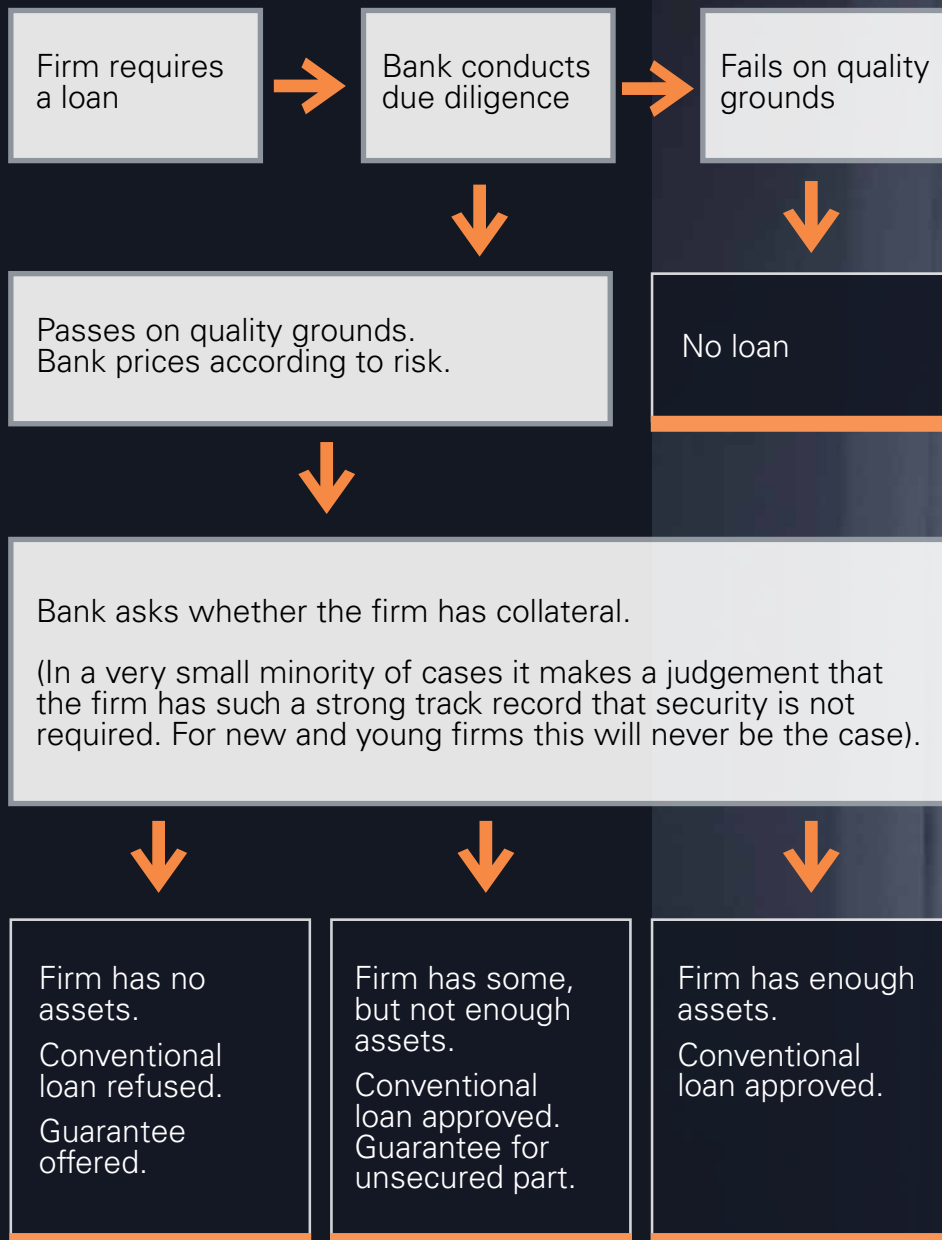
In some cases, lenders can provide training themselves or direct businesses towards vetted training programs. This improves financial literacy and helps lenders assess potential borrowers. DAE notes that:

The process helps banks gain a good understanding of the value and risk of the applicant's opportunity. An ANZ scheme targeting entrepreneurs requires the borrower to invest some of their own funds, providing an incentive for the borrower to succeed. At the same time, entrepreneurs and small business owners improve their knowledge of what products best suit their needs, and how to signal the value of their project to lenders. The challenge is to extend the coverage.

There are also steps that lenders can take to improve the way they deal with customers. DAE observes that:

Some applicants say they do not know the reasons why applications for credit were rejected. This problem is recognised by lenders, and appears to be relatively easy to address. However, the time taken to secure comprehensive credit reporting provisions suggests otherwise.

The process of accessing a loan guarantee



The Real Estate Institute of Australia has proposed the establishment of an Australian Small Business Credit Resolution Service which would mediate between financial institutions and small business when credit applications are refused and ensure that all applications by small businesses are adequately and properly assessed.

The inconsistency in bank decision-making that some businesses have reported suggests that such a system may help banks themselves improve the way they assess risk – although the cost attached to double handling loan applications would also need to be considered.

Dealing with lack of collateral

Efficiency requires that capital goes to where it is most productive, so there would be wider economic benefits if loans could be provided to the best businesses rather than just the businesses with the best collateral.

Professor Cowling points out that:

Any such scheme needs to be carefully designed to avoid perverse incentives, such as giving lenders the capacity to shift risk onto government.

However, Professor Cowling argues that there is strong case for the implementation of a partial credit guarantee scheme in Australia. He points out that a well-designed scheme only offers a guarantee after the bank has conducted initial due diligence.

DAE also notes that:

In many countries, Credit Guarantee Schemes (CGS) address gaps in SME financing. Well-designed and managed CGS can limit the call on public finances. If information asymmetry causes the potential lender to attribute a higher risk of default to a borrower in the absence of adequate security, the credit guarantee can address this. By reducing the loss-given-default with a guarantee, the CGS increases the likelihood of viable businesses gaining access to finance.

Professor Cowling and Dr Josh Seipal examined the performance of a partial credit guarantee scheme in the UK called the Small Firm Loan Guarantee (SFLG). By comparing a sample of SFLG borrowers to normal borrowers and non-borrowers they found that:

even in the first two years, when defaults are high, the program delivered benefits

worth £1.05 GVA per £1 spent. This includes 75% additional lending, 3,550 to 6,340 jobs, £75m-£150m sales, £33m exports, 17% more innovation, 24% more cutting edge tech at a cost of £35m each year (or £23m with revenue gained from the additional sales and employment).

Following on the onset of the GFC, the SFLG was expanded to a wider range of borrowers and renamed the Enterprise Finance Guarantee (EFG).

Professor Cowling notes that research has also shown the benefits of partial credit guarantees in other countries. For example, researchers studying the Canadian loan guarantee program found that:

81 per cent of their loan guarantee sample would have been turned down for conventional loans, and after further testing this amounted to 74.8 per cent additionality. Further analysis for jobs created suggested that of the 10,000 guaranteed loans per annum, CSBF contributed to an additional 22,000 full-time jobs in Canada each year.

Other researchers examined the performance of the US Small Business Administration loan guarantee scheme:

Using panel data at the Metropolitan Statistical Area (MSA) level, they test whether the 360,000 SBA and '504' loans were associated with higher per capita incomes and higher local employment. On incomes, they find that SBA loans are associated with a positive (but small) increase in future per capita income growth. On employment, they find that 'if you increased per capita SBA guaranteed lending in a local market by... approximately \$100 the predicted result is an increase in the level of employment by 0.8 percentage points' (p26). In localities with less developed financial markets the effect is higher, and specifically, 'guaranteed lending will have a larger positive impact on social welfare if it is targeted to certain high-minority areas' (p.28). In short, SBA lending supports the creation of net new jobs in the local area where the loans are issued.

In Australia, the obvious parallel is the Export Finance Insurance Corporation's Export Working Capital Guarantee

(EWCG), which helps banks support financially viable Australian exporters or companies in the export supply chain that are facing working capital shortages. Like the UK schemes, the EWCG is only available when a customer meets a bank's existing credit criteria other than the security required for the provision of additional finance.

Professor Cowling contends that loan guarantee schemes:

...have the potential to have disproportionately high and positive effects in countries and regions where (a) collateral based lending is the norm, and (b) a significant proportion of the entrepreneurial population is not asset rich.

Lending in Australia is certainly reliant on collateral, and the proportion of potential entrepreneurs without access to collateral is likely to increase as growth in house prices slows relative to the previous decade, reducing the home equity that is available to provide collateral.

Professor Cowling outlines the key issues that need to be considered before implementing a partial credit guarantee in Australia.

Feasibility study – conduct a feasibility study to establish the scale of latent demand for a loan guarantee programme amongst SMEs and the nature of finance constrained firms and latent entrepreneurs. Analysis of SME loan defaults will also help inform likely longer-term default effects and costs. This will also shape and inform the nature of the schemes core parameters.

Staffing – a core administration team to validate and process loan guarantee scheme applications (using a pro forma template) and maintain a Management Information System (MIS).

MIS – design and construct an MIS capable of recording applications and collating firm and loan level data. This would also support subsequent evaluations and annual scheme reporting.

Evaluation – agree appropriate evaluation timings and allocate a fixed budget for this. Determine how performance will be measured in future evaluations and build this into the routine MIS data collection process.

Treasury calls – set up a legal system whereby commercial banks can put claims directly to the Treasury if a guaranteed loan is in legal default.

Eligible banks – set the conditions under which a commercial bank can issue loans under the government guarantee and a system of performance review.

Exclusions – aside from the normal gambling, finance sector, and illegal business activities, many loan guarantee schemes have excluded particular sectors of the economy, primarily for high displacement and low additionality reasons (e.g the UK used to exclude high street retail). The precise nature of these exclusions would be informed by the feasibility study.

Scheme parameters – the specific scale and scope of the core parameters (the premium, level of guarantee, minimum and maximum loan term and size) will be informed by the feasibility study analysis of SME credit markets. A judgement should be made, and informed by SME loan default analysis, on the effects of setting specific parameters and it's subsequent impact on loan default.

According to Professor Cowling there are several key criteria in the development of a partial credit guarantee scheme.

- The level of guarantee (the % share of the outstanding debt that is covered by government in the event of default)
- The interest rate premium (the margin that the government receives for guaranteeing the loan)

- The maximum (and in some cases minimum) loan amount available
- The maximum (and in some cases minimum) loan term available
- The arrangement fee

As a guideline, the typical range across these core parameters for established loan guarantee schemes are as follows; Guarantee 65%-85%; Interest rate premium 0.5% - 2.5%; Loan size, minimum A\$8,000, maximum A\$500,000; Loan term 1-10 years; Arrangement fee, 0.25%-3.0% of the total loan value.

While the proper design of a partial credit guarantee scheme could be a challenging exercise, there is strong evidence to suggest that the effort could produce sizeable benefits for thousands of Australian SMEs.

Regulation

Given lending to small business represents such a small proportion of bank balance sheets, it is not clear that the financial stability benefits of requiring higher capital adequacy ratios for business finance would be large.

This trade-off should be explicitly examined as part of a future financial system inquiry.

The need for a financial system inquiry

DAE concludes its analysis by pointing to the need for a future financial system inquiry to examine these issues in further detail.

Narrowly, the differential impact of increased capital reserve requirements for specific classes of borrower post-GFC, and more generally an emphasis on stability over competition in a changed financial landscape require a proper review to establish whether the regulatory settings are still appropriate.

Many of the issues that could be addressed have been considered in previous inquiries. However, the issues need to be re-examined through a different lens—one that has been shaped by developments post-Wallis, including the GFC.

In this context, a new financial system inquiry could:

- assess current levels of access to capital for the economy as a whole and for different groups of borrowers
 - in comparison to earlier periods; and
 - in comparison to other jurisdictions;
- identify impediments to accessing capital and their likely causes
 - market failures; and/or
 - regulatory settings;
- consider how access to capital is likely to evolve in the years ahead; and
- explore cost-effective measures to improve access to capital for specific groups judged likely to continue to receive sub-optimal access to capital.

It will also be vital for such an inquiry to examine measures to improve competition in the banking system.





Access to capital for small and medium-size enterprises

Deloitte Access Economics

Report commissioned by
NSW Business Chamber



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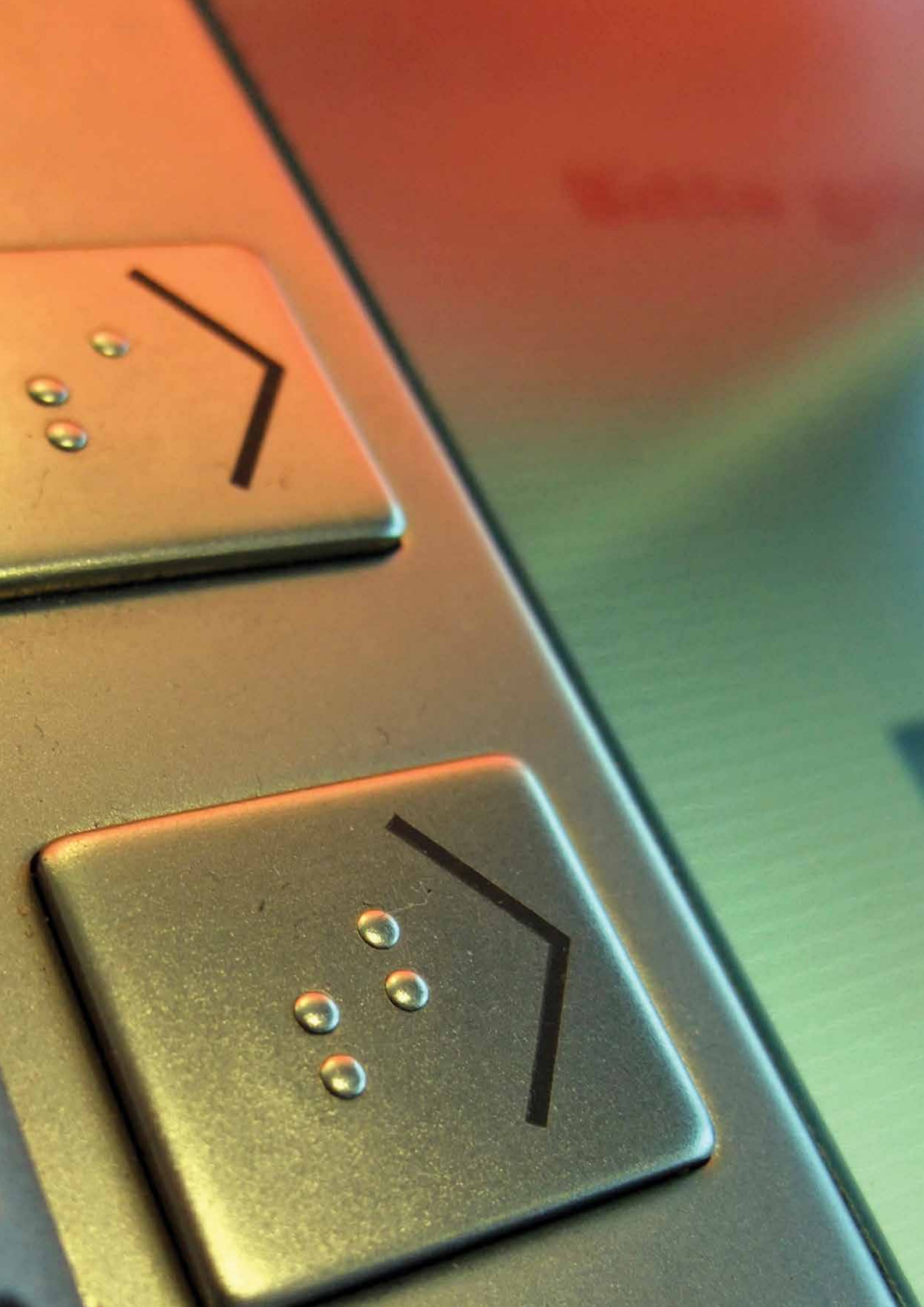


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Glossary

| | |
|-------|--------------------------------------------------|
| ABA | Australian Bankers Association |
| ABS | Australian Bureau of Statistics |
| ACCC | Australian Competition and Consumer Commission |
| ACCI | Australian Chamber of Commerce and Industry |
| ANZ | Australia and New Zealand Banking Corporation |
| AOFM | Australian Office of Financial Management |
| APRA | Australian Prudential Regulation Authority |
| ASIC | Australian Securities and Investments Commission |
| ATO | Australian Taxation Office |
| BIS | Department of Business Innovation and Skills |
| CAR | capital adequacy ratio |
| CFO | Chief Financial Officer |
| DAE | Deloitte Access Economics |
| EFG | Enterprise Financing Guarantee |
| FWC | Fair Work Commission |
| GE | General Electric |
| GFC | Global Financial Crisis |
| KPI | key performance indicator |
| NAB | National Australia Bank |
| NSWBC | New South Wales Business Chamber |
| NPL | non-performing loan |
| PC | Productivity Commission |
| RBA | Reserve Bank of Australia |
| RMBS | residential mortgage-backed security |
| SFLG | Small Firms Loan Guarantee |
| SME | small and medium-size enterprise |
| UK | United Kingdom |



Executive Summary

Traditionally, small and medium-size enterprises have had more difficulty accessing capital than other types of borrowers, such as large firms and homeowners. Since the start of the Global Financial Crisis (GFC), the greater emphasis placed on financial stability over competition has had a differential impact on access to capital and the cost of finance for different types of borrowers. The New South Wales Business Chamber (NSWBC) has commissioned this report to explore the difficulties small and medium-size enterprises (SMEs) face in securing access to capital and what might be done to improve their access to capital.

Access to capital for SMEs

Unmet demand for finance may be due to high prices (e.g. interest rates, fees) or reduced volumes supplied (i.e. fewer successful applications for loans). Prices and volumes offered are typically different for different types of borrowers (e.g. small business, large business or households). These differences reflect the riskiness of the borrower, general economic conditions, specific (lending) market conditions and regulatory factors.

Restricting access to credit can be a rational way for lenders to deal with imperfect information about borrowers, and avoid investments with a low chance of success. Borrowers providing collateral or paying higher interest rates compensates lenders for the risks associated with imperfect information. It is sensible for banks to do most of their lending with property as collateral because it is less costly (risky) than the alternatives and thus the SME gets cheaper finance. Relationships between borrowers and their bankers can also reduce the information gap that induces lenders to restrict borrowers' access to capital.

Nonetheless, there still may be potentially profitable investments that do not proceed because borrowers lack collateral or strong relationships or their projects cannot otherwise be accommodated in lenders' business models; or perhaps because regulatory settings work against them. If this is the case, it is worthwhile exploring cost-effective measures that could improve access to capital for SMEs.

Small business lending conditions

The RBA finds that smaller businesses pay more, on average, for debt than both households and larger businesses. This is true with respect both to interest rates and product fees (RBA 2012). During the recent global financial crisis, average lending rates for smaller businesses increased by more than those for larger businesses and households.

Lending to SMEs is risky because they can be especially vulnerable to the economic cycle, since they typically do not have the balance sheet to handle, say, their customers' slowing payments or a creditor taking a tougher stance.

One concern is that this economic cycle may be different due to the impact of the GFC and that conditions will not revert to a pre-GFC world. The GFC induced a major shift in attitudes towards risk as the need for stability took priority over competition in lending. Bank and non-bank lenders re-evaluated their loan books and equity investors reassessed their exposures; financing to riskier borrowers was tightened, with some adverse outcomes for SMEs.

Various surveys of small business lending conditions undertaken in 2012 and 2013—including by NSWBC, East & Partners, NAB and ACCI—show some variation in the proportion of SMEs experiencing difficulties in gaining access to finance.

While the specific wording of the questions in the surveys and the samples of firms differ, the overall messages are summarised as follows:

1. credit conditions were tightened for SMEs after the start of the GFC;
2. however, access to new loans has improved over the past year or so
 - NSWBC surveys of SMEs found the portion of loan applicants refused finance in the preceding 2 years fell from 24% in mid-2012 to 7% in the first half of 2013
 - National Australia Bank's (NAB) quarterly survey of business conditions shows credit and interest rates were a significant constraint for around 10% of SMEs in early 2013—around half as many as in late 2010;
3. access to capital is not a pressing problem for a large majority of SMEs—most can meet their needs
 - a recent Australian Chamber of Commerce and Industry (ACCI) survey reported that 14.2% of small businesses and 11% of medium-size firms identified lack of finance as an obstacle to growth and development of their businesses;
4. nonetheless, some cohorts of SMEs—probably around 10% of the total, based on an average of the surveys—are still experiencing difficulty in accessing capital
 - a survey by DBM and sponsored by NAB reports around 5% of small businesses—over 100,000 businesses—nominated accessing capital as a major issue
 - East & Partners in 2013 found that 44% of SME applicants had been refused finance in the previous 12 months, although this is at odds with results of other contemporaneous surveys;

5. some of the successful applicants may not have received the full amount applied for
 - of NSWBC survey respondents who missed an investment opportunity, around 9% said they had obtained finance but not in sufficient quantities (it is not known if the funds that were approved were used to finance alternative opportunities that were less attractive to borrowers); and
6. some applicants who were unsuccessful initially eventually succeeded in obtaining finance
 - there is a range of alternative forms of finance available to SMEs but not as wide as that for large corporates, since most SMEs are unable to access capital markets, including the equity market and bond market.

The majority of SMEs—but not all—eventually meet their finance needs. However, it is more challenging and more expensive for SMEs to obtain finance compared to other types of borrowers. And there is a group of SMEs that have limited access to capital, either because of rational credit rationing by borrowers (on account of the greater risk of lending to SMEs) or because other factors exacerbate credit rationing above efficient levels. It is this group that is of particular interest.

Why access to capital is difficult

Prior to the GFC, credit was widely available and relatively cheap, although access for SMEs was seen as an issue even then. Since the GFC, risk has been re-priced upwards and the number of providers of funds has reduced, i.e. credit conditions have tightened on both price and quantity. Banks moved away, or perhaps even were pushed away from SME lending by increased costs of meeting revised prudential standards, viz., Basel III. For would-be borrowers, accessing external funding—either debt or equity—has become more difficult.

Basel III capital requirements

For SMEs the key change arising from Basel III is the increase in the minimum bank capital adequacy ratio (CAR) from 2% to 7% to be phased in by 2015, with an additional 'capital conservation buffer' to be phased in by 2019.

To meet the required increase in their overall CARs from 2% to 7-9.5%, banks can:

- increase their holdings of capital;
- reduce the average risk weights that apply to their assets (i.e. shift towards less risky loans); or
- decrease their total assets.

In the current context, a key issue is the extent to which different lenders will meet the Basel III requirements using:

- credit pricing (e.g. higher fees, increased interest rate margins); or
- credit rationing (i.e. knock back applications or otherwise discourage demand).

Both of these posited lender responses would have a negative impact on SME borrowers. However, the net impact of Basel III on SMEs is not clear if the putative benefits of a more stable financial system (and less volatile economic cycle) are considered, since SMEs will share in these benefits. This is an area for further research into the trade-off between stability and growth for SMEs.

Evolution of the bank business model

Relationship lending (with limited or no collateral) requires:

- proof of credit-worthiness; and
- people in the lending organisation who can assess risk, and do so on an ongoing basis.

There appears to be a shortage of people with the skills required to assess credit-worthiness of SME borrowers.

Additionally, recent decades have seen significant advances in technology, allowing banks to adopt faster and more cost-effective ways to process applications. This has resulted in a shift away from relationship banking towards a more model-based approach to approving loan applications. The trade-off is a more effective way to process loan applications against a reduced understanding of the businesses requesting a loan.

- The move towards a model-based approach is favoured as it is still cheaper (after adjusting for lower repayment rates) to process an application using this approach (Cowling 2010).
- Moreover, the potential interest revenues from smaller businesses' relatively small loans do not justify the same ongoing relationship management and detailed credit risk assessments that businesses with larger loans receive.

As a result, there is at least the potential for more credit to be extended to more SMEs, especially to low-risk borrowers.

Other challenges for SMEs

Pricing and collateral conditions are the biggest obstacles for SMEs to overcome, but there are other challenges faced by potential borrowers. For example, NSWBC surveys found 37% of rejections of applications were due to inadequate security, while another 10% were because of an inadequate business plan. Around 20% of respondents who reported needing finance did not apply for loans because they found the process too difficult or too time-consuming.

These 'hidden' transaction costs can be high if borrowers face long, resource-intensive search times or the cost of obtaining expert advice is prohibitive. Moreover, this means that per-unit transaction costs are likely to be relatively higher for smaller borrowers.

The costs of tighter credit conditions

While access to credit appears to be problematic for only specific groups of SMEs, this is still likely to have significant effects on the wider economy. SMEs contribute much of the competition and innovation that underpins productivity growth in the national economy. Indeed, conservative 'bricks and mortar' SMEs probably face fewer challenges accessing capital than do those most likely to provide innovation. Impaired access to capital for SMEs is therefore costly because it blunts innovation and competition.

ABS data show a lack of access to finance is the single highest barrier to SMEs' innovating (ABS 2012). This indicates that innovative SMEs are one of the groups that experience above-average difficulty in gaining access to finance.

According to ex-Productivity Commission chairman, Gary Banks,

"While most of these regulations have worthy objectives — whether economic, social or environmental — many are formulated without sufficient regard for collateral damage on productivity and whether objectives could be met in more cost-effective ways" (PC 2012)

His comments about the impact of regulations on productivity appear to be relevant here also.

Potential measures to improve access to capital for SMEs

Capital flows to where it is most highly valued. However, the balance between competition and stability in the financial sector can influence the destination of these flows. For SMEs that, typically, have found it harder to access capital, the introduction of Basel III may exacerbate this problem.

Lenders have not been idle and some innovative products have been introduced specifically to cater for SMEs—hence, it is a case of trying to extend coverage or generate more of the same. There are also some innovations and short-term bridging solutions that have not yet been trialled in Australia.

Overcoming a lack of information

There are a number of approaches to **improving the information available to potential borrowers and lenders** that are currently being used and could be extended. Solutions are aimed at reducing information asymmetry and attendant risks.

- For example, lenders provide **business training to applicants** for some types of loans, going as far as to make the training a prerequisite for loans in some cases.
- The process helps banks gain a good understanding of the value and risk of the applicant's opportunity. An ANZ scheme targeting entrepreneurs requires the borrower to invest some of their own funds, providing an incentive for the borrower to succeed. At the same time, entrepreneurs and small business owners improve their knowledge of what products best suit their needs, and how to signal the value of their project to lenders. The challenge is to extend the coverage.

There are numerous government and industry schemes providing financial information, although SMEs may not be aware of them or easily able to access them. Also, banks are putting more small business advisers on the ground, but the trade-off against the potential revenue to the bank from relationships with SMEs remains. Networks to provide SMEs **improved access to financially sophisticated business advisers and financiers**, and knowledge of how to deal with them can help to fill the gap.

- Organisations such as the NSWBC or government organisations such as the Office of Fair Trading could provide a list of recommended suppliers.
- Conventions that bring together venture capitalists and start-ups could provide a model for other types of finance, including high net worth individuals (HNW).
- **Comprehensive credit reporting** or positive credit reporting was recommended in 2008 by the House of Representatives Standing Committee on Economics and will be introduced from March 2014. This would open up credit reports to include a much broader range of information on payment history. It does not cover SMEs directly, but will apply to borrowing against a principal's home.
- Some applicants say they do not know the **reasons why applications for credit were rejected**. This problem is recognised by lenders, and appears to be relatively easy to address. However, the time taken to secure comprehensive credit reporting provisions suggests otherwise.
- Technology may lessen the extent of asymmetric information, e.g. through dynamic credit modelling of lenders' exposures.

These measures will help to address issues identified in workshops and consultations with representatives of small business and lenders relating to financial literacy limitations of borrowers, lack of networks to replace gaps in relationship banking, processes that contribute to high transaction costs, lack of collateral and tighter regulatory requirements.

When information is not enough

Even with improved information, some groups of SMEs are still likely to experience difficulty accessing capital—e.g. new businesses lacking a credit history or collateral and those with innovative products that are not well understood.

There are some potential **solutions to a lack of collateral**, including instruments that provide lenders with (partial) guarantees, to mitigate the high loss-given-default risk (LGD).

- In many countries, **Credit Guarantee Schemes (CGS)** address gaps in SME financing. Well-designed and managed CGS can limit the call on public finances. If information asymmetry causes the potential lender to attribute a higher risk of default to a borrower in the absence of adequate security, the credit guarantee can address this. By reducing the loss-given-default with a guarantee, the CGS increases the likelihood of viable businesses gaining access to finance.
- **Income-contingent loans**, with well-aligned incentives for SMEs and financiers, and the government subsidising the loan and providing some training could produce a **HECS-type scheme** for small businesses. The scheme needs to be parameterised so as not to attract proposals that could be financed through normal channels.
- **Peer-to-peer (P2P) lending** involves a lender acting as introducer of borrowers to depositors, and taking a fee for this service. The lender assesses the creditworthiness of the borrower and manages the stream of cash flows repaid and deposited. Typically, the depositor deposits some nominal amount into the fund which is then lent to borrowers. The biggest appeal of peer-to-peer lending for the borrower is that collateral is not a requirement.
- **Crowdsourcing** is a form of unconditional borrowing that is collateral - and covenant -free. To date it has been used successfully by entertainers (i.e. a known 'brand') to fund new albums or movies. The **digital economy** is likely to throw up other possibilities to address some of the issues in lending to SMEs.

Financiers are **adapting to the post-GFC regulatory landscape**:

- Some lenders may simply decide to target prospective SMEs and take additional risk onto their books.

- Large banks with internal risk models have scope to move away from standard capital charges. For example, NAB now allocates the same risk-weight to commercial loans backed by mortgages as it does to owner-occupied residential mortgages for capital adequacy purposes.
- Securitization of loans is another avenue for finance, reducing the capital requirements for banks and bringing in investors with untapped sources of capital, such as superannuation funds.
- Questions remain about the system's capacity to assess risk, and to do so over time, and how many of these skills have been lost in the aftermath of the GFC.

Wallis Mark II

Narrowly, the differential impact of increased capital reserve requirements for specific classes of borrower post-GFC, and more generally an emphasis on stability over competition in a changed financial landscape require a proper review to establish whether the regulatory settings are still appropriate.

Many of the issues that could be addressed have been considered in previous inquiries. However, these issues need to be re-examined through a different lens—one that has been shaped by developments post-Wallis, including the GFC.

In this context, a new financial system inquiry could:

- assess current levels of access to capital for the economy as a whole and for different groups of borrowers
 - in comparison to earlier periods; and
 - in comparison to other jurisdictions;
- identify impediments to accessing capital and their likely causes
 - market failures; and/or
 - regulatory settings;
- consider how access to capital is likely to evolve in the years ahead; and
- explore cost-effective measures to improve access to capital for specific groups judged likely to continue to receive sub-optimal access to capital.

Deloitte.

1 Introduction

This report examines the difficulties small and medium-size enterprises (SMEs) face accessing capital and what, if anything, might be done to address their needs.

The report has been prepared for the New South Wales Business Chamber (NSWBC) by Deloitte Access Economics (DAE).

1.1 Background to this report

The issue underlying this report is one of credit rationing or more broadly the difficulties faced by small and medium-size firms wishing to access capital. Credit rationing occurs when the demand for credit exceeds the supply of credit at the equilibrium price, i.e. the interest rate. In practical terms, credit rationing occurs if:

- there are some loan applicants who receive credit while others don't even though they possess identical characteristics; and/or
- there are identifiable groups of people or firms who cannot obtain credit at any price.

Of course, it is important for lenders to distinguish between those borrowers that are not likely to repay a loan—e.g. those with poor business propositions—from those that are.

Furthermore, even when demand and supply of credit are in balance, credit rationing can occur. For example, firms may still have difficulty accessing capital due to regulatory requirements imposed on lenders that work effectively to limit lending to specific cohorts of borrowers.

A key explanation for credit rationing is the information asymmetry that exists between the borrower and lender. Borrowers know more about an investment and its prospects for success than lenders. Alternatively, borrowers may find it difficult to communicate and signal the true value and risk of their potential investment to the lender. In either case, acquiring the necessary information is costly to the lender.

The information asymmetry manifests itself in two ways:

- adverse selection, i.e. where poor quality investments crowd out worthwhile projects when the cost of information is high (signalling effects); and
- moral hazard, i.e. where the borrower, having obtained finance, has insufficient incentive to pay it back (misaligned incentives).

For the lender, simply increasing interest rates to attempt to compensate for the lack of information and its attendant risks is not ideal since:

- increasing the cost of the loan discourages low-risk applicants leading to adverse selection which lowers expected returns to the lender; and
- increasing the cost of the loan reduces returns to the borrower, weakening incentives to re-pay or encouraging higher risk investments in an effort to deliver higher returns ('moral hazard').

Thus, improving access to finance requires measures that mitigate adverse selection and moral hazard so the lender has an incentive to supply funds. There are three practical ways to do this:

- through the borrower providing collateral;
- a business relationship between the lender and borrower; and
- through contractual arrangements that reduce risks to the lender.

This report focuses on the first two solutions, and explains how they can help improve access to capital. In fact, some combination of varying interest rates, providing collateral and building relationships is required to secure freer access to finance.

1.1.1 Role of collateral

According to Serra-Garcia (2010), more than 80% of small business loans in the US are collateralised. Also in more than 100 countries (mainly developing countries) more than 75% of small business loans are collateralised. Collateral reduces the risks associated with the lender having insufficient information in two ways:

- having 'skin in the game' serves a disciplinary role which reduces moral hazard; and
- sending a positive signal, which reduces the effects of adverse selection as it indicates the value of the project to the borrower and commitment to the project.

In reality both interest rates and collateral requirements are used in specifying the terms of a loan contract. Using these two devices it may be possible to alleviate the effects of credit rationing for:

- high-risk borrowers, who prefer a higher interest rate and lower collateral requirements, since if the project succeeds, they can meet the repayments and if it fails, their loss is minimal; and
- low-risk borrowers, who prefer low interest repayments and high collateral requirements.

This differing profile could form the basis of a screening device for the lender. Nevertheless, the overall effect of collateral on credit volume will still depend on:

- the level of the interest rate
 - Competition between lenders will also be needed since high interest rates crowd out low-risk borrowers.

- regulations affecting collateral
 - Regulation that affects collateral in particular and lending markets more generally must be designed so as to avoid non-neutralities.
- borrowers' appetite for risk, i.e. loss aversion.

Not all firms can supply adequate collateral. In this case, alternative ways of compensating for the information shortfall must be considered.

The OECD suggests that this is where credit guarantees can be used, with third parties effectively providing (a portion) of the collateral in return for a fee. Such a guarantee reduces the loss-given-default to the lender by transferring it to another party, e.g. the taxpayer.

1.1.2 Role of relationship banking

Intuitively, relationship banking reduces the information gap since the lenders know more about the project through gathering propriety information. The information can be used to undertake a more accurate analysis of the firm and the entrepreneur, reducing problems of adverse selection. In some sense, the quality of the relationship behaves in a similar fashion to collateral.

Over time, as a relationship improves, the information opaqueness for the lender reduces and the borrower establishes a reputation which mimics the role of collateral. The borrower now has an extra incentive to ensure the project succeeds because the potential loss they will suffer exceeds the value of the project since it now includes the entrepreneur's reputation. Thus the moral hazard is mitigated.

However, there is a cost to gathering information in this manner, namely, the cost of maintaining a team of specialist relationship bankers. Consequently, there will be a trade-off, a point beyond which the cost of obtaining information outweighs the revenues that can be earned from the borrower.

1.1.3 What is left?

This textbook framework suggests that collateral and relationships can help to overcome information asymmetries that make it difficult for firms to access capital. Conversely, firms that are unable to provide collateral or do not have an established relationship with a financier are likely to have trouble accessing capital. Information asymmetry means this result will hold even if the would-be borrower wishes to fund a low-risk opportunity.

1.2 Analysing access to capital for SMEs

This report seeks to:

- establish the reasons why small businesses are unable to obtain finance

- This involves a review of the broad issues which surround capital access, (primarily informed by a literature review on capital access) and the specific issues relating to small and medium-size enterprises. Information on failure rates, discouraged borrowers and the like from NSWBC surveys and public sources is used to inform this discussion. The prudential regulatory landscape and implications for small borrowers are considered.

- Competition issues are discussed, including the potential for other institutions or instruments to provide competition to banks in lending to SMEs.

- Market failures are examined, although credit rationing is a means of dealing with imperfect information and the attendant incentive problems. The question is whether regulation is exacerbating the credit rationing.

- Subject to data availability, the magnitude of the problem is measured, e.g. in terms of share of applications refused or a similar metric.

- understand which of these reasons for refusing applicants are:

- driven by 'normal' considerations of risk and return applying to all bank lending; or

- regulatory distortions and/or policy inconsistencies resulting in differential treatment of certain types of borrowers.

- suggest potential solutions, distinguishing between market factors and policy settings, that are consistent with longer-term policy goals

- These solutions could form the basis of a submission to a future financial system inquiry.

- consider what types of bridging solutions could provide a short-term fix

- One such measure is a partial credit guarantee as implemented in the UK. We do not attempt to replicate the calculations underlying this or other proposed measures but rather assess them from a theoretical perspective.

1.3 Contents of this report

The balance of this report is separated into three chapters. Chapter 2 establishes that SMEs face difficulties accessing capital, drawing on surveys of SMEs that include questions about access to capital and reports from policy makers and regulators on the matter; and exploring reasons why applications for loans are successful or not. Reviewing this information sheds light on SMEs' attempts to obtain funding.

This is followed by a chapter explaining what causes these difficulties—again reviewing results of surveys, official reports and academic research. Views of industry experts—from the borrowing side and the lending side—were considered to provide context to the analysis. The chapter also demonstrates that access to capital for SMEs matters, by highlighting the role of SMEs in the broader economy, and how access to capital influences their effectiveness in performing this role. Again, survey data provide important insights.

The study concludes by suggesting how access to capital for SMEs might be improved. Policy makers have wrestled with this issue without much success. However, the GFC has altered the landscape and a new financial system inquiry could provide an opportunity to revisit the issue. Financiers are making efforts to expand their offerings to SMEs but a number of potential bridging solutions may be useful to address particular pressure points in the loans market.

2 Access to credit for SMEs

2.1 Australian experience

The issue of small business access to bank finance has been on policy makers' radar since at least the 1960s. The Vernon Inquiry (1965) considered the issue of businesses access to bank finance. The Campbell Inquiry (1981) found, if there were constraints on small business access to finance, this was likely to be the result of regulatory restrictions on lending.

From the mid-1980s, the financial sector was deregulated with new lenders entering the market, increasing lending to business, including SMEs. Large losses by banks in the early 1990s on business and property loans led to re-evaluation of lending risk. In the first half of the 1990s, there was concern over access to capital for SMEs (ABA 2011).

However, deregulation of the financial sector continued to bear fruit, and in the dozen or so years prior to the GFC, smaller lenders and foreign banks provided strong competition for the major banks. In its report on competition in the banking and non-banking sectors, the House of Representatives Standing Committee on Economics noted:

The increased pressure that the non-banking sector places on banks led to the banks emulating many of the new products that were being offered. The Australian Bankers'

Association agrees that foreign banks and the non-banking sector forced the banks to 'accept reduced margins and to roll out new technology and new products, and to otherwise respond to competitive pressures'.

Margins on business lending contracted by around 10 basis points per annum, credit standards were eased and non-bank lenders provided credit to sectors of the market not served by the banks (ABA 2011).

After 2007, the GFC produced a major shift in attitudes to risk and stability took priority over competition, with financiers forced to re-assess their exposures. Increases in funding costs and the collapse of other funding markets, e.g. securitisation, made it difficult for smaller lenders to fund themselves economically; wholesale lenders could not raise funds. Major banks were able to capitalise on government guarantees to obtain funding at a lower cost than many of their competitors. Banks and non-bank lenders re-evaluated their loan books; loans to riskier borrowers were cut back, including to SMEs.

The major banks' share of commercial lending rose significantly after the GFC from 86% in March 2007 to 92% in March 2012, at the expense of non-bank lenders, as shown in Chart 2.1. The chart shows that the market share of banks was broadly steady during 2000-2002 and 2004 – 2008. However, during 2002-2004 and then after 2008 the banks' market share increased.

Chart 2.1: Market share of business credit for banks and non-bank lenders



Source: RBA.

Note: Other lenders include finance companies and investment banks.

Against this backdrop, a number of parliamentary committees re-examined the issue of access to capital for SMEs.

In 2008, the House Standing Committee on Economics presented its report '*Competition in the banking and non-banking sectors*' investigating the level of competition in Australia and examining ways to increase competition in lending to increase access to capital.

In 2010 the Senate Economics References Committee presented its report '*Access of Small Business to Finance*' (see Appendix A). Recommendations for small business included:

- the Australian Bankers' Association meet with small business representatives to develop a code of practice for lending to small business;
- the Government request the ACCC, APRA and the Reserve Bank to provide a joint annual report to parliament on competition in the retail banking market in Australia, and the provision of finance to small business, but taking care not to increase unduly the reporting burden on financial institutions.

In 2011 the Parliamentary Joint Committee on Corporations and Financial Services presented its report '*Access for Small and Medium Business to Finance*' which revisited this issue (see Appendix A). Recommendations from this inquiry included:

- the Government assess the value of developing uniform definitions of 'micro', 'small' and 'medium' business to be applied for data gathering, policy development and analysis by Commonwealth and State agencies;
- the Reserve Bank of Australia specifically track the impact of the introduction of Basel III on the cost of SME finance and residential mortgages;
- the Code of Banking Practice and the Mutual Banking Code of Practice be amended to include a standardised notice period for notifying business borrowers of changes to loan terms and conditions that may be materially adverse for them; and
- the Government undertake further work to explore policy measures which may strengthen the mutual sector as a 'fifth pillar' of the banking system and thereby promote competition.

Access to credit continues to be a current and ongoing issue as many of the recommendations are yet to be assessed in detail by policy makers.

2.2 Credit conditions for SMEs

There is a range of organisations that survey SMEs about business conditions in general and access to finance in particular. SMEs' unmet demand for finance may reflect high prices (e.g. interest rates, fees) or reduced volumes supplied (fewer successful applications for loans).

2.2.1 Cost of borrowing

The RBA found that smaller businesses pay more, on average, for debt than both households and larger businesses. This is true with respect both to interest rates and product fees (RBA 2012).

During the recent financial crisis, average lending rates for smaller business increased by more than those for larger businesses and households (see Chart 2.2). The reason is that there has been an increase in the assessed riskiness of small business loans. This is consistent with an increase in non-performing small business loans over this period.

According to the RBA, non-performing loans rose to around 2¼% of banks' total small business loan portfolios as of December 2011. By way of comparison, non-performing housing loans comprised only 0.7% of banks' housing books. Thus in adjusting for the increase in perceived risk, banks place an additional premium on their loan rates to compensate for the possibility of default.

Chart 2.2: Spread between loan rates and target cash rate



Source: RBA and DAE

2.2.2 Credit growth

Since 2000, business loans of less than \$100,000 have grown at a slower rate than loans of greater than \$2 million. The only exception is the 2010 financial year. This suggests that businesses that seek relatively small loans (< \$100,000) find it more difficult to obtain loans relative to those that seek large loans (> \$2 million). Since 2000, large business loans have averaged growth of 9.8% annually, while small business loans have grown at 2.5% (Chart 2.3).

These data suggest lending conditions have been more difficult for smaller businesses relative to larger businesses throughout the cycle. Typically, those that seek small loans are SMEs and those that require more than \$2 million are larger businesses. (Loans for owner-occupied property continued to grow even post-GFC, albeit at a slower pace, providing an alternative source of funds for some SMEs.)

Chart 2.3: Annual growth of total loans FY2000-FY2012



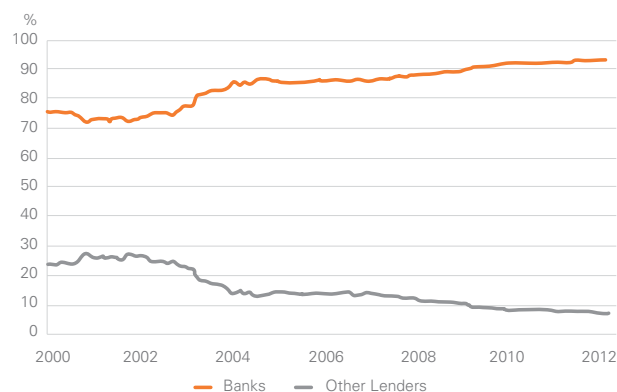
Source: RBA and DAE

Chart 2.3 shows that credit growth is low at the moment which reflects slower economic growth in the broader economy and hence softer demand for credit, as recently noted by the RBA's Head of Domestic Markets. It is also worth noting that the figures presented by the RBA for small business loans may be understated as a proportion of loans categorised as personal loans or mortgages will be used to fund business ventures. While credit growth is likely to increase when the economy picks up, it is not clear how access to finance for different cohorts will change. This is an area for more research.

2.2.3 Equity finance

Small businesses tend to use less leverage than large businesses because they have more volatile cash-flows, increasing their risk of not being able to make payment on time. Many small businesses use internal equity and external equity sourced from friends, family and business owners (Chart 2.4). Internal equity (from existing owners) is popular; owners know the value and risks of their business and prefer not to pay external financiers to compensate them for not having this knowledge.

Chart 2.4: Source of external equity finance, 2005



Source: RBA

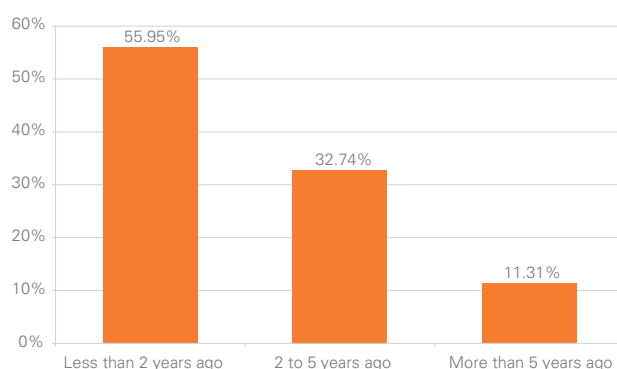
2.2.4 Availability of credit

Surveys of small business lending conditions show some variation in access to credit. Broad conclusions can be drawn, however.

1. Credit conditions have tightened for SMEs

A survey of SMEs undertaken by the NSWBC in 2012 (NSWBC12) found 18% of respondents experienced tighter conditions applied to their **existing facilities**. Responses were split into three periods that approximately correspond to three phases of recent macroeconomic and credit market changes: the recovery post the recent global financial crisis (less than 2 years ago); the middle of the crisis (2 to 5 years ago); and before the start of the crisis (more than 5 years ago). The trend exhibited in Chart 2.4 suggests a consistent tightening of credit conditions during this time.

Chart 2.5: Commencement of tightened credit conditions



Source: NSW Business Chamber and DAE

2. Access to new loans appears to have improved over the past year

- In NSWBC12, 24% of SMEs that applied for a loan reported having applications for new finance knocked back in the preceding 2 years. However, a follow-up survey in 2013 (NSWBC13) found that only 7% of applicants had been refused, indicating a marked improvement.
- National Australia Bank's (NAB) quarterly survey of business conditions shows credit and interest rates were a significant constraint for around 10% of SMEs in early 2013; around half as many as in late 2010 (Chart 2.6).
- Deloitte's quarterly survey of CEOs of large companies (D13) reports that finance has become easier to access and also cheaper. Almost a third of CFOs felt that credit was cheap or very cheap, while two-thirds saw credit as somewhat or very available with only 13% finding credit difficult to obtain.

In the latest quarter almost a third of CFOs reported increases in the maximum size of credit lines, while close to two-thirds reported no change to fees, documentation requirements, covenant requirements and maximum loan terms. Around three-quarters also reported no change in liquidity requirements and minimum interest coverage ratios.

- While this reflects the impact of risk-tolerance on funds flows, it also indicates conditions appear to have improved across the board.

Chart 2.6: Most significant constraining factors for SMEs (% , multiple response) see below

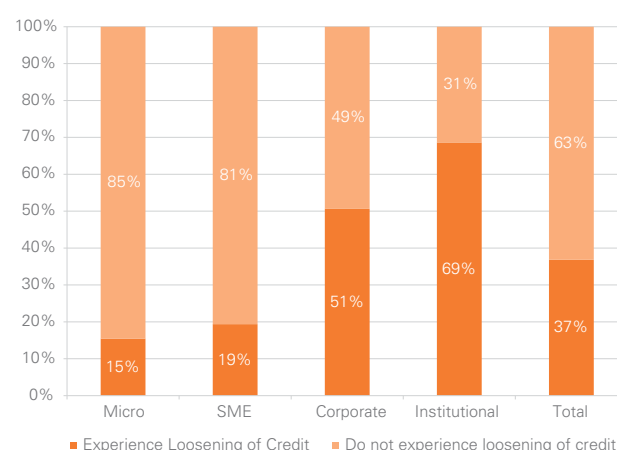
3. Access to capital is not a pressing problem for most SMEs

- The Australian Chamber of Commerce and Industry quarterly survey (ACCIQ) identifies national trends and conditions in the small business sector and also reports the top factors currently constraining investment in plant and equipment. In December 2012, the only financial factor in the top 10 was current levels of debt; access to credit did not feature in the list. This implies that access to finance was not a major constraint for most businesses in the survey.
- In the 2013 ACCI Pre-election survey (ACCIP) it was found that 24.1% expressed major concern about access to credit and about 33.4% expressed moderate concern. However, a much lower proportion (13.4%) reported that access to credit was stopping their business from growing or developing, and respondents ranked credit well down the list of obstacles at 11th.
- In the 2013 GE Mid-Market report, 1 in 12 SMEs cited access to finance as a concern.

4. Some cohorts of SMEs are still experiencing difficulty accessing capital

- NSWBC12 showed that the smallest SMEs are most likely to be refused:
 - firms that had greater turnover were more likely to be successful than firms with a small turnover (in this case, firms with annual revenue of less than \$500,000)
 - more than 40% of rejected applications were for amounts less than \$100,000;
 - businesses aged between 1 and 3 years appeared to have less success than younger or older businesses—this accords with anecdotal evidence that start-ups are typically financed from individual's own sources initially, but require external finance after this is exhausted
 - credit may be more difficult to access for firms in some industries, e.g. rental, hiring and real estate services (although different industries are likely to be affected at different stages of the economic cycle).
- A 2013 survey by East & Partners (EP13) of credit conditions faced by firms, predominantly SMEs, found that 44% of applicants for a loan within the past 12 months were unsuccessful and 63% of respondents believe that credit remains tight. This appears at odds with findings of other contemporaneous surveys but the survey also highlights the disparity between different cohorts of businesses (Chart 2.6). The contrast between conditions for larger firms and small firms is consistent with the findings of the other surveys (e.g. D13 and NSWBC12) and indicates that pockets of problems still exist.

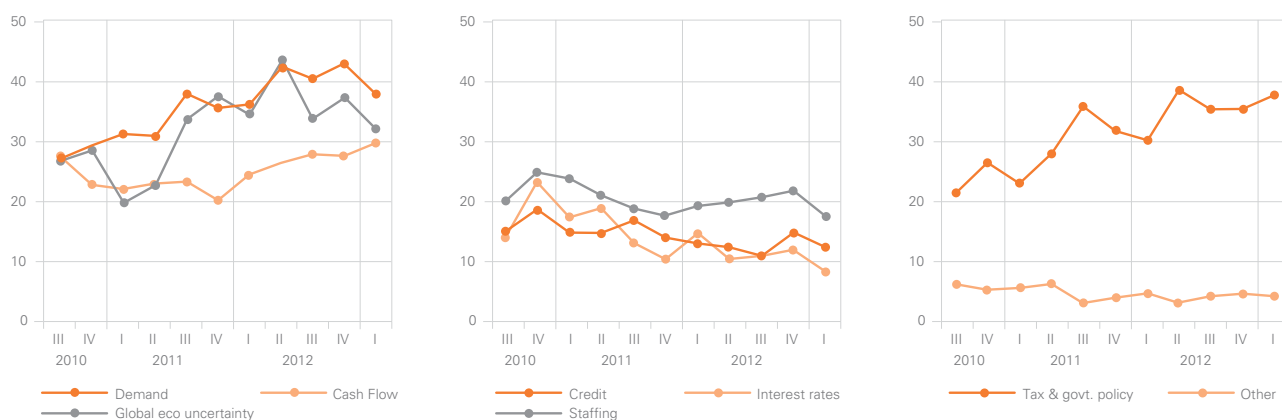
Chart 2.7: Credit access by size of firm, 2013



Source: East & Partners and DAE

- The Council of Small Business of Australia (COSBOA) says around 5% of small businesses – over 100,000 businesses – nominate accessing capital as a major issue for them.

Chart 2.6: Most significant constraining factors for SMEs (% , multiple response)



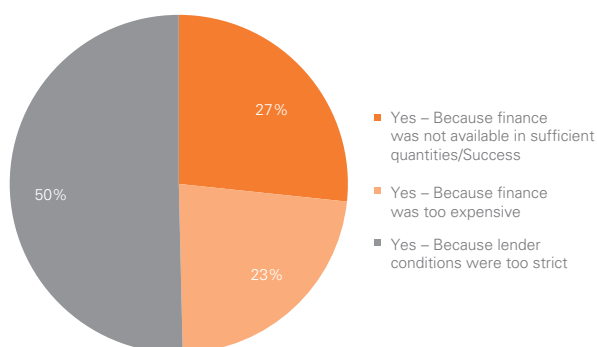
Source: Reproduced from NAB Quarterly SME survey, March Quarter 2013

- It is worth noting that the contrasting survey results reflect different wording of questions about access to capital and different samples of firms across the surveys. Thus in general the survey results indicate that access to finance among the entire cohort of SMEs is not among their most pressing concerns. However, there is a cohort of firms (COBOA suggests more than 100,000) for which access to finance remains a challenge.

5. Some successful applicants may not have received the full amount applied for

If investment projects are not divisible, not obtaining enough finance is the same as not obtaining finance at all. According to the NSWBC12 survey (Chart 2.8), among those that did receive finance, 32% felt that they had missed an opportunity. Of the 32%, 27% said capital was not available in sufficient quantities, 50% felt that lender conditions were too strict and 23% felt it was too expensive. However, it is not known if the applicants used the funds approved for other opportunities.

Chart 2.8: Reasons given by successful loan applicants for lost opportunities



Source: NSW Business Chamber and DAE

6. Some applicants may have been unsuccessful initially but succeeded eventually

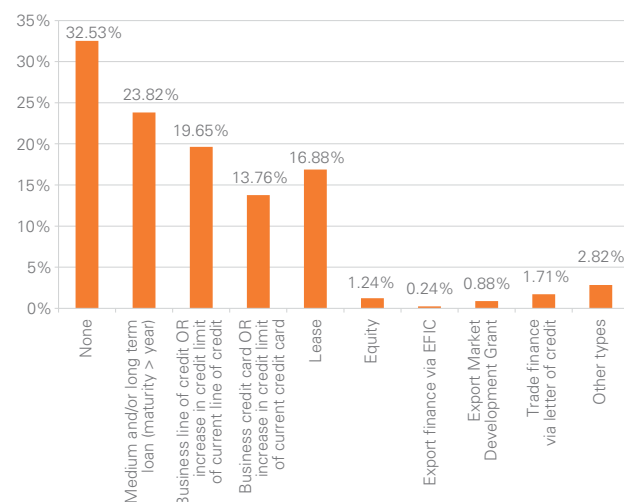
There is a range of alternative forms of finance available for SMEs, but not as wide as for large corporates – i.e. most SMEs are unable to access capital markets, such as the equity market and the bond market since the volume of capital required is too small to justify transaction costs.

The main sources of finance for SMEs include:

- term loans
- factoring or invoice discounting;
- trade and equipment finance;
- credit card;
- overdrafts;
- business angels; and
- loans from family members.

Chart 2.9 shows the range of external sources of finance accessed by businesses in the NSWBC13 survey.

Chart 2.9: Type of external finance accessed by business, 2010-2012



Source: Australian Chamber of Commerce and Industry 2013 and DAE

Small businesses tend to rely less on external credit than other types of borrowers. For example, the RBA finds that firms with fewer than 20 employees are less likely to rely on external finance than firms that employ between 20 and 200 employees. However, when small firms apply they are more likely to be rejected (RBA 2012).

Applications for term loans, overdrafts, credit cards and equipment financing were more likely to be unsuccessful than applications for debtor finance and trade finance (Chart 2.10). This is understood to reflect the order in which SMEs apply for the different types of finance, cascading from finance at major banks to more expensive types of finance and to non-bank lenders.

Chart 2.10: Proportion of unsuccessful applicants by type of application



Source: NSW Business Chamber and DAE

The majority of SMEs—but not all—eventually meet their finance needs. But it is more challenging and more expensive for SMEs to obtain finance compared to other types of borrowers. And there is a group of SMEs that have limited access to capital. It is this group that is of particular interest.

3 Why access to finance is difficult

While restricting access to capital is a legitimate response from lenders to address uncertainty, some worthwhile opportunities may not be funded. This chapter explores

the nuances as to why access to finance is particularly difficult for SMEs above and beyond what is suggested by theory, and how this situation has changed and evolved. This chapter also discusses the costs associated with limited access to capital for SMEs.

3.1 Altering the balance between competition and stability

Australia avoided the worst fallout from the GFC, but not all of it. In particular, the GFC has:

- reduced competition in domestic financial markets
 - smaller lenders and some overseas banks have departed or merged due to the reduced capacity to raise funds at economical rates
- intensified the regulatory focus on financial system stability
 - with regulators building more comprehensive safety nets
 - Australia is under pressure to conform with the new, tougher standards
- altered the balance between competition and stability which had worked well in Australia's financial system.

The GFC in mid-2007 had caused capital to dry up and thus credit was tightly rationed. As a direct consequence of the GFC, financial institutions both by choice and regulation became more risk averse and re-assessed their exposures.

Up until 2007, the average cost of debt funding for the major banks was low and stable. This reflected a de facto credit bubble globally in which credit risks were clearly under-priced (APRA 2012).

Subsequently, regulators have sought to increase capital requirements for some types of lending immediately and in the longer term; the stricter capital requirements were imposed in the form of Basel III. Among many new regulations, Basel III increases bank capital adequacy requirements, restricts the size of banks' balance sheets (and thus their lending activities) and proposes new stress tests.

3.1.1 Increased capital adequacy requirements for lenders

For SMEs the key change affecting bank capital requirements arising from Basel III is the minimum capital adequacy ratio (CAR) increase from 2% to 7% to be phased in by 2015, with an additional 'capital conservation buffer', to be phased in by 2019 (Table 3.1).

Table 3.1: Minimum capital adequacy ratios

| Component | Ratio of Core Tier 1 capital to risk weighted assets |
|------------------------------------------------------------|------------------------------------------------------|
| Minimum common equity component | 4.5% |
| Capital conservation buffer | 2.5% |
| Minimum and conservation buffer | 7% |
| Countercyclical buffer according to national circumstances | 0-2.5% |
| Range for all banks | 7-9.5% |

Source: OECD 2012

To meet the required increase in their overall CARs from 2% to 7-9.5%, banks can:

- increase their holdings of capital;
- reduce the average risk weights that apply to their assets (i.e. shift towards less risky loans); or
- decrease their total assets.

In the current context, a key question is to what extent different lenders will meet the Basel III requirements using:

- credit pricing (higher fees, increased rate spreads); or
- credit rationing (knock back applications or otherwise discourage demand).

3.1.2 The impact on business

Concerns have been raised about the impact of the increased CAR on lending to business.

“It is beyond serious dispute that loans and other banking services will become more expensive and harder to obtain under Basel III. The real argument is about the degree, not the direction” (Elliott 2010 in OECD 2012).

Central banks can mitigate higher interest rates and unmet demand for loans; the RBA has explicitly recognised the impact of higher bank funding costs in setting the official interest rate in Australia. However, interest rates are a blunt instrument that does not take into account the risk profile of lenders. Riskier lenders facing relatively large increases in interest rates require a greater offset than less risky lenders.

Furthermore, interest rates cannot offset decreases in limits on exposures to specific (riskier) sectors. For example, a blanket reduction in lending to SMEs means that even low-risk SME borrowers will be affected. Similarly, reductions in limits on lending to specific industries (especially those that are relatively more dependent on bank debt) also may result in worthwhile opportunities being missed.

Certainly, the OECD is concerned that Basel III may make lending conditions more difficult for SMEs:

... since Basel III carries over the risk weighting system for assets from Basel II, it retains the capital requirements that are sensitive to risk, which increases the risk premium that banks charge for SMEs. ... The weighting system also favours many large enterprises over small ones: large companies with good external credit ratings (AAA) are assigned a 20% risk weight, whereas SMEs that are unrated have risk weightings of 100% or 75%. Under Basel III, the difference in core Tier 1 capital the bank needs to hold against their loans is remarkable: 7% of the loan for SMEs with 100% risk weighting, as opposed to 1.4% (7% × 20%) for a large company with an AAA rating (OECD 2012).

APRA describes the implications of these changes:

There is a long-term economic impact of the Basel III reforms. The ‘cost’ impact in the chain of economic effects of higher regulatory capital ratios is:

- higher equity ratios for ADIs [Authorised Deposit Taking Institutions];
- higher weighted funding costs (including debt and equity funding) and lower return on equity;
- banking institutions increase lending rates to restore some of their lost return on equity;
- borrowers increase their aggregate borrowings more slowly than would otherwise have been the case; and
- gross domestic product (GDP) grows more slowly than would otherwise have been the case, for most of the business cycle.”

However, according to APRA, Basel III also presents some benefits including:

- higher equity ratios for ADIs;
- safer ADIs, which can therefore borrow funds and raise capital more cheaply;
- reduced failure of ADIs and impairment rates; and
- reduced risk and potential depths of financial crises. (APRA 2012)

A complete assessment of Basel III should also consider the potential benefits of increased financial stability. Indeed, there will be benefits for SMEs:

small firms are less able to hedge operationally or financially against financial crises than large businesses and cannot rely on the extensive government safety net available to households; thus their prosperity may well be more dependent on economic stability (OECD 2012).

These posited lender responses would have a negative impact on SME borrowers. However, the net impact of Basel III on SMEs is not clear if the putative benefits of a more stable financial system (and less volatile economic cycle) are considered, since SMEs will share in these benefits. This is an area for further research into the trade-off between stability and growth for SMEs.

3.2 The lender's decision making process

It is rational for banks to prioritise or allocate funds based on the expected return to equity; if an investment is not economic, credit will not be extended and more risky borrowers are less likely to be catered for.

Traditionally, an evaluation of whether a particular customer is a worthwhile investment for a lender to make would incorporate an in-depth understanding of the nature of the customer's business and an ability to track its progress, traits of a relationship banking model.

Recent decades have seen significant advances in technology, allowing banks to adopt more cost-effective ways to process applications. This has resulted in a shift away from relationship banking and towards a more model-based approach. That is, banks require applicants to meet various key performance indicators (KPI)—e.g. sufficient collateral, good credit history, low volatility of revenue flows—before credit is extended.

A pure focus on pre-determined KPIs would fail to internalise the idiosyncrasies of a business. Moreover, such a system would tend to favour established, stable businesses that have enough security, cashflow and a credit history. Such a system would be less adept at assessing the potential worth of a start-up (e.g. without tangible assets or cash flow), a business with no credit history (i.e. has not used external finance) or firms with untested products (e.g. an innovation). The NSWBC survey (NSWBC12) found the main reasons for rejection of applications were (lack of) security, (inadequate) cash flow and debt overhang (i.e. the bank thought the firm was too indebted).

The trade-off is a more cost effective way to process the application against a reduced understanding of the business.

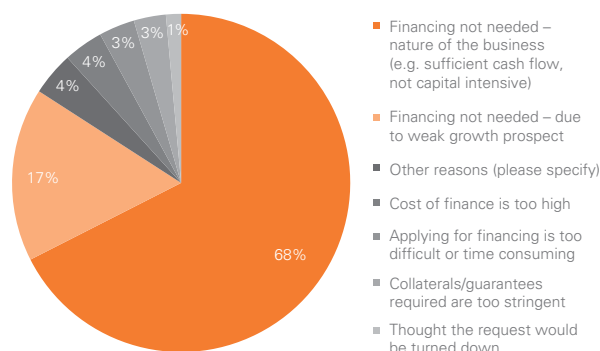
- The move towards a model-based approach is favoured as it is still cheaper (after adjusting for lower repayment rates) to process an application using this approach (Cowling 2010).
- Moreover, the potential interest revenues from smaller business' relatively small loans do not justify the same ongoing relationship management and detailed credit risk assessments that businesses with larger loans receive. Lenders adjust for this additional risk by charging higher interest rates as well as by rejecting or modifying a greater proportion of credit applications.
- Finally, many small businesses prefer a quick response to their application and to date an automated, model-based approach is the quickest way to obtain an answer. Consider an example where a small business runs a glass factory and the furnace breaks down and needs to be repaired or replaced. Ideally, the owner would like a quick response so they can resume manufacturing with the minimum delay and loss in revenue.

In recent years, some banks have expanded their small business loan teams to build better links to the small-business community. However, this is costly; thus a balance must be struck as to how much additional understanding of a business a lender needs to make a decision and how much revenue the borrower will generate for the lender.

3.3 Challenges faced by potential borrowers

Pricing and collateral conditions are the biggest obstacles for SMEs to overcome, but there are other challenges faced by potential borrowers. For example, NSWBC surveys found 10% of rejections of applications were due to the (quality of) the firm's business plan (NSWBC12) and that around 20% of respondents that needed finance did not apply for loans because they found the process too difficult or too time consuming (NSWBC13, Chart 3.1).

Chart 3.1: Breakdown of reasons for not applying for loans



Source: NSWBC/ACCI

3.3.1 Financial literacy

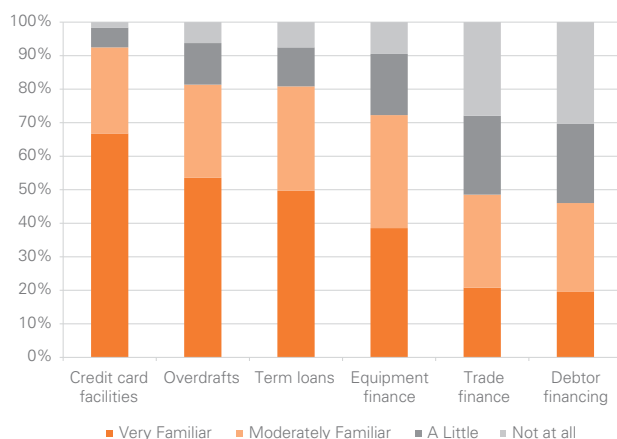
Borrowers need to be able to communicate their needs to the lender to ensure that an understanding is reached and to reduce the information asymmetry between the two parties. If borrowers are unable to communicate their intentions and the needs of their projects, lenders are less likely to lend due to uncertainty in how the funds will be used.

For the business owner, the key factor in accessing credit is the quality of the credit application. The objective of preparing a credit application is for the business owner to show the bank that they run a viable business and therefore, that by providing a business loan has an acceptable level of risk (ABA 2011).

One of the key elements the OECD lists as a reason why SMEs have difficulties accessing capital is the “lack of knowledge about supporting instruments or funding sources” (OECD 2013).

A NSWBC survey (NSWBC12) found that the degree of familiarity with the different types of financial products available to SMEs varies considerably (Chart 3.2).

Chart 3.2: Degree of familiarity across financial products



Source: NSW Business Chamber and DAE

Participants at a workshop held by NSWBC agreed that it is important to have good business financing advice, as distinct from traditional accounting advice. One member of a CPA Australia panel who works with SMEs applying for finance noted that, “more than 30 per cent of those wanting cashflow lending do not have a cashflow forecast” (CPA Australia 2012). Similarly, there are reports that SMEs opt for periodic rather than upfront repayments of tax debts, not realising that an outstanding tax debt has a negative impact on their credit rating.

3.3.2 Lack of networks

In a NSWBC workshop with small businesses and SME advisers, a key theme was that the shift away from the traditional business banker model means that knowledge of, for example, bank offerings and application processes is harder to come by. That is, if you do not know the right people finance is difficult or expensive to obtain.

Banks have different business strategies and product offerings to differentiate themselves and this is reflected in different application processes. NSWBC workshop attendees noted not only that applications can be knocked back by one bank but accepted by another –which may reflect business strategy – but could also receive differential treatment within a bank (depending on the bank officer overseeing the application). The uncertainty surrounding product offerings and loan applications represent additional ‘transaction costs’.

Borrowers without an established banking relationship are likely to spend more time trying to access credit. These higher ‘transaction costs’ increase the real cost of a loan. Moreover, these additional costs are likely to be relatively higher for smaller firms; time spent away from work by key personnel applying for loans means revenue foregone for many small businesses.

3.4 Implications of reduced access to capital

The effect of credit rationing is the potential loss of opportunity and or reduction in the scale of a business, neither of which is a desirable outcome. At the most fundamental level, there are lost opportunities for the borrower and the lender. There are implications for the wider economy also. SMEs are a key source of innovation, competition and choice.

3.4.1 SMEs’ current contribution to the economy

SMEs contribute more than half (57%) of private sector economic activity, valued at \$530 billion in 2010-11, and more than two-thirds (70%) of private sector employment, or around 7.4 million people in 2010-11. A large number of SMEs also export; approximately 17 500 small businesses exported goods in 2009-10.

3.4.2 SMEs’ potential future contribution to the economy

Small and medium-size enterprises contribute much of the competition and innovation that underpins productivity growth in the national economy.

The Treasury has identified productivity as a key element in securing Australia’s prosperity in the long run. The Intergenerational Report identified three key components which will determine the long term prosperity of Australia: Population, Participation and Productivity. According to Treasury, “With an ageing population, productivity growth is the key driver of future growth prospects.”

Key factors that influence productivity growth include:

1. Competition

There are more than 2 million SMEs in Australia. From a whole-of-economy perspective, this implies that within each industry there are significant numbers of SMEs competing for consumers. The incentive to innovate is high among these firms as they try to increase profits through taking opportunities to access new markets, create new products or work more efficiently.

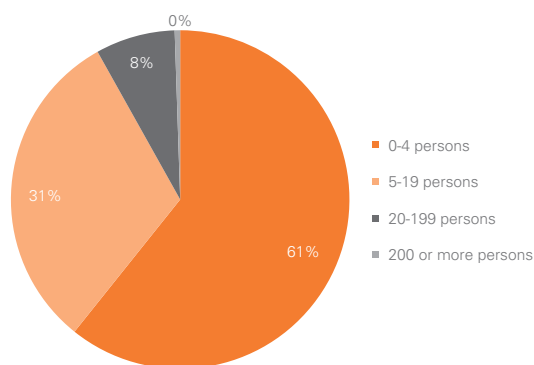
The NSWBC (NSWBC12) found that around 30% of SMEs felt that they missed an opportunity due to a lack of credit (Chart 2.8).

Sometimes the effect of credit rationing is more direct, e.g. laying off staff or even increasing the chance of bankruptcy due to cashflow problems. The NSW Survey 2012 examines this issue looking at SMEs that had their applications rejected. The survey found that around 55% felt that the rejection significantly constrained firm growth; around 21% felt that it significantly increased the chances of bankruptcy; and 18% had to lay off staff.

2. Innovation

In 2010-2011, there were approximately, 760,000 innovating firms that are SMEs (defined as businesses with employment of fewer than 200) (ABS 2012). Small firms account for the largest share of innovating businesses by employment (Chart 3.3).

Chart 3.3: Proportion of innovating businesses by employment

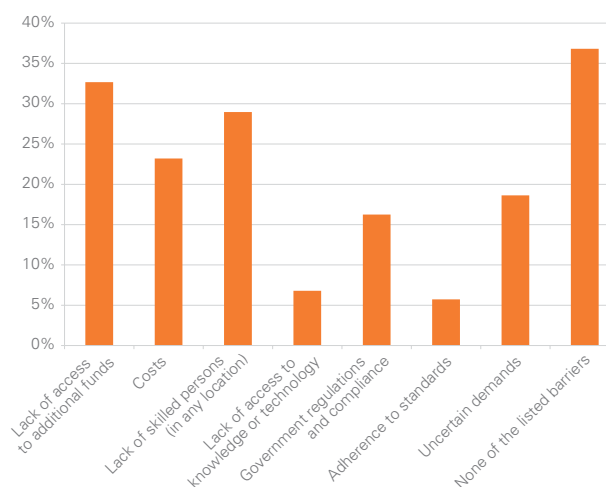


Source: ABS 8158.0

At a more strategic level, commitment to assisting viable SMEs to raise finance is underpinned by evidence that the ease of accessing finance is a key driver of productivity through its impact on investment, enterprise and innovation. Accordingly, if these small businesses are not well funded they may have great ideas that are neglected, which is a potential loss of productivity-improving innovation.

The lack of access to finance has been reported as the highest barrier to SMEs' innovating (Chart 3.4).

Chart 3.4: Barriers to innovation for SMEs



Source: ABS 8158.0

3. Regulation

In the current context, there is clearly tension between regulation that adversely affects access to capital for SMEs and the overarching policy goal of productivity growth. According to ex-Productivity Commission chairman, Gary Banks,

“While most of these regulations have worthy objectives — whether economic, social or environmental — many are formulated without sufficient regard for collateral damage on productivity and whether objectives could be met in more cost-effective ways” (PC 2012)

Consequently, further research into the effect on lending to SMEs and the broader economy of Basel III capital requirements and other regulations is warranted.

3.5 Conclusion

Difficulty gaining access to capital can be explained by a variety of factors, loosely grouped under three headings:

- the regulatory environment;
- lenders' decision-making processes; and
- challenges faced by borrowers.

The impact of these factors can also be aligned with the textbook framework summarised in Chapter 1:

- The increase in CAR further rations credit and exacerbates the adverse selection problem as credit rationing and increasing the price of loans encourages high-risk borrowers and crowds out low-risk borrowers. This also manifests as moral hazard since the increase in return demanded by lenders also reduces the return to borrowers.

- Financial literacy limitations of borrowers reduce their ability to signal the quality of their project or the needs of the project so that it can be properly evaluated, exacerbating the adverse selection problem.
- High transaction costs exacerbate the moral hazard and adverse selection problems. Lack of networks exacerbates the moral hazard problem because lenders are unable to accurately monitor projects thus allowing borrowers to take on excessive risks.

As SMEs are a major source of innovation and in the long run innovation is one of the key drivers of productivity, restricting small businesses' access to capital compromises productivity growth.

4 Options for improving access to credit for SMEs

In the long run, capital should flow to where it is most valued. However, a shift in the balance between competition and stability in the financial sector since the start of the GFC has resulted in access to finance being tightened disproportionately for a cohort of riskier borrowers. This cohort includes SMEs that, typically, have found it harder to access capital. The introduction of Basel III may exacerbate this problem.

While a financial system inquiry is the best forum for getting to the bottom of these problems, in the interim more opportunities will be lost, including among innovative small firms. Hence short-term bridging solutions should be considered as well.

The range of issues affecting SME access to capital discussed in this report have been developed and refined with the aid of the NSWBC, a workshop with small business representatives and their business advisers, and interviews with the ABA and small business banking professionals.

This process resulted in a number of potential solutions to the problems highlighted in the preceding chapters. Lenders have not been idle and some innovative products have been introduced specifically to cater for SMEs; hence it is a case of trying to extend coverage, or encourage more of the same. There are also some innovations that have not yet been trialled in Australia.

4.1 Improving information

A lack of information—for borrowers and lenders—prevents SMEs from maximising their chance of obtaining

funds, and deters lenders from investing in worthwhile opportunities.

There are a number of approaches to **improving the information available to potential borrowers and lenders** that are being used and could potentially be extended.

For example, lenders provide **business training to applicants** for some types of loans, going so far as to make the training a prerequisite in some cases.

- ANZ currently has its Young Entrepreneurs program, where participants are required to undertake 2 days of training on how to run a business. A good proposal can receive up to \$40,000 in unsecured loans on condition that the entrepreneur contributes \$10,000 in equity to the project.
- NAB offers a similar program but requires further ongoing training; its program is called the "Microenterprise Loan Program". In this program, loan applicants must first undertake business training with a partner (as nominated by NAB). The partner then helps the loan applicant develop a business plan through training and mentoring after which NAB then assesses the application. If the applicant is successful, they obtain an unsecured loan of up to \$20,000 and have 90 days to spend it. The applicant then has 3 years to repay the principal. During these years the applicant must continue training with their assigned partner.
- The process helps banks gain a good understanding of the value and risk of the applicant's opportunity. The ANZ scheme also includes putting in some of the borrower's own money, providing an incentive for the borrower to succeed. At the same time, entrepreneurs and small business owners improve their knowledge of what products best suit their needs, and how to signal the value of their project to lenders. The challenge is to extend the coverage of such schemes.

Banks are putting more small business advisers on the ground, but the trade-off against the potential revenue to the bank from relationships with SMEs remains. Networks to provide SMEs **improved access to financially sophisticated business advisers and financiers**, and knowledge of how to deal with them can help to fill the gap.

- Organisations such as the NSWBC or government organisations such as the Office of Fair Trading could provide a list of recommended suppliers.
- Conventions that bring together venture capitalists and start-ups could provide a model for other types of finance, including high-net-worth individuals (HNW).

Comprehensive credit reporting or positive credit reporting was recommended in 2008 by the House of Representatives Standing Committee on Economics and will be introduced from March 2014. This would open up

credit reports to include a much broader range of information on payment history.

- The benefits to financial institutions of access to positive credit reporting include:
 - improved risk assessment;
 - enabling pricing to more accurately reflect risk; and
 - reducing the incidence of fraud and mis-information by borrowers.

Having this information gives financial institutions more information to make a better judgement about the application. Thus, if a business does not meet a KPI, the additional information may give further insights about the business which may form a basis for extending the loan. The information can also be used to decline loans. In short, positive credit reporting will reduce information asymmetry and thus improve the allocation of credit.

- However, positive credit reporting will not help start-ups or a firm seeking to change direction as it relies on credit histories. Furthermore, it has been noted that positive credit reporting will mainly affect the consumer space rather than businesses. However, businesses will benefit where the principal's house is used as collateral.
- It may be feasible to use rent repayment records as a form of credit history should the applicant lack a credit history.

Some applicants say they do not know the **reasons why applications for credit were rejected**. This problem is recognised by lenders and appears to be relatively easy to address.

- Simplifying applications and having more transparent criteria could improve the chances of applying successfully for credit since applicants are better able to identify and communicate how they fit into the required criteria.
 - Assuming that the entire process is model-driven and transparent, it could be extended to provide the applicant with a statement explaining why the application was rejected, and what steps need to be taken to address shortcomings in the application.

For example, small businesses will need to be aware that outstanding tax liabilities, even if they are being repaid on time, can count against them

in credit scores. Similarly, when an applicant is rejected by a lender, that counts against them when they next apply.

- Banks have different business models and need to differentiate their products and so are likely to retain different processes and thus different lending criteria. Nonetheless, this should not be an obstacle to providing more guidance to applicants.

There appear to be real benefits to both borrowers and lenders from making the application process as efficient as possible. SMEs can reduce their transaction costs by reducing the number of applications they make and lenders will reduce their processing costs.

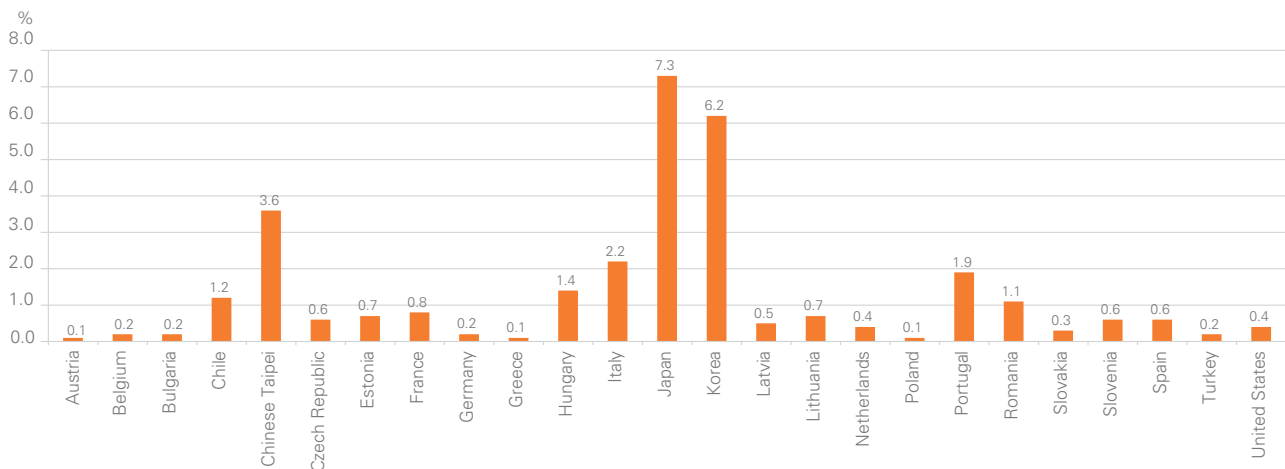
4.2 When information is not enough

Even with improved information, some groups of SMEs are still likely to experience difficulty accessing capital – e.g. new businesses, lacking a credit history or collateral and those with innovative products that are not well understood. Whether the problem stems from market imperfections, regulatory effects or a lack of suitable instruments, options to overcome these obstacles are available.

There are some potential **solutions to a lack of collateral**, including instruments that provide lenders with (partial) guarantees, to mitigate the high loss-given-default risk (LGD).

- In many countries, Credit Guarantee Schemes (CGS) are used to address gaps in SME financing. Well-designed and monitored schemes can limit the call on public finances (Chart 4.1). If information asymmetry causes the potential lender to attribute a higher risk of default to a borrower in the absence of adequate security, the credit guarantee can address this. By reducing the loss-given-default with a guarantee, the CGS increases the likelihood of viable businesses gaining access to finance (Figure 4.1).

Chart 4.1: Volume of outstanding CGS, 2011 (as a percentage of GDP)



Source: OECD (2013)

- A HECS-type income contingent loan scheme (ICLS) has been suggested for small businesses (e.g. Chapman and Simes 2004). The argument is that students have no security when they obtain their HECS loans and by the end of their degree borrow tens of thousands of dollars unsecured; thus the risk they present is very similar to that of a startup. The starting point for ICLSs is to align incentives and then not to get in the way of normal business.

- **Peer-to-peer (P2P) lending** involves a lender introducing borrowers to depositors, and taking a fee for this service. The lender assesses the creditworthiness of the borrower and manages the stream of cash flows repaid and deposited. Typically, the depositor deposits some nominal amount into a fund, which is then lent to the borrowers.

One of the main risks of this program is that, where a business defaults, the depositors weather the loss rather than the peer-to-peer lender. Some peer-to-peer lenders offer a provision fund to insure against the possibility of this event, e.g. Ratesetter in the UK. A provision fund is created through the additional payment by the borrowers. The charge increases with the riskiness of the borrower. To date Ratesetter has been able to pay all the promised return to depositors.

The biggest appeal of peer-to-peer lending for the borrower is that collateral is not a requirement. Peer-to-peer lending would primarily appeal to

borrowers willing to pay a higher rate with lower security requirements, which is more than half of survey respondents. Thus implementing such a program could play a major role in reducing the effects of credit rationing. Such a scheme may provide competition for the banks and they may be forced to reduce the spread imposed on small business loans.

- Crowdsourcing is a form of unconditional borrowing that is collateral- and covenant-free. To date it has been used successfully by entertainers (i.e. a known 'brand') to fund new albums or movies.

Financiers are **adapting to the post-GFC regulatory landscape**:

- Some lenders simply target prospective SMEs and take additional risk onto their books.
- Large banks with internal risk models have scope to move away from standard capital charges. For example, NAB now allocates the same risk weight to commercial loans backed by mortgages as it does to owner-occupied residential mortgages for capital adequacy purposes.
- Securitization of loans is another avenue for finance, reducing the capital requirements for banks and bringing in investors with untapped sources of capital, such as superannuation funds.

A range of alternative financing arrangements for SMEs is summarised in Figure 4.2.

Figure 4.1: Example of a credit guarantee

Under Basel III a loan guarantee would have a significant impact on the amount of capital a lender needs to hold. By reducing the risk weight attached to SME loans, guarantees can reduce the amount of capital a bank has to hold against these loans.

For instance:

Without a guarantee, a \$100,000 loan to an SME, with a 75% risk weight, would need to be matched by \$5,250, that is:

- Value of risk weighted asset (RWA) = $\$100,000 \text{ loan} \times 0.75 = \$75,000$
- Amount of capital the bank has to hold = $\$75,000 \text{ RWA} \times 0.07 \text{ (capital adequacy ratio)} = \$5,250$

With a guarantee for 90% of the loan from a sovereign government with an AAA rating, the capital the bank is required to hold against the SME loan reduces to \$525, that is:

- Value of RWA = $\$90,000 \text{ guaranteed loan} \times 0 + \$10,000 \text{ non-guaranteed loan} \times 0.75 = \$7,500$
- Amount of capital the bank has to hold = $\$7,500 \times 0.07 \text{ (capital adequacy ratio)} = \525 .

Source: OECD 2012

Figure 4.2: Alternative finance arrangements

Alternative debt arrangements

Vendor financing

- Providers include: Cat, IBM and BMW
- Formal or informal deferral of payment terms
- No set mechanism for repayment
- Interest rates higher than on business loans

Debtor financing

- Providers include: GE Capital, Bibby, Asset Secure and Scottish Pacific
- Funds available (up to 80% of debtors)
 - Debtor financing – $>\$200,000$ turnover p.a.
 - Invoice discounting – $>\$1\text{m}$ turnover p.a.
- Costs
 - Service fee (0.50-3.50% of invoice value)
 - Interest (10-13% of funds drawn)

Revenue based funding

- Providers include: Next Step Capital Partners, Revenue Loan and Strategic Funding
- No fixed interest payments, rather
 - a fixed % of gross revenues (3-8%); plus
 - a multiple typically 2-3x amount borrowed
- Effective interest rate between 18%-30%
- Loan term generally 3-5 years
- Investments of \$50,000 to \$500,000

Industry specific/project financing

- Providers include: Alpha Financial Services, GE Capital and Fleet Partners
- Banking covenant tailored to the industry

Alternative equity raisings

HNWs

- Smaller investments than PE
- Historical focus on property, passive equity and cash
- Portfolio investment approach
- Have areas of expertise and sectors of particular interest

Sophisticated Investor

- Between \$50,000-\$250,000 equity cheque
- Professional investors

HNW (minimum)

- Investment between \$0.5m-\$1.0m

HNW (moderate)

- Investment between \$1.0m-\$5.0m

HNW (maximum)

- Investment between \$5.0m-\$10.0m
- Structured investments may use: Convertible notes, Warrants, preference shares and management equity uplift.

Venture Capital

- Big in the US but there is a limited number of VC investors in Australia.

Private equity

- Private companies in growth sectors
- Equity cheques of \$10m-\$20m (at a minimum)
- Exit time horizon typically 3-5 years

Public market options

- Listed cash-box targets
- Back door listings
- IPO's/secondary raisings

Disruptive trends emerging

Crowdfunding

- Providers include: Kickstarter, Pozible.
- Condition, collateral and covenant free.

P2P lending

- Sample providers include: Lending Club, Society One.
- Personal loans cover holiday, debt consolidation, vehicles and weddings
- Rates from 11.05%ps with returns for investors from 10% p.a.

Source: Deloitte

4.3 Regulation and the balance between stability and competition

An emphasis on stability over competition in a much changed financial landscape, and the attendant impacts on different groups of borrowers including SMEs, requires a proper review to establish if the current and planned regulatory settings are appropriate, including their impact on the needs of borrowers.

In the long run, increased competition for banks may be a practical and desirable option to improving access to credit. Competition does not necessarily need to come in the form of new deposit-taking institutions; it is likely to involve disintermediation and new entrants such as, e.g. superannuation funds.

However, competition does affect stability as firms reduce prices and thus margins to capture more market share. Policy makers need to consider an intricate balance when determining the optimal level of competition.

Many of the issues that could be addressed have been considered in previous inquiries. However, the issues now need to be examined through a different lens, one that has been shaped by developments post-Wallis, including the GFC.

In this context, a new financial system inquiry could:

- assess current levels of access to capital for the economy as a whole and for different groups of borrowers;
 - in comparison to earlier periods; and
 - in comparison to other jurisdictions;
- identify impediments to accessing capital and their likely causes;
 - market failures; and/or
 - regulatory settings;
- consider how access to capital is likely to evolve in the years ahead; and
- explore cost-effective measures to improve access to capital for specific groups judged likely to continue to receive sub-optimal access to capital.

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Appendix A:

In 2010, the Senate Economics References Committee's presented its report 'Access of Small Business to Finance'. The purpose of this inquiry was to investigate the current circumstances of issues surrounding access of small businesses to finance, including:

- the costs, terms and conditions of finance and changes to lending policies and practices affecting small businesses;
- the importance of reasonable access to funding to support small business expansion and the sector's contribution to employment growth and economic recovery;
- the state of competition in small business lending and the impact of the Government's banking guarantees;
- opportunities and obstacles to other forms of financing, for example, equity to support small business 'start ups', liquidity, growth and expansion;
- policies, practices and strategies to enhance access to small business finance that exist in other countries; and
- any other related matters.

In 2011 the Parliamentary Joint Committee on Corporations and Financial Services committee presented its report 'Access for Small and Medium Business to Finance' which revisits this issue.

The issues this committee was focusing on include:

- the types of finance and credit options available to small and medium business (SMEs) in Australia;
- the current levels of choice and competition between lending institutions, but not limited to, credit availability, fees, charges, comparative interest rates and conditions for business finance;
- credit options available from banks, non-bank lenders and second tier lenders;
- the impact of financial institution prudential requirements and banking guarantees on lending costs and practices;
- comparison between the credit options available to SMEs located in regional Australia and metropolitan areas;
- the impact of lenders' equity and security requirements on the amount of finance available to SMEs;
- policies, practices and strategies that may restrict access to SME finance, and the
- possible effects this may have on innovation, productivity, growth and job creation;
- the need for any legislative or regulatory change to assist access by SME to finance; and
- any other related matters.

Appendix B: NSWBC Survey

Table B.1: Survey questions and possible responses

| Questions | Possible responses |
|-----------------------------------------------------------------------|-------------------------------------------------|
| What is your annual turnover? | \$0 to \$500,000 |
| | \$500,001 to \$1,000,000 |
| | \$1,000,001 to \$2,500,000 |
| | \$2,500,001 to \$5,000,000 |
| | \$5,000,001 to \$10,000,000 |
| How many people are employed in your business? | More than \$10,000,000 |
| | 1 – 5 |
| | 6 – 10 |
| | 11 – 20 |
| In which industry does your business mostly operate (select up to 3): | More than 20 |
| | Agriculture, forestry and fishing |
| | Mining |
| | Manufacturing |
| | Wholesale trade |
| | Retail trade |
| | Electricity, gas, water and waste services |
| | Construction |
| | Transport, postal and warehousing |
| | Information media and telecommunications |
| | Public administration and safety |
| | Education and training |
| | Health care and social assistance |
| | Accommodation and food services |
| | Financial and insurance services |
| What is the postcode for your business (NSW only)? | Rental, hiring and real estate services |
| | Professional, scientific and technical services |
| | Administrative and support services |
| | Arts and recreation services |
| | Other services |

| | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| How many years have you been trading? | Less than 1 1 to 3 3 to 5 5 to 10 More than 10 |
| What is your current level of debt? | Less than \$100,000 \$100,001 to \$250,000 \$250,001 to 500,000 \$500,001 to \$1,000,000 \$1,000,001 to \$5,000,000 \$5,000,001 to \$10,000,000 More than \$10,000,001 |
| Do you operate under a franchise model? | Yes No |
| Are you a family-owned business? | Yes No |
| What is your main target market? | Local State National International |
| Where do most of your sales currently take place? | Local State National International |
| To what extent are you familiar with how the following financing options work? Applies for: | Not at all A Little Moderately Familiar Very Familiar |
| <ul style="list-style-type: none"> • Debtor financing • Equipment financing • Trade financing • Overdrafts • Term loans • Credit card | |
| Have you used any of these financing solutions? Applies for: | Not at all A Little Moderately Familiar Very Familiar |
| <ul style="list-style-type: none"> • Debtor financing • Equipment financing • Trade financing • Overdrafts • Term loans • Credit card | |
| If a bank was to offer a type of finance which charged a higher interest but had lower security requirements, would your business be attracted to a product of this kind? | Yes Possibly No |

| | |
|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Did the business have to pass up opportunities over the past two years because of an inability to access finance? (select as many as appropriate) | Yes – Because finance was not available in sufficient quantities Yes – Because finance was too expensive Yes – Because lender conditions were too strict No |
| Have you ever had a bank tighten lending conditions or downgrade the value of security against a financial facility you held? | Yes No |
| How recently has this occurred? | Less than 2 years ago 2 to 5 years ago More than 5 years ago |
| What was the change, and how did it impact on your business? | User response |
| Have you applied for finance in the past two years (successfully or unsuccessfully)? | Yes No |
| What were your reasons for seeking finance? (select as many as appropriate) | Working capital (purchase stock, increased sales) Expand current business Business credit cards Equipment acquisition Maintenance or upgrades of existing equipment/systems R&D or the purchase of IP Acquisition of additional business Starting up an additional business Trade finance Purchase of premises Refinance Equity release, reimburse owners funds Other (please specify) |
| What was the amount of funding you were seeking? | Less than \$100,000 \$100,001 to \$250,000 \$250,001 to 500,000 \$500,001 to \$1,000,000 \$1,000,001 to \$5,000,000 \$5,000,001 to \$10,000,000 More than \$10,000,000 |
| In the last two years, have you unsuccessfully applied for finance? | Yes No |

| | |
|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| If yes, which types? (select as many as appropriate) | Debtor finance (factoring) Equipment finance Trade finance Overdraft's Term loans Credit Card Facilities |
| What were the reason/s provided? (select as many as appropriate) | Security Cash flow Prior credit history Business plan Lender thought firm was already too indebted No reason given by lender Other (please specify) |
| What impact did the inability to access finance have on your business? (select as many as appropriate) | Firm growth was constrained significantly. Staff were laid off and/or operational functions were ceased. The chances of bankruptcy increased significantly Other (please specify) |
| Is there anything else about your ability to access finance that you would like to add? | User response |

Source: NSW Business Chamber

Respondent characteristics

This appendix provides further information on the firm characteristics of the respondents. This appendix will cover turnover, employment, years in business and Industry.

Table B.2: Annual turnover of the respondents

| Annual Turnover | Proportion of respondents |
|-----------------------------|---------------------------|
| \$0 to \$500,000 | 29.57% |
| \$500,001 to \$1,000,000 | 17.77% |
| \$1,000,001 to \$2,500,000 | 19.68% |
| \$2,500,001 to \$5,000,000 | 12.87% |
| \$5,000,001 to \$10,000,000 | 7.77% |
| More than \$10,000,000 | 12.34% |

Source: DAE and NSW Business Chamber

The next set of table will cover employment.

Table B.3: Number of people employed by the respondents

| No of staff | Proportion of respondents |
|--------------|---------------------------|
| 1 – 5 | 40.96% |
| 6 – 10 | 19.68% |
| 11 – 20 | 15.96% |
| More than 20 | 23.40% |

Source: DAE and NSW Business Chamber

Years in business is covered in the following table:

Table B.4: Number of years in business of respondents

| Years in business | Proportion of respondents |
|-------------------|---------------------------|
| Less than 1 | 2.77% |
| 1 to 3 | 10.64% |
| 3 to 5 | 9.36% |
| 5 to 10 | 17.02% |
| More than 10 | 60.21% |

Source: DAE and NSW Business Chamber

The amount of debt carried by the respondents is covered in the following table:

Table B.5: Number of years in business of respondents

| Amount of debt | Proportion of respondents |
|-----------------------------|---------------------------|
| Less than \$100,000 | 50.21% |
| \$100,001 to \$250,000 | 14.47% |
| \$250,001 to 500,000 | 12.66% |
| \$500,001 to \$1,000,000 | 9.68% |
| \$1,000,001 to \$5,000,000 | 9.47% |
| \$5,000,001 to \$10,000,000 | 1.28% |
| More than \$10,000,001 | 2.23% |

Source: DAE and NSW Business Chamber

The industries which the respondents are involved in is summarised in the following table:

Table B.6: Industry presence of respondents

| Industry | Proportion of respondents | ABS Proportions for small and medium businesses |
|-------------------------------------------------|---------------------------|-------------------------------------------------|
| Agriculture, forestry and fishing | 3.83% | 9.94% |
| Mining | 2.45% | 0.38% |
| Manufacturing | 15.43% | 4.47% |
| Wholesale trade | 7.45% | 0.27% |
| Retail trade | 16.17% | 16.66% |
| Electricity, gas, water and waste services | 1.38% | 3.71% |
| Construction | 9.79% | 6.81% |
| Transport, postal and warehousing | 3.83% | 3.76% |
| Information media and telecommunications | 4.36% | 6.50% |
| Public administration and safety | 0.32% | 0.87% |
| Education and training | 6.38% | 7.28% |
| Health care and social assistance | 6.91% | 10.61% |
| Accommodation and food services | 6.49% | 11.29% |
| Financial and insurance services | 7.45% | 3.73% |
| Rental, hiring and real estate services | 3.83% | 0.39% |
| Professional, scientific and technical services | 9.26% | 1.15% |
| Administrative and support services | 2.77% | 4.51% |
| Arts and recreation services | 2.77% | 1.34% |
| Other services | 15.32% | 4.17% |

Source: DAE, NSW Business Chamber and ABS 8165.0

The proportion of the respondents that operated a franchise and is family owned is presented below:

Table B.7: Proportion of respondents that operated a franchise

| Response | Proportion of respondents (franchise) | Proportion of respondents |
|----------------|---------------------------------------|---------------------------|
| (family owned) | | |
| Yes | 9.36% | 68.40% |
| No | 90.64% | 31.60% |

Source: DAE and NSW Business Chamber

The main target markets and source of sales for the respondents are presented below:

Table B.8: Main target markets and main sales source of the respondents

| Market | Proportion of respondents (target) | Proportion of respondents (sales) |
|---------------|------------------------------------|-----------------------------------|
| Local | 54.64% | 55.09% |
| State | 13.66% | 24.33% |
| National | 27.32% | 18.33% |
| International | 4.38% | 2.25% |

Source: DAE and NSW Business Chamber

Responses to the familiarity of alternative financing options are presented below:

Table B.9: Familiarity of alternative financing options

| Financing Option | Not at all | A little | Moderately familiar | Very familiar |
|---------------------|------------|----------|---------------------|---------------|
| Debtor financing | 30.36% | 23.61% | 26.50% | 19.53% |
| Equipment financing | 9.50% | 18.25% | 33.69% | 38.55% |
| Trade financing | 27.97% | 23.50% | 27.75% | 20.78% |
| Overdrafts | 6.25% | 12.39% | 27.80% | 53.56% |
| Term loans | 7.54% | 11.64% | 31.14% | 49.68% |
| Credit card | 1.61% | 5.91% | 25.70% | 66.77% |

Source: DAE and NSW Business Chamber

Responses to the use of alternative financing options are presented below:

Table B.10: Use of alternative financing options

| Financing Option | Yes | No |
|---------------------|--------|--------|
| Debtor financing | 8.68% | 91.32% |
| Equipment financing | 59.80% | 40.20% |
| Trade financing | 18.45% | 81.55% |
| Overdrafts | 58.03% | 47.97% |
| Term loans | 57.84% | 42.16% |
| Credit card | 85.45% | 14.55% |

Source: DAE and NSW Business Chamber

Appendix C: Credit rationing characteristics

Table C.1: Loan applications and success rate

| | Yes | No |
|------------|--------|--------|
| Applied | 55.97% | 44.03% |
| Successful | 76.25% | 23.75% |

Source: DAE and NSW Business Chamber

Table C.2: Reason for loan application

| Reason | Proportion of respondents |
|-------------------------------------------------------|---------------------------|
| Working capital (purchase stock, increased sales) | 31.73% |
| Expand current business | 30.77% |
| Business credit cards | 18.46% |
| Equipment acquisition | 46.15% |
| Maintenance or upgrades of existing equipment/systems | 15.96% |
| R&D or the purchase of IP | 2.31% |
| Acquisition of additional business | 8.85% |
| Starting up an additional business | 5.77% |
| Trade finance | 3.65% |
| Purchase of premises | 15.38% |
| Refinance | 16.35% |
| Equity release, reimburse owners funds | 4.62% |
| Other (please specify) | 3.85% |

Source: DAE and NSW Business Chamber

Table C.3: Size of the loan

| Amount | Proportion of respondents |
|-----------------------------|---------------------------|
| Less than \$100,000 | 43.84% |
| \$100,001 to \$250,000 | 15.85% |
| \$250,001 to 500,000 | 15.46% |
| \$500,001 to \$1,000,000 | 10.96% |
| \$1,000,001 to \$5,000,000 | 10.96% |
| \$5,000,001 to \$10,000,000 | 0.98% |
| More than \$10,000,000 | 1.96% |

Source: DAE and NSW Business Chamber

Table C.4: Unsuccessful size of the loan

| Amount | Proportion of respondents |
|-----------------------------|---------------------------|
| Less than \$100,000 | 44.26% |
| \$100,001 to \$250,000 | 13.11% |
| \$250,001 to 500,000 | 14.75% |
| \$500,001 to \$1,000,000 | 11.48% |
| \$1,000,001 to \$5,000,000 | 12.30% |
| \$5,000,001 to \$10,000,000 | 0.82% |
| More than \$10,000,000 | 3.28% |

Source: DAE and NSW Business Chamber

Table C.5: Types of unsuccessful loans

| Type | Proportion of respondents |
|----------------------------|---------------------------|
| Debtor finance (factoring) | 5.69% |
| Equipment finance | 25.20% |
| Trade finance | 11.38% |
| Overdraft's | 27.64% |
| Term loans | 38.21% |
| Credit Card Facilities | 26.02% |

Source: DAE and NSW Business Chamber

Table C.6: Reason for rejection

| Reason | Proportion of respondents |
|----------------------------------------------|---------------------------|
| Security | 36.59% |
| Cash flow | 31.71% |
| Prior credit history | 4.07% |
| Business plan | 10.57% |
| Lender thought firm was already too indebted | 17.89% |
| No reason given by lender | 8.94% |
| Other (please specify) | 8.94% |

Source: DAE and NSW Business Chamber

Table C.7: Impact on business

| Type | Proportion of respondents |
|--------------------------------------------------------------|---------------------------|
| Firm growth was constrained significantly | 55.28% |
| Staff were laid off and/or operational functions were ceased | 17.89% |
| The chances of bankruptcy increased significantly | 21.14% |
| Other (please specify) | 8.94% |

Source: DAE and NSW Business Chamber

Table C.8: Accept a lower security higher rate loan

| Response | Proportion of respondents |
|----------|---------------------------|
| Yes | 9.04% |
| Possibly | 42.66% |
| No | 48.30% |

Source: DAE and NSW Business Chamber

Table C.9: Lost opportunities due to the unavailability of such a facility

| Response | Proportion of respondents |
|------------------------------------------------------------------|---------------------------|
| Yes – Because finance was not available in sufficient quantities | 9.68% |
| Yes – Because finance was too expensive | 7.87% |
| Yes – Because lender conditions were too strict | 17.98% |
| No | 71.49% |

Source: DAE and NSW Business Chamber

Table C.10: Lost opportunities and were successful in their loan application

| Response | Proportion of respondents |
|------------------------------------------------------------------|---------------------------|
| Yes – Because finance was not available in sufficient quantities | 8.51% |
| Yes – Because finance was too expensive | 7.33% |
| Yes – Because lender conditions were too strict | 16.08% |
| Did not lose any opportunities | 68.09% |

Source: DAE and NSW Business Chamber

Table C.11: Proportion that lost opportunities and were unsuccessful in their loan application

| Response | Proportion of respondents |
|--------------------------------|---------------------------|
| Did not lose any opportunities | 69.11% |
| Lost opportunities | 30.89% |

Source: DAE and NSW Business Chamber

Table C.12: Unsuccessful size of the loan

| Amount | Proportion of respondents |
|-----------------------------|---------------------------|
| Less than \$100,000 | 44.26% |
| \$100,001 to \$250,000 | 13.11% |
| \$250,001 to 500,000 | 14.75% |
| \$500,001 to \$1,000,000 | 11.48% |
| \$1,000,001 to \$5,000,000 | 12.30% |
| \$5,000,001 to \$10,000,000 | 0.82% |
| More than \$10,000,000 | 3.28% |

Source: DAE and NSW Business Chamber

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Credit rationing, access to debt finance, and policy solutions for financing entrepreneurial business in Australia

Theory, tests, evidence and the design and effectiveness of debt based policy instruments.

Professor Marc Cowling
Exeter Business School





"We initially explore why Australian policy-makers might wish to facilitate capital formation in smaller firms. Following on from this, we then set out the key theoretical concepts surrounding the definition, identification and testing of credit rationing, drawing in a wide range of literature, and discussing some of the dissenting views and models.

We then go on to examine how policy-makers have articulated the existence of market failures in small firm credit markets and how researchers have gone about formally testing for the existence of credit and capital rationing and evaluating policy interventions.

Drawing on this evidence, we then discuss the findings and implications for entrepreneurs, small firms and the economies they operate in, and set out a case for the introduction of a partial credit (loan) guarantee scheme in Australia."

Introduction

The five stated objectives of this report are to address these questions:

- 1 According to the literature and evidence base, what are the main reasons (such as differences in the form of market failure) for the use of financing schemes to fund policy intervention to promote small and medium enterprise (SME) development?
- 2 Since the objectives of public and private financial engineering instruments are different, does this have implications for the way they are set up (their organisation) and the costs of operating them?
- 3 Are there specific market conditions – or traditions – that cause differences in the extent to which financial engineering instruments are used and in the way in which they are used?
- 4 What evidence exists on the benefits of using financial engineering instruments as tools of public policy to promote SME development?
- 5 Is there a case to be made to develop a partial credit guarantee scheme in Australia, and, if so, what might it look like?

With these five questions in mind, it is the aim of this report to provide a non-technical review of some of the important historical and recent contributions to the theoretical and empirical literature (including policy evaluations and governmental reports) on the key phenomenon of credit rationing and the broader financing of entrepreneurial businesses. In doing so, we hope to establish where we are now in terms of our knowledge base and how these issues have been articulated by policy-makers in the developed and developing world. Attention will be given to critically appraising the rationales underpinning policy intervention and their relative success in achieving their desired outcomes. Particular consideration will also be given to other issues relating to the way financial programmes and funds are managed and the geographical context in which they operate. We also draw in wider evidence on policy intervention from the UK, US, Canada, all of which have well-established and long standing partial credit guarantee schemes in operation.

To begin, we initially set out the theoretical concepts surrounding the definition, identification, and testing of credit rationing, drawing in a wide range of literature and discussing some of the dissenting views and models. We then go on to examine how researchers and policy-makers have formally tested for the existence of credit rationing, their findings and implications for entrepreneurs, smaller firms and regional and national economies. The existence of credit rationing underpins the need for public intervention in credit markets, often in the form of loan guarantees, but also in the wider context of finance provision, so understanding what the body of research tells us is fundamental to our understanding of this phenomenon.

‘it is important to have a competitive business environment that allows for the entry of new and innovative entrepreneurs resulting in a Schumpeterian process of ‘creative destruction’ rather than simply having a large SME sector’

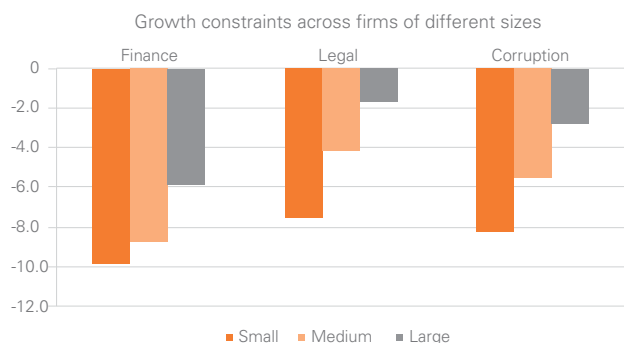
(Beck and Demircuc-Kunt, 2006:p.2934)

Current theory of credit rationing

1. The economic importance of smaller firms and the effects of finance constraints

Smaller firms are an important part of the regional and national economic systems that make up economies. In particular, they play a key role in promoting and stimulating economic dynamism, job creation, and growth through their contribution to innovation, competitiveness and productive 'churn'. The ability of smaller firms to access finance is crucial in order that these firms can fund the level of investment that maximises their growth potential. Lack of finance not only reduces the rate of new business formation, but impedes the ability of existing firms to grow and can endanger their survival. Specifically, external finance is an important part of the market mechanism which facilitates the efficient allocation of resources within economic systems (BIS, 2012).

Figure 1: The Economic Effects of Growth Constraints



Debt finance is the preferred and most widely used form of finance by smaller firms, and this reflects its low cost, the relatively low risk of failure or non-repayment of the majority of smaller firms, and also a desire by most entrepreneurs to maintain control of their businesses. Equity finance is more suited to the minority of smaller firms that have the potential for high growth, but typically lack the cash-flow necessary to cover capital and interest repayments on debt funding. As equity is secondary to debt in law (i.e. debt holders have first call on assets in the event of a business failure), this is a more risky form of investment for the provider of capital. Importantly, financing constraints become more severe for high growth potential firms. Thus we might expect that policy interventions to facilitate improved access to debt capital

impact on larger numbers of firms (higher take-up), but have a smaller economic impact (lower economic value added per firm supported) than equity-based interventions. The relative balance, and success, of these two broad strands of policy intervention will substantively reflect the underlying economic development and institutional infrastructure of particular regions and countries. Empirical evidence on this issue of debt (including that provided by commercial banks and a separate class of mutual or co-operative lending institutions on a quasi-commercial basis) and equity provision, and impact in a European context (Pistoresi and Venturelli, 2012) shows that:

“Venture capital generates a specific, significant effect in the region where the target company is based. The distinction between mutual and commercial credit suggests that both types of bank are important for regional growth but the role of mutual banks is greater in economically deprived areas [EDAs]. Mutual banks and venture capital both proved to be substantial factors for economic growth in regional contexts.”

Here mutual and co-operative lending institutions are those rooted in localities who adopt relationship based lending models and incorporate softer information into their decision-making processes. Having established a causal link between capital provision, financial market development, and regional economic growth in Europe, we then explicitly consider whether credit rationing is an important feature of small firm capital markets, how we identify its existence, and how public policy-makers have sought to correct for it.

2. Capital market imperfections and implications

A common concern raised in the small business literature is that capital market imperfections exist and limit the availability of finance to small firms (Laeven, 2003; Love 2003; Gelos and Werner, 2002). Beck and Demirguc-Kunt *op. cit.* state that small firm financing obstacles have almost twice the effect on annual growth than large firm financing obstacles. Ghosh et al., (2000) also contend that the availability of credit reduces the reluctance to adopt new technologies that raise mean income levels. Importantly, they also identify two types of credit rationing, micro and macro. The former refers to credit limits (amount) and the latter to loan denial. Importantly, the majority of research to date has considered macro level rationing (Cowling, 1997; Cowling, Liu and Ledger, 2012), or absolute loan denial. Such concerns have led to the widespread use of loan guarantee programmes

throughout the developed and developing world (Klapper et al, 2006; Honaghan, 2008). Almost without exception this type of intervention in the capital market has sought to provide loan security to smaller firms who would not otherwise be able to obtain debt finance through conventional means (Cowling and Siepel, 2013; Cowling, 2010; Riding, 1998; Cowling and Clay, 1995).

Ensuring that smaller firms have access to adequate finance for investment and growth is an important priority for regional, national and supra-national policy-makers and this is reflected in current deliberations between policy-makers, smaller firm representative organisations and financiers, including banks and equity providers. And this belief was fundamental to the development of the JEREMIE programme initiated by the European Union in 2005 with the explicit aim to “promote increased access to finance for the development of SMEs”

3. Missed opportunities?

The fact that banks may have missed out on potentially profitable lending opportunities is particularly important for the credit rationing debate as when loan guarantee programmes exist and loans are advanced to small businesses, subsequent default represents what Astebro and Bernhardt (2003) call a type 1 error. That is to say banks made the correct decision in the first instance not to lend to the firm in the absence of a loan guarantee scheme. By contrast, government backed loans which are successfully repaid would, in the absence of a guarantee scheme, represent a missed opportunity for the bank. This would be termed a type 2 error.

Broadly speaking if default increases as constrained firms become unconstrained via the loan guarantee, then banks are, under certain conditions, better off without a scheme. This occurs as loan guarantees raise the equilibrium price (via the government interest rate premium) and volume (number of loans and the total value of loans) traded in the market. This can lead to a situation where banks are lending at levels above their profit maximising level (Cressy, 1996; Deviney, 1986; Cowling, 2010). The fact that not all potential entrepreneurs and/or small businesses get access to loans is a necessary, but not a sufficient condition, for justifying public intervention in credit markets¹. But this is often not understood by entrepreneurs or policy-makers.

However, since part of the remit of governments is to improve the social, as well as economic, welfare of citizens policy intervention can often be justified by taking into account socio-economic objectives. For example, banks and investors are not explicitly interested in job creation and local economic development per se, unless it leads directly to more deal flow, higher repayment rates or more profit. But in a public policy cost-benefit analysis,

more jobs not only reduces social welfare payments (a cost saving to the state) but new employees pay taxes and stimulate consumption. Further, higher employment rates, and local economic multipliers, are also associated with improved social outcomes such as lower crime, lower rates of multi-generational unemployment etc. There is also an issue of timing. Governments can often justify longer-term investments which take time to achieve their outcomes, as part of their remit is to promote and support economic and social development in areas of relative deprivation. And this takes time. But private investors and commercial lending institutions are only interested in purely economic investment returns and they always face short-term opportunity costs and pressure from shareholders to maximise short-run profits. Current capital adequacy requirements placed on banks in Europe under the Basel III agreement has placed further restrictions on the pool of funds available for lending.

4. Risk!

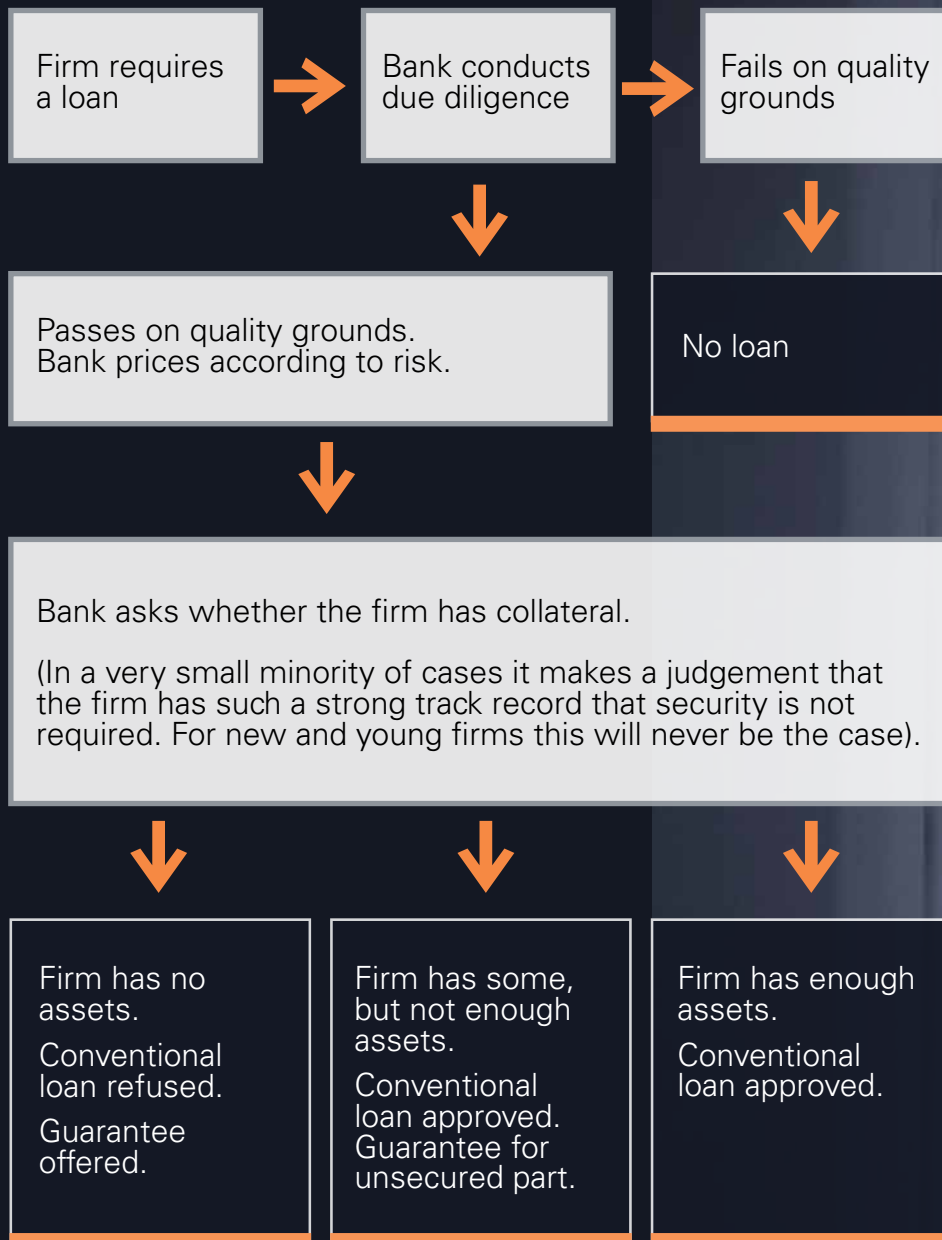
The associated literature on credit rationing fundamentally deals with lenders response to risk. For example, size of firm is often taken to be a good proxy for firm risk (Beck et al, 2006), as is age of firm (Cowling, 1999). And in a world of imperfect (or incomplete) information, lending institutions often look for easily verifiable factors when making lending decisions. Empirical evidence from a study of 47,115 Finnish firms reported by Hyytinen and Pajarinen (2007) finds that when a small business ages one year, its cost of debt decreases by 1-2 basis points. Gregory et al. (2004), using US National Survey of Small Business Finances data for 1995, find that only firm size is a predictor of capital structure decisions. Whilst both may be true in a wider sense, it is also true that within each size and age category of firm there is a distribution of risk across firms within that group. Riding (1998) argues that the objective of loan guarantee schemes is to assist small firms, not to subsidise risky firms, and further that it is the task of the credit markets to discriminate according to quality of borrower (Fraser, 2009). Thus the objective of loan guarantee schemes is to facilitate capital formation for small firms, a contention supported by Green (2003) and Graham (2004). To this end, the offer of a loan guarantee by a potential lending bank is made after due diligence is conducted according to conventional lending criteria. This requirement is a fundamental criterion of most loan guarantee schemes throughout the world. Figure 2 outlines the basic process from initial loan demand through to the potential offer of a loan guarantee backed loan.

Figure 2: The process of accessing a loan guarantee

(See following page.)

¹ This is true if need is assessed on purely economic grounds, although these constraints may be relaxed if schemes pursue an explicit social agenda.

Figure 2: The process of accessing a loan guarantee



5. The case for loan guarantees

This leads us into the key issue surrounding the rationale for loan guarantee schemes, that of credit rationing. The existence or otherwise of credit rationing that is not based on borrower quality is fundamental to the requirement for a corrective scheme such as the UK's Small Firms Loan Guarantee Scheme (SFLG) as it exists in its present form² (see Cowling and Mitchell, 2003; Cowling, 2010; Cowling and Siepel, 2013), for empirical evaluation based evidence). In short to justify the introduction, or continuation, of a loan guarantee scheme, it must be the case that small firms cannot gain access to (proportionally) as much credit, or credit on equally favourable terms, as larger firms of equal risk. In addition, small firms typically face higher transactions costs in the preparation of funding proposals which is disproportionate to the scale of funding sought.

6. The theory of credit rationing

The subject of credit rationing itself has been the focus of a considerable body of theoretical work for a long period of time (Keeton, 1979). The reason for this difficulty can be articulated using a basic demand-supply framework. Quite simply, if there is an excess demand for bank funds (ie more firms want loans than banks are currently prepared to supply at the governing market price) then theory implies that banks should raise loan price (the interest rate) to equate demand for loans with supply, thus increasing profits. We know from the evidence on small firm loan refusal rates that in the normal course of bank lending this does not happen (Cowling, 1997; Levenson and Willard, 1997; Shen, 2002; Robb and Fairlie, 2007; Fraser, 2009; Cowling et al, 2012). The question is why banks refuse to lend to some firms. Metzger (2007), in an empirical analysis of the KfW Start-up Monitor in Germany, finds that finance constraints are more severe the larger the loan amount requested, for entrepreneurs that have been declared bankrupt, for younger entrepreneurs and for those entering from unemployment. Fraser (2009), using UK data, also finds that previous financial delinquency increases loan denial, and that there is a 'liability of newness' as younger firms are more likely to be denied credit.

7. Information gaps

The common thread that ties much of the literature together is the role that information plays in the small firm-bank relationship (Berger and Udell, 1998; Behr and Guttler, 2007; Petersen and Rajan, 1994). On this, the seminal credit rationing paper by Stiglitz and Weiss (1981) argues that borrower quality is *ex ante* undetectable by the lending bank (termed adverse selection). By implication this gives the firm an unfair advantage over the bank. A second problem under this sort of information problem (termed moral hazard) would be one where the

borrower responds to an upward movement in interest rates (cost of borrowing) by switching his funds to a riskier project. For the bank the implications are such that its expected profits are in fact lower than was the case before it raised the interest rate. Here it is optimal for the bank not to raise its interest rates to clear the credit market as it would suffer through lower profits due to firms choosing higher risk projects. An interesting alternative is a regime of fully risk adjusted pricing where banks assess risk and offer loans at interest rates that fully reflect their perception of risk. This is typically only observed from personal money lenders (payday lenders) for very short-term lending to people in extremely difficult economic circumstances. In theory interest rates under this regime would have no ceiling.

In a second paper on this theme, Stiglitz and Weiss (1983) develop their work to give a time dimension to the small firm-bank lending relationship. Here banks deny credit to any borrower who has defaulted on a previous loan. Assuming that borrowers know this bank strategy, the implications are that borrowers are induced to always choose the safest project with the lowest probability of failure. This has been empirically validated in recent work conducted in the UK over the financial crisis (Cowling and Liu, 2013) which found that any measure of what banks term financial delinquency (unauthorised overdraft use, late payments of tax to the authorities, missed loan repayments etc) severely restricts the probability of a new loan request being approved.

8. Collateral

A number of theoretical papers (Besanko and Thakor, 1987; Bester, 1985; Coco, 2000) have argued that collateral can act as a sorting device. By this we mean that only good risk borrowers will be willing to put up collateral against a loan as they feel confident that they will not default and lose their assets. Bad borrowers, knowing that they are risky, are very reluctant to offer collateral against borrowing as they have a higher probability of losing it. In this type of framework offering collateral also has implications for the cost of borrowing. For example, a good borrower who offers collateral to the bank will be compensated with a lower interest rate. A bad borrower, unwilling to offer collateral, will pay a high interest rate. In this type of regime banks separate out borrowers by risk type by the nature of the contracts they accept, even in the presence of asymmetric information (Leeth and Scott, 1989). This is where the first divergences begin to appear in the credit rationing debate. Bester *op. cit.* argues that bringing collateral into the credit market can eliminate credit rationing. Besanko and Thakor *op. cit.* argue the opposite. Their case is founded upon the possibility that in cases where the good and bad borrowers are sufficiently different in terms of their riskiness, the amount of collateral required from good

² Similar rationales have been articulated for the US SBA Loan Guarantee Program, Canadian, Japanese, Malaysian and Korean schemes.

borrowers may well exceed their wealth (asset) endowment. Thus a proportion of genuinely good, low risk, borrowers' become unfairly credit rationed. This sort of credit rationing would be *prima facie* evidence in support of loan guarantee schemes.

9. Collateral and loan rates: A trade-off?

Coco (2000), points out that often the entrepreneur's marginal valuation of collateral in terms of interest rates is lower than the rate at which the bank is willing to exchange collateral for interest rate in its zero profit contract. This reflects differences in perceptions of risk between banks and entrepreneurs and the probability of losing the asset. Thus the optimal contract always requires full collateralisation. It follows that if banks only compete on collateral (assuming competition drives down a common loan rate), an increase in collateral requirements (adverse selection) drives the safest entrepreneurs out of the market as banks incorrectly assume in this case that only good borrowers will risk their assets. In addition, whilst collateral, increases effort by increasing the losses of the entrepreneur in default, a higher interest rate induces lower effort, by reducing the surplus of the entrepreneur in successful states. In a multi-period setting, the bank will design a contract in which the borrower obtains cheap credit (both lower interest rates and collateral) late in the relationship conditional on successful repayment in early periods. This contract design is intended to incentivise borrowers by offering the reward of low interest loans in the future.

10. Wealth and entrepreneurial ability

Exploring these 'ability' issues further, and bearing in mind the evidence of the positive effects of gifts and inheritances on the probability of starting a business (see for example, Blanchflower and Oswald, 1998, Holtz-Eakin *et al.*, 1994, Lindh and Ohlsson, 1996), we can consider a regime in which there are 'poor' and 'rich' borrowers. But it is questionable whether entrepreneurial talent is the prerogative of the wealthy or more broadly distributed throughout the population as a whole. Without reasonable access to financing, many talented entrepreneurs may be forced to accept waged employment and contribute less to the economic system. Innovation and business development will become a luxury reserved for the wealthy, and the economy as a whole will suffer (Hanson, 1983).

But entrepreneurial talent is not possessed by all and is largely unobserved (Ghatak *et al.*, 2002). Thus credit rationing is largely influenced by events in other markets, in particular the labour market. As wages affect occupational choice, this fundamentally determines the quality of a bank's borrower pool (Taylor, 1996), which affects lending policy. Efficiency requires that talent, not wealth, should determine who becomes an entrepreneur

(Cowling *et al.*, 2003). Ghatak *et al. op. cit.* then describes three potential outcomes for talented entrepreneurs where banks have high collateral requirements:

- talented entrepreneurs with full collateral only apply for loans and get separating contracts (i.e the price of a loan reflects the specific risk of that firm or project)
- talented entrepreneurs with not enough collateral get pooling contracts (i.e high quality borrowers in the banks' portfolio effectively subsidise lower quality borrowers whose loan price does not fully reflect their relative risk); and
- talented entrepreneurs with no collateral get rationed.

If wages rise and collateral requirements fall, then the untalented remain in wage employment and vice-versa. As wages fall and collateral requirements rise, more talented entrepreneurs are credit rationed. In short, only talented entrepreneurs can earn a higher relative wage when the waged employment offer is high. The authors then argue that the optimum policy intervention is to raise the average talent of entrepreneurs to such a level that they can attract loans at low interest rates and low collateral requirements, even in a pooling contract scenario. In a separating contract scenario wealth redistribution is more effective at reducing credit rationing to the extent that:

'Even if government lending programs initially make losses and seem inefficient, they can have long-run general equilibrium effects on the credit market that improve efficiency.'

(p.20)

11. Testing for credit rationing

Building on their seminal 1981 paper, Stiglitz and Weiss (1987) again show that borrowers can be rationed in equilibrium, and importantly even those with low risk probabilities. This once again would be a cause for concern to policy-makers wishing to promote entrepreneurial activity and would support the hypothesis of unjustifiable credit rationing. From the core theoretical models relating to credit rationing, one might conclude that in situations where information is asymmetric, (i.e one party to the contract has fuller information than the other) it can be quite rational for banks to ration credit. Yet we have also seen that under certain conditions good borrowers can be denied access to credit.

12. Do loan contract terms change with credit market tightness?

An important work to use microeconomic data to test theories of credit rationing was that of Berger and Udell (1992), who analysed over one million individual loans in

the US over the period 1977 to 1988. Their results on loan rate stickiness show that bank margins (defined as total interest rates minus the treasury rate) are sticky with respect to shifts in nominal treasury rates with a bank margin elasticity of -0.34. Thus bank margins are highly and negatively correlated with treasury rates over time. This evidence is consistent with credit rationing. They also find that the probability of collateralised lending increases when treasury rates rise. This evidence broadly supports the existence of credit rationing.

13. How important are moral hazard and adverse selection in the loan market?

Hyytinen and Vaananen (2006), in an empirical study of 600 Finnish SMEs in 2003, sought to establish the determinants of passing up on important investment opportunities and successful applications for funding focusing specifically on:

- the effect of moral hazard (essentially entrepreneurs using funding to finance alternative, and riskier, investments than that originally considered by the financier);
- adverse selection (a lack of relevant information leading financiers to invest in lower quality firms than they would have chosen with better information); and
- firm age (a proxy for informational opacity, or the flow of good quality information between the firm and its financiers).

Their basic data shows that:

- 12 per cent of the sample had foregone an important investment opportunity;
- 14 per cent were credit rationed;
- 27 per cent considered adverse selection to be important in their bank's lending decision; and
- 16 per cent considered moral hazard to be important in their bank's decision.

This evidence strongly establishes that adverse selection is empirically more prevalent than moral hazard and all firms are equally likely to misuse loan funds *ex post* (moral hazard). This would be consistent with corrective credit guarantee schemes being focused on younger small firms who face acute adverse selection problems. Colombo and Grilli (2007), in an empirical study of 368 Italian new technology based firms (NTBFs), find that 22 per cent used bank loans at start-up, with an average loan size of around £25,000. But they argue that even those firms who were successful in obtaining a bank loan were constrained by the amount offered and this resulted in them being unable to reach an efficient scale of production. Thus NTBFs might also be considered a constrained group due to adverse selection, an issue also explored by Baum and Silverman (2004) and Boocock and Woods (1997), albeit in the context of venture financing.

14. How do banks ration credit?

Lown and Morgan (2006) examine how banks credit standards (non-price loan contract features) impact on future credit rationing using the Federal Reserve Board Loan Officer Opinion Survey. The overarching question posed was, 'To what extent do banks allocate business loans by changing standards compared to loan rates?' Their evidence shows two things: firstly, that an increase in loans supplied now will result in a tightening of future standards; and secondly that as standards rise, the future supply of loans will diminish, but an expanding economy will have a positive effect on future supply of loans. Thus the credit cycle and the business cycle act in opposite ways as far as loan supply is concerned. They conclude that credit standards are more informative about future lending than are loan rates. Loans are rationed via changes in standards not rates. A further paper, Hanousek and Filer (2004), who estimated the relationship between profit and investment using Czech data, argue that the way that banks allocate loanable funds is the main cause of credit rationing for small firms, as investment generally flows to industries (not explicitly firms) with the greatest profit potential.

15. Does size of bank and length of relationship matter?

Other research has looked at how size of lending bank affects contracting with small firms. This is very relevant to the UK (and many other countries) where the banking sector is highly concentrated. For example, Zheng (2007) identifies how transactions costs fall when average loan size increases and generates more surplus for the entrepreneur. But only big banks can make big loans, thus they can exercise their market power and charge a higher rate as identified by Fraser (2009) in the UK.

De Bodt et al. (2005), consider the impact of bank mergers on small business relationships. The first point they make is that as banks merge and get bigger, longer-term customer relationships are often lost. They empirically test this theory by looking at number of banks used, length of relationship and access to finance using a survey of 300 Belgian small businesses in 1999. They find that 50-75 per cent of total small business loan funding is guaranteed by the firm, and that the probability of rationing on loans is higher for very small businesses dealing with a single bank. They conclude that the very smallest firms should increase the number of banks they deal with, but the very largest small firms should concentrate their bank financing as much as possible and invest in longer-term relationships.

Hernandez-Canovas and Martinez-Solano (2007), using a panel of 705 Spanish SMEs, estimate the effects of number of banking relationships on credit availability and find that firms with fewer financial institutions obtain relatively less funding for a given increase in interest

rates. Interestingly, the threshold number of banks a firm should deal with is three, below which credit is more likely to be rationed. In a related European paper, Hernandez-Canovas and Koeter-Kant (2008) also find that closer firm-bank relationships also increase the firms' ability to access long-term loans.

In a recent empirical study of bank loan prices discrimination in the UK, Cowling (2013) found that there are important differences in terms of what types of firms and what types of loans are sought and offered by Big-4 banks compared to smaller banks. Firms that use Big-4 banks are more likely to take longer-term loans for fixed capital investments, and be more productive. But their borrowing requirements (loan values) are generally lower than those of firms who contract with smaller banks. This suggests that it is the nature of lending offer that is part of the explanation for differences across large and small banks. Therefore it appears that the nature of a small firms' financing requirements plays a fundamental role in determining what type of bank they use.

Equally, the determinants of loan interest rate margins, and (even when they coincide across Big-4 and smaller banks) the magnitude of these effects, differ significantly between Big-4 and smaller banks. This implies that banks have different segregation strategies, but importantly that firm size is not a fundamental component of this segregation. Big-4 banks reward longer-term loans with lower interest rate margins whilst smaller banks penalise them. Smaller banks appear to segregate according to scale of lending. Where segregation strategies coincide, small banks reward more productive firms (higher efficiency per employee) more highly whilst large banks penalise risk and willingness to accept fixed rate loans more highly. In short, the size structure of the private sector banking sector impacts on the nature of the small business lending market.

16. Does firm ownership or risk-aversion matter?

Cooley and Quadrini (2006) set out the small firm decision-making process as one where the optimal amount of debt involves a trade-off between higher growth and higher expected profits, but higher volatility of profits to which the firm is averse. Small firms thus become much more sensitive to interest rate shocks as they are more leveraged than large firms.

17. Are all banks equally good?

Thakor (2002) opens up a whole new line of investigation by allowing for 'talented' and 'non-talented' banks. This is an important extension to conventional credit rationing models which only consider talented and untalented borrowers. Setting out his model in the context of loan commitments (where a borrower purchases a loan commitment to (partially) insure themselves against

future rationing, he considers how noisy (or imperfect) credit analysis and material adverse change (MAC) clauses affect banks' financial capital and reputation. Here MAC clauses in lending contracts allow banks to withdraw funding when, for example, the economy suffers an adverse shock. Importantly, this is not related to the firm but to wider economic conditions. Thakor *op. cit.* posits that noisy credit analysis separates talented and untalented banks in the first instance, and that invoking MAC whilst preserving banks' financial capital also depreciates their reputational capital.

Fundamentally, talented banks are more efficient processors of information, even when it is imperfect and thus are more able to assess true risk. A further paper by Brewer (2007) considered the effects of sophisticated credit assessment systems for loans and argues that, 'credit scored loans are likely to have less flexible terms set to maximise a lender's profit period-by-period rather than over the life of a relationship' (p.44), thus leading to a short-term lending perspective. Here credit scoring refers to a computer based algorithm that statistically 'scores' loan applications based on observable and easily verifiable criteria and takes no account of 'softer' information about the entrepreneur and their business.

18. Loan Guarantee Programmes

Here we briefly review the empirical literature on international loan guarantee programmes, their effectiveness and impact on small businesses and regional or national economies. The first paper we consider relates to what is termed additionality in Europe, and incrementality in North America. Additionality being the requirement that guaranteed loans are only issued to borrowers who have exhausted all other potential sources of loan funding.

This paper is from Riding et al. (2006), which analyses the Canadian Small Business Financing program (CSBF), which evolved from the original 1961 Small Business Loans Act primary loan guarantee program. In its current form, the program is available for any (non-farm) profit oriented business with sales less than \$5 million Canadian, and loans up to \$250,000 can be issued. Loans are limited to term loans, and for the purchase of premises and equipment, land, or leasing but not working capital. The guarantee is for 80 per cent of the outstanding balance. As with the UK programme, lenders have complete discretion over the loan approval process.

The focus of their study is on additionality and the measure is whether or not a loan is issued to a borrower who has been unable to obtain financing from alternative sources. Their key finding was that 81 per cent of their loan guarantee sample would have been turned down for conventional loans, and after further testing this amounted to 74.8 per cent additionality. Further analysis for jobs created suggested that of the 10,000 guaranteed

loans per annum, CSBF contributed to an additional 22,000 full-time jobs in Canada each year.

A series of papers by Craig, Jackson and Thompson from the Federal Reserve Bank of Cleveland (2005; 2006; 2007) focused on how the US Small Business Administration (SBA) loan guarantee affected local economic growth and employment. Using panel data at the Metropolitan Statistical Area (MSA) level, they test whether the 360,000 SBA and '504' loans were associated with higher per capita incomes and higher local employment. On incomes, they find that SBA loans are associated with a positive (but small) increase in future per capita income growth. On employment, they find that 'if you increased per capita SBA guaranteed lending in a local market by... approximately \$100 the predicted result is an increase in the level of employment by 0.8 percentage points' (p26). In localities with less developed financial markets the effect is higher, and specifically, 'guaranteed lending will have a larger positive impact on social welfare if it is targeted to certain high-minority areas' (p.28). In short, SBA lending supports the creation of net new jobs in the local area where the loans are issued.

In the context of the UK, a series of empirical papers by Cowling (2007; 2008; 2010), Cowling and Siepel (2013) and Cowling and Mitchell (2003) add some interesting insights into the operation of the UK SFLG. The key findings were that default increases with the banks' cost of capital (the loan rate) but not with the government premium. In addition, default was also found to increase in periods of macroeconomic growth, suggesting that in economic upturns the marginal SFLG borrower is of lower quality as banks relax their lending criteria. Collateralisable wealth was found to have no effect, which implies that entrepreneurial ability is not confined to the wealthy.

The recent work of Cowling and Siepel (2013) examined whether the SFLG provides value-for-money to the UK tax payer, presenting a regression based performance approach which then fed into a formal cost-benefit analysis. Specifically, they considered whether firm performance post-investment is such that it justifies the government's presence in the lending market and the costs associated with it. Their findings suggest that entrepreneurial firms that are able to access new finance through SFLG achieve superior performance in the form of improved sales, job creation and exports and that this justifies public intervention in private credit markets.

Cowling (2007) explored the role of loan commitments (overdrafts) on the UK SFLG as a means of insuring borrowers against future credit rationing. The key findings were that *ex post* default had no bearing on initial credit volumes advanced, nor was there an obvious trade-off between loan margins (risk premia) and loan amount. But the availability of collateral for firms that wish to borrow debt under commitment contracts is absolutely crucial to their ability to raise substantial amounts of funding.

Holding all else constant, not having any collateral reduces a firm's maximum borrowing by half. This is supportive of the role of SFLG in allowing certain types of small firms access to bank funding under commitment.

19. Credit rationing summary

On the basis of the evidence presented, there is a body of work indicating that access to finance problems can reduce firm growth and new technology adoption. The empirical literature on small business lending also suggests that banks use easily verifiable proxies, such as firm size and age, for risk, and this substantively affects the cost of borrowing. However, interest margin spreads are still quite small, emphasising the role of collateral in reducing observable risk. But the nature of tradable loan contract terms is different for entrepreneurs and banks, with the former placing higher value on their collateral (psychic value) and also (erroneously) rating their entrepreneurial qualities more highly than a bank. The evidence also suggests that entrepreneurial talent is more widely distributed than wealth, and that this can lead to credit rationing of poorer, but talented, potential entrepreneurs. Importantly, in the current economic climate with falling wages growth and higher collateral requirements, this particular problem may become more acute.

Some of the more innovative work has been conducted in the very recent past and drawn some fascinating conclusions. For example, Hyytinen and Vaananen (2006) develop a bespoke survey instrument deliberately designed to identify moral hazard and adverse selection in small firm financing. And they conclude that adverse selection is a far more important phenomenon in the real world than moral hazard. Other work suggests that this issue may be even more acute amongst innovative and new technology based firms.

On the role of bank-small firm relationships, a number of recent contributors suggest that the number and nature of banking relationships are critical. There is evidence that banks' market power can increase borrowing costs, as can bank mergers which result in an information loss as the customer relationship breaks down. There is further support for entrepreneurs who diversify their banking relationships as a mechanism for avoiding credit rationing. On banks *per se*, Thakor (2002) and others open up a whole new avenue of research by questioning whether all banks are equally good at making lending judgements, even when credit scoring models are used. This turns the whole focus of the 'typical' credit rationing model on its head by allowing for 'talented' and 'non-talented' banks.

Finally, we considered what we know about the contribution of loan guarantee programmes and their relative impact on constrained small businesses. Whilst the broad body of evidence is far from conclusive, it does appear that in certain circumstances, interventions of this

type can create additional economic benefits including local economic growth, innovation, technology adoption, exporting and jobs. And it appears to be the case that there will always be a small pool of borrowers who, due to information problems, will find it hard to access bank funding, thus providing some justification for this type of policy intervention.

20. Critical indicators of the need for loan guarantee programmes

Having considered why credit may be rationed to smaller firms, and which firms are most likely to face severe problems with accessing debt finance from conventional sources, we now outline the critical indicators that policy-makers might consider when assessing the specific need for policy intervention in the form of loan guarantee type programmes. These are:

- a highly concentrated banking sector (few large banks)
- less dense local branch networks and a general lack of relationship banking
- low levels of housing or general (tangible) asset ownership and asset price growth
- most commercial loans require assets to be placed as security
- falling or stable asset values
- a diverse entrepreneurial, and latent entrepreneur, population (poor as well as rich potential entrepreneurs)
- access to loans is conditional on criteria not related to the quality of the entrepreneur or their investment proposal (e.g. collateral availability)
- the spread of interest rates on bank loans is narrow (indicating rationing is favoured over risk-adjusted lending)
- there is substantial diversity in the relative quality of lending institutions

The Case for an Australian Loan Guarantee Scheme

1. Introduction

The evidence is broadly supportive of the use of financial engineering instruments to correct for (lack of) collateral issues in debt markets and to a lesser degree lack of a track record. Loan guarantee schemes have the advantage of being simple to design and administer and typically require that investment appraisal is conducted on a commercial basis thus minimising deadweight. Instruments of this type are most effective when the entrepreneurial population is more widely distributed than wealth throughout the general population. This gives loan guarantee schemes the potential to have disproportionately high and positive effects in countries and regions where (a) collateral based lending is the norm, and (b) a significant proportion of the entrepreneurial population is not asset rich. As a tool for promoting local economic development, loan guarantee schemes have been shown to be relatively successful as a means of public policy intervention. Their use is more widely relevant in the current global financial crisis even though Australia has been less affected than most countries.

2. Small businesses and the credit market in Australia

The first point to note is that the Australian small business sector, and economy more generally, is in a relatively healthy position compared to many developed and developing countries throughout the world. Figure 3 shows that the effects of the global financial crisis in the last quarter of 2008 led to a subsequent stalling of the Australian economy, but GDP growth rates remained positive, albeit at a lower level, throughout 2009. After another tailing off of growth in 2011, the economy returned to strong growth in 2012.

Figure 3: Australian GDP growth rates

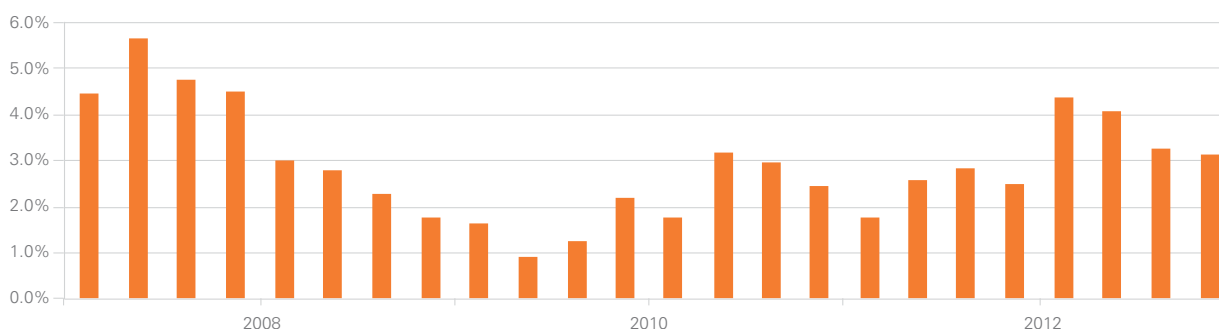


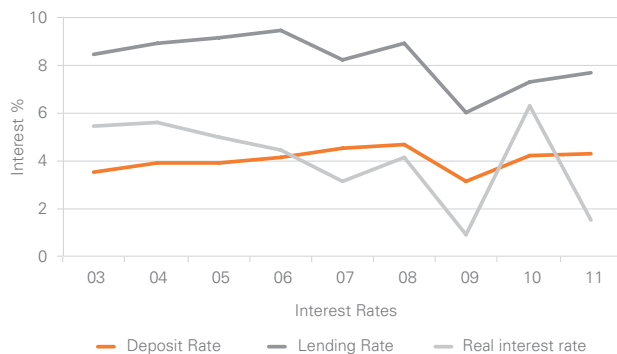
Figure 4 shows that the trend in new business start-ups is increasing over the global recessionary cycle from around 87,000 per annum in 2008 (the onset of the financial crisis) to 97,000 per annum in 2011. The general relationship between economic growth and new business registrations is that they broadly move together suggesting that economic growth is creating new opportunities for start-ups.

Figure 4: New business start-ups



So what of the credit market? With interest rate margins on bank loans in the 2%-3% range which is in line with those in many developed economies, the key determinants of the total cost of credit is commercial banks' lending rate and the default rate on non-performing loans. Figure 5 below shows Australian deposit and lending rates from 2003-2011.

Figure 5: Australian lending and deposit rates

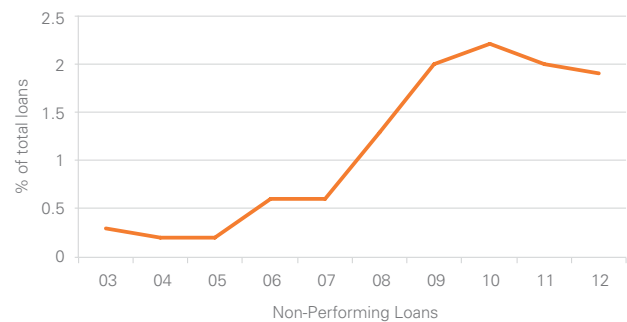


The interesting features are that the deposit rate was subject to much less temporal variation than the lending rate, and that the spread between the two is large. By comparable international standards the cost of debt is high. It also suggests that the large lending banks are highly profitable. The trend in real interest rates has generally been downward with the notable exception of the upwards spike in 2010.

The second key element of the cost of debt finance is the rate at which banks issue loans that are non-performing, that is loans which are not fully repaid. This is shown in Figure 6. What is immediately apparent is that the general

incidence of non-performing loans is low by any international standards. But the trend is upwards in the rate of non-performing loans. Overall, this suggests that Australian lending banks are cautious in their general lending policies and that risk-adjusted lending is not the norm.

Figure 6: Non-performing bank loans



To a degree, these three pieces of evidence, high costs of debt, low interest margins and cautious lending are consistent with credit rationing theories as margins imply relatively low risk lending and a backward bending loan supply curve where riskier loans are choked off as they would attract a higher interest rate margin and raise the default rate above the banks expected profit maximising level.

Designing a loan guarantee programme

One of the key success factors of loan guarantee programmes throughout the world is the simplicity of their basic parameters and the general level of flexibility that these parameters allow policy-makers to reshape or refocus programmes. The fact that commercial banks conduct due diligence (in most but not all cases) effectively transfers some of the downside risk back to banks, although the government clearly bears most of the default risk. Important in the Australian context is that banks might become more willing to expand the supply of loans significantly when a large share of the outstanding loan is guaranteed and still not suffer from excessively high default rates. The core parameters of a loan guarantee programme are:

- The level of guarantee (the % share of the outstanding debt that is covered by government in the event of default)
- The interest rate premium (the margin that the government receives for guaranteeing the loan)
- The maximum (and in some cases minimum) loan amount available
- The maximum (and in some cases minimum) loan term available
- The arrangement fee

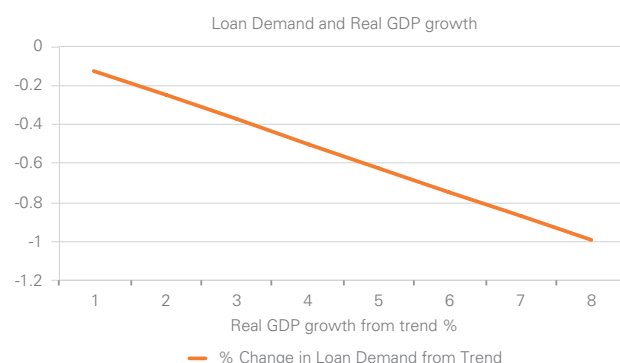
Importantly, these parameters are easily understood by most people who have ever taken out a personal or business loan and/or insurance. So loan guarantee schemes benefit from being simple to create and operationalise and also from being widely understood by all actors in the debt market. This helps avoid the problem of many complex government programmes which are only understood and accessed by those with the high level of awareness, skills, knowledge and resources to clear all the necessary hurdles and deal with the complexities of application. This is generally why smaller firms do not bid for government contracts and why in many cases scheme deadweight can often be high.

As a guideline, the typical range across these core parameters for established loan guarantee schemes are as follows; Guarantee 65%-85%; Interest rate premium 0.5% - 2.5%; Loan size, minimum A\$8,000, maximum A\$500,000; Loan term 1-10 years; Arrangement fee, 0.25%-3.0% of the total loan value.

Scale of loan guarantee programme and its determinants

When considering the actual parameters of a new loan guarantee scheme, we need to consider how both lending banks and smaller firms will react to (a) the level of guarantee and, (b) the premium. Banks willingness to advance loans under a loan guarantee scheme, previous research has shown, is substantially affected by the level of the guarantee provided by government. Equally, as the premium level adds to the total cost of debt both banks and firms will take this (additional) cost into account when deciding whether the proposed investment can generate the level of future cash flow capable of servicing the capital and interest payments. Importantly, the actual cash volumes that flow to government from the loan guarantee premia are relatively small compared to the costs of defaulting loans. But the micro level operation of a loan guarantee scheme cannot be treated in isolation and wider macroeconomic circumstances need to be considered. Figure 7 (below) highlights the general relationship between (real) GDP growth (from trend levels) and loan guarantee backed loan issued using evidence for the UK scheme (see Cowling, 1996).

Figure 7: Real GDP growth from trend and loan guarantees issued



As is immediately obvious, if real GDP is above trend levels then, the quantity of loans issued under a loan guarantee scheme declines significantly, as credit conditions become more relaxed. If we focus on a feasible range then with an economy expanding at 1% above trend levels would result in a decline in number of loan guarantee total loans issued of 12.5%, holding other macroeconomic factors constant and maintaining the loan guarantee parameters at their starting levels. The implied relationship is linear thus an economy expanding at 3% above trend levels would be associated with a decline in total loan guarantee loan volumes of around 37.5%. Equally, if we allow for scenarios where an economy is experiencing a below trend growth rate of real GDP then we would expect an expansion in loan guarantee volume of loans issued. For policy-makers, this is a key element of the planning process when designing and managing a loan guarantee scheme as the level of loan guarantee loans offered is a key indicator of the subsequent cash demands on the Treasury arising from future default calls.

Figure 8: Loan guarantee level and interest rate premium effects on loans issued



Figure 9: Loan guarantee demand and supply and total loan interest rates

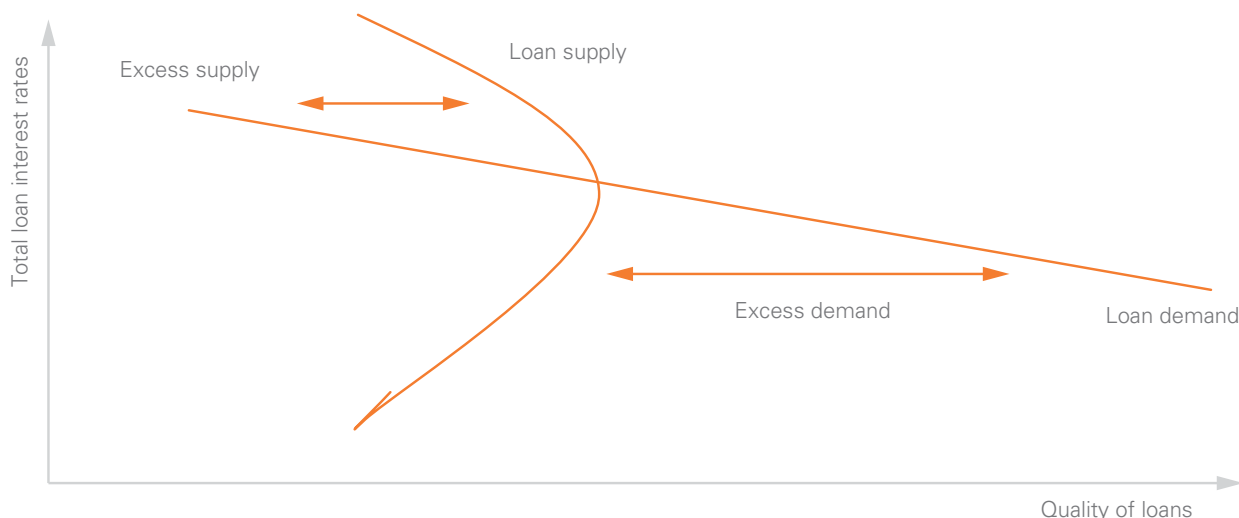


Figure 8 illustrates how potential combinations of guarantee levels and interest premia impact on the total volume of loans issued under a loan guarantee scheme. On the horizontal scale we have a (hypothetical) scheme where the government guarantees 100% of the loan and sets its interest premium to zero. We then have (moving right along the horizontal axis) a rising interest premium and a declining level of guarantee. Thus as we move right along this axis a loan costs the firm more and the banks' exposure in the event of default increases. Thus as we move right along the axis a loan guarantee scheme becomes less favourable to both parties to the lending contract. Most schemes operated in developed countries would be in the 70%-80% guarantee and 2%-3% interest premia range historically. This should ensure that only good quality lending propositions are funded as the bank bears enough risk to conduct due diligence. This ensures that loans that are made have a higher probability of being additional to those that would have been made.

Thus if we begin with a notional 800 loan guarantee backed loans issued at commonly used parameter ranges, then we observe that a rise in the interest premium to 4% (from 2%) and a decline in the guarantee level to 60% (from 80%) would see the total volume of loan guarantee backed loans issued fall by around 25% (from 800 to 600). If we consider that a loan guarantee scheme has a minimum required level of activity to justify the need for it to be in place in the first instance, and to cover the fixed costs of operation and management, then in this hypothetical scenario any combinations of guarantee and interest premia that result in the total volume of loans issued falling below 400 would be in an unfeasible range. Here any guarantee level below 50% and an interest premium above 5% would trigger this unfeasible scenario. Policy-makers when designing a new scheme, or adjusting an existing one, need to consider beforehand

both bank sensitivity to the guarantee level and firms sensitivity to the interest premium in particular. Equally, an estimate of the potential scale of latent or unmet demand for loans and the economic costs of unfunded investments should inform judgements on the feasible operational scale of a scheme and the resources required to administer and deliver a scheme at the desired scale.

Figure 9 shows the general shape of the bank's loan guarantee supply curve and the small firm's loan guarantee demand curve in terms of the total cost of lending based on UK loan guarantee scheme analysis (Cowling, 2010). Bearing in mind that the loan guarantee scheme interest premium is around 2% over and above that charged by banks it is interesting to note that the small firm demand curve is relatively insensitive to the total interest rate (i.e. it declines relatively slowly as total debt costs rise). For the UK, loan demand is choked-off completely at total loan interest rates above 12%. This is in a world where, at the time, base rates were 4%, and bank interest margins were 2%-3%. If total lending rates had fallen then the volume of loans demanded would increase in a steady and linear way. This is expected as more potential investment projects can generate the level of returns (and cash) to service a lower interest rate repayment. From this, we can assume that any changes to one or all of the components of the total loan interest rate offered (bank base rate, bank margin and loan guarantee premium) would result in a change in the level of demand for loans from small firms.

On the nature of banks willingness to offer loans at various interest rates, we observe that the supply curve is backward bending at high (and low) interest rates. This former is due to banks unwillingness to offer high interest rate loans as this type of loan is typically associated with higher risk projects (i.e only high risk-high return

investments can generate the type of returns necessary to service the loan). Thus the bank chokes off its supply of loans at high interest rates as it suffers from higher default and lower profits. Remember that this is analysis is for loan guarantee backed lending, so even under this regime banks choke off the flow of credit as they are still exposed to 20%-25% of the total outstanding loan in the event of default. So, even a scheme designed to eliminate credit rationing has feasible limits.

At total lending rates below base rates plus 3%, there is excess demand for loan guarantee backed loans as banks are reluctant to lend at low rates as profits decline but small firms have an increasing number of viable projects. On the bank side, this relates to the relative profitability of alternative investments. The interesting feature of the loan guarantee debt market is that even with a backward bending supply curve, as banks become increasingly reluctant to offer high interest rate loans (even with a 75% government guarantee), the willingness of small firms to accept such high interest rate loans diminishes at an even faster rate leading to a situation of excess supply of loan guarantee backed loans. Taken together, these two features of the loan guarantee market suggest that the government has a quite small range of feasible interest premia unless other price components of the total lending cost change.

Lending scale and loan terms

A clear advantage that a government backed loan guarantee programme has is that the government can take a longer (and broader) view in terms of the timing and nature of its' investments. Economic evaluations of government supported financial programmes suggest that the full economic benefits of new investments can take up to six years to fully accumulate. This is important as the costs of many schemes are incurred early on in the investment process, and in particular 80% of defaulting loans do so within 2 years of the loan being made. A failure to accommodate these facts can result in evaluations being conducted too early in the investment cycle and erroneous (and negative) conclusions being drawn. This is known as the J-curve effect where firm performance dips in the immediate post-investment period as firms re-configure themselves in order to accommodate future growth episodes. Once these intra-firm changes have bedded in, performance increases.

What is clear is that loan guarantee schemes have generally promoted longer-term lending (typically up to 10 years) and a wider distribution of loan terms than is the case for the stock of conventional bank loans. Thus, more patient investments and less onerous per period capital repayments have been supported. Equally, loan guarantee programmes have also been associated with a larger scale (loan size) than would be found in a portfolio of

conventional bank loans. The 'typical' UK loan guarantee backed loan would equate to around A\$100,000 under the original SFLG scheme before it was broadened and re-branded as the EFG. Importantly, a recommendation of the 1999 UK SFLG evaluation was that shorter-term, smaller value, loans for working capital purposes should be excluded as there are other mechanisms by which temporary cash-flow issues can be addressed (see the UK Transitional Loan Fund³).

Resource allocation and programme design

Having established the general capital market conditions under which the provision of a loan guarantee scheme would be an appropriate policy intervention, we now move on to consider the more practical aspects of programme provision.

Feasibility study – conduct a feasibility study to establish the scale of latent demand for a loan guarantee programme amongst SMEs and the nature of finance constrained firms and latent entrepreneurs. Analysis of SME loan defaults will also help inform likely longer-term default effects and costs. This will also shape and inform the nature of the schemes core parameters

Staffing – a core administration team to validate and process loan guarantee scheme applications (using a pro forma template) and maintain a Management Information System

MIS – design and construct an MIS capable of recording applications and collating firm and loan level data. This would also support subsequent evaluations and annual scheme reporting

Evaluation – agree appropriate evaluation timings and allocate a fixed budget for this. Determine how performance will be measured in future evaluations and build this into the routine MIS data collection process

Treasury calls – set up a legal system whereby commercial banks can put claims directly to the Treasury if a guaranteed loan is in legal default

Eligible banks – set the conditions under which a commercial bank can issue loans under the government guarantee and a system of performance review

Exclusions – aside from the normal gambling, finance sector, and illegal business activities, many loan guarantee schemes have excluded particular sectors of the economy, primarily for high displacement and low additionality reasons (e.g the UK used to exclude high street retail). The precise nature of these exclusions would be informed by the feasibility study

Scheme parameters – the specific scale and scope of the core parameters (the premium, level of guarantee, minimum and maximum loan term and size) will be informed by the feasibility study analysis of SME credit

3 This was a temporary scheme which was initiated at the onset of the financial crisis in 2008 and ran for 12 months. It supported working capital investments for established SMEs with liquidity problems due to the crisis.

markets. A judgement should be made, and informed by SME loan default analysis, on the effects of setting specific parameters and its' subsequent impact on loan default

Using data and wider evidence from the well established UK loan guarantee scheme to predict a feasible scale of operation of an Australian guarantee scheme, we observe that;

- In total 34 lending institutions currently are eligible to issue loans with a government backed guarantee in the UK. These include, 12 National banks, 17 regional banks and finance institutions, and 5 factoring and asset finance houses. Importantly, 83% of the total number of guaranteed loans issued to SMEs are made by the big-4 national banks. Thus, in an Australian context bringing the big banks on board would be critical for the establishment of an Australian loan guarantee scheme.
- In total government guaranteed loans account for between 1% and 2% of total lending in the UK to SMEs. In an Australian context, and adjusting for the number of SMEs (2,051,085) and the proportion seeking to borrow in a given year this would equate to a floor of 100 loans per calendar month.
- The estimated governmental cost of scheme administration (including staff, equipment, building etc) is £5,000 per loan issued over the life cycle of an individual loan.
- Legal recovery of assets relating to loans in default typically takes 322 days from the initial point of default.
- The borrower is responsible for repayment of 100% of the EFG facility, not just the 25% outside the coverage of the government guarantee. Where defaults occur, the lender is obliged to follow their standard commercial recovery procedure, including the realisation of security, before they can make a claim against the government guarantee.
- Under EFG, lenders are expressly prohibited from taking a charge over a principal private residence as security against an EFG loan.
- Under EFG, lenders are entitled to take security, including personal guarantees. This is standard commercial practice and an established mechanism for ensuring a degree of personal commitment to repayment of the loan by the business. In EFG this means there is a three-way risk sharing between borrower, lender and the government.

4. Conclusion

We began by discussing the theoretical background to the phenomenon of credit rationing and how it may manifest itself in debt markets relevant to smaller firms. We then discussed the wider economic implications of smaller firms not being able to fund investment opportunities

from external debt markets. Drawing upon a wide range of empirical evidence we then identified particular problems that smaller firms have in accessing debt capital from commercial banks and how publicly supported loan guarantee programmes might act to redress market failures where and when they exist. Further thought was given to identifying specific institutional, economic and market conditions which are most typically associated with need for a corrective loan guarantee programme and the benefits that have been found to be associated with guaranteeing smaller firm loans through the commercial bank channel. Broadly speaking, the evidence suggests that (a) credit rationing of good quality, low risk, smaller firms is a small, but not insignificant feature of credit markets in most developed countries. And loan guarantee programmes, when appropriately designed and administered, are capable of delivering value-for-money for the tax payers dollar through their support for employment growth, productivity, innovation and exporting.

Then the focus of discussion narrowed to consider the nature of credit markets in Australia, the role of smaller firms in the economy and general patterns of recent economic growth. This is important as all these factors help determine the need for a loan guarantee programme in the first instance, and secondly the specific type of programme that might be most appropriate in an Australian context. Drawing on experiences of programmes available throughout the developed world, core issues surrounding the design and development of loan guarantee programmes were then discussed. Specific attention was paid to establishing what the effect of setting different parameters of a loan guarantee programme might be, and identifying a feasible range of the core parameters that such a scheme might operate within.

We conclude that there is a case for the design and implementation of a loan guarantee programme in Australia to correct for the specific problems of smaller firms being unable to finance new investment opportunities through normal commercial bank channels. But the specific scale of potential programme demand needs to be established in a detailed feasibility study as this determines the scale of the initial and ongoing demands on the Treasury. Further, more detail is required on (a) the specific characteristics of credit rationed smaller firms in Australia, and (b) the specific characteristics of smaller firms capable of generating the highest value added when unconstrained in debt markets, and (c) the scale of unmet loan demand. This would then help determine the actual values of the key programme parameters (level of guarantee, interest rate premium, loan term and loan size).

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ISBN 978-0-9923041-2-6

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