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The Status of Bank Lending to SMEs in the Middle East and North Africa Region

Results of a Joint Survey of the Union of Arab Bank and the World Bank

Roberto Rocha
Subika Farazi
Rania Khouri
Douglas Pearce

The World Bank
Middle East and North Africa Region
Financial and Private Sector Development Unit
&
The Union of Arab Banks
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Abstract

Among the principal constraints for SME lending is the lack of SME transparency, poor credit information from credit registries and bureaus, and weak creditor rights. If constraints can be addressed, lending can potentially reach bank targets of 21 percent. State banks still play an important role in financing SMEs in the MENA region, but they use less sophisticated risk management systems than private banks. On another hand, credit guarantee schemes are a popular form of support to SME finance in the region, and are associated with higher levels of SME lending.

The paper concludes that MENA policy makers should prioritize improvements in financial infrastructure, including greater coverage and depth of credit bureaus, improvements in the collateral regime (especially for movable assets), and increased competition between banks and also non-banks. Weaknesses in insolvency regimes and credit reporting systems should also be alleviated. Direct policy interventions through public banks, guarantee schemes, lower reserve requirements and subsidized lending and other measures have played a role in compensating for MENA's weak financial infrastructure, but more sustainable structural solutions are needed.

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Roberto Rocha, Subika Farazi, Rania Khouri and Douglas Pearce*

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The Union of Arab Banks

The World Bank

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1. Introduction

The financing of small and medium sized enterprises (SMEs) has attracted great interest from academics and policy-makers around the world. SMEs play an essential role in building a competitive private sector and contributing significantly to employment and economic activity.[1] Despite their importance, SMEs seem significantly more financially constrained than large firms, especially in developing countries. Indeed, enterprise-level surveys conducted by the World Bank show that a much smaller share of SMEs has a loan or a line of credit by comparison with large firms, and also that access to finance is relatively more constrained in lower and middle income countries (Figure 1a). Other studies using enterprise-level data show that the lack of access to external finance constitutes a major constraint to SME growth.[2]

Despite the importance of the topic of SME finance, there has been relatively little research on the supply side of bank finance to SMEs. Notable exceptions are Beck, Demirguc-Kunt, and Peria (2008 and 2009), and De la Torre, Peria, and Schmukler (2010), which provided the first measures of the extent of bank lending to SMEs, as well as the drivers and obstacles to further SME lending. These studies were based on two surveys, the first covering 45 developing and developed countries and the second 3 Latin American countries and one Central European country. The results show that most banks increasingly see SMEs as an attractive business, in contrast with the traditional view that SME lending is dominated by small banks and based on relationship lending. However, the studies also show that institutional obstacles to SME lending remain and that the SME market is still far from saturated.

The ongoing efforts to investigate further the status of bank lending to SMEs are particularly relevant for the Middle East and North Africa (MENA) region. As shown in Figures 1b and 1c, enterprise-level surveys conducted by the World Bank suggest that SMEs are particularly financially constrained in MENA countries – only 20 percent of SMEs in MENA have a loan or a line of credit, a lower share than any other region, and only 10 percent of their investment expenditures are financed by a bank loan, a share that is higher only to the one in Sub-Saharan Africa. These results have motivated the design and implementation of a survey of bank lending to SMEs in the MENA region that complements the information provided by enterprise surveys and provides further insights into the challenge of enhancing SME access to finance.

The objective of this paper is to report the results of a joint survey of the Union of Arab Banks and the World Bank (henceforth the MENA survey), including not only the bank responses but also the statistical analysis of the dataset. The MENA survey was conducted between December 2009 and April 2010 and secured a high response rate across the region. It draws on material from the two previous surveys conducted by the World Bank, thus allowing for comparisons with previous results. However, the MENA survey also contains new material, designed to address the specificities of the MENA region and provide more information and granularity to

[1] According to Ayyagari et al., (2007) SMEs account for more than 60% of manufacturing employment across 76 developed and developing economies.

[2] Schiffer and Weder (2001), IADB (2004) and Beck et al. (2005, 2006 and 2008) show SMEs perceive access to finance and cost of credit to be greater obstacles than large firms and these factors affect their growth.

some key issues, including long-run targets for SME lending and the deficiencies in financial infrastructure. Here in this section we report the main stylized facts and results.

First, like the banks surveyed in the two previous surveys, MENA banks also regard the SME segment as potentially profitable, and most banks are already engaged in SME lending to some degree. The drivers that motivate banks to engage in SME lending include the potential profitability of the SME market, the saturation of the large corporate market, the need to enhance returns, and the desire to diversify risks. Larger banks (measured by total loans) have not played a more significant role in SME finance in MENA, but banks with a larger branch network and/or that have set up SME units seem to do more SME lending, suggesting that relationship lending may still be important in a region where financial infrastructure remains generally deficient.

Second, despite the interest in the SME sector, lending volumes are still not very impressive. The share of SME lending in total lending is only 8 percent, of which 2 percent in the GCC (Gulf Cooperation Council) countries, and 13 percent in the non-GCC countries. The low share of SME lending in the GCC reflects largely the characteristics of concentrated oil economies. The share of SME lending in the non-GCC is higher, but still lower than the shares of SME lending in developing and developed countries (Beck, Demirguc-Kunt, and Peria (2008), and OECD (2010)). Most importantly, the shares of SME lending in total lending in both the GCC and non-GCC regions are substantially below the banks' own long-run targets, also suggesting substantial room for further lending to SMEs.

Third, MENA banks quote the lack of SME transparency and the weak financial infrastructure (weak credit information, weak creditor rights and collateral infrastructure), as the main obstacles for further engagement in SME finance. Banks complain less about regulatory obstacles (e.g. interest rate ceilings), excessive competition in the SME market, or lack of demand for loans from SMEs. Within an overall environment of weak financial infrastructure, the countries that are able to strengthen creditor rights and provide more information to creditors succeed in inducing more SME lending overall or more long-term lending to SMEs.

Fourth, state-owned banks in MENA still play an important role in providing finance to SMEs, with an average share of SME lending which is similar to that of private banks. This reflects largely the gaps in SME finance in the region and their mandates in this area. The generally weak quality of financial infrastructure in MENA is probably one of the main reasons why private banks have not engaged more in SME finance in several countries, although many private banks are making inroads in this area, suggesting that these banks have better SME strategies and lending technologies.

Fifth, state banks seem to be taking greater risks than private banks in their SME lending business. They are less selective in their strategies to target SMEs, have a lower ratio of collateralized loans to SMEs, and a higher share of investment lending in total SME lending. At the same time, they also seem to have less developed SME lending technologies and risk management systems. A lower share of state banks has dedicated SME units, makes use of credit scoring, and conducts stress tests.

Sixth, several MENA countries have introduced special interventions to induce banks to lend more to SMEs. In addition to the use of state banks, special programs have included exemptions on reserve requirements, credit subsidies and partial credit guarantee schemes. Guarantee schemes have proved particularly popular and are in operation in ten MENA countries. The paper provides some evidence that these schemes have contributed to more SME lending, although it is difficult to evaluate the extent to which these schemes are cost-effective.

While state banks and other interventions such as guarantee schemes may have a played an important role in providing finance to SMEs in an environment where financial infrastructure remains weak, the results also allow for the identification of MENA's policy agenda in the area of SME finance. Strengthening credit information systems and creditor rights should remain the priority item in the legal/regulatory agenda. Credit guarantee schemes may play an important role, but it is essential to ensure that these schemes are well-designed and cost-effective. Finally, avoiding overly restrictive entry requirements and allowing the entry of international and regional banks showing leadership in SME finance can improve competition and produce positive direct and indirect effects in the market for SME lending.

The rest of the paper is structured as follows. The second section provides an overview of the two previous SME banking surveys and their main results. The third section reviews how the MENA survey was designed and implemented. The fourth section discusses the overall survey results. This includes the actual and target bank lending to SMEs, the main strategic approaches adopted by MENA banks in dealing with SMEs, the main products offered, and the risk management techniques employed. The fifth section presents a preliminary econometric analysis of the dataset built from the survey results and other sources. Finally, the sixth section concludes and identifies the key policy implications.

2. Overview of Previous Surveys

As mentioned before, two World Bank surveys were conducted in recent years as part of an effort to investigate the status of bank lending to SMEs. These surveys share some important common elements, but also have important differences. Both surveys provide some measurement of SME lending, investigate the main drivers and obstacles to further SME lending, the main business models developed and the main risk management techniques adopted, but with different emphasis on each of these components. The two surveys are also based on very different samples, regarding their size, the types of bank surveyed, and the regional coverage.

The first survey covered 91 large banks in 45 countries and provided the basis for two separate studies – Beck, Demirguc-Kunt and Martinez Peria (2008 and 2009). The first study provides an overall assessment of the survey results while the second provides an econometric analysis of the dataset. This survey included a quantitative component, allowing the authors to obtain measures of the share of SME loans in total loans, the share of investment loans in SME loans, percentages of applications approved, and loan fees and interest rates. Besides comparing SME lending in developed and developing countries, and investigating drivers and obstacles, the two studies also made comparisons between government, private, and foreign banks.

In the first study, Beck, Demirguc-Kunt and Martinez Peria (2008) report that the average share of SME lending is smaller in developing countries (16 percent of total lending) by comparison with the average share in developed countries (22 percent of total lending). Banks in developing and developed countries are primarily attracted by the potential profitability of the SME sector and serve SMEs primarily through dedicated SME units. Government programs are considered favorable and prudential regulations are not perceived as burdensome. Scoring models are used by most banks but they are just one of the inputs in loan decision. Banks in developing countries report that macroeconomic instability is the main obstacle to SME lending, rather than flaws in the legal and contractual framework. However, the second study (Beck, Demirguc-Kunt and Martinez Peria, 2009), based on the statistical analysis of the dataset concludes that the differences in SME lending between developing and developed countries are actually explained by differences in the quality of the legal and contractual environment (weaker in developing countries). Overall, their analysis suggests that the enabling environment is more important than firm size or bank ownership in shaping bank financing to SMEs.

The study by de la Torre, Martinez Peria and Schmukler (2009) relies primarily on on-site interviews with 37 banks in Argentina, Chile, Colombia and Serbia. The survey did not focus on measuring SME lending, but included 92 questions covering the strategic approach to SME lending, business models, and risk management. The authors complement the information from the interviews with a survey by the International Finance Corporation (IFC) across 8 developed and developing countries and annual surveys undertaken by FRS (Inmark Group) in 7 countries. All in all, data from 48 banks and one leasing company in 12 countries was used in the analysis.

This study investigates to what extent the conventional wisdom on SME lending holds in practice – the conventional view is that large banks are not attracted to SME lending and that the SME business is dominated by small banks and based on relationship lending. Their results show that the conventional view is not prevalent in practice. Like the study by Beck, Demirguc-Kunt and Martinez Peria (2008), they find that the SME segment is perceived to be profitable and that most banks are interested in serving SMEs, including large and foreign banks. Almost all the banks in the sample have separate SME units and offer a wide range of products and services. In addition to relationship lending, banks apply different transactional technologies such as credit scoring, risk-rating tools, and special products such as leasing and factoring. There are significant differences across banks and countries regarding the use of particular techniques, but these technologies allow banks to compensate for weaknesses in the enabling environment. Interestingly, the use of government supported programs is reported to be low.

3. The MENA Survey

Our survey (henceforth the MENA survey) was developed and conducted jointly with the Union of Arab Banks (UAB), which is the regional association of all banking associations in the region and has a membership of about 330 banks. The MENA survey has 50 questions distributed into four broad sections. Like the two previous surveys, we included qualitative questions in three broad areas: the strategic approach to SME lending, the main products offered to SMEs, and the risk management techniques employed. Moreover, like the survey by Beck, Demirguc-Kunt and Peria (2008), we also included a fourth and quantitative section designed to measure the extent of SME lending, the share of investment loans in total SME loans, and other variables.

Many questions in the MENA survey were directly drawn from the two previous surveys, allowing for comparisons of some of the main results. At the same time, the MENA survey has new questions, designed to cover topics that were not covered in the previous surveys, but that are important for MENA, or designed to provide granularity on some of the obstacles to SME lending. For example, the MENA survey has included a new question on long-run targets for SME lending that allows us to assess the additional room for SME finance by each country. The survey also provides more granularity on some of the problems with financial infrastructure such as creditor rights (an area where the MENA region fares very poorly), asks questions on gender and Islamic finance, and finally includes some questions on the status of Basel II implementation, because of its potential effects on SME finance.

The first version of the MENA survey was tested in a pilot set of interviews with 6 banks in 2 countries – Morocco and Egypt. The results of these interviews provided important insights for the final revisions. The UAB and World Bank teams finalized the revisions and launched the survey in December 2009. The survey was sent in English, French, and Arabic. The UAB also played a fundamental role in the follow-up phase (January-May 2010), through constant communication with member banks, collecting responses, checking for inconsistencies, and frequently requesting revisions. The final response rate was high – slightly less than half of the universe, due largely to the active follow-up of UAB staff in headquarters and regional offices.

Table 1 reports the number of banks and countries from MENA that responded to our survey along with their market share. We obtained responses from a total of 139 banks in 16 countries. On average the banks that responded account for 64% of the banking system loans. Among the 16 countries in our sample, 6 are from the GCC and remaining 10 are from outside the GCC. The 57 GCC banks account for 74% of loans in GCC banking systems, while the 82 non-GCC banks account for 58% of non-GCC banking system loans. The sample includes 29 state banks and 110 private banks. Out of the private banks, 76 are domestic banks and 34 are foreign banks. However, foreign banks are usually subsidiaries of a parent bank domiciled in a MENA country. There are very few subsidiaries of international banks domiciled outside the region. This implies that it is difficult to assess differences in the behavior of foreign and domestic banks, as most foreign banks in the sample are part of a MENA regional group that shares the same strategies and lending technologies among its subsidiaries. Therefore, in the paper we explore more the differences between GCC and non-GCC banks, as well as the differences between state and private banks, rather than the differences between foreign and domestic banks.

The survey does not ask the banks to use a predetermined classification of SMEs, because this would have generated technical difficulties and could have resulted in a very low response. In line with other surveys, banks were asked to provide their own definitions for SMEs, in terms of employees and turnover. As shown in Table 2, the average minimum number of employees defining a small firm is 3 in the GCC and 4 in the non-GCC countries. The average maximum number of employees defining a small firm in the GCC and non-GCC is 24 and 17 employees respectively, while the average maximum number of employees defining a medium firm is 90 for the GCC and 58 for the non-GCC countries. These average thresholds adopted by the banks are much smaller than those adopted in the EU.

The same is true for turnover, which is the measure used by most banks to classify their SMEs. As shown in Table 2, the average minimum turnover for defining a small enterprise in the non-GCC is US$61,000, a small number by comparison with the EU's threshold of US$2.9 million. Likewise, the maximum turnover for defining a medium enterprise in the non-GCC region is US$4.7 million, a small number by comparison with the EU's US$70 million. However, it is also noticeable that when turnover thresholds are divided by per capita income the differences vis-à-vis the EU are much smaller. This is not surprising, and reveals that MENA banks are adapting their definitions of SMEs to the reality of their markets, which generally comprise much smaller firms operating with fewer employees. That being said, it is also true that there are still differences in the definitions of SMEs across banks and countries, and therefore, there is always some measurement error that must be taken into account when comparing results.

4. Main Survey Results

4.1. Overall Extent of SME Lending in MENA

The average share of SME lending in MENA is low – less than 8 percent of total lending – but there are significant differences between the two main sub-regions and individual countries, as shown in Table 3 and Figures 2a and 3a. The average share of SME lending in the GCC is only 2 percent, while the share of SME lending in the non-GCC region is 13 percent. This is a significantly higher figure, although still lower than those reported by Beck, Demirguc-Kunt and Martinez Peria (2008), for both developing and developed countries, and also lower than the average share of five OECD countries (OECD 2010), as shown in Table 4.

It is noticeable that the average share of SME lending is consistently low across all GCC countries, while there is more variation among non-GCC countries. The low share of SME lending in the GCC reflects to a large extent the structure of oil-based economies – less diversified, dominated by very large enterprises, and characterized by appreciated exchange rates and small non-oil traded sectors. These factors imply a more narrow space for SMEs to flourish, especially in non-oil sectors producing traded goods. Moreover, GCC countries tend to have small populations, and the nationals tend to find attractive positions in the public sector, which may also discourage risk-taking in the SME sector. By contrast, in the non-GCC countries there is probably scope for more SME growth across a wider range of economic sectors, including traded sectors, and also as part of supply chains linked to large enterprises.

In the case of non-GCC countries, three sub-groups can be identified: a first group with SME lending below 10% of total lending (Syria, Egypt), an intermediate group with SME lending between 10%-15% of total lending (Palestine, Jordan), and a third group with SME loans between 15%-24% of total loans (Tunisia, Lebanon, Yemen, and Morocco). There could be an element of error in country comparisons, related to different definitions of SMEs adopted by the banks. However, Figure 3b indicates that there is broad consistency between the results of enterprise surveys and the results of this survey (the comparison is only made where both survey results are available). The countries with the highest shares of enterprises with a loan tend to be the countries with the highest share of SME loans in total loans – Morocco, Lebanon, and Yemen, while the countries with the lowest shares of enterprises with a loan tend to also have small shares of SME loans – Syria, Egypt, and the Palestine (the correlation between the two variables is 0.54, and the ranking correlation is 0.68). Therefore, despite the different

methodologies, there is broad consistency between the results of the enterprise surveys and the MENA survey.[3]

There seems to be significant scope for further SME lending in MENA, as shown by the large differences between the long-run targets and the actual shares of SME lending reported by the banks (Table 3 and Figure 2a). This is true in both the GCC and the non-GCC regions, although targets are significantly lower in the GCC (about 12% of total lending), revealing that the banks themselves have concluded that there are "natural" limits to profitable SME lending in oil-based economies. In the case of non-GCC countries, the long-run target is much higher and around 27% of total lending. It is interesting to note that this target is very similar to the actual share of SME lending in developed economies. This could be more than a coincidence, and reflect expectations by the banks that the enabling environment and market conditions in MENA will eventually converge to those already prevailing in developed countries, creating the conditions for further and profitable SME lending.

State banks play an important role in SME lending in several MENA countries, as indicated by an average share of SME loans of 9% of total lending. This share is very close to the average share of private banks (Table 5 and Figure 2b). The long-run targets for SME lending for State and private banks are also similar. Moreover, while the differences between the average shares of SME loans in GCC and non-GCC countries are large and statistically significant, the differences between state and private banks are not statistically significant, as shown in Table 5. The important role played by state banks could reflect their mandates to fill a gap in SME lending, especially where the enabling environment remains weak and the private banks are still reluctant to take more risk, despite the potential profitability of the SME business. This result will be further explored below.

In addition to having a larger SME portfolio overall, non-GCC banks also extend a larger share of investment loans than GCC banks. As shown in Table 5, the differences are statistically significant, whether the averages are weighted or unweighted. It is also noticeable that State banks have a larger share of investment loans in their SME loan portfolios, although the difference between the two averages is not statistically significant (this result is revisited in section 5). Finally, there are no significant differences between foreign and private domestic banks in our sample. As mentioned before, this is not surprising, as most banks classified as foreign banks in our sample are in fact part of a regional group that shares the same strategy and lending technologies across the mother bank and the subsidiaries and branches.

The analysis of frequency distributions at the individual bank level sheds further light on the patterns of SME lending in MENA. As shown in Figures 4a-4b, all the distributions are positively and strongly skewed, with a high concentration of institutions with small shares. In the case of the GCC, some banks maintain shares of SME loans above 5% of total loans, but the maximum share is 10%, still a low number by international comparison. In the non-GCC, a large number of banks also operate with low shares, although there is also a sizable group of

[3] Since the first draft of this paper was released, the authors have made further efforts to confirm and validate the numbers. This has resulted in some adjustments of country averages, especially for Morocco, whose average of SME lending in total lending declined from 33 percent to 24 percent.

banks that seem very engaged in SME lending, with shares of SME loans around one third of total loans. A similar pattern is observed in the case of private banks. Most institutions operate with low shares, but there is a sizable group that seems more engaged in the SME business. By contrast, the distribution of SME lending among state banks is more uneven.

The clustering of banks operating with low shares of SME lending could reflect a set of common obstacles such as weak financial infrastructure. The banks in the intermediate range of the distribution could be operating in countries with better enabling environments, or could be doing relationship lending with a large branch network, or could still be leading banks with more advanced SME lending technologies. These questions will be pursued further in section 5.

4.2. Strategic Approach to SME Banking

In line with other surveys, most banks in MENA are already engaged in the SME sector, despite the low share of lending in many of these banks. As shown in Figure 5a, about 87 percent of banks in the GCC already have SMEs as clients, and the same percentage already has a separate unit to manage the SME business. The percentage of non-GCC banks that already has SMEs as clients is even higher at 96 percent, as shown in Figure 5a. This is expected, given the relatively higher importance of SMEs in non-GCC economies, and the higher average share of SME lending among non-GCC banks. What seems surprising is the lower share of non-GCC banks with a dedicated SME unit.

The lower share of non-GCC banks with dedicated SME units reflects to some extent the relatively low share of state banks with these units (most state banks are in the non-GCC countries). As shown in Figure 5b, although state banks are also very engaged in the SME business, only 56 percent have already set up a separate SME unit, while in the case of private banks this figure is significantly higher at 74 percent. All in all, these figures indicate that many private banks are committed to SME lending and willing to allocate internal resources to develop the SME business and reach their long-run targets for SME lending. Even in the GCC, where SME lending plays a comparatively less important role, most banks have already a dedicated SME unit presumably created to reach the proposed targets.

There are a number of common factors driving banks to engage with SMEs across regions and ownership structures. In line with the previous surveys, the most important factor mentioned by both GCC and non-GCC banks is the perceived profitability of the SME segment (Figure 6a).[4] Other important and inter-related factors include the saturation of the market for large corporates and the need to diversify the loan portfolio. The prospects of generating business through cross-selling are rated as important or very important by a large share of GCC and non-GCC banks alike. Interestingly, government programs are rated as relatively less important, especially in the GCC. Government programs are generally more important among non-GCC banks, although a closer look at the questionnaire reveals significant differences across non-GCC countries.

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[4] In this question the banks were asked to provide an answer following a four-point scoring scale: not important, marginally important, important, and very important. The two highest scores are reported. The same format was used for other questions in the survey.

A large share of state banks is also attracted to the SME business due to the perceived profitability of the sector (Figure 6b), but the share is somewhat lower than the one for private banks. Interestingly, supply chain links and cross selling do not seem to be important drivers for state banks. These responses could reflect the broad policy mandates imposed on state banks to serve the SME sector, or the lower level of development of SME strategies in these banks, possibly also related to the absence of an SME unit in several of these banks.

Regarding the obstacles to SME lending, the responses in the MENA survey were more clear and consistent than those in the two previous surveys conducted in Latin America and worldwide. As shown in Figures 7a and 7b, MENA banks complain primarily about SME opacity and about the weak financial infrastructure (lack of reliable collateral, weak credit information systems, and weak creditor rights). They complain much less about restrictive regulations (e.g. interest rate controls), excessive competition in the SME segment, or weak demand for loans from SMEs. This pattern is consistently observed in both GCC and non-GCC banks, and also between state and private banks. Interestingly, however, a larger share of state banks indicated that their own internal technical weaknesses constitute an obstacle to SME lending.

The contrast with the two previous surveys is striking. In the Latin American survey (de la Torre, Martinez Peria, and Schmukler (2010)), banks indicated many types of obstacles, including macroeconomic factors, regulations, and excessive competition in the SME business, and the patterns were not consistent across countries. For example, the legal and contractual environment was identified as an important obstacle in only two countries. In the survey conducted by Beck, Demirguc-Kunt and Martinez Peria (2008), macroeconomic factors and competition in the SME segment were also identified as the major obstacles, not the legal and contractual environment. The greater concern expressed by MENA banks about the quality of financial infrastructure is not surprising, considering that the region fares very poorly in this area. As shown in Table 6, the region has the lowest legal rights index among all the regions. Moreover, while the credit information index has improved in recent years, but the coverage of credit reporting systems is still very limited.[5]

In order to obtain more detailed information on the weaknesses of collateral regimes in MENA – an area where the region fares very poorly – the survey included questions on the problems faced by banks on the different elements of the secured lending chain – especially the registration, enforcement, and final sale of the seized collateral. Moreover, the questions were broken down by fixed and movable collateral. The answers are reported in Figures 8a-8b and 8c-8d, for GCC and non-GCC countries and for state and private banks.

As shown in Figures 8a-8d, there are significant problems in the registration, enforcement, and selling of collateral, especially movable collateral. While a relative low share of banks reports serious problems with the registration of fixed collateral, a high share of banks reports that registries of movables remain very deficient. Enforcement of collateral is an even bigger problem, especially for movables, but also for fixed collateral in the case of non-GCC banks. Finally, an even larger share of banks reports problems in selling the seized collateral. Again,

[5] Maddedu (2010) provides a detailed analysis of the quality of credit information systems in MENA, while Alvarez de la Campa (2010) and Uttamchandani (2010) examine the effectiveness of collateral and insolvency regimes.

this is true for both GCC and non-GCC banks, and applies both to fixed and movable collateral. The same pattern of responses applies to state and private banks, although it is also noticeable that a larger share of state banks complains about the collateral regime than private banks. These responses reveal that creditors perceive high risks in SME lending that can only be partially offset through greater reliance on relationship lending, or through the use of other lending techniques such as leasing and factoring, or even through access to a guarantee scheme.

4.3. SME Products

As shown in Figure 9a, almost all the banks that responded to the survey offer loans to SMEs, with deposit and cash management accounts, trade finance, and payments and transfers following closely behind as the most widely offered SME finance products. More than 85 percent of banks in both regions reported offering each of these services, which confirms that SME finance is much broader than SME lending, despite the tendency in literature to often equate the two. Actual SME uptake of these services is likely to be higher for current accounts and payments – which are used for daily transactions - than for loans and trade finance.

Only 76 percent of state banks offered payments and transfers, or trade finance, which was markedly lower than for private banks at 88 percent and 94 percent respectively, and may reflect a relative emphasis on more conventional SME lending (Figure 9b). At the other end of the spectrum, services that are least widely offered are insurance (19 percent of GCC banks, 34 percent of non-GCC banks), and leasing (31 percent in GCC, 27 percent in non-GCC), and these are typically offered through wholly-owned subsidiaries. A larger share of private banks offers insurance and leasing products than state banks, but the differences are not very large.

It is perhaps surprising that neither leasing (a form of asset financing) or factoring (a form of supply chain financing) are more developed among MENA banks, as these technologies seem to offer a solution to weaknesses in legal and contractual regimes.[6] However, while leasing and factoring are in principle well suited to countries with weak collateral regimes, in practice weak protection of ownership rights and contract enforcement dilute or even eliminate their supposed advantages. The low presence of banks in leasing can be explained in many MENA countries by the lack of clarity in the legal framework for leasing, including leasing definition, balance in responsibilities between lessor and lessee, regulations for different forms of leasing, a cumbersome process for registering leased assets, weak asset repossession processes, and unfavorable tax treatment.[7] Follow-up interviews with some MENA banks also revealed difficulties in disposing of the repossessed assets in thin secondary markets.

An analysis of distribution channels used by banks to service SMEs points to the importance of branches offering services tailored to SME needs, which may reflect the continuing importance of 'relationship banking' (Figures 10a-10b). 'Limited service branches' including dedicated SME business center branches are widely used distribution channels. Private banks are the largest users of limited service branches (94 percent), and place less reliance on full service

[6] This view is commonly expressed in the SME Finance literature. See e.g., Berger and Udell (2006), De la Torre, Martinez Peria, and Schmukler (2010).
[7] See Al-Sugheyer and Sultanov (2010).

branches (39 percent for private banks, 56 percent for state banks). This suggests a greater emphasis by private banks on cost efficiency, and perhaps also that state banks may benefit from a legacy of more extensive branch networks. ATMs are important, but mobile branches are not widely used for SME financing, although points of sale (POS) are widely used by GCC banks (58 percent) for services such as payments, transfers, and potentially also withdrawals and deposits. The low use of mobile branches and agents may reflect a lack of emphasis on serving rural SMEs, or restrictive regulations on the use of agents to offer banking services, although it may also suggest that a minimum level of bank staff is required to adequately meet SME needs.

GCC banks are much more active in Islamic Finance than non-GCC banks, with 59 percent of GCC banks offering Shariah-compliant products, as versus 30 percent of non-GCC banks (Figure 11a). A further 32 percent of GCC banks plan to offer Islamic products in the next 12 months, and 26 percent of non-GCC banks. This implies that up to 91 percent of GCC banks are or will be engaged in Islamic finance, and over half (56 percent) of non-GCC banks. State banks seem more engaged in Islamic finance than private banks, although by a narrow margin. All banks offering Shariah-compliant products offer Murabaha (cost plus) financing, which is more typically used for working capital. Ijara, which is similar to leasing, is the next most prevalent for GCC, private and state banks. Islamic finance seems to be an area of increasing involvement for both GCC and non-GCC banks.

A very low share of banks run programs targeted at female-owned businesses. As shown in Figure 12a, only 13 percent of GCC banks maintained this type of program, and the figure in the non-GCC was not much higher (22 percent). Interestingly, state banks seem more proactive than private banks in this area, as shown in Figure 12b. It is also noticeable that only 22 percent of loan officers of GCC banks are women (35 percent for non-GCC banks). This is despite the additional access to finance constraints that women can face, and the fact that in some MENA countries only female loan officers can deal with female clients, particularly for site visits.

Finally, a very low share of banks reported that female loan officers are better at managing risk and ensuring client repayment – only 10 percent of GCC banks and 19 percent of non-GCC banks reported that the percentage of defaulted loans was lower for female loan officers. The great majority of respondents indicated that there were no significant differences in loan performance, while a few reported that male officers performed better. This seems in contrast with research showing that the default probability for female loan officers can be as much as 4.5 percent lower than for their male counterparts.[8]

4.4. Risk Management

A large share of GCC banks perceives SMEs as riskier than large corporates and housing loans, as shown in Figure 13a. This result is consistent with the low share of SME loans in the loan portfolio of GCC banks, and with the large share of GCC banks that have set up SME units to develop the SME business while managing the perceived high risks. SMEs are also perceived to be risky by non-GCC banks, but not nearly to the same degree. Intriguingly, a larger share of state banks perceive SMEs as riskier than large corporates, relative to private banks (Figure 13b),

[8] Beck, Behr, and Guttler (2009).

but this perception does not prevent them from engaging in the SME business, possibly reflecting their mandates to fill the SME financing gap, regardless of the associated risks.

GCC banks seem to adopt stricter selection criteria for engaging in SME lending, relative to non-GCC banks. As shown in Figure 14a, in selecting potential SMEs, a larger share of GCC banks considers specific factors such as the growth prospects of specific SME sectors, the size of their exposure to these sectors, and the existing clientele. The apparently stricter selection criteria adopted by GCC banks is consistent with the higher perception of risk in the SME business among these banks, and with the smaller volumes of SME lending as well. Interestingly, GCC banks do not target exporting SMEs, a result which can be explained by the limited number of exporting SMEs in oil economies (Figure 15c).

At the same time, the apparently lesser relevance of selection criteria among non-GCC banks disguises large differences between state and private banks. As shown in Figure 14b, a much lower share of state banks adopts selection criteria to identify and screen their clients and build up their SME portfolios than private banks. This again probably reflects the broad mandates of state banks to fill the SME financing gap and serve the SME sector.

Less than half of GCC and non-GCC banks have developed internal scoring models to assess the risk of current and prospective clients (Figure 15a). An even smaller share makes use of external scoring. Since most public registries and private credit bureaus still do not provide scoring models, the respondent banks are referring to models developed by external consulting firms, frequently non-customized models. Almost all the banks are making an effort to develop internal rating systems, combining credit scores of the owner with other information from the SME, both qualitative and quantitative. It is noticeable that very few banks use automated application processing. This result reflects to some extent the weak state of development of credit reporting systems in MENA, and the limited reliance on the quality of internal credit scores. However, the other two surveys also reported that internal scoring is only one element in the lending decision, suggesting that many banks in other developing countries are struggling with similar challenges.

At the same time, the average results reported by non-GCC banks disguise significant differences between state and private banks. As shown in Figure 15b, a significantly lower share of state banks has developed internal credit scores or internal ratings systems, and a very low share has adopted automated application processing, again revealing that these banks have not developed their SME lending technologies and risk management systems as much as the private banks.

A very low share of GCC banks informs their SME clients about the factors driving their internal score or ratings, as shown in Figure 16a. The same is true for state banks, as shown in Figure 16b. In the case of state banks, this result is probably associated with the low development and use of credit scores. In any case, these are not welcome findings, as they reveal missed opportunities to increase awareness among SMEs of their weaknesses and encourage improvements in performance.[9] A much larger share of non-GCC and private banks informs

[9] Ayadi (2005).

their SME clients about the factors driving their scores/ratings, but there is clearly scope for further improvements here as well.

MENA banks conduct stress tests to assess their exposures to large losses, but by very different degrees. As shown in Figure 17a, GCC banks seem particularly concerned with the slowdown of particular sectors, especially hydrocarbons and real estate and much less concerned with currency shocks. This is not surprising considering that these banks operate in highly concentrated oil economies with abundant foreign reserves. By contrast, non-GCC banks are more concerned with currency and commodity price shocks, reflecting their higher vulnerabilities in these areas. However, the most striking finding is the large differences between state and private banks (17b). In general, a much lower share of state banks conducts regular stress tests than private banks, despite their mandates and the associate risks that they take, including the risks in the SME lending business.

A large share of GCC banks imposes higher collateral requirements on SMEs, relative to large corporates, as shown in Figure 18a. This again reflects the higher perception of risk in the SME business among GCC banks. When asked about the reasons for the higher collateral, a large share of GCC banks indicated that the lack of stability, competent management, and difficulties to evaluate SMEs were very important reasons (see the upper part of the bars in Figure 18b). By contrast, less than half of non-GCC banks impose higher collateral on SMEs. The reasons for the higher collateral are the same but the relative importance is generally lower.

Again, the average responses reported by non-GCC banks disguise important differences between state and private banks. As shown in Figure 18c, it is noteworthy that only 45 percent of state banks impose higher collateral requirements on SMEs, a small share by comparison with that of private banks – 64 percent. This difference holds despite the fact that a large share of state banks complains about the lack of SME stability and the difficulty to evaluate SMEs. This result again reveals that state banks are willing to take higher risks and be exposed to larger losses, relative to private banks, in order to fulfill their mandates.

Assessing the status of compliance with Basel 2 provides some information on a bank's capacity to manage risks in general, including the risks of the SME portfolio. It is also relevant for assessing the possible impact on SME lending, as banks can benefit from lower capital charges under certain conditions. As shown in Figure 19a, a large share of GCC banks has already made progress in adopting Basel 2. Most banks are adopting the standardized approach, which in principle should enable them to classify SMEs in the retail portfolio and get a lower capital charge. By contrast, one third of non-GCC banks have not yet adopted Basel 2, suggesting that they are generally behind in their capacity to manage risks.

The breakdown of the responses between state and private banks provides additional insights. As shown in Figure 20b, almost half of state banks have not yet adopted Basel 2, a much higher share than that reported by private banks. This suggests again that state banks in MENA have generally lagged behind in the development of their governance and risk management systems, despite the fact that these banks are fulfilling mandates and taking credit risk.

A large share of MENA banks indicates that the impact of the adoption of Basel II on SME lending will be either neutral or positive. As shown in Figures 20a-20b, this response was consistent across banks. These responses are also consistent with a study commissioned by the European Commission with the objective to assess the consequences of Basel II on the European economy with particular attention to SMEs – it concluded that the overall impact of Basel II would be positive for Europe's SMEs, despite possible variations across sectors, segments of SMEs, regions, and other dimensions.[10]

5. A Preliminary Analysis of the Dataset

This section provides an econometric analysis of the dataset to explore further the factors that contribute to SME lending in MENA. More specifically, we want to test further the differences between regions and ownership structures while controlling for other factors. We also want to examine whether large banks play an important role in SME finance (Berger and Udell, 2006; de la Torre et al., 2008 and Beck et al., 2009), and whether banks are engaged in relationship lending (Berger et al., 1995, 2001; Berger and Udell, 1996; Sengupta, 2007). Finally, we want to assess the impact of financial infrastructure and special interventions such as partial credit guarantee schemes on overall SME lending and the share of SME investment loans.

To examine these different hypotheses, we estimated the following regression model:

$$Y_{it} = \alpha_0 + \alpha_1 Loans_{it} + \alpha_2 GCC_{it} + \alpha_3 State_{it} + \alpha_4 Relation_{it} + \alpha_5 Cover_{it} + \alpha_6 Legal_{it} + \alpha_7 Guar_{it} + e_{it}$$

where i refers to the bank and t refers to time. The dependent variable Y stands for either SME loans as a percentage of total loans or investment loans as a percentage of SME loans. *Loans* refer to total volume of loans for a bank and controls for the size of the bank. *GCC* is a dummy that takes the value 1 if the bank operates in the GCC region and 0 otherwise. *State* is a dummy that equals 1 if the bank is state-owned and 0 otherwise.

Relation is a variable that controls either for number of branches for a bank or it depicts a dummy variable which takes a value 1 if bank has a separate unit for SME clients and 0 otherwise. We decided to use these two variables alternatively as proxies for relationship lending because the interviews with the banks revealed that in many cases the SME unit served simply as a focal point for relationship lending, including those units in small banks with few branches.

The role of SME units is an important issue that merits further clarification. Banks set up SME units to develop more articulated strategies of SME finance, but it is not clear that the presence of an SME unit by itself means that the bank has moved from relationship lending to transactional lending. Our survey indicates that about 90% of banks that have a separate SME unit also have some rating system, but these rating models seem to vary greatly in their use of hard statistical data, and the development of statistical models is generally limited by the weaknesses in credit information. Moreover, it is noteworthy that very few banks have adopted automated application processing, maybe the best evidence that transactional lending is not well

[10] Price, Waterhouse and Coopers (2004).

developed in MENA yet. Therefore, while many SME units seem to be developing more sophisticated lending techniques, in most cases they are still conducting relationship lending, although in a more effective way.

We also look at how the quality of financial infrastructure in a country affects SME lending. *Cover* is a variable that represents the volume of credit information provided to lenders by public credit registries or private credit bureaus. This variable is based on information from the World Bank's Doing Business Database and is defined by the highest coverage ratio of either the public registry or the private bureau.[11] The *Legal* variable measures the quality of the legal and contractual framework, and is represented by several alternative legal indicators from the World Bank's Doing Business database. We use: (i) the legal rights index that measures the degree to which collateral and bankruptcy laws protect the rights of lenders, (ii) the time to register a property, (iii) the time to enforce a contract and (iv) the time to close a business. All these indicators capture the strength of creditor rights and the risks of SME lending.

Finally, we look at the impact of a particular type of government intervention – partial credit guarantee schemes (PCGs). These schemes have become a popular tool to stimulate SME lending in many countries, and 10 MENA countries have already introduced such schemes.[12] *Guar* is a variable that measures the size of PCGs through the ratio of outstanding guarantees to GDP. Table 7 provides information on the stock of outstanding guarantees (in % of GDP) of MENA PCGs. Some schemes are still very young and have not yet accumulated a significant volume of guarantees.

Our analysis includes all the countries listed in Table 1 except for Libya (where we could not verify the data). Most banks reported information for at least two years in the 2007-2009 period, allowing us to build a panel of about 240 observations. The appendix tables provide descriptive statistics of the variables used in the regression, the correlation matrix and the definitions and sources of the variables.

For estimation we first use Ordinary Least Squares (OLS), where we relax the assumptions of independence and homoskedasticy and report two sets of standard errors: Huber/White robust standard errors and robust standard errors corrected for possible intra-bank correlation. We realize the potential endogeneity of the partial credit guarantee variable – the volume of outstanding guarantees reflects at least partly the demand for guarantees from banks lending to SMEs. Therefore, we also use Two State Least Squares (2SLS) and employ the lag of outstanding guarantees and the median statutory coverage ratios of the guarantee schemes as instrumental variables (IVs). The coverage ratio is the share of the loan which is guaranteed and is one of the key statutory rules of a guarantee scheme. Coverage ratios remained constant during the estimation period and it can be argued that they only affected SME lending through

[11] We also used the sum of coverage of credit registry and credit bureau and our results did not change significantly. We prefer to use the maximum coverage indicator, as the sum can result in significant double counting of coverage.
[12] Saadani, Arvai, and Rocha (2010) provide an assessment of PCGs in MENA. The IFC (2010) provides an overall assessment of policy interventions that have been introduced to induce more lending.

the operations of the guarantee scheme. These IVs seem reasonable and also satisfy the formal tests of instrument validity and relevance in most of the regressions.[13]

OLS results are reported in Tables 8.1 and 8.2, while 2SLS results are reported in Tables 8.3 and 8.4. In Tables 8.1 and 8.3, the share of SME loans in total loans is the dependent variable, while Tables 8.2 and 8.4 report the results for the share of investment loans in SME loans as the dependent variable. In all the tables we report separately the results for the number of branches or the presence of a dedicated SME unit as the measure of relationship lending. We also report separately the results for each of the four legal indicators.

Total loans have a negative and mostly significant coefficient for both OLS and 2SLS results (Tables 8.1 and 8.3). This shows that large banks are less engaged in SME lending, controlling for other factors. Tables 8.2 and 8.4 show that large banks are also less involved in long-term SME lending, although these results are not so robust as those in the previous regressions. Overall, these results are probably capturing the presence of large wholesale banks in the MENA region that are primarily engaged in project finance and do not target SMEs.

The GCC dummy coefficient is negative and significant in Tables 8.1 and 8.3, suggesting that the share of SME loans remains significantly lower among GCC banks after controlling for other factors, a result consistent with our earlier analysis. The same pattern holds for investment lending to SMEs. As shown in Tables 8.2 and 8.4, GCC banks are also less engaged in long-term SME lending relative to non-GCC banks.

The state dummy coefficient in Tables 8.1 and 8.3 is not statistically significant, indicating that there are no significant differences between state and private banks regarding overall SME lending. This result confirms our previous analysis that state banks remain important players in SME finance in the MENA region. Moreover, the results in Table 8.2 and 8.4 suggest that state banks do more investment lending than private banks – the coefficient of the state dummy is positive and mostly significant, even when the errors are clustered. We note that although the difference between the simple averages of the share of investment loans is not statistically significant (Table 5), it becomes significant when controlling for other factors. The result confirms that state banks are taking more risk in SME lending and compensating for the weaknesses in financial infrastructure, as discussed in the previous section.

Banks in the MENA region still seem to rely on relationship lending, possibly to compensate for the weak financial infrastructure. As shown in Tables 8.1 through 8.4, the coefficient of the branch variable is positive and significant in many regressions, especially where the share of investment loans in SME loans is the dependent variable. Interestingly, the reverse seems to happen with SME unit dummy. It is positive and significant in most regressions where the share of SME loans is the dependent variable, but not significant when the share of investment loans is the dependent variable. These results are not always uniform, but suggest that banks use relationship lending to overcome information asymmetries and the opaqueness of SMEs. As mentioned before, the survey does not allow us to identify the extent to which these SME units are relying on statistical models in their lending decisions. There is a movement in the direction

[13] We also tested the share of government ownership in the scheme as an instrument and obtained similar results.

of transactional lending, but we note again that power of these techniques is still limited by the poor quality of credit information in most MENA countries.

The coefficient of the variable measuring coverage of credit information is positive but generally not significant when the share of SME loans is the dependent variable (Tables 8.1 and 8.3). It performs slightly better when the share of investment loans is the dependent variable (Tables 8.2 and 8.4), but the results for this variable are rather disappointing, as MENA banks report the lack of good credit information as one of the major obstacles to further SME lending. It is possible that statistical testing within a MENA-only sample is hindered by the limited variability of coverage ratios in the region. As mentioned before, the region does not fare well in this area and most MENA countries report very low coverage ratios, especially the Non-GCC countries.

The four variables measuring the quality of the legal framework have the expected signs and are generally significant in Tables 8.1 and 8.3. Although MENA does not compare well with other regions in this area either, these results show that the countries that have made an effort to strengthen creditor rights have succeeded in increasing the share of SME lending. Interestingly, the legal variables are not significant when the share of SME investment loans is the dependent variable (Tables 8.2 and 8.4). This suggests that the legal framework affects the overall volume of SME lending but not its composition. In other words, a strong legal framework promotes SME lending overall by facilitating the recovery of the loan and/or the collateral, but may not have such a strong impact on the decision to extend the maturity of the loan.

Finally, the variable measuring the size of guarantee schemes is positive and significant in most OLS regressions reported in Tables 8.1 and 8.2. This implies that these schemes have contributed both to more SME lending and to a higher share of investment lending. Indeed, the countries which seem to have a larger share of SME lending in MENA – Morocco, Lebanon and Tunisia – also have larger guarantee schemes, as shown in Figure 3a and Table 7. Moreover, Tables 8.3 and 8.4 show that the credit guarantee variable remains generally positive and significant after correcting for endogeneity bias, especially when the total share of SME loans is the dependent variable.

These results suggest that guarantee schemes have contributed to SME lending in a period when MENA countries are still addressing their weaknesses in financial infrastructure. At the same time, it is also important to stress that these results do not necessarily imply that these guarantee schemes are cost-effective, additional, or promote good practice SME lending. For example, whether they are able to target and reach the maximum possible number of credit constrained SMEs with the volume of guarantees offered (cost-effectiveness), or whether banks use the PCG to extend loans to start-up or smaller SMEs (additionality). In this regard, Saadani, Arvai and Rocha (2010) provide a preliminary assessment of PCGs in MENA and argue that there is scope for design improvements leading to gains in outreach and additionality.

All in all, these results are consistent with the survey responses reported in the previous section. They are admittedly subject to a number of limitations, including possible measurement errors in the dependent variable (due to different definitions of SMEs adopted by the banks), the narrow variance of some of the right hand side variables, and also the limitations of some of the indicators used. The regressions explain only about one third of the variations in SME lending

across banks, indicating the existence of other important bank and country-level effects. For example, some individual banks have better strategies and lending technologies, and there are country-level effects and programs that are not easily measurable (e.g. interest subsidies, exemptions on reserve requirements). Even acknowledging these caveats, however, we believe that the results are insightful and help in initiating more research in this important area.

6. Summary of Findings and Policy Implications

This paper reports the results of a survey of SME lending with unusually high coverage of banks in the MENA region. The paper shows that the average SME loan portfolio in MENA is relatively small amounting to less than 8 percent of total loans. The survey also shows the wide differences in the scale of SME lending between GCC and non-GCC countries (much smaller in the former group), as well as the scope for further SME lending in both sets of countries, revealed by the large difference between the long-run targets and the actual lending levels.

State banks play an important role in SME lending in many MENA countries, to a large extent a compensatory role for the low private bank involvement in SME finance in these countries. Moreover, state banks seem to take more risk than private banks, as indicated by broader selection criteria, more exposure to term lending, and softer collateral requirements. However, they do not seem to have developed sufficient risk management capacity to manage these risks – a smaller share of state banks has introduced dedicated SME units, adopted internal scoring models, and conducted regular stress tests to monitor the risks related to SME lending.

Several MENA countries have introduced credit guarantee schemes, and there is some evidence that these schemes may have contributed to more SME lending. The countries with the largest shares of SME loans in the total loan portfolio are the ones with the largest schemes, and the statistical analysis of the dataset also suggests that credit guarantee schemes may have induced more SME lending, controlling for other factors. However, these results do not necessarily mean that MENA credit guarantee schemes are cost-effective, in the sense of reaching the maximum number of viable and credit-constrained SMEs within their overall guarantee envelope.

These and other policy interventions are in many countries compensating for weaknesses in financial infrastructure, including weaknesses in collateral and insolvency regimes, as well as deficiencies in credit information systems. These interventions may be well justified, but they should not be the main components of the architecture of SME finance in the MENA region.

Improving financial infrastructure should be the priority item in the policy agenda of MENA countries. MENA banks report that deficiencies in financial infrastructure are one of the major obstacles for further SME lending, and the statistical analysis of the dataset largely confirms this survey result. Improving financial infrastructure will entail expanding the range of movable assets that can be used as collateral, improving registries for movables, and improving enforcement and sales procedures for both fixed and movable assets. It also entails upgrading public credit registries, and more importantly, introducing private credit bureaus capable of significantly expanding coverage and the depth of credit information.

Competition policy can also contribute to further SME lending. The survey results suggest that there are private banks that have more effective lending technologies and that are able to generate and manage a significant SME portfolio, even within weak enabling environments. The entry of these banks into other MENA countries could contribute to more SME lending, both directly and through spillover effects. In this case, the policy implication is to ensure that entry requirements are not overly restrictive and that banking markets remain contestable. Moreover, the impact of the entry of foreign banks on SME lending can be magnified if there are credit registries/bureaus with good coverage and depth providing these new foreign banks access to substantive credit information on prospective SME borrowers.[14]

Governments play a critical role in promoting an enabling environment in which private banks can fulfill their SME finance targets prudently and responsibly. In the interim, state banks would be well advised to place a higher emphasis on risk management, so that the greater risks they are currently taking in extending SME finance arise from well informed decisions and are better monitored. Likewise, credit guarantee schemes can play an important role and can even be expanded in some countries, but most schemes can be improved in design and should start conducting comprehensive reviews that include evaluations of impact.

Lastly, it is important to recognize that the potential for SME finance is also a function of the structure of the economy and the size of the SME sector. In the case of non-GCC countries, there is huge potential for expanding SME finance, with large numbers of smaller enterprises underserved and low levels of bank competition to serve them. In the case of GCC countries, the size of the SME sector may remain more constrained by the nature of oil economies, but there is also scope for further SME finance, especially if access to finance is also expanded for resident non-nationals.

[14] Maddedu provides a review of credit reporting systems in MENA (2010). Azoategui, Martinez Peria, and Rocha (2010) provide an analysis of bank competition in MENA, showing that the region is generally less competitive than other regions, and also showing that bank competition indices are determined inter alia by entry regulations, and the quality of credit information.

Figure 1a
Share of Firms with a Loan/Line of Credit from Financial Institutions

Figure 1b
% of Firms with a Loan/Line of Credit from Financial Institution, MENA and other Regions

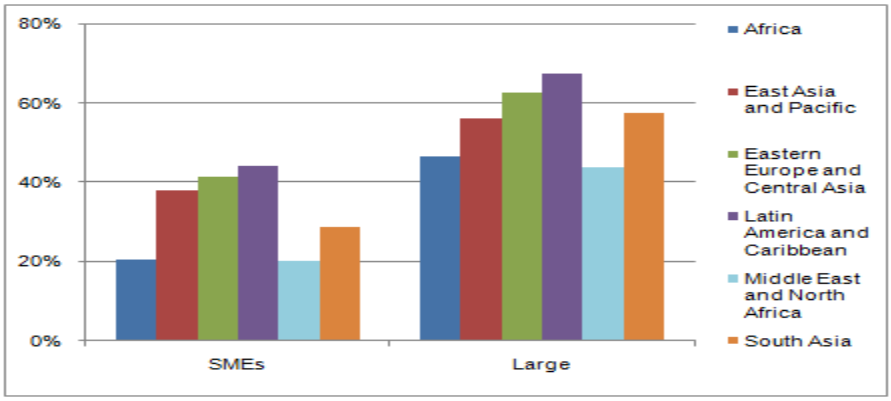
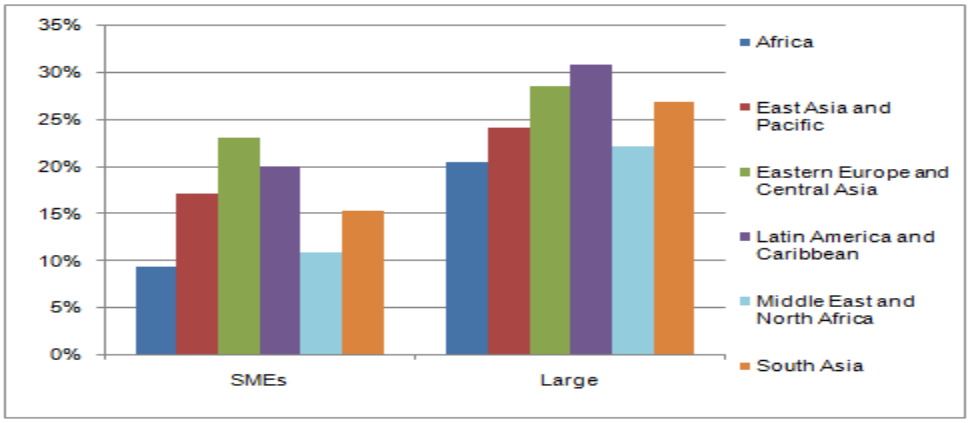
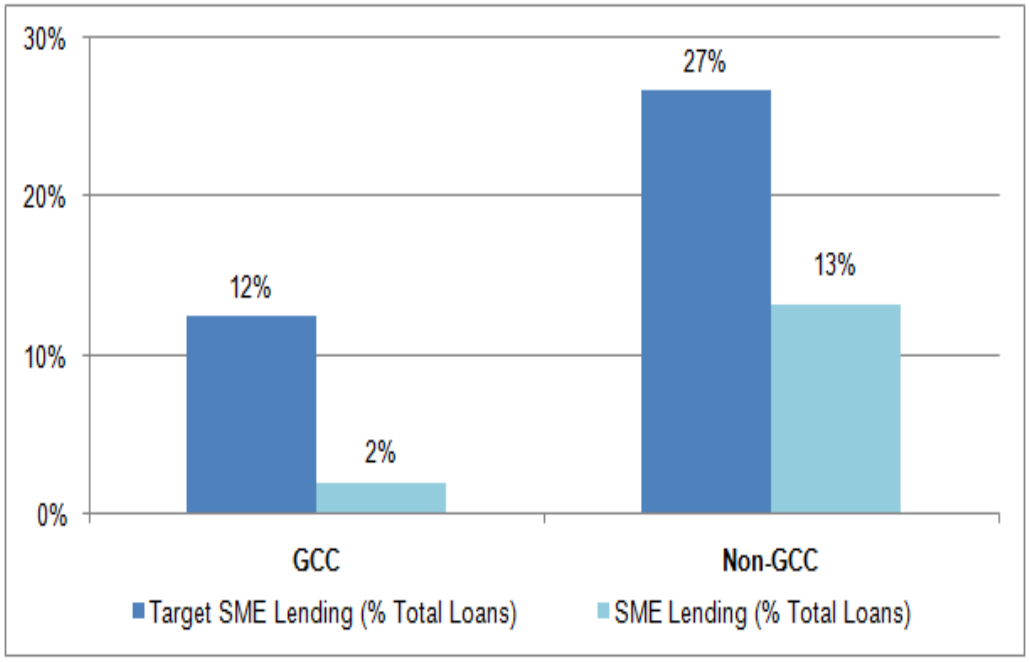


Figure 1c
% of Investment Finance by Bank Financing, MENA and other Regions



Source: World Bank Enterprise Surveys (2006-2009)

Figure 2a
SME Loans/Total Loans (%) and SME Lending Targets (%)*: GCC vs. Non-GCC



* Weighted by total loans.

Figure 2b
SME Loans/Total Loans (%) and SME Lending Targets: State vs. Private

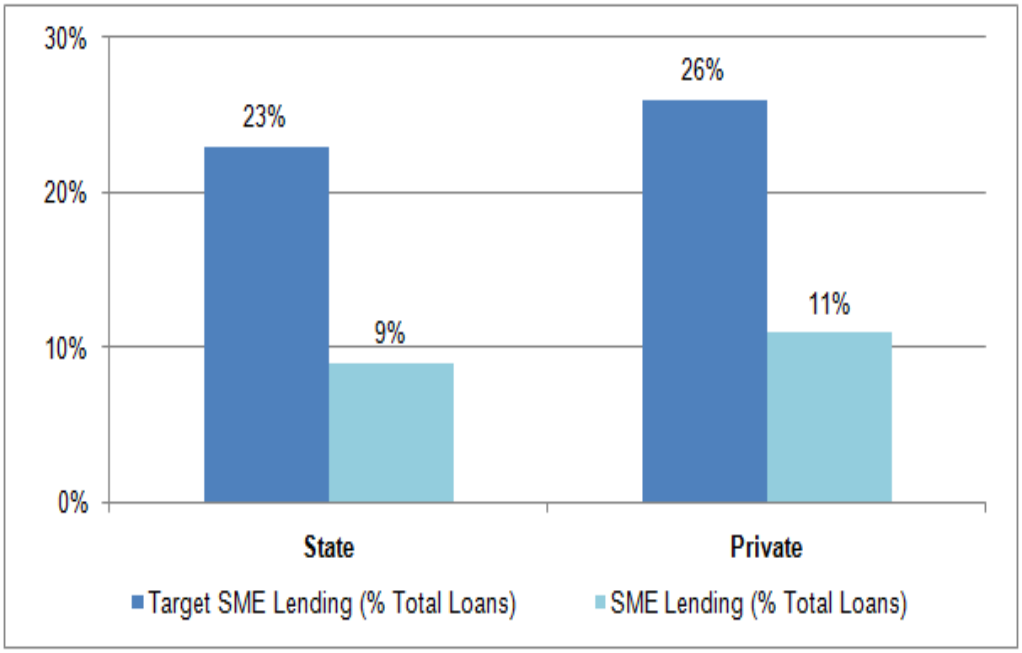
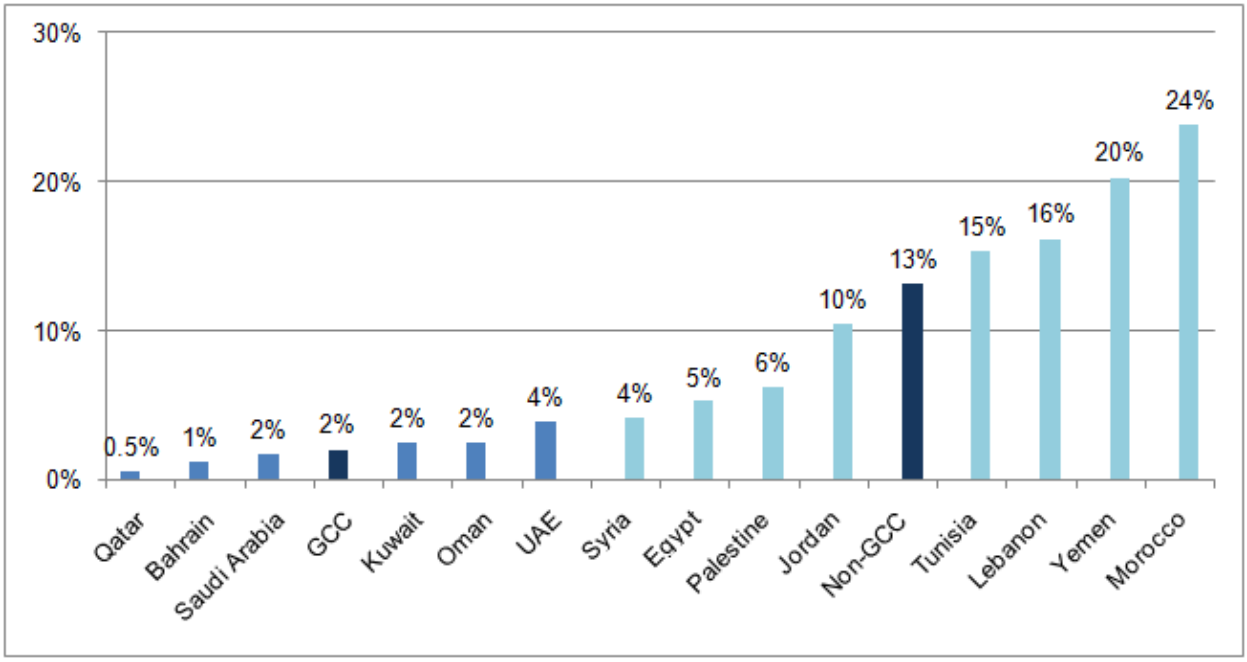
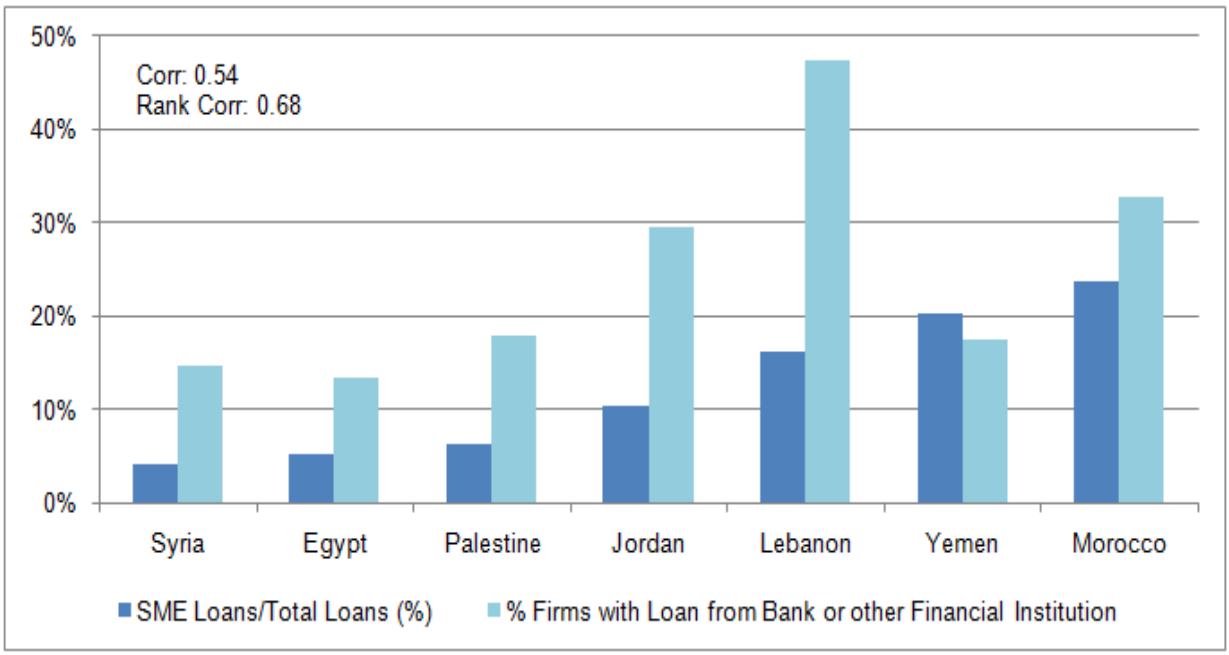


Figure 3a
SME Loans/Total Loans (%)*: MENA Countries



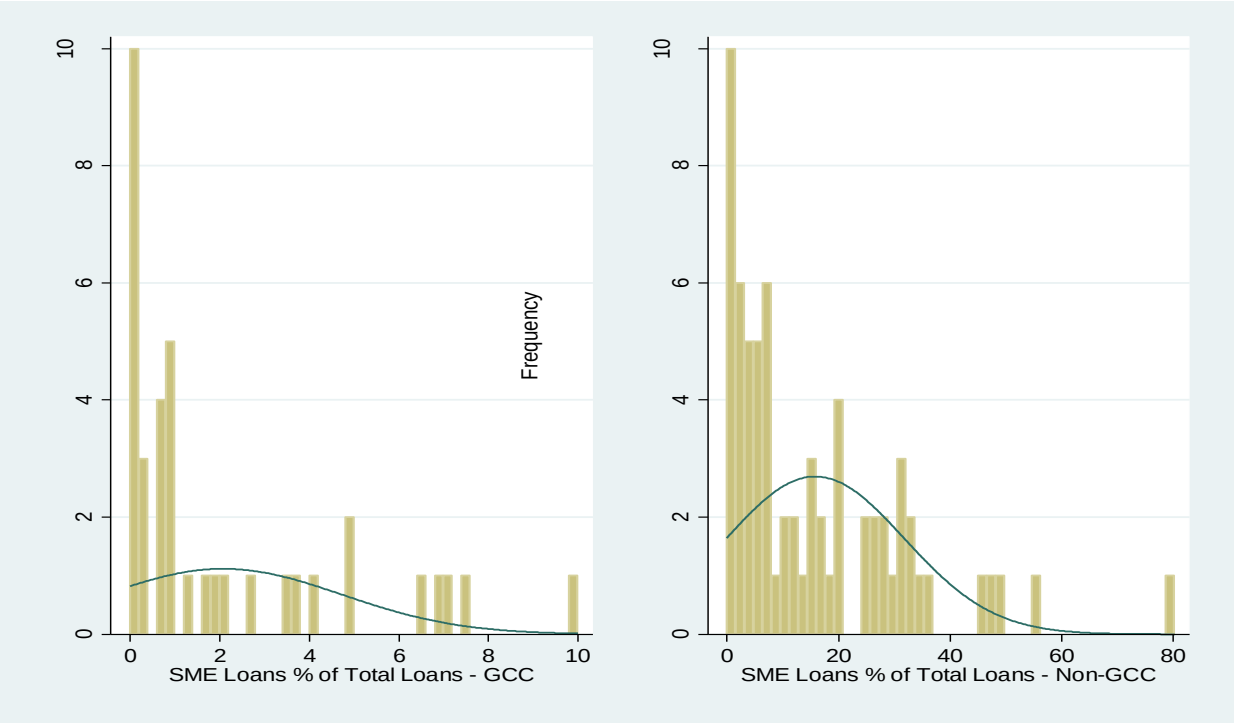
*Reported numbers are weighted averages and Non-GCC average includes Iraqi banks that were not reported in the graph as the coverage Iraq is not more than 30%.

Figure 3b
Comparison of Enterprise Surveys and SME Banking Survey



Source: ICA assessments, MENA SME survey.

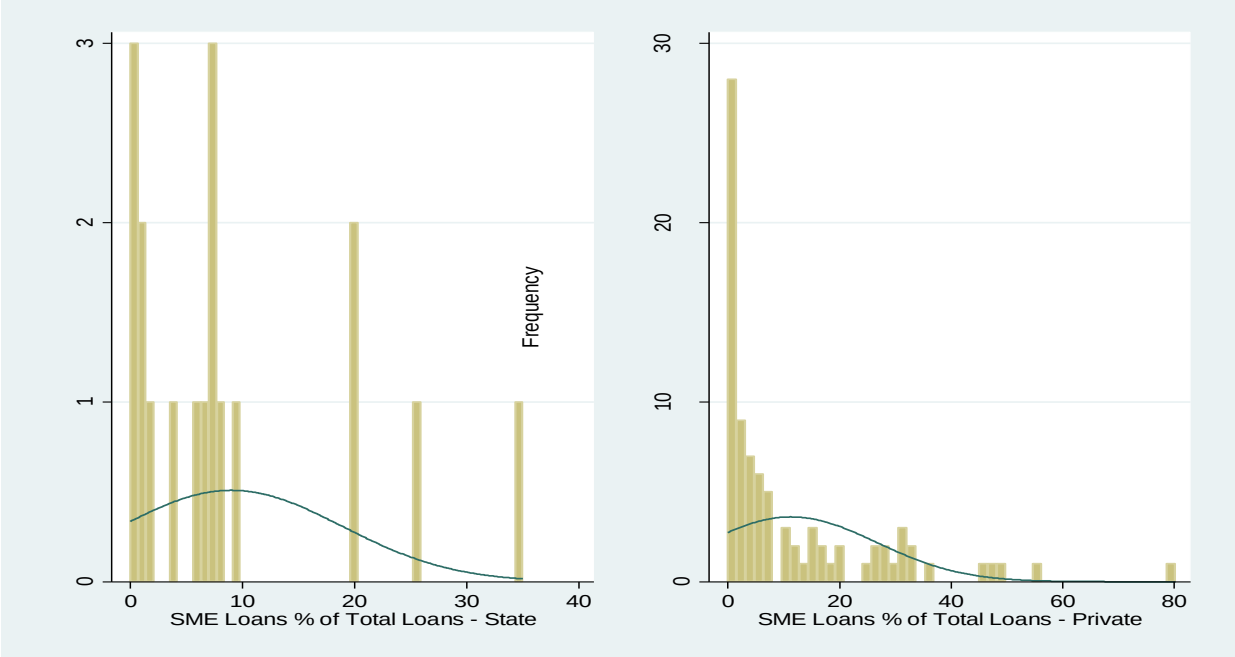
Figure 4a
SME Loans/Total Loans (%): GCC vs. Non-GCC Bank



Skewness: 1.39
Kurtosis: 3.94

Skewness: 1.52
Kurtosis: 5.78

Figure 4b
SME Loans/Total Loans (%): State vs. Private Bank



Skewness: 1.35
Kurtosis: 3.90

Skewness: 1.96
Kurtosis: 7.36

Figure 5a
Bank Involvement with SMEs: GCC vs. Non-GCC

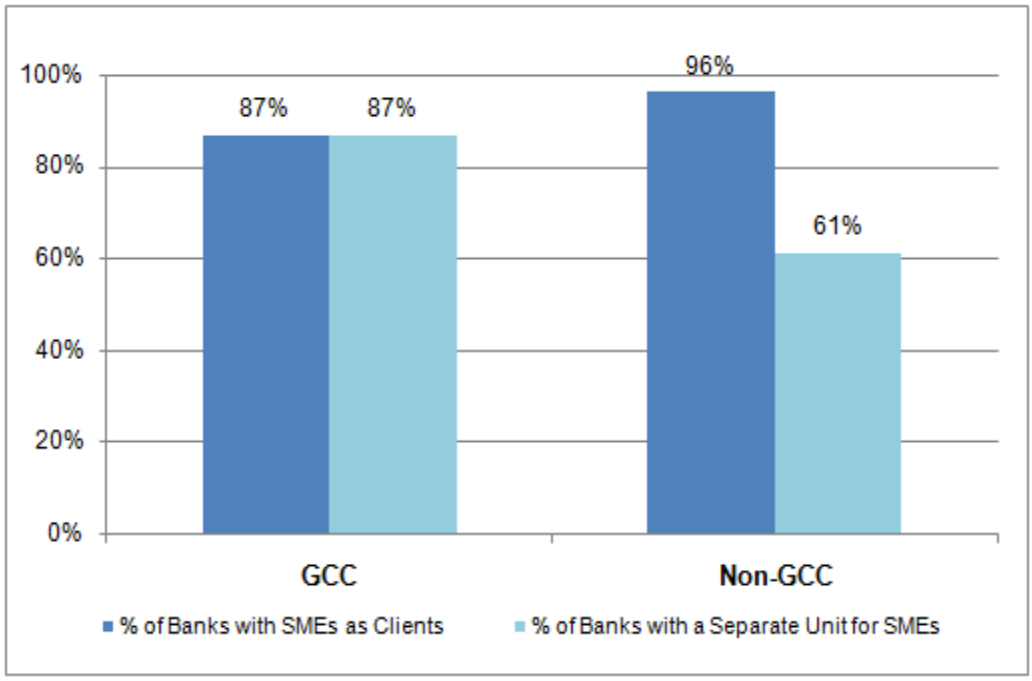


Figure 5b
Bank Involvement with SMEs: State vs. Private Banks

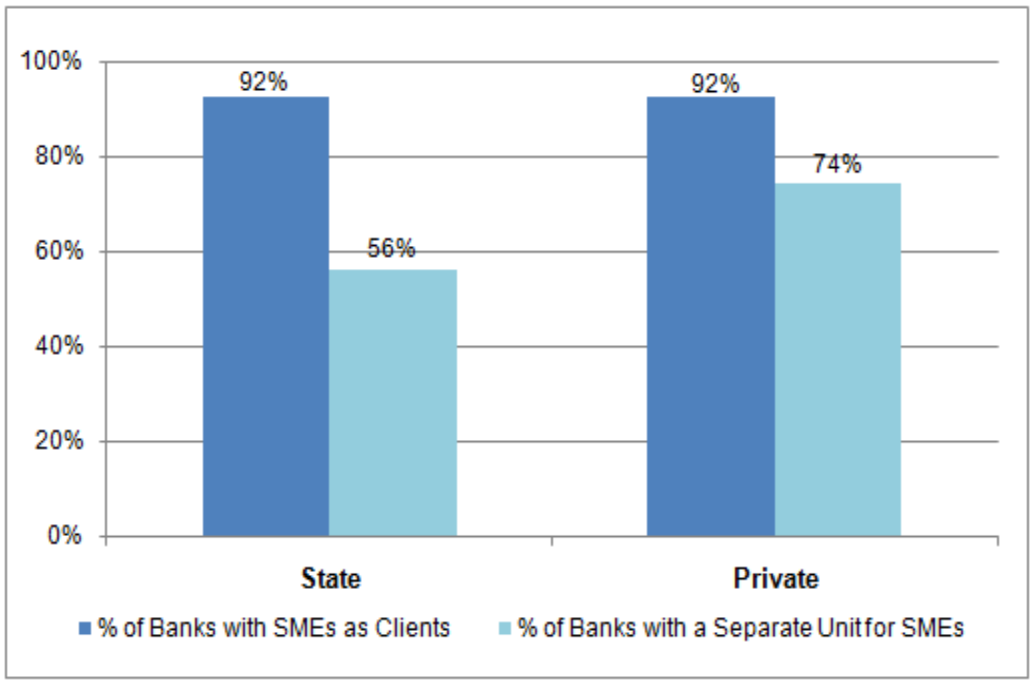


Figure 6a
% of Banks responding that Driver is Very Important or Important for SME Financing: GCC vs. Non-GCC

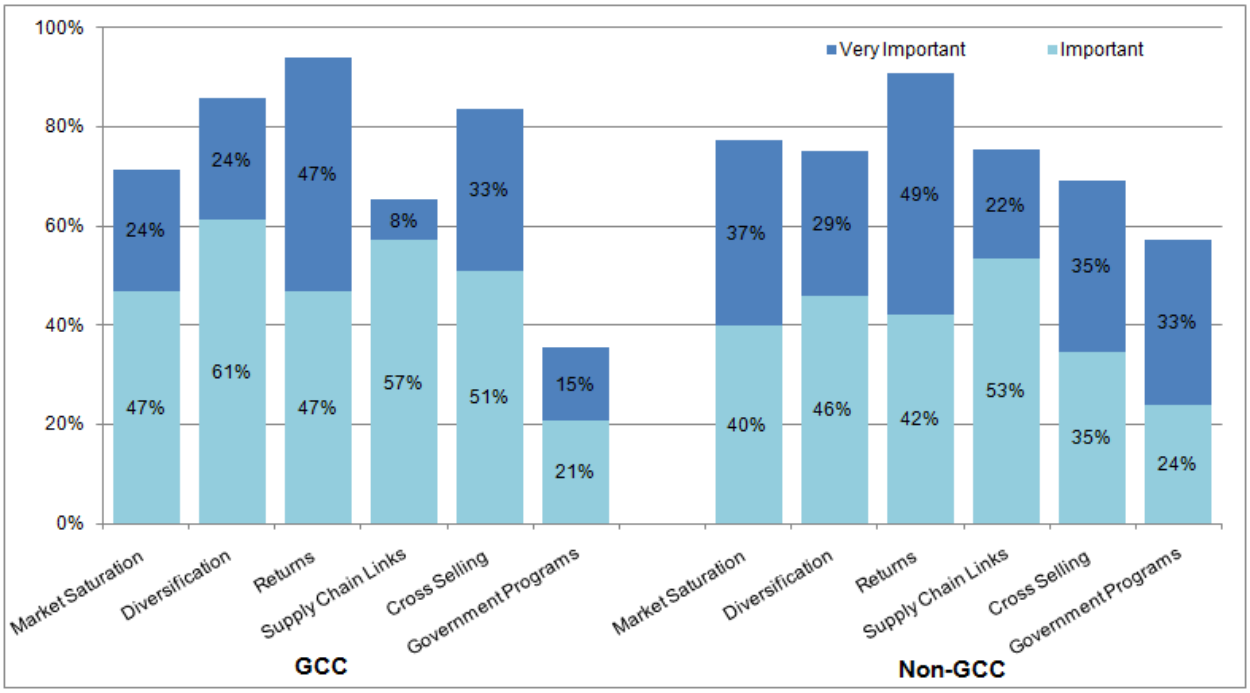


Figure 6b
% of Banks responding that Driver is Very Important or Important for SME Financing: State vs. Private Banks

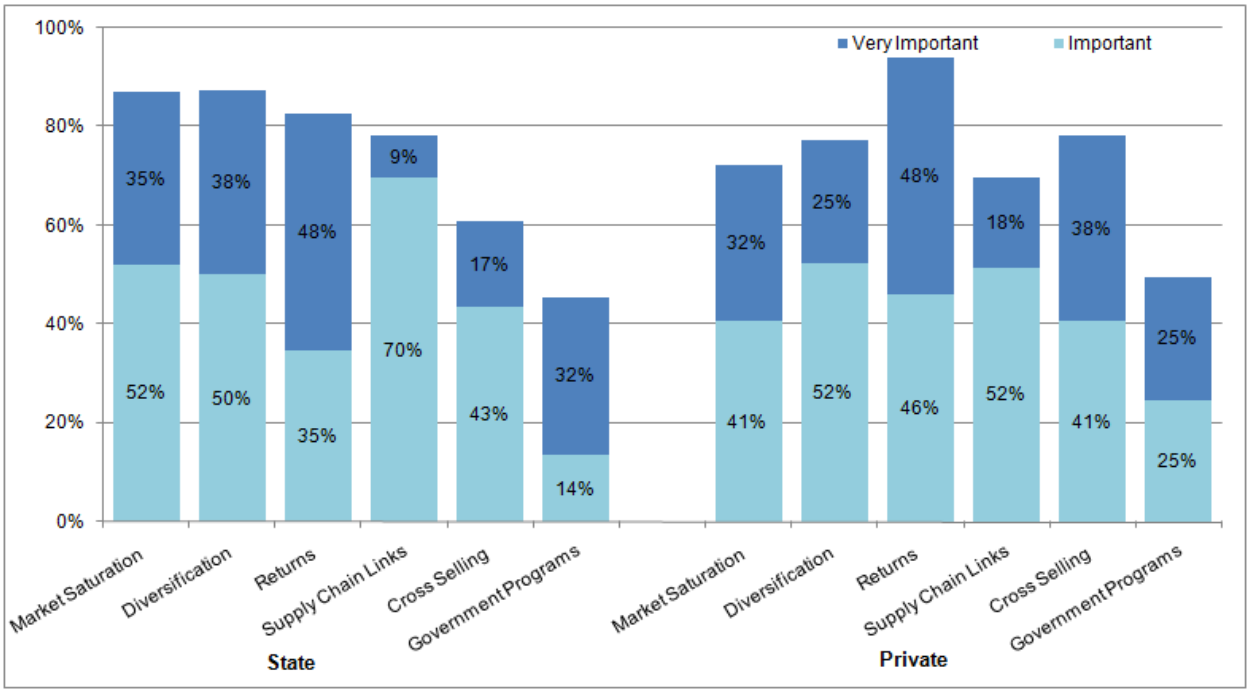


Figure 7a

% of Banks responding that Obstacle is Very Important or Important for SME Financing: GCC vs. Non-GCC

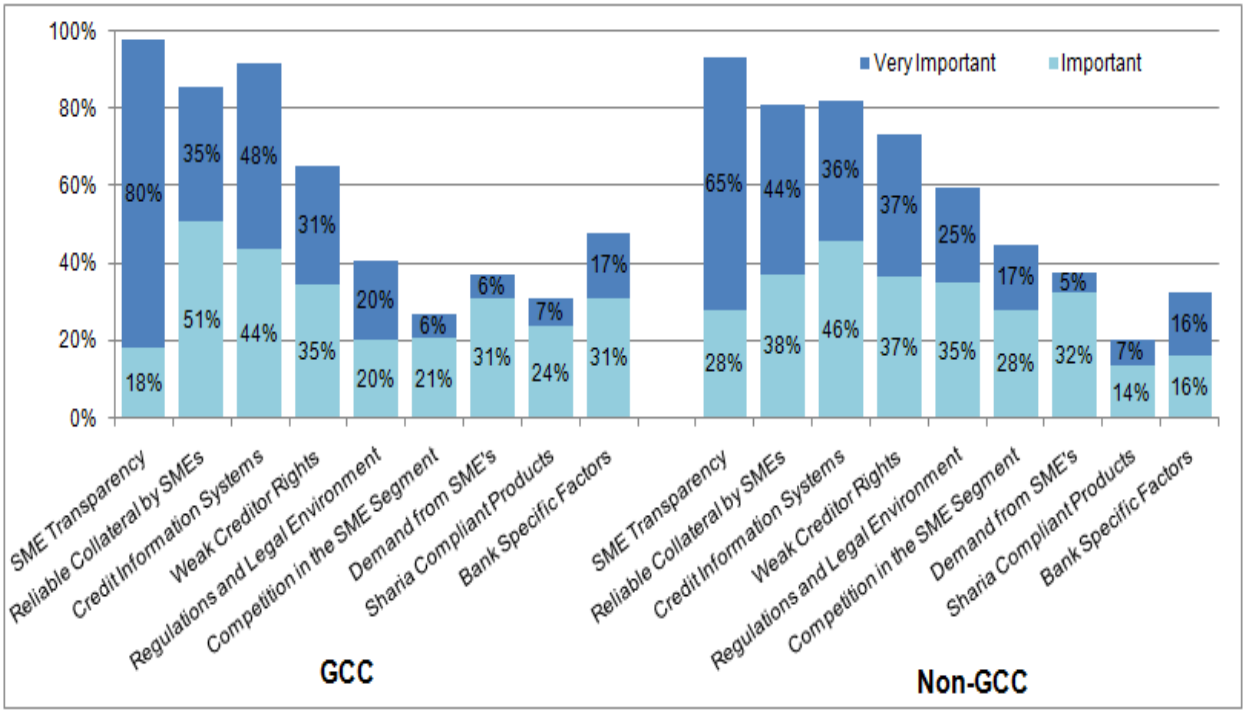


Figure 7b

% of Banks responding that Obstacle is Very Important or Important for SME Financing: State vs. Private Banks

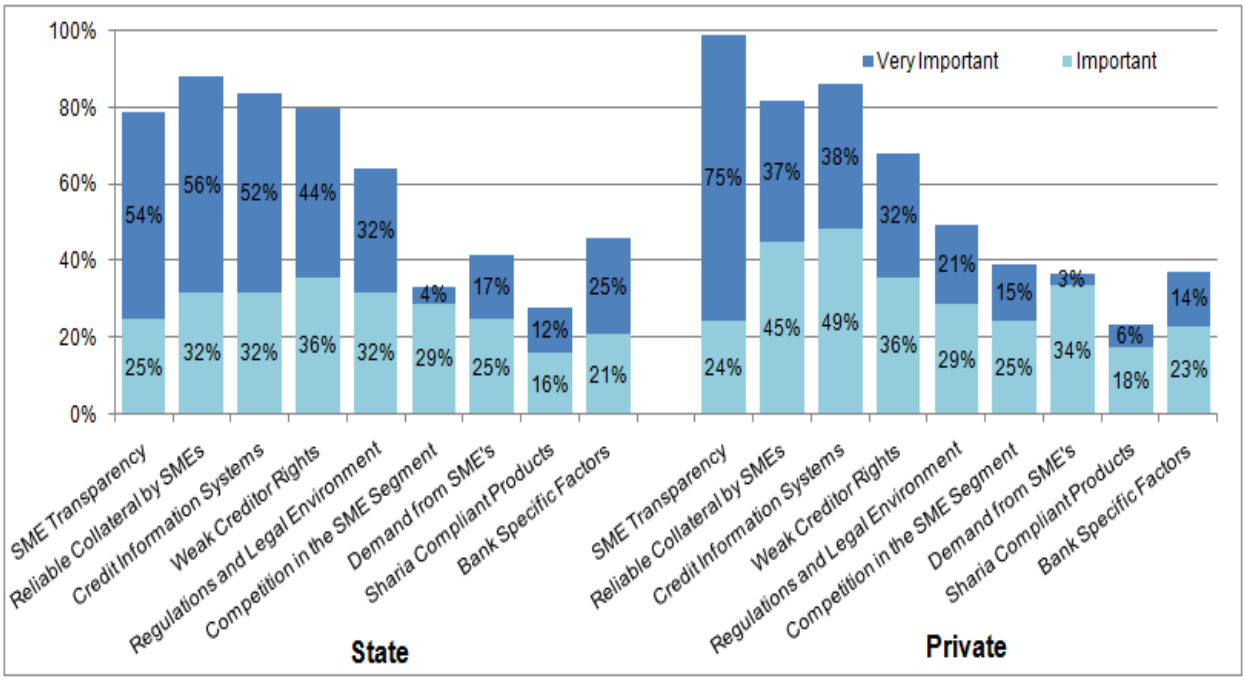


Figure 8a
Problems with Fixed Collateral: GCC vs. Non-GCC

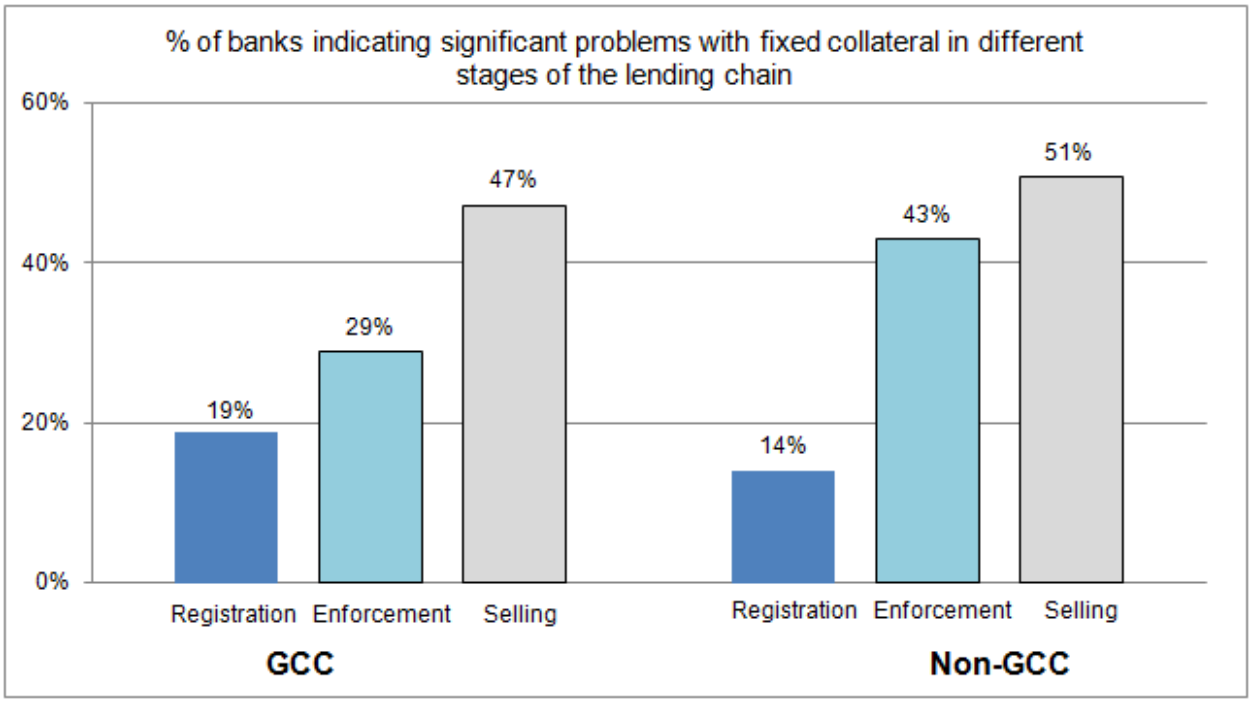


Figure 8b
Problems with Movable Collateral: GCC vs. Non-GCC

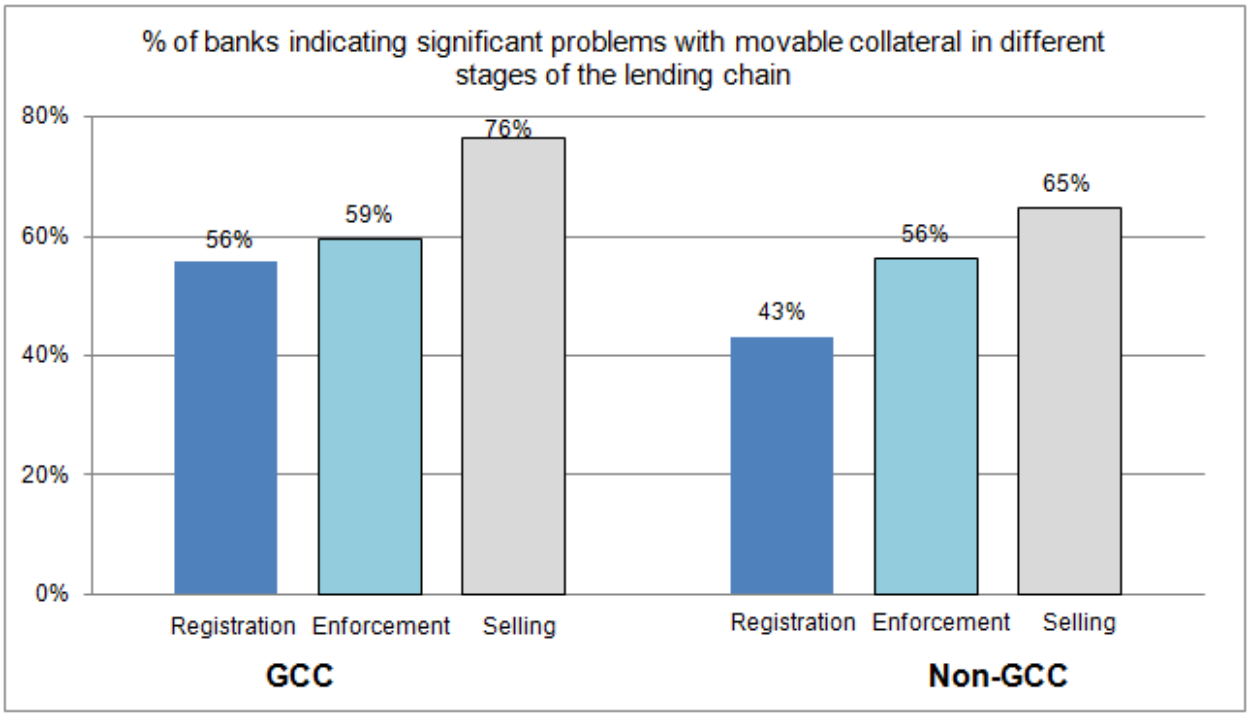


Figure 8c
Problems with Fixed Collateral: State vs. Private Banks

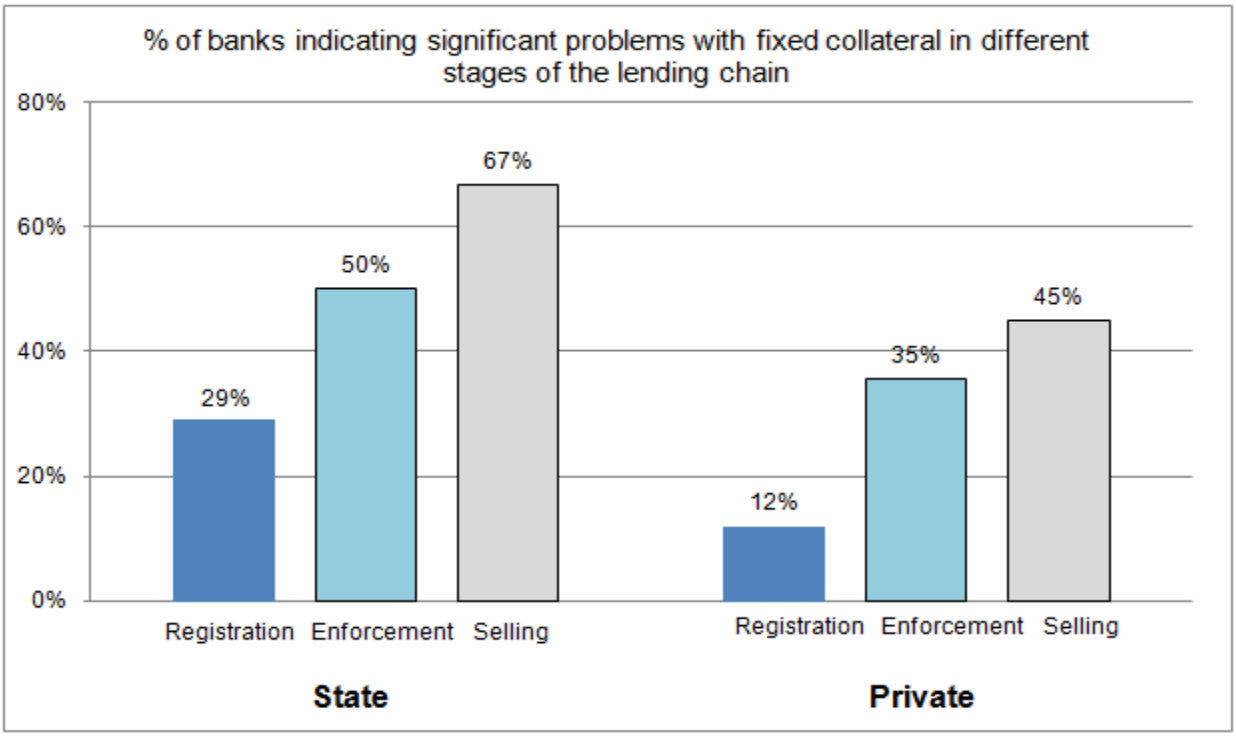


Figure 8d
Problems with Movable Collateral: State vs. Private Banks

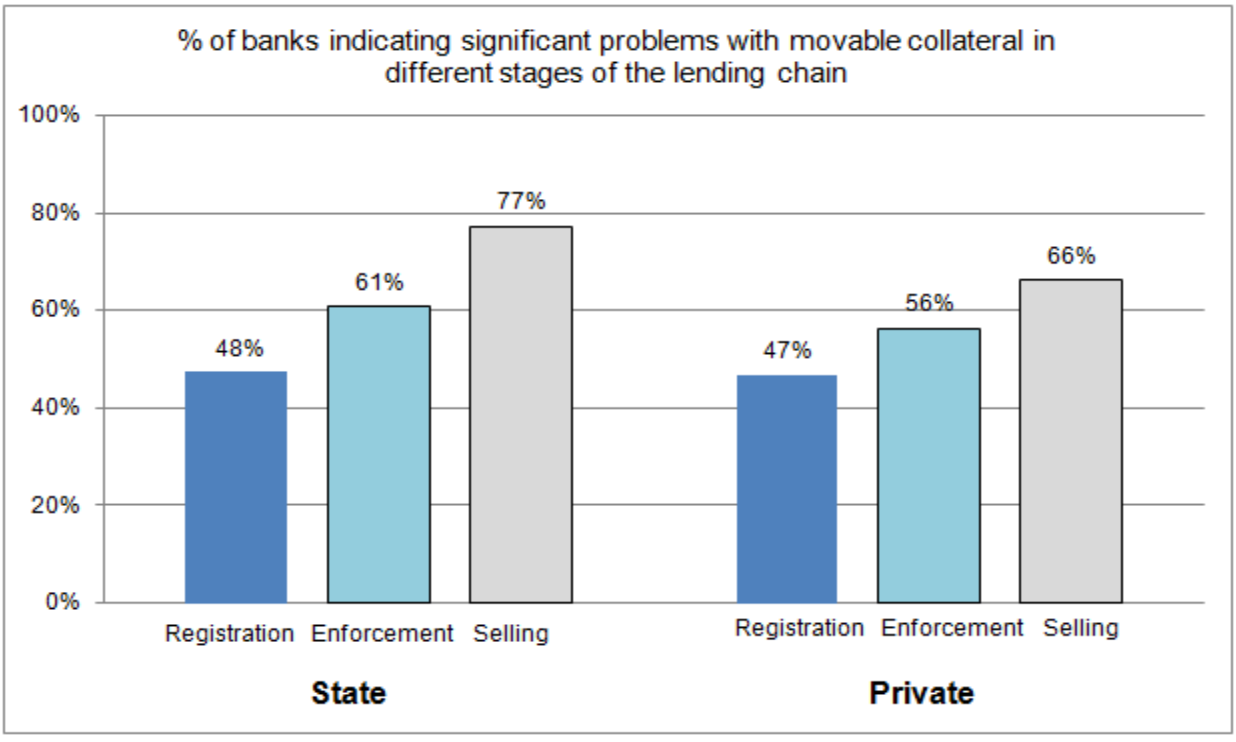


Figure 9a
Products and Services offered to SMEs: GCC vs. Non-GCC

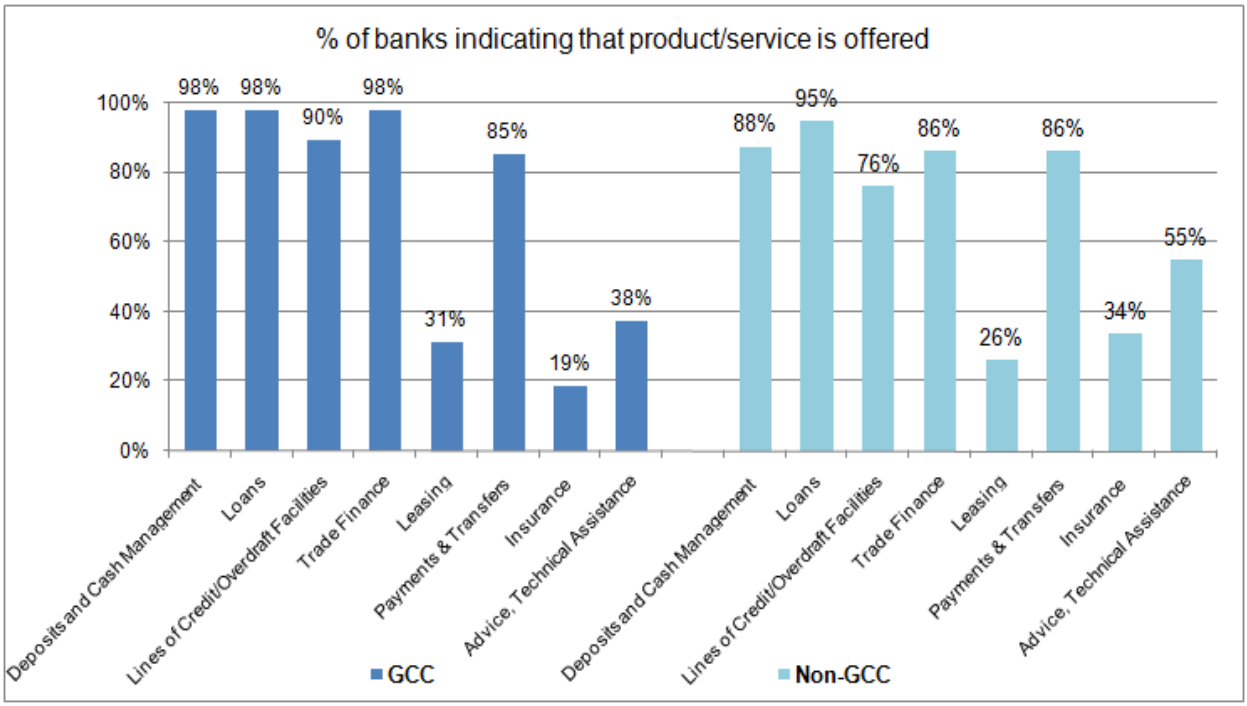


Figure 9b
Products and Services offered to SMEs: State vs. Private Banks

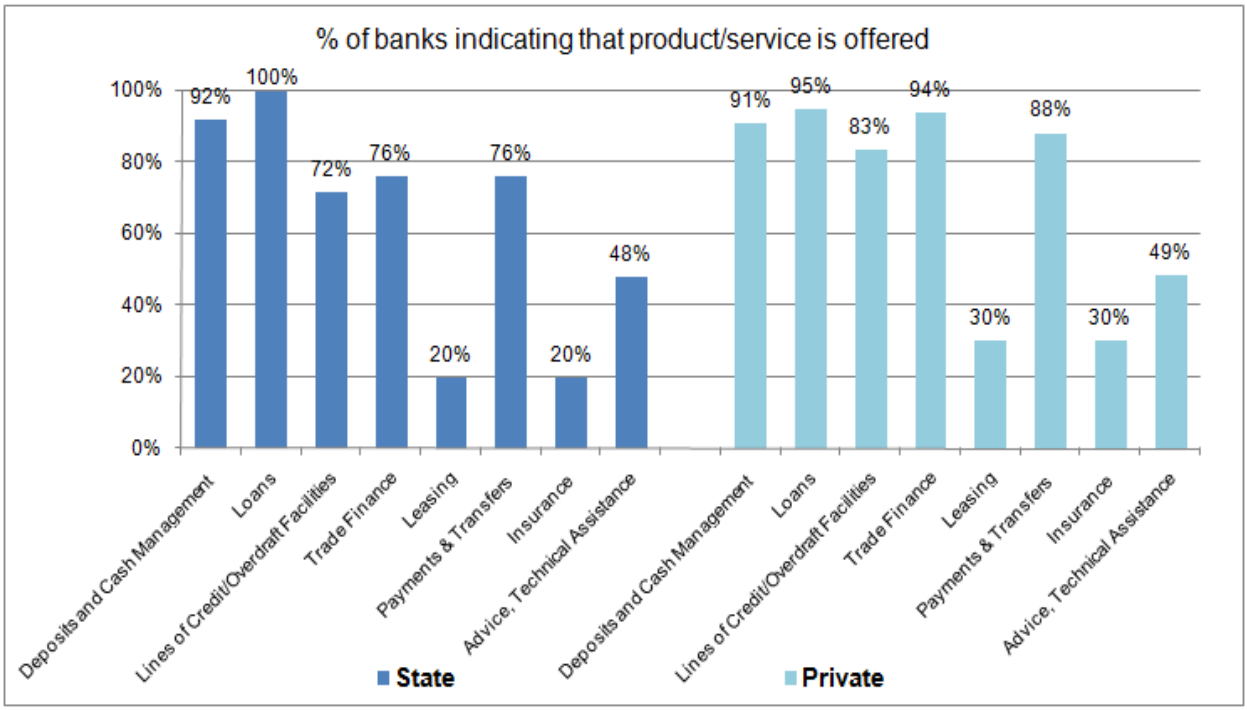


Figure 10a
% of Banks using various Distribution Channels to serve SMEs: GCC vs. Non-GCC

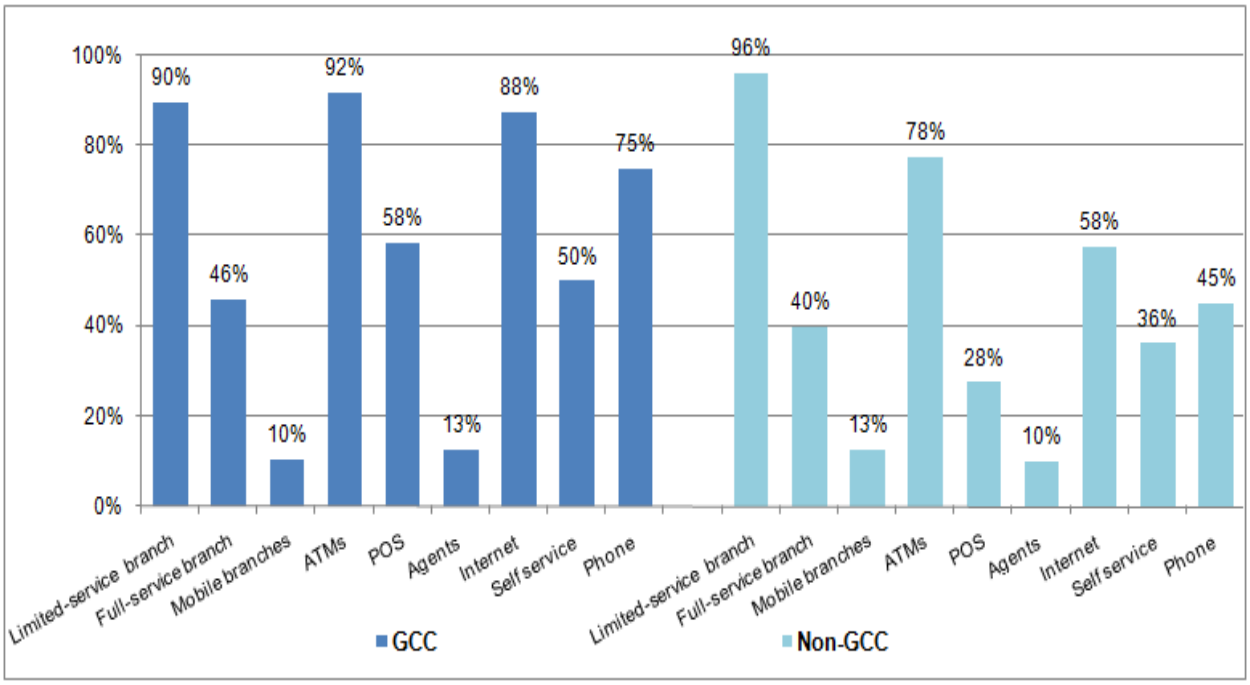


Figure 10b
% of Banks using various Distribution Channels to serve SMEs: State vs. Private Banks

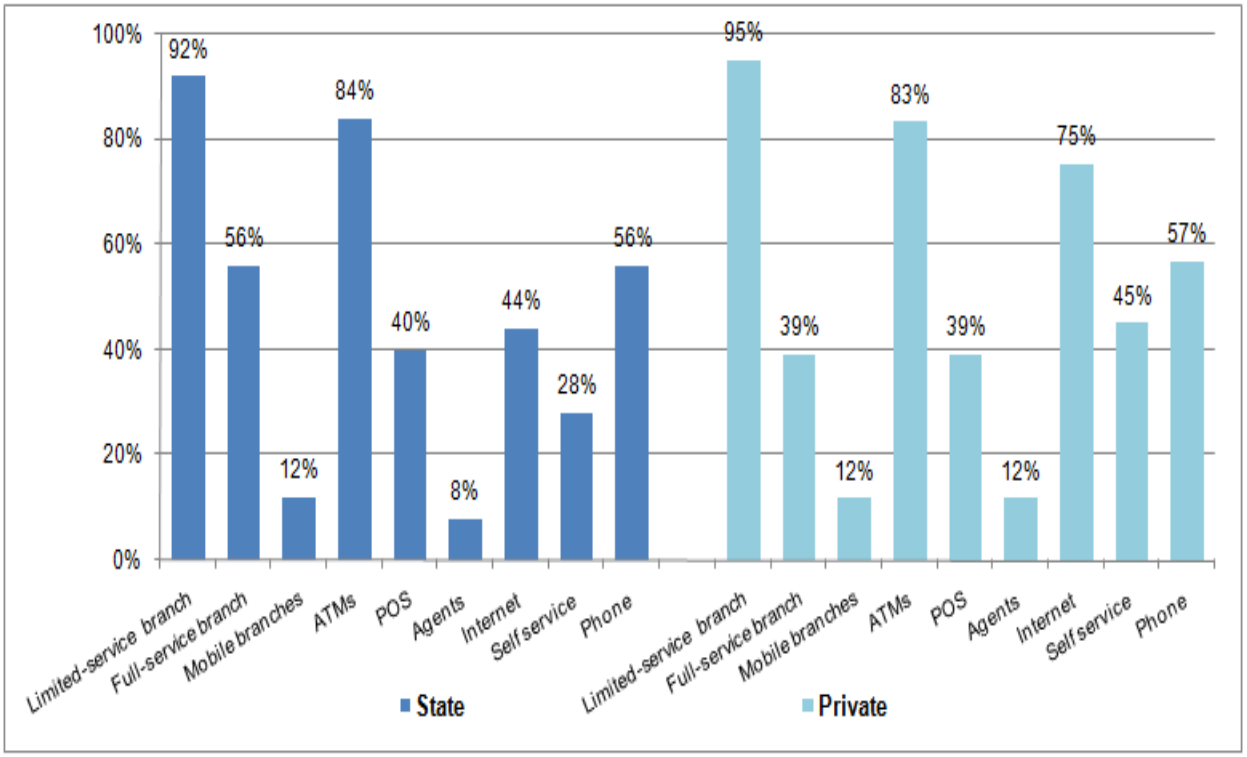


Figure 11a
Shariah-compliant Products: GCC vs. Non-GCC

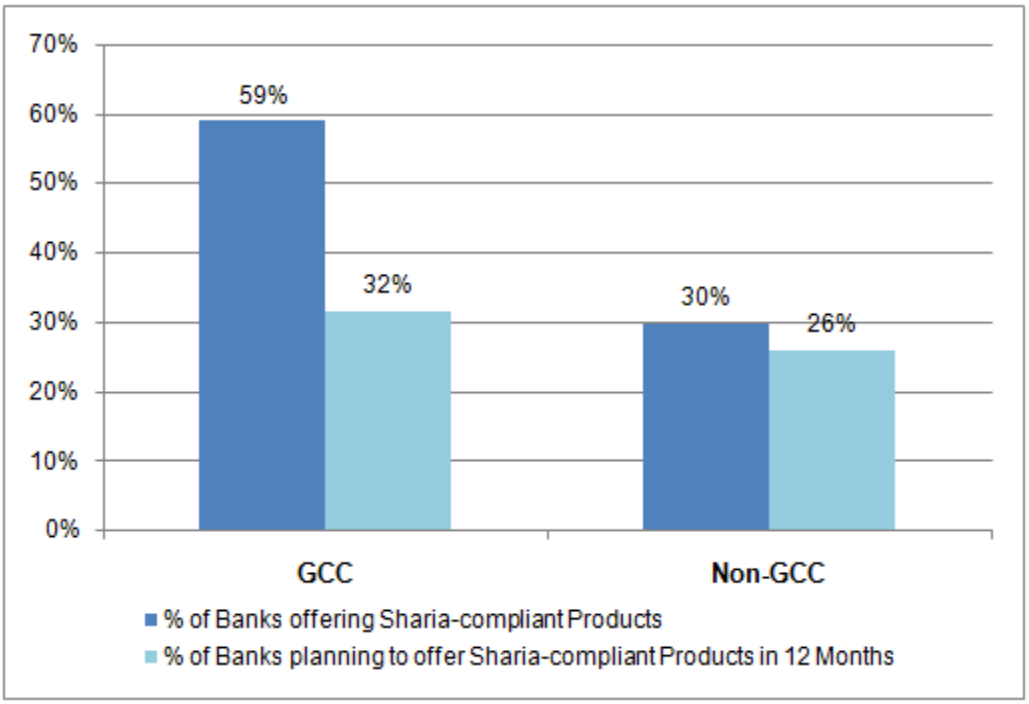


Figure 11b
Shariah-compliant Products: State vs. Private Banks

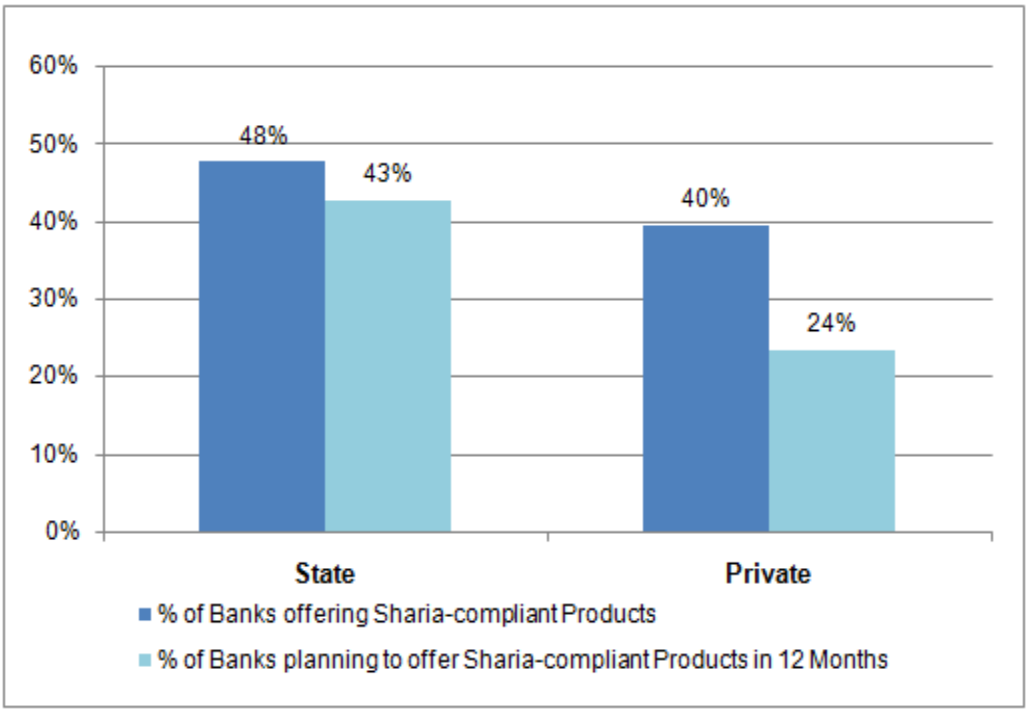


Figure 12a
Gender: GCC vs. Non-GCC

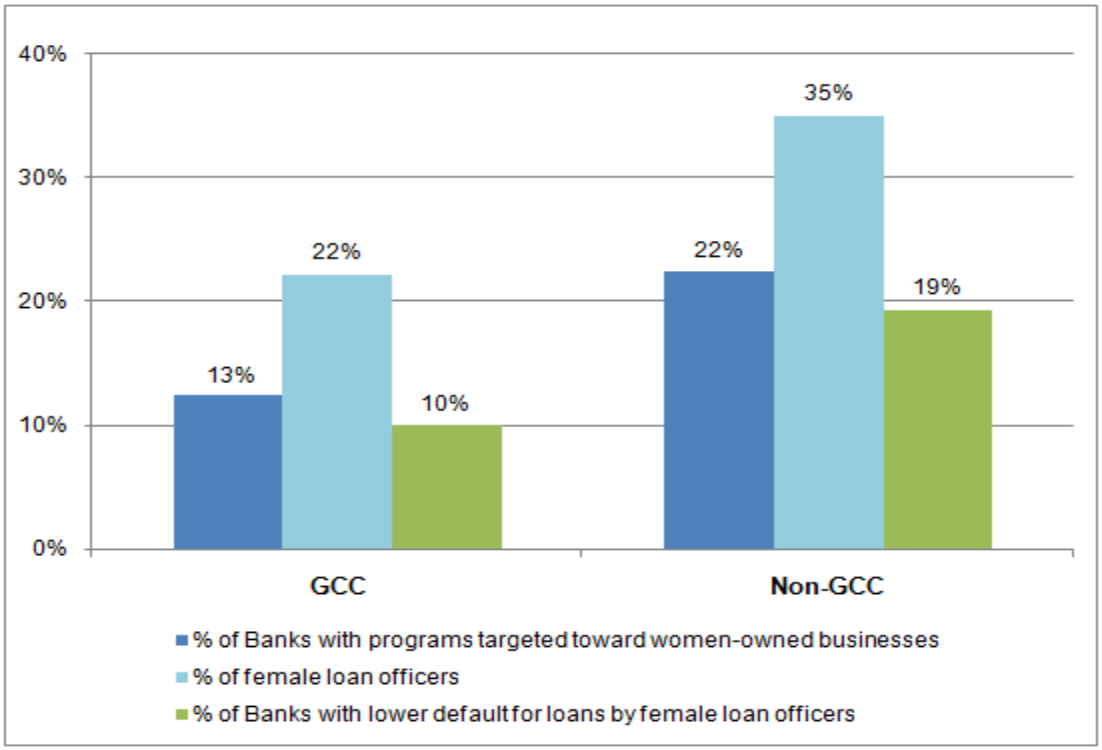


Figure 12b
Gender: State vs. Private Banks

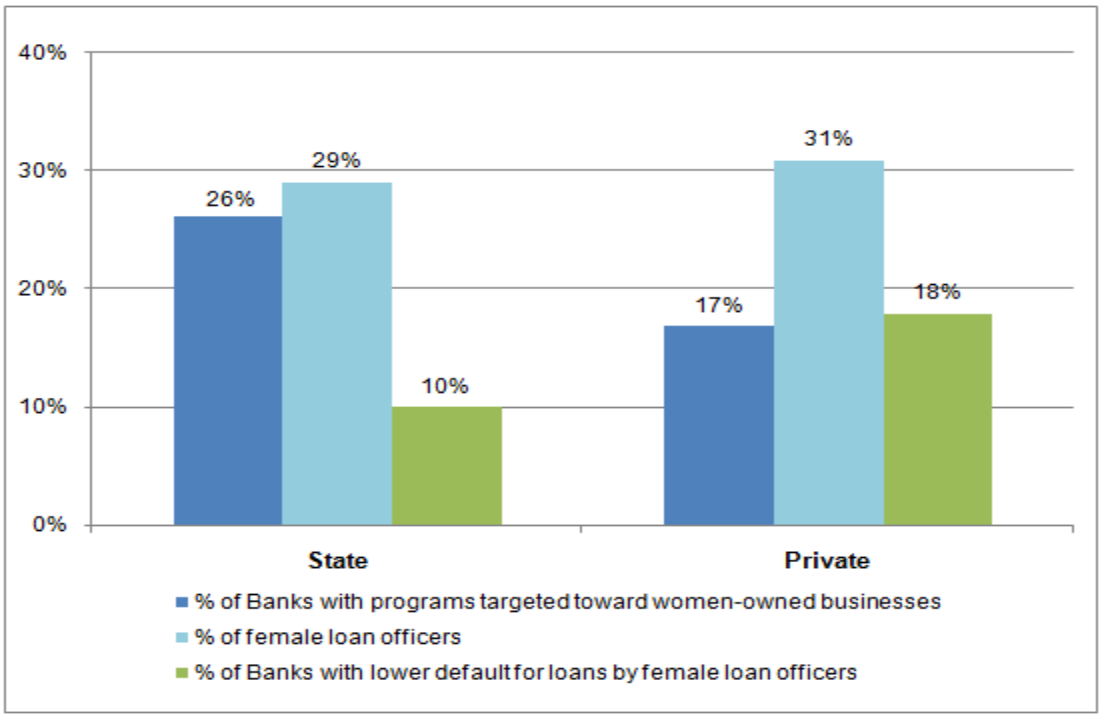


Figure 13a
% of Banks responding that SME lending is more or equally risky than other business lines: GCC vs. Non-GCC

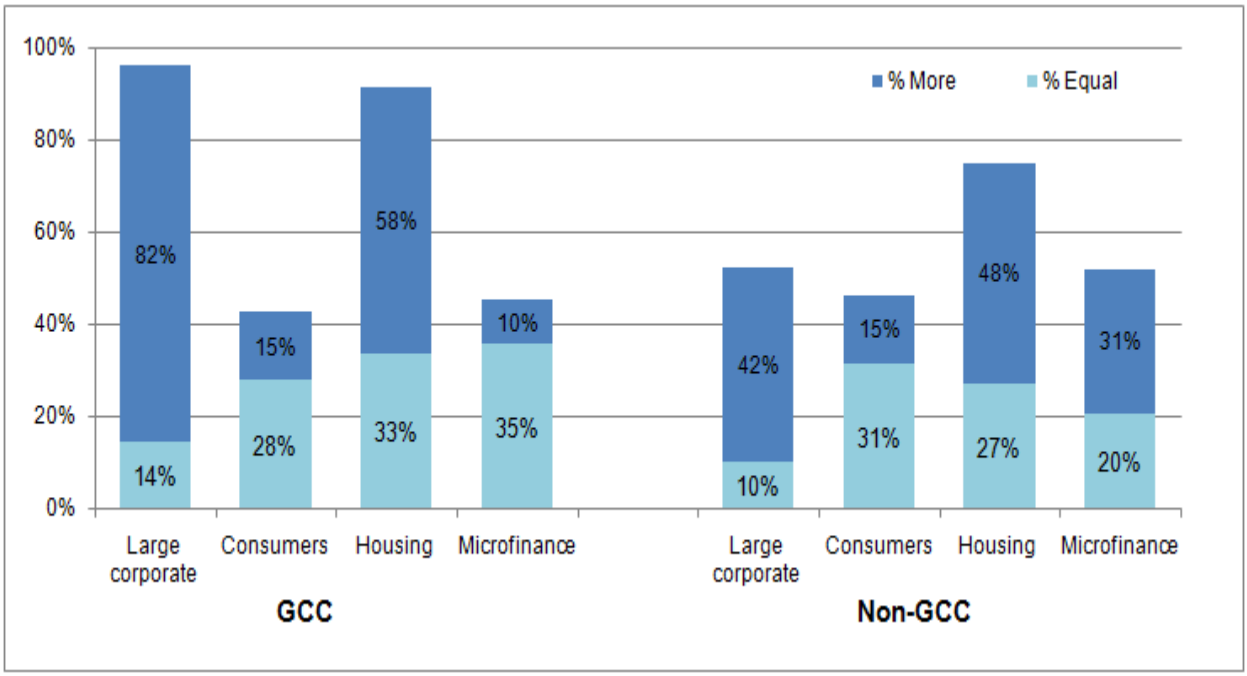


Figure 13b
% of Banks responding that SME lending is more or equally risky than other business lines: State vs. Private Banks

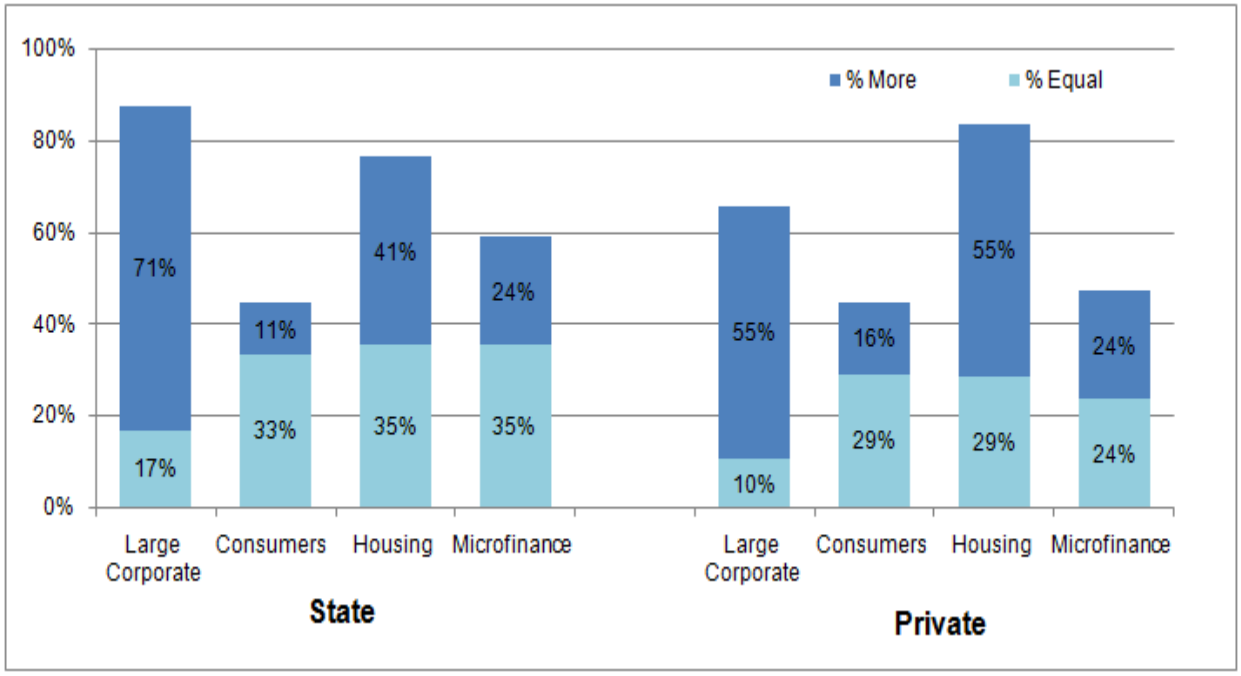


Figure 14a
% of Banks indicating the selection criteria used for targeting SMEs: GCC vs. Non-GCC

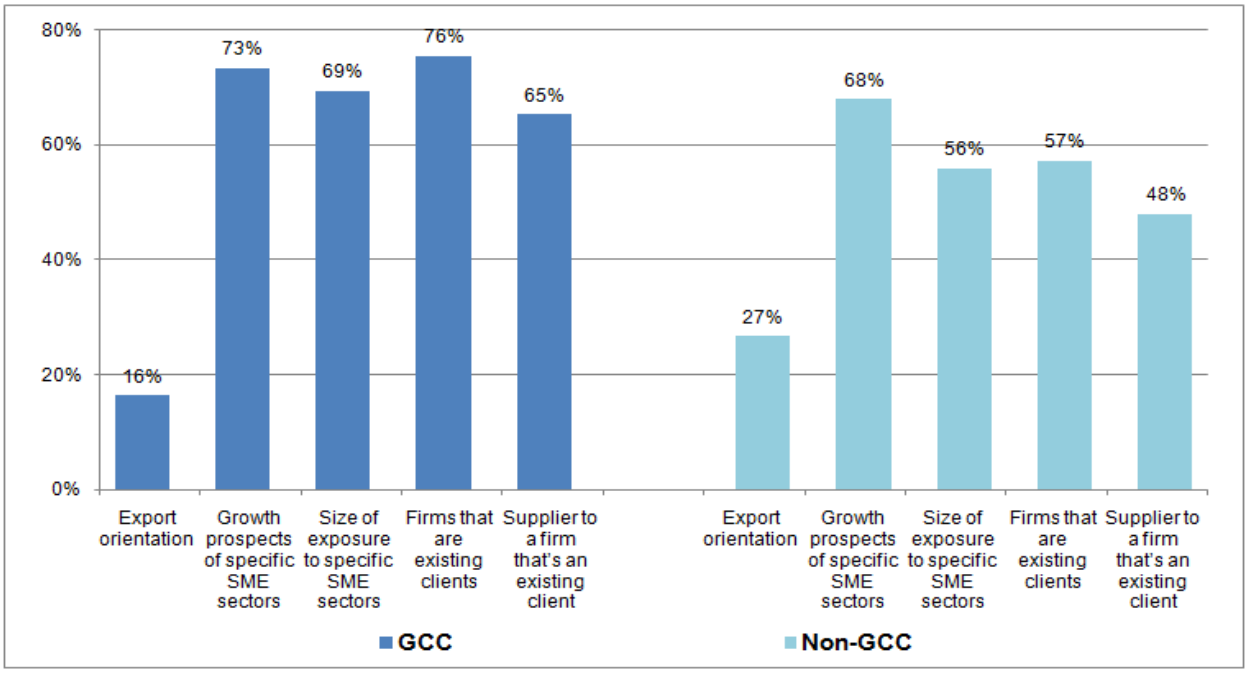


Figure 14b
% of Banks indicating the selection criteria used for targeting SMEs: State vs. Private Banks

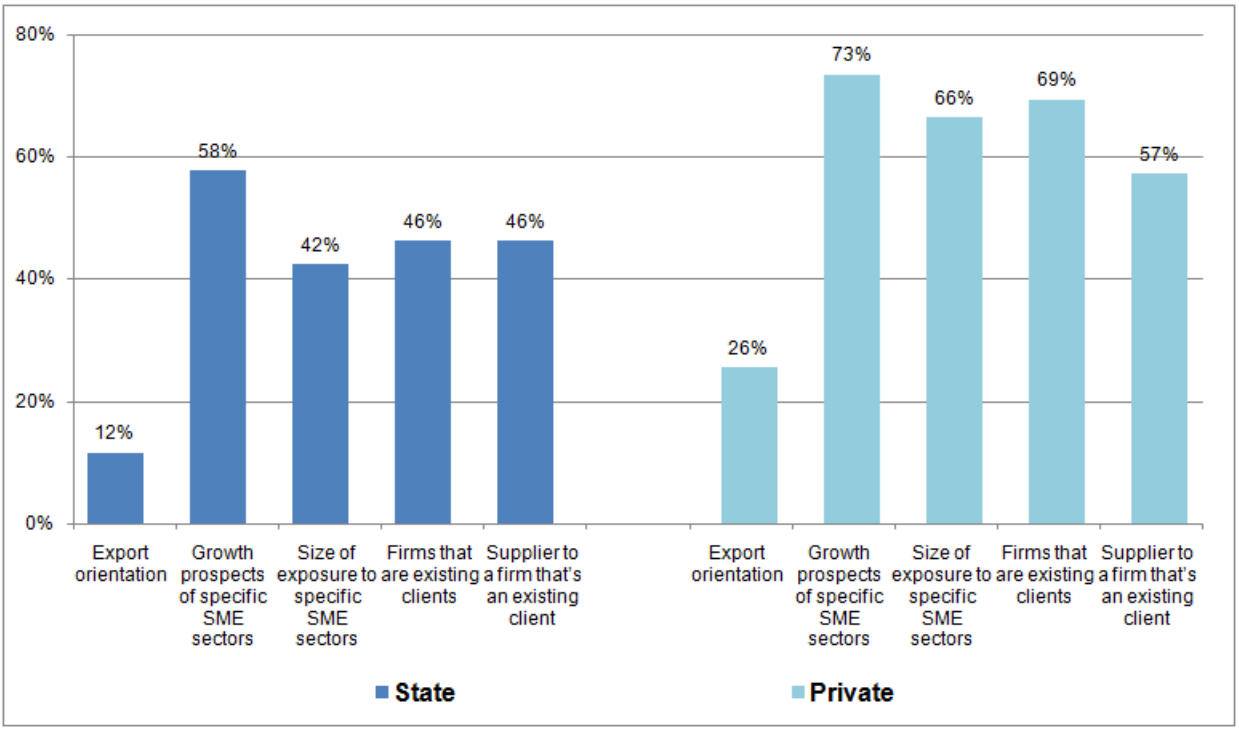
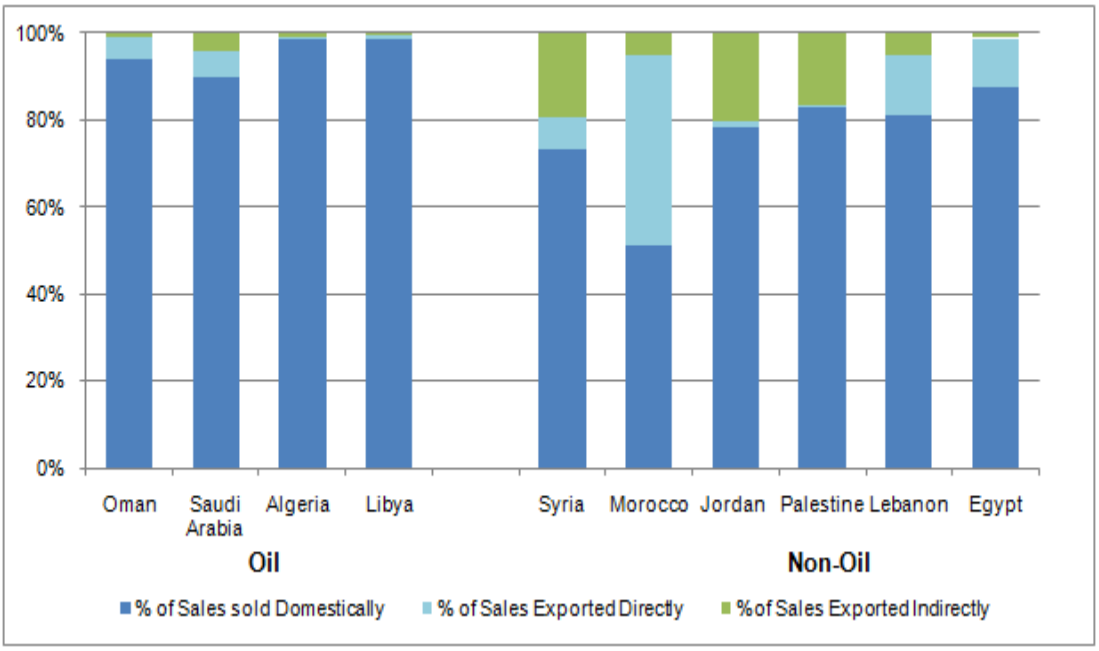


Figure 14c
Comparison of Exports, Oil and Non-Oil Economies in MENA



Source: ICA assessments.

Figure 15a
% of Banks indicating the risk technique used for SMEs: GCC vs. Non-GCC

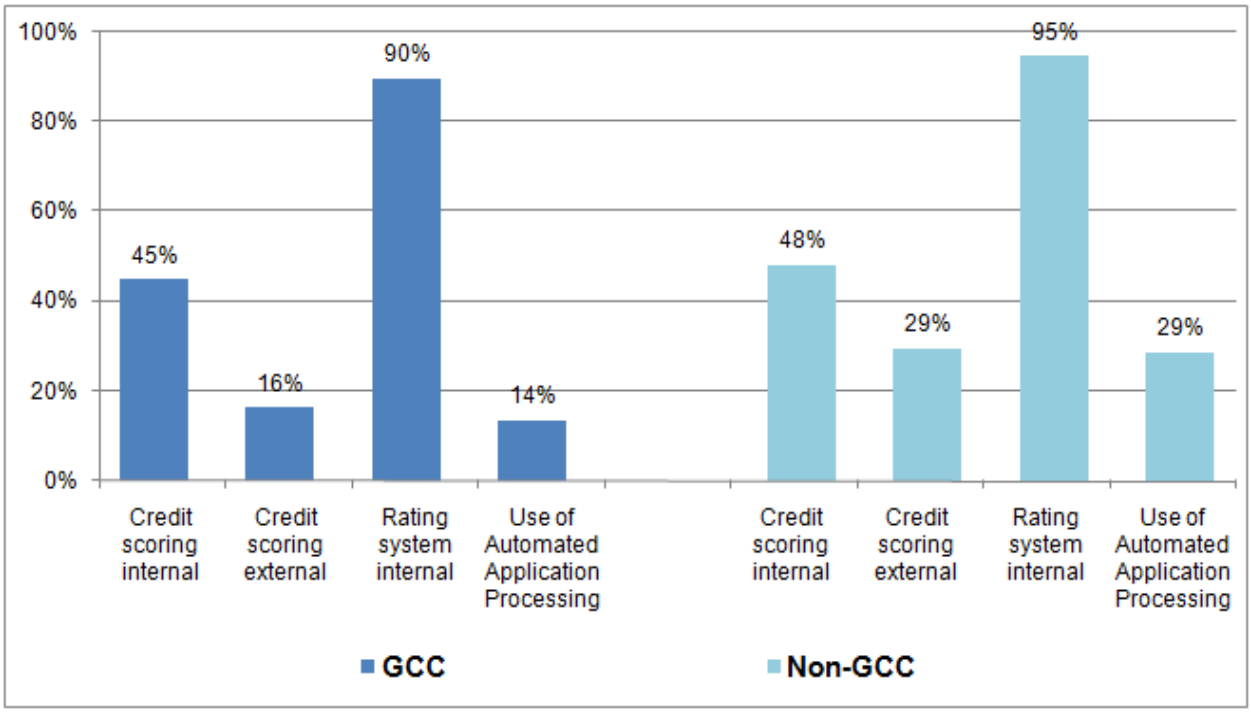


Figure 15b
% of Banks indicating the risk technique used for SMEs: State vs. Private Banks

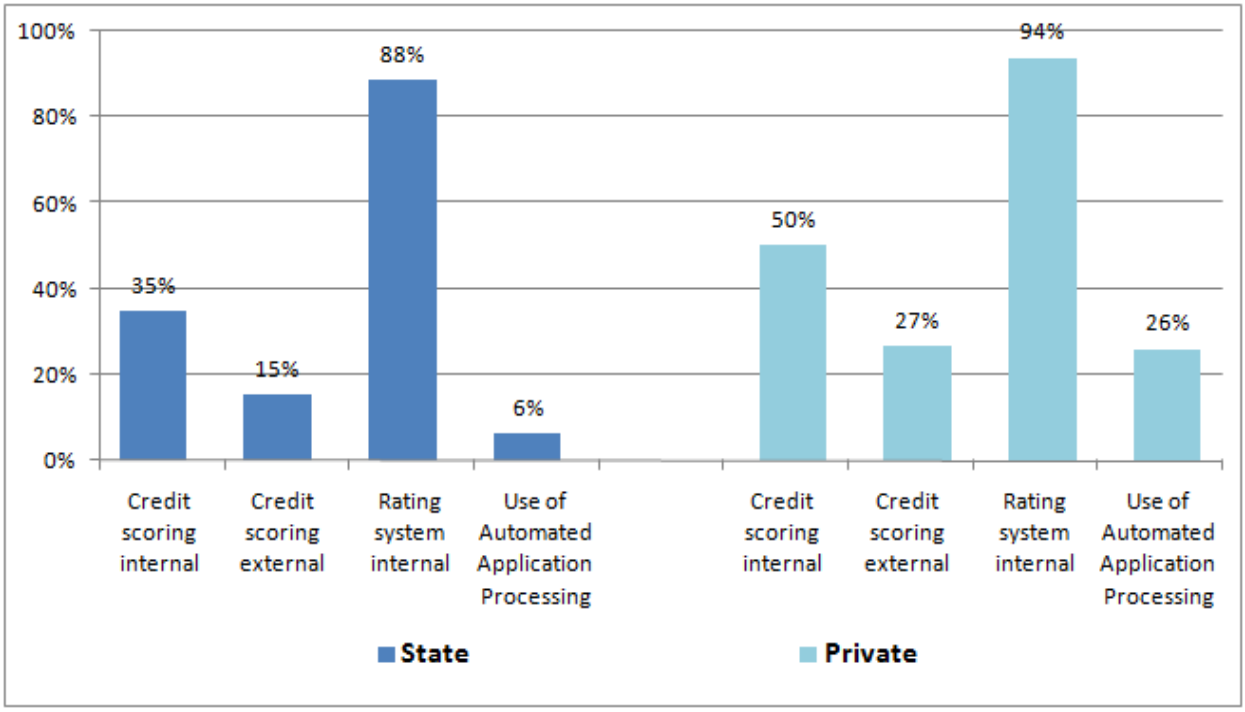


Figure 16a
% of Banks informing SME clients about the factors driving Ratings/Scorings: GCC vs. Non-GCC

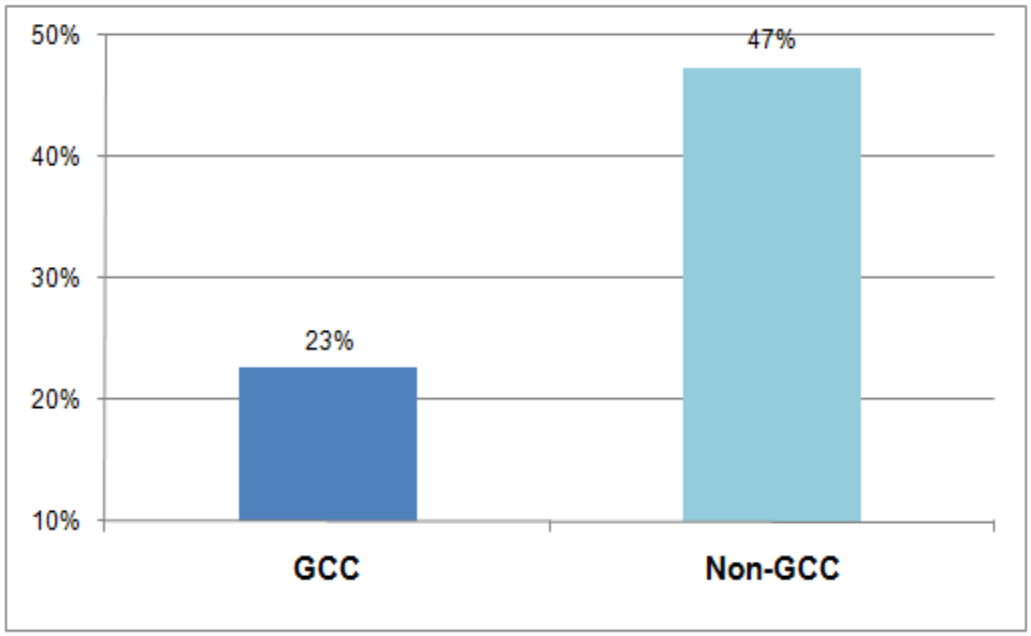


Figure 16b
% of Banks informing SME clients about the factors driving Ratings/Scorings: State vs. Private Banks

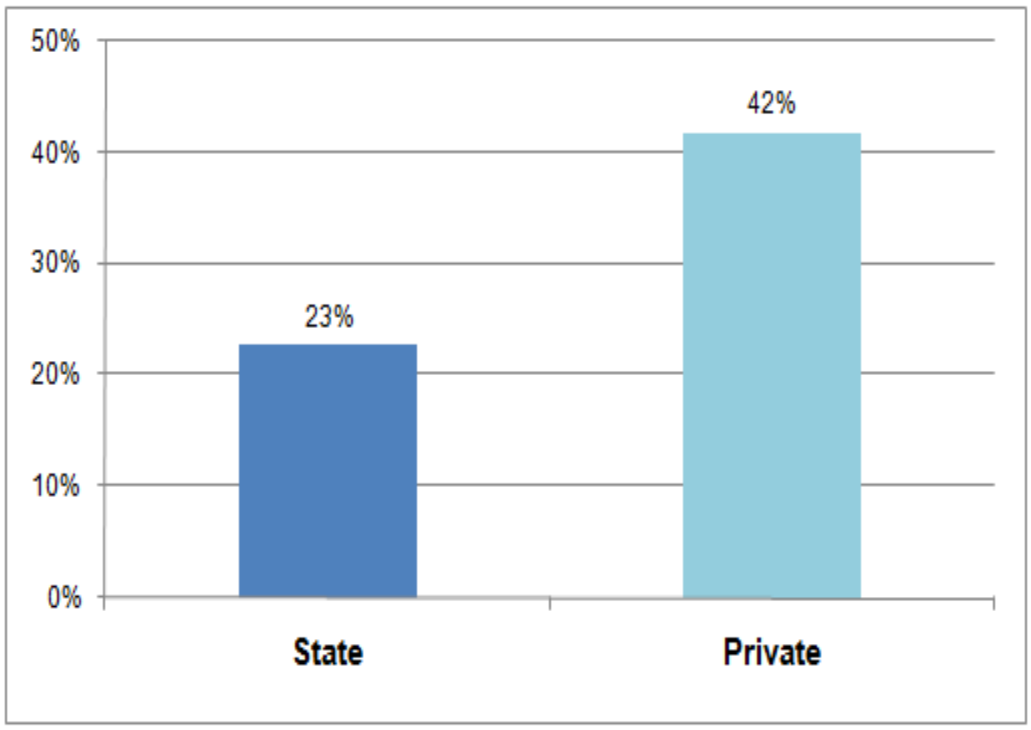


Figure 17a
% of Banks indicating the stress test used for SMEs: GCC vs. Non-GCC

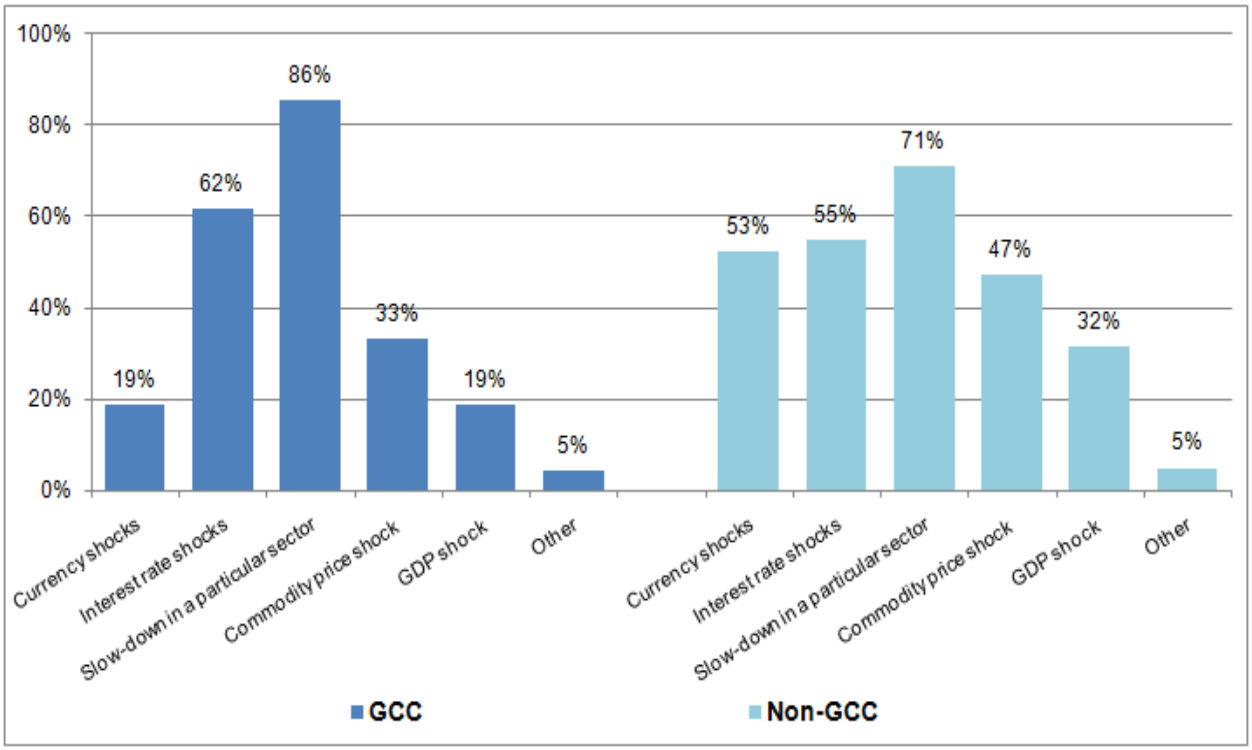


Figure 17b
% of Banks indicating the stress test used for SMEs: State vs. Private Banks

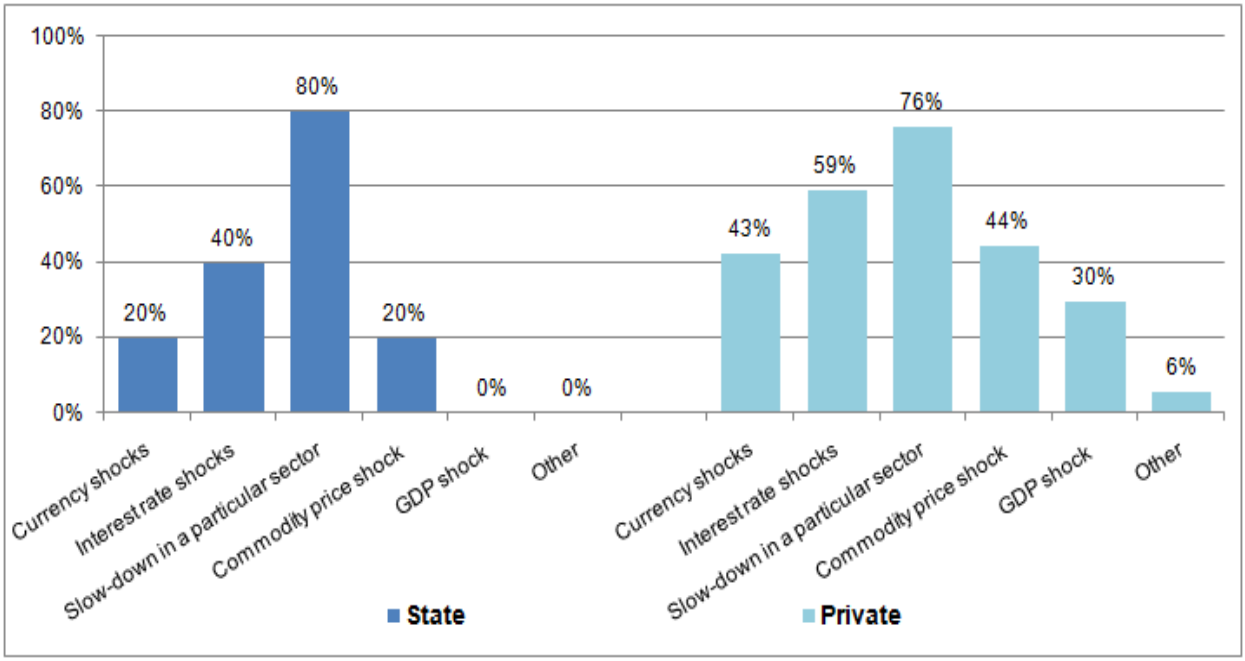


Figure 18a
% of Banks indicating that collateral requirements are higher for SMEs than for larger corporates: GCC vs. Non-GCC

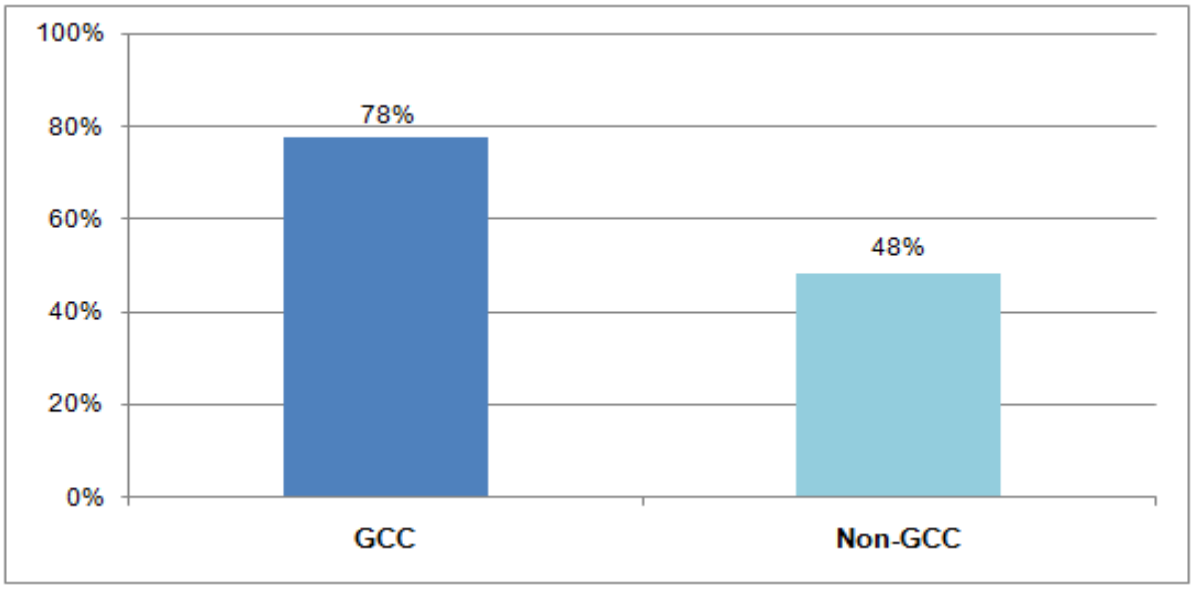


Figure 18b
% of Banks indicating the reason as Very Important or Important for higher SME collateral: GCC vs. Non-GCC

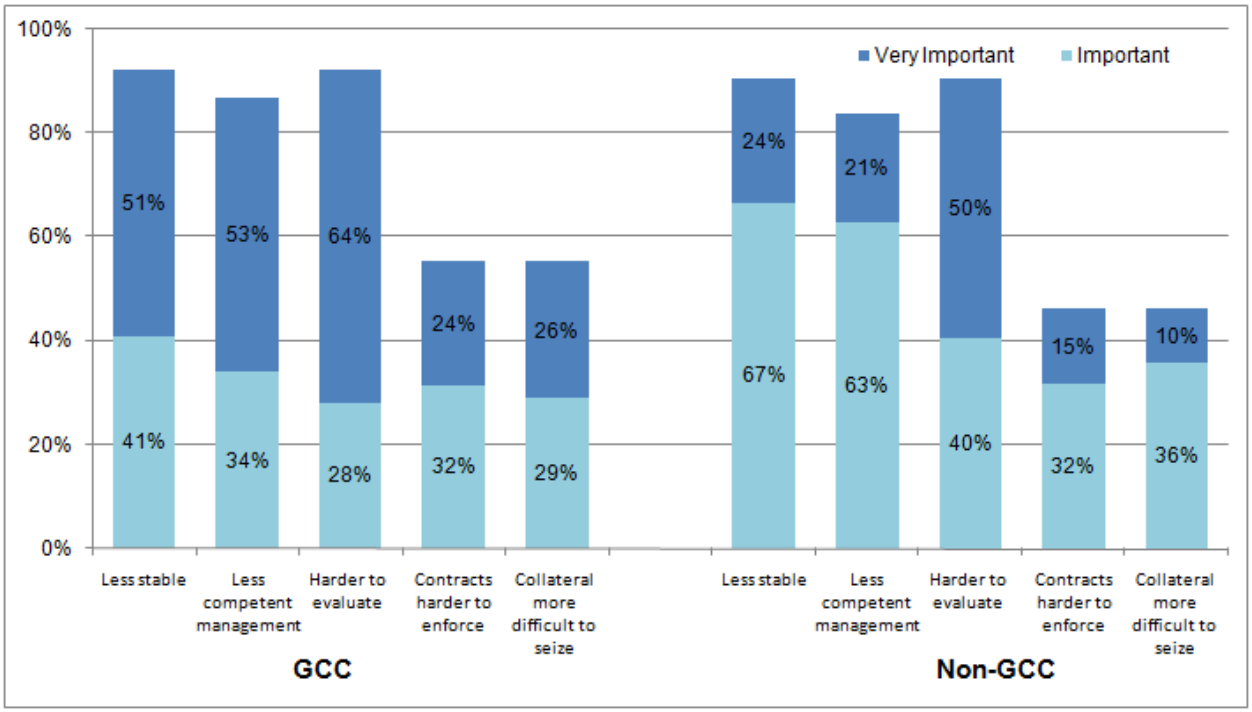


Figure 18c
% of Banks indicating that collateral requirements are higher for SMEs than for larger corporates: State vs. Private Banks

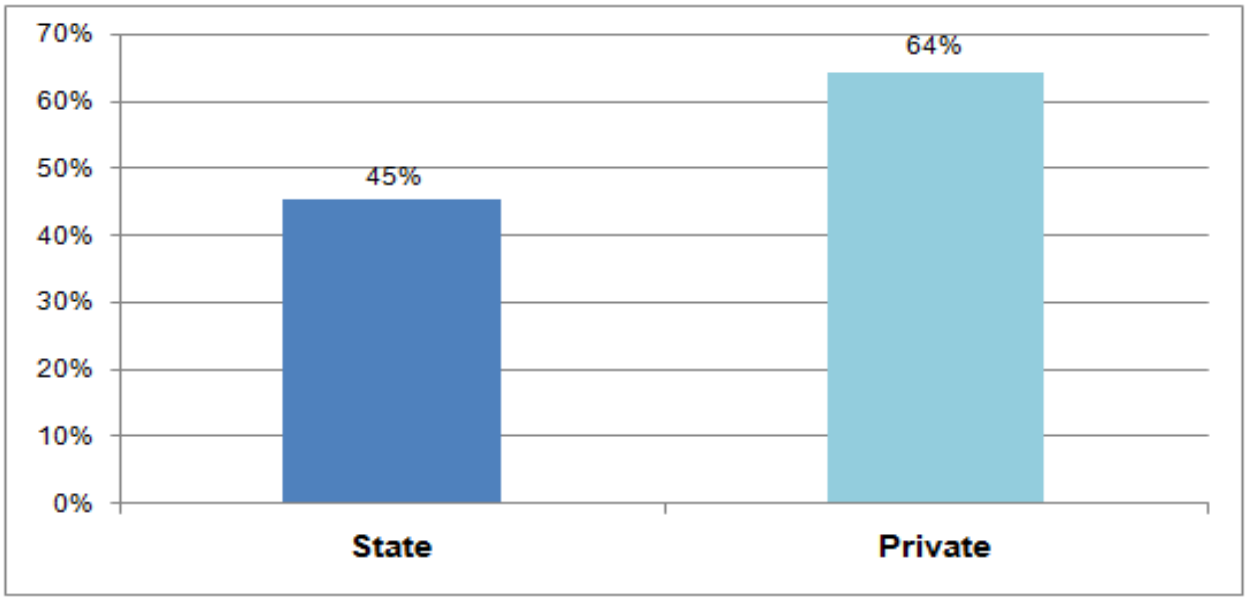


Figure 18d
% of Banks indicating the reason as Very Important or Important for higher SME collateral: State vs. Private Banks

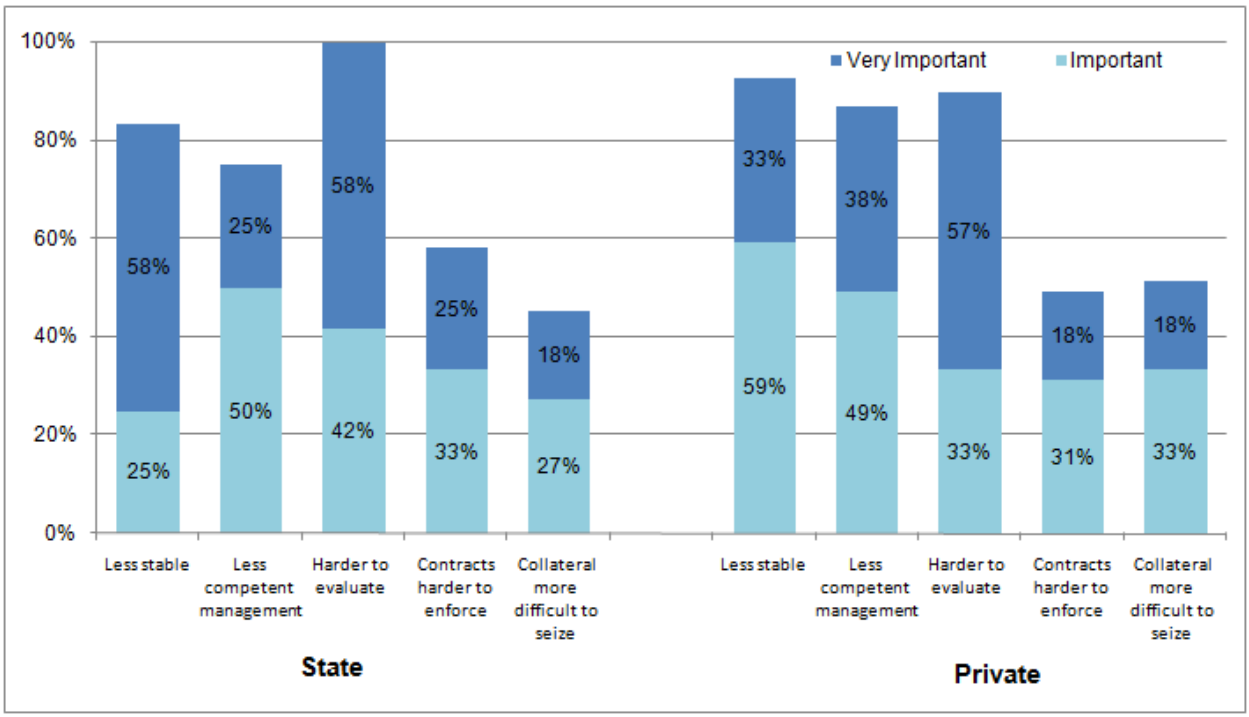


Figure 19a
% of Banks complying with Basel II: GCC vs. Non-GCC

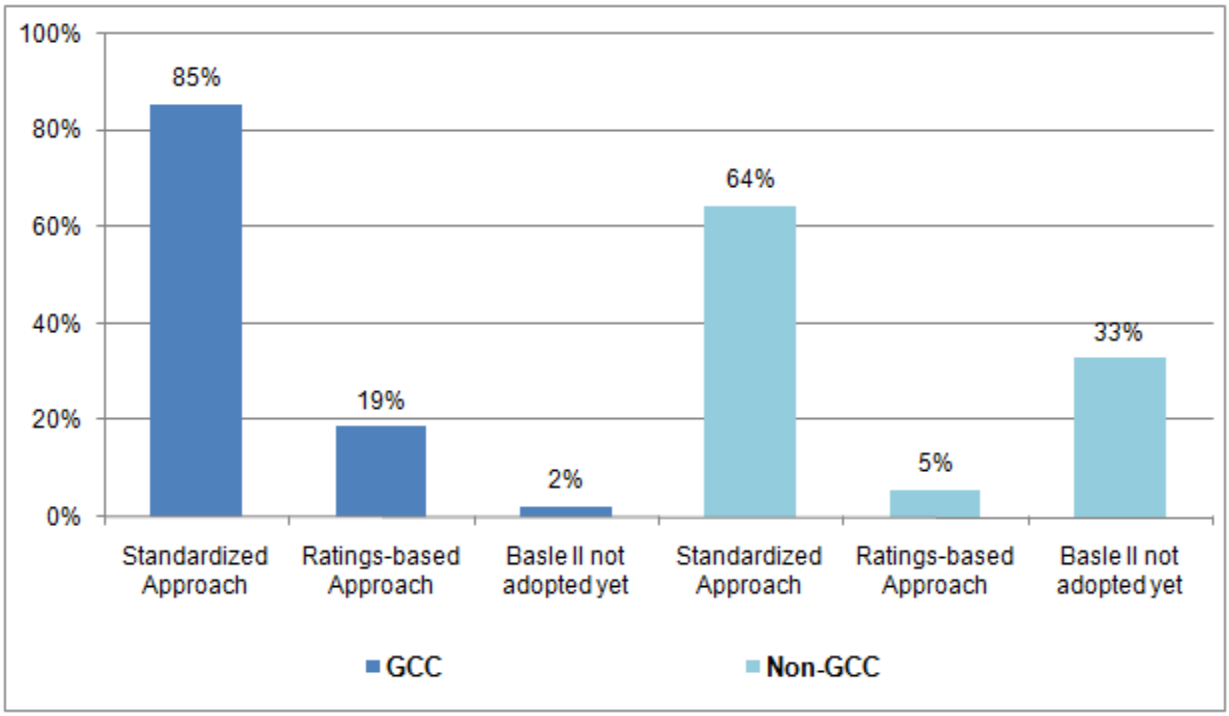


Figure 19b
% of Banks complying with Basel II: State vs. Private Banks

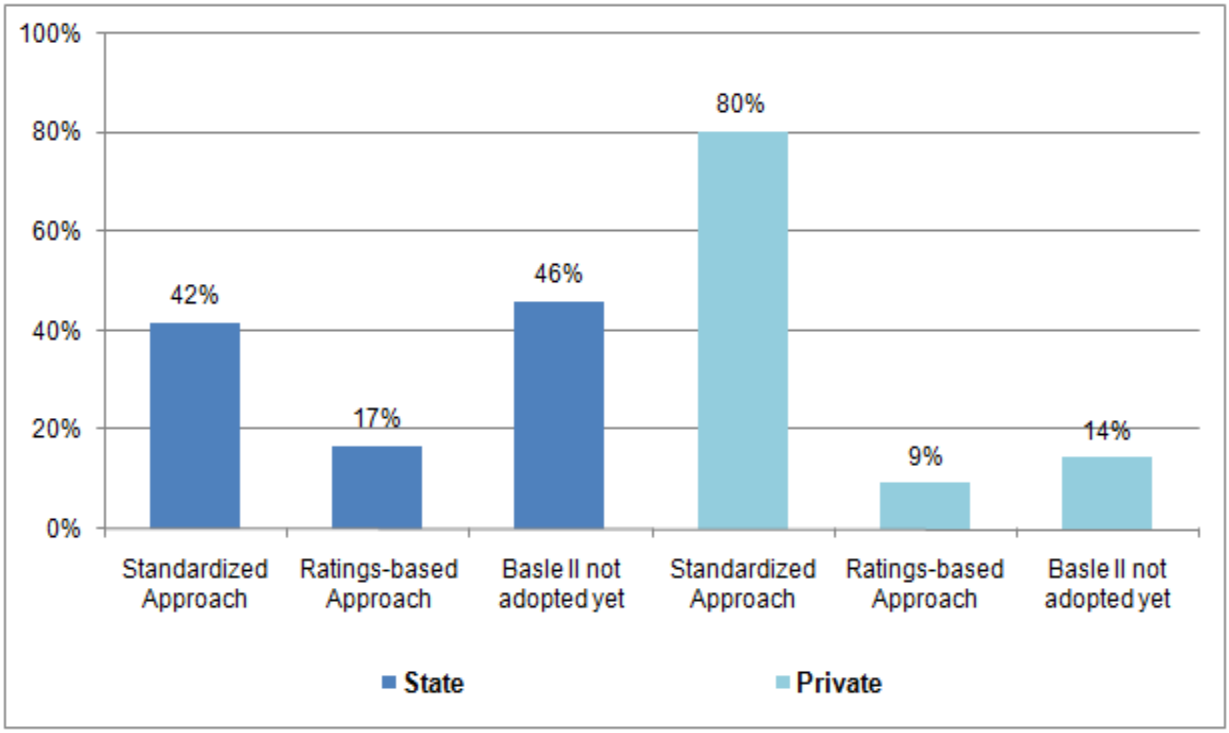


Figure 20a
% of Banks indicating the impact of adoption of Basel II on SME Lending: GCC vs. Non-GCC

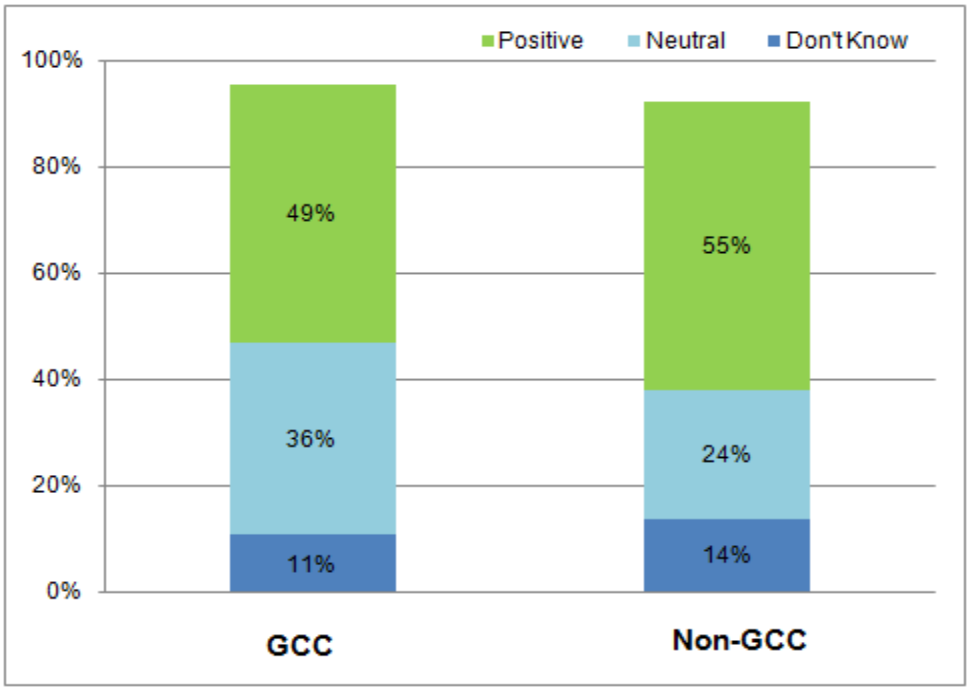


Figure 20b
% of Banks indicating the impact of adoption of Basel II on SME Lending: State vs. Private Banks

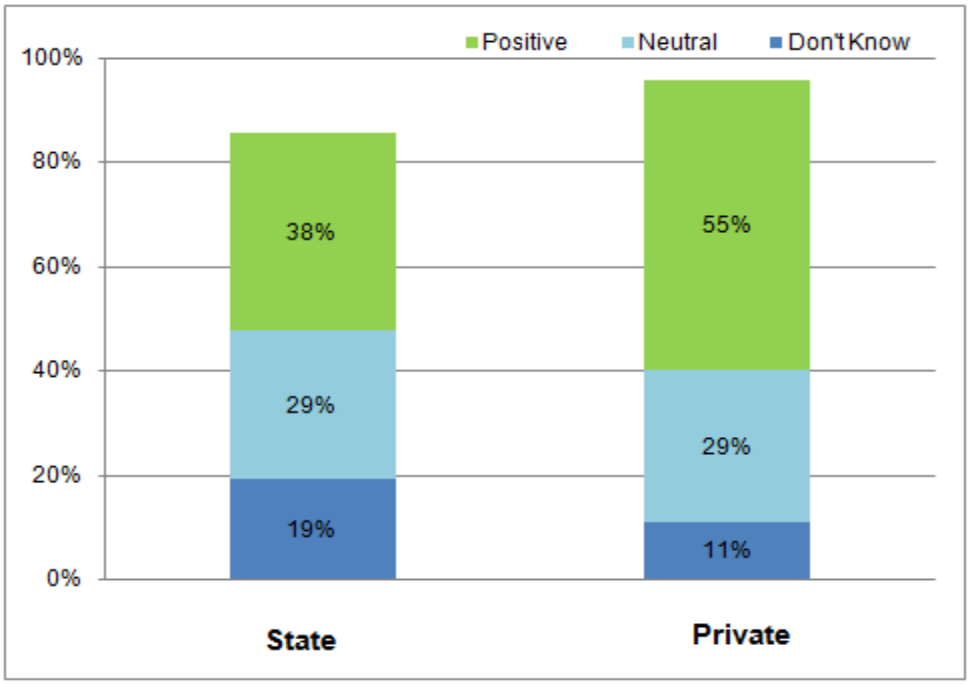


Table 1
Characteristics of banks in the sample

Country	No. of Banks	Market Share Covered
Bahrain	9	67%
Egypt	11	60%
Iraq	10	26%
Jordan	13	91%
Kuwait	7	60%
Lebanon	9	46%
Libya	5	28%
Morocco	5	80%
Oman	5	71%
Palestine	7	95%
Qatar	9	77%
Saudi Arabia	11	98%
Syria	12	90%
Tunisia	4	35%
United Arab Emirates	16	69%
Yemen	6	33%
GCC	57	74%
Non-GCC	82	58%
Total	139	64%
	No. of Banks	
State	29	
Private	110	
Total	139	
Memo:		
Private	110	
o/w Domestic	76	
o/w Foreign Regional	25	
o/w Foreign International	9	
State	29	
GCC	11	
Non-GCC	18	

Table 2
Thresholds for Small and Medium Enterprises, GCC banks, Non-GCC banks and the EU

	Turnover -- Thousands of US Dollars		
	Minimum Small	**Maximum Small**	**Maximum Medium**
GCC	365	5,456	18,390
Non-GCC	61	897	4,757
Memo: EU	2,816	14,085	70,422
	Turnover -- Multiples of Per Capita Income		
	Minimum Small	**Maximum Small**	**Maximum Medium**
GCC	8	144	601
Non-GCC	26	342	1,719
Memo: EU	85	427	2,134
	Number of Employees		
	Minimum Small	**Maximum Small**	**Maximum Medium**
GCC	3	24	90
Non-GCC	4	17	58
Memo: EU	20	50	250

(*) GCC and Non-GCC: Average of individual bank thresholds
EU: Official definitions

Table 3
Weighted Actual and Target SME Lending

Country	Target for SME Lending	No. of Banks	Actual SME Lending	No. of Banks
Bahrain	5.88	3	1.14	6
Egypt	24.72	7	5.22	9
Jordan	25.276	12	10.40	13
Kuwait	9.22	6	2.45	4
Lebanon	30.64	8	16.14	8
Morocco	29.4	3	23.79	5
Oman	11.39	5	2.48	4
Palestine	27.84	4	6.20	4
Qatar	15.14	7	0.49	5
Saudi Arabia	8.90	9	1.70	7
Syria	13.90	9	4.12	10
Tunisia	15.66	4	15.34	4
United Arab Emirates	24.26	8	3.85	7
Yemen	22.71	4	20.25	2
GCC	12.47	38	2.02	33
Non-GCC	26.71	61	13.16	65
MENA	19.59	99	7.59	98

(*) Non-GCC and MENA averages and totals include Iraq, but it is not reported in the table above as its coverage is less than 30%. Iraq is however included in the remaining analysis. Libyan banks are not included in the average and quantitative data analysis as their figures could not be verified during the follow-up process. Libya is however included in qualitative analysis.

Table 4
Average share of SME Loans in total Bank Loans

	Developed Countries		Developing Countries		
Source	OECD (2010)[1]	World Bank (2008)[2]	World Bank (2008)[3]	World Bank/UAB (2010)	
Number of countries	5 countries	7 countries	38 countries	15 Middle East countries	9 Non-GCC countries
SME Loans/Total Loans (%)	26.8	22.1	16.2	7.59	13.16

[1] Canada, France, Korea, Sweden, and the US.
[2, 3] Beck, Demirguc-Kunt, Peria (2008).

Table 5
Test of Differences in means between regions and ownership of banks

	Weighted Averages*			
	GCC	**Non-GCC**	**t-test**	**p-value**
SME Loans/Total Loans (%)	2.02	13.16	4.77	0.00***
Investment Loans/SME Loans (%)	15.43	26.40	4.38	0.00***
	Un-weighted Averages			
	GCC	**Non-GCC**	**t-test**	**p-value**
SME Loans/Total Loans (%)	2.08	15.82	6.89	0.00***
Investment Loans/SME Loans (%)	14.68	30.69	3.64	0.00***
	Private	**State**	**t-test**	**p-value**
SME Loans/Total Loans (%)	11.34	8.99	0.82	0.42
Investment Loans/SME Loans (%)	22.43	32.38	1.40	0.18
	Domestic (Private)	**Foreign**	**t-test**	**p-value**
SME Loans/Total Loans (%)	11.67	10.56	0.29	0.77
Investment Loans/SME Loans (%)	22.80	21.48	0.27	0.79

***** Total loans for banks are used to construct the weighted averages.

Table 6
Measures of Financial Infrastructure, MENA and other Regions

Region	Legal Rights Index	Coverage Public Credit Registry	Coverage Private Credit Bureau	Credit Information Index
Middle East & North Africa	3.5	3.5	2.6	2.6
GCC	3.8	4.2	6.4	2.9
Non-GCC	3.2	3.7	0.0	2.5
East Asia	5.3	8.9	14.6	3.7
Eastern Europe	6.8	2.4	14.1	3.5
Former Soviet Union	5.7	0.5	1.1	1.7
High income: Non-OECD	6.5	0.0	46.3	4.5
High income: OECD	6.8	8.1	58.1	4.9
Latin America	4.4	10.6	36.2	4.6
South Asia	5.7	0.5	2.0	2.9
Sub-Saharan Africa	5.2	1.0	6.9	1.5

Source: The Doing Business Database

Table 7
Outstanding Guarantees as a % of GDP

Country	2007	2008	2009
Egypt	0.08%	0.08%	0.09%
Jordan	0.07%	0.07%	0.07%
Lebanon	0.85%	0.84%	0.87%
Morocco	0.33%	0.35%	0.41%
Palestine	0.05%	0.16%	0.27%
Saudi Arabia	0.01%	0.01%	0.02%
Tunisia	0.34%	0.39%	0.50%

Source: Saadani, Arvai, and Rocha (2010)

Table 8.1: Determinants of Lending to SMEs (OLS)

Dependent Variable: Share of SME Loans in Total Bank Loans

Regressions are estimated via OLS at bank level for the year 2007 to 2009. Robust t statistics in brackets and (bank level) clustered t statistics in parenthesis.* significant at 10%; ** significant at 5%; *** significant at 1%

	1	2	3	4	5	6	7	8	9	10	11
Log Total loans	**-1.47**	**-2.53**	**-2.53**	**-2.26**	**-1.33**	**-1.09**	**-2.44**	**-2.53**	**-2.14**	**-1.72**	**-1.52**
	[3.81]***	[4.60]***	[4.59]***	[4.08]***	[2.48]**	[2.28]**	[6.33]***	[6.51]***	[5.36]***	[4.22]***	[3.80]***
	(2.50)**	(3.15)***	(3.14)***	(2.78)***	(1.70)*	(1.52)	(4.18)***	(4.32)***	(3.49)***	(2.73)***	(2.57)**
GCC Dummy	**-9.36**	**-4.13**	**-6.14**	**-7.44**	**-11.71**	**-5.41**	**-5.19**	**-6.21**	**-8.14**	**-9.79**	**-5.36**
	[7.08]***	[2.13]**	[2.80]***	[3.46]***	[4.98]***	[3.11]***	[3.20]***	[3.61]***	[4.23]***	[4.75]***	[3.60]***
	(4.30)***	(1.34)	(1.74)*	(2.19)**	(3.15)***	(1.98)*	(2.03)**	(2.26)**	(2.67)***	(2.98)***	(2.30)**
State Ownership Dummy	**0.59**	**0.86**	**2.00**	**0.96**	**1.54**	**1.24**	**1.50**	**2.23**	**1.65**	**1.75**	**1.29**
	[0.40]	[0.52]	[1.18]	[0.60]	[0.96]	[0.73]	[0.97]	[1.39]	[1.10]	[1.12]	[0.84]
	(0.25)	(0.31)	(0.71)	(0.36)	(0.57)	(0.44)	(0.58)	(0.83)	(0.66)	(0.66)	(0.50)
Log Number of Branches		**1.58**	**1.20**	**1.72**	**0.69**	**0.17**					
		[1.95]*	[1.43]	[2.16]**	[0.94]	[0.24]					
		(1.27)	(0.92)	(1.42)	(0.62)	(0.15)					
Separate Unit for SME Clients Dummy							**6.39**	**5.25**	**6.12**	**4.45**	**2.86**
							[3.12]***	[2.56]**	[3.05]***	[2.18]**	[1.24]
							(1.96)*	(1.62)	(1.93)*	(1.38)	(0.75)
Maximum Coverage Registry or Bureau		**0.00**	**-0.01**	**0.08**	**0.03**	**-0.08**	**-0.01**	**-0.02**	**0.06**	**0.01**	**-0.03**
		[0.04]	[0.22]	[1.69]*	[0.61]	[1.63]	[0.21]	[0.32]	[1.12]	[0.21]	[0.56]
		(0.03)	(0.17)	(1.37)	(0.43)	(1.28)	(0.16)	(0.25)	(0.94)	(0.15)	(0.43)
Legal Rights Index			**1.92**					**1.53**			
			[2.27]**					[1.79]*			
			(1.36)					(1.09)			
Time to Register Property				**-0.07**					**-0.06**		
				[4.27]***					[3.78]***		
				(2.96)***					(2.58)**		
Time to Enforce a Contract					**-0.03**					**-0.02**	
					[5.91]***					[4.17]***	
					(3.77)***					(2.73)***	
Time to Close a Business						**-2.48**					**-1.70**
						[3.67]***					[2.62]***
						(2.43)**					(1.74)*
Partial Credit Guarantee % of GDP		**10.16**	**10.31**	**8.51**	**7.19**	**11.91**	**12.37**	**12.47**	**10.98**	**10.12**	**13.58**
		[3.87]***	[3.95]***	[3.09]***	[2.66]***	[4.32]***	[4.75]***	[4.92]***	[4.02]***	[3.91]***	[5.06]***
		(2.49)**	(2.52)**	(1.98)*	(1.71)*	(2.74)***	(3.20)***	(3.32)***	(2.68)***	(2.63)**	(3.37)***
Observations	245	239	239	239	239	203	220	220	220	220	184
R-squared	0.32	0.35	0.37	0.37	0.42	0.39	0.39	0.41	0.41	0.42	0.39
Number of Countries	15	15	15	15	15	13	15	15	15	15	13
Number of Banks	96	96	96	96	96	82	88	88	88	88	74

Table 8.2: Determinants of Investment Lending to SMEs (OLS)

Dependent Variable: Share of Investment Loans in Total SME Loans

Regressions are estimated via OLS at bank level for the year 2007 to 2009. Robust t statistics in brackets and (bank level) clustered t statistics in parenthesis.* significant at 10%; ** significant at 5%; *** significant at 1%

	1	2	3	4	5	6	7	8	9	10	11
Log Total loans	**-1.49**	**-4.39**	**-4.49**	**-4.13**	**-3.89**	**-0.04**	**-2.70**	**-2.58**	**-2.45**	**-2.30**	**-0.71**
	[1.82]*	[3.42]***	[3.45]***	[3.25]***	[3.07]***	[0.02]	[2.90]***	[2.67]***	[2.60]***	[2.40]**	[0.66]
	(1.10)	(2.05)**	(2.06)**	(1.97)*	(1.86)*	(0.01)	(1.78)*	(1.64)	(1.63)	(1.50)	(0.40)
GCC Dummy	**-13.96**	**-6.58**	**-3.75**	**-9.01**	**-10.04**	**-14.20**	**-12.94**	**-11.58**	**-15.32**	**-15.60**	**-13.60**
	[4.50]***	[1.30]	[0.70]	[1.66]*	[1.64]	[2.63]***	[3.11]***	[2.84]***	[3.23]***	[2.94]***	[3.28]***
	(2.66)***	(0.79)	(0.42)	(1.07)	(0.99)	(1.62)	(1.91)*	(1.75)*	(2.11)**	(1.78)*	(2.04)**
State Ownership Dummy	**10.12**	**12.03**	**10.67**	**11.85**	**11.99**	**15.31**	**14.47**	**13.74**	**14.26**	**14.23**	**15.23**
	[2.36]**	[2.83]***	[2.57]**	[2.81]***	[2.77]***	[3.39]***	[3.22]***	[3.07]***	[3.21]***	[3.14]***	[3.31]***
	(1.38)	(1.66)*	(1.51)	(1.65)	(1.62)	(2.00)**	(1.88)*	(1.79)*	(1.88)*	(1.83)*	(1.93)*
Log Number of Branches		**4.85**	**5.598**	**4.793**	**4.562**	**-0.514**					
		[2.68]***	[2.96]***	[2.66]***	[2.59]**	[0.29]					
		(1.59)	(1.74)*	(1.58)	(1.54)	(0.18)					
Separate Unit for SME Clients Dummy							**6.76**	**8.11**	**6.63**	**5.86**	**3.19**
							[1.56]	[1.74]*	[1.54]	[1.31]	[0.67]
							(0.93)	(1.03)	(0.92)	(0.78)	(0.40)
Maximum Coverage Registry or Bureau		**0.30**	**0.32**	**0.35**	**0.31**	**0.30**	**0.35**	**0.37**	**0.40**	**0.36**	**0.32**
		[1.75]*	[1.91]*	[1.92]*	[1.82]*	[1.84]*	[2.18]**	[2.38]**	[2.34]**	[2.21]**	[2.00]**
		(1.20)	(1.32)	(1.36)	(1.25)	(1.32)	(1.48)	(1.60)	(1.64)	(1.50)	(1.44)
Legal Rights Index			**-2.22**					**-1.85**			
			[1.59]					[1.24]			
			(0.95)					(0.74)			
Time to Register Property				**-0.04**					**-0.05**		
				[1.11]					[1.13]		
				(0.82)					(0.83)		
Time to Enforce a Contract					**-0.01**					**-0.01**	
					[0.98]					[0.85]	
					(0.58)					(0.50)	
Time to Close a Business						**-1.89**					**-1.70**
						[1.20]					[1.10]
						(0.72)					(0.66)
Partial Credit Guarantee % of GDP		**18.12**	**18.64**	**16.79**	**16.37**	**20.37**	**16.82**	**17.01**	**15.49**	**15.39**	**19.64**
		[2.46]**	[2.55]**	[2.26]**	[2.15]**	[2.89]***	[2.17]**	[2.20]**	[1.99]**	[1.96]*	[2.64]***
		(1.46)	(1.51)	(1.35)	(1.27)	(1.70)*	(1.29)	(1.30)	(1.19)	(1.17)	(1.55)
Observations	238	230	230	230	230	202	227	227	227	227	199
R-squared	0.18	0.25	0.26	0.25	0.25	0.25	0.23	0.23	0.23	0.23	0.24
Number of Countries	15	15	15	15	15	13	15	15	15	15	13
Number of Banks	87	87	87	87	87	77	86	86	86	86	76

Table 8.3: Determinants of Lending to SMEs (2SLS)

Dependent Variable: Share of SME Loans in Total Bank Loans

Regressions are estimated via 2SLS at bank level for the year 2007 to 2009. Robust t statistics in brackets and (bank level) clustered t statistics in parenthesis.* significant at 10%; ** significant at 5%; *** significant at 1%

	1	2	3	4	5	6	7	8	9	10	11
Log Total loans	**-1.92**	**-2.70**	**-2.69**	**-2.27**	**-1.61**	**-1.05**	**-2.47**	**-2.56**	**-2.04**	**-1.86**	**-1.33**
	[4.19]***	[4.35]***	[4.34]***	[3.62]***	[2.69]***	[2.01]**	[5.55]***	[5.70]***	[4.39]***	[3.92]***	[3.03]***
	(3.25)***	(3.54)***	(3.55)***	(2.91)***	(2.20)**	(1.50)	(4.41)***	(4.54)***	(3.43)***	(3.06)***	(2.32)**
GCC Dummy	**-5.64**	**-2.93**	**-5.04**	**-8.79**	**-10.08**	**-5.74**	**-4.67**	**-5.69**	**-9.79**	**-8.67**	**-5.80**
	[3.01]***	[1.29]	[2.01]**	[3.09]***	[3.71]***	[2.92]***	[2.35]**	[2.76]***	[3.83]***	[3.46]***	[3.22]***
	(2.21)**	(0.97)	(1.49)	(2.34)**	(2.75)***	(2.15)**	(1.75)*	(2.05)**	(2.91)***	(2.55)**	(2.39)**
State Ownership Dummy	**1.11**	**0.09**	**1.27**	**0.12**	**0.91**	**0.74**	**1.24**	**1.94**	**1.16**	**1.46**	**0.99**
	[0.62]	[0.05]	[0.64]	[0.06]	[0.49]	[0.37]	[0.71]	[1.05]	[0.69]	[0.82]	[0.56]
	(0.45)	(0.03)	(0.46)	(0.05)	(0.35)	(0.26)	(0.51)	(0.75)	(0.50)	(0.59)	(0.40)
Log Number of Branches		**1.91**	**1.52**	**1.98**	**1.03**	**0.46**					
		[2.18]**	[1.70]*	[2.32]**	[1.33]	[0.66]					
		(1.70)*	(1.31)	(1.83)*	(1.05)	(0.48)					
Separate Unit for SME Clients Dummy							**6.86**	**5.65**	**6.10**	**5.06**	**3.13**
							[2.96]***	[2.47]**	[2.68]***	[2.20]**	[1.19]
							(2.23)**	(1.85)*	(2.03)**	(1.65)	(0.86)
Maximum Coverage Registry or Bureau		**-0.03**	**-0.04**	**0.15**	**0.01**	**-0.04**	**-0.04**	**-0.05**	**0.13**	**-0.02**	**-0.01**
		[0.44]	[0.71]	[2.53]**	[0.11]	[0.83]	[0.71]	[0.88]	[2.03]**	[0.34]	[0.14]
		(0.37)	(0.60)	(2.41)**	(0.08)	(0.70)	(0.59)	(0.73)	(1.97)*	(0.27)	(0.12)
Legal Rights Index			**1.94**					**1.55**			
			[1.97]*					[1.56]			
			(1.43)					(1.14)			
Time to Register Property				**-0.14**					**-0.12**		
				[3.54]***					[3.28]***		
				(2.69)***					(2.48)**		
Time to Enforce a Contract					**-0.03**					**-0.02**	
					[4.60]***					[3.04]***	
					(3.45)***					(2.34)**	
Time to Close a Business						**-1.64**					**-1.00**
						[2.66]***					[1.64]
						(1.95)*					(1.20)
Partial Credit Guarantee % of GDP	**10.29**	**10.03**	**9.71**	**7.93**	**7.53**	**11.65**	**11.89**	**11.66**	**9.97**	**10.15**	**13.09**
	[3.27]***	[3.15]***	[3.08]***	[2.35]**	[2.28]**	[3.39]***	[3.60]***	[3.64]***	[2.90]***	[3.09]***	[3.81]***
	(2.41)**	(2.31)**	(2.26)**	(1.73)*	(1.67)*	(2.46)**	(2.66)***	(2.69)***	(2.15)**	(2.28)**	(2.78)***
Observations	177	177	177	177	177	151	162	162	162	162	136
Number of Countries	15	15	15	15	15	13	15	15	15	15	13
Number of Banks	96	96	96	96	96	82	88	88	88	88	74
Kleibergen-Paap F statistic	5779	6924	8522	7827	7878	13195	6186	7759	6870	6524	11728
Hansen J statistic	1.31	0.07	2.3	0.04	0.12	3.31	0.14	0.72	0	0.01	2.61
P value of Hansen J statistic	0.25	0.8	0.13	0.83	0.73	0.07	0.71	0.4	0.97	0.94	0.11

Table 8.4: Determinants of Lending to SMEs (2SLS)

Dependent Variable: Share of SME Investment Loans in Total SME Loans

Regressions are estimated via 2SLS at bank level for the year 2007 to 2009. Robust t statistics in brackets and (bank level) clustered t statistics in parenthesis.* significant at 10%; ** significant at 5%; *** significant at 1%

	1	2	3	4	5	6	7	8	9	10	11
Log Total loans	**-2.00**	**-4.20**	**-4.37**	**-3.95**	**-3.74**	**-0.23**	**-2.45**	**-2.37**	**-2.16**	**-2.07**	**-0.82**
	[2.01]**	[2.68]***	[2.76]***	[2.50]**	[2.40]**	[0.11]	[2.21]**	[2.06]**	[1.92]*	[1.83]*	[0.64]
	(1.47)	(1.94)*	(1.99)**	(1.82)*	(1.74)*	(0.08)	(1.63)	(1.52)	(1.42)	(1.36)	(0.46)
GCC Dummy	**-7.34**	**-5.03**	**-2.11**	**-7.46**	**-8.16**	**-12.88**	**-12.04**	**-10.81**	**-15.63**	**-14.66**	**-12.77**
	[1.77]*	[0.81]	[0.32]	[1.00]	[1.08]	[1.92]*	[2.41]**	[2.22]**	[2.48]**	[2.32]**	[2.57]**
	(1.26)	(0.58)	(0.23)	(0.72)	(0.77)	(1.36)	(1.72)*	(1.58)	(1.78)*	(1.65)	(1.84)*
State Ownership Dummy	**12.12**	**10.91**	**9.64**	**10.71**	**10.86**	**13.97**	**13.39**	**12.82**	**12.93**	**13.11**	**14.15**
	[2.26]**	[2.14]**	[1.93]*	[2.13]**	[2.09]**	[2.55]**	[2.47]**	[2.36]**	[2.44]**	[2.39]**	[2.52]**
	(1.61)	(1.53)	(1.38)	(1.52)	(1.49)	(1.81)*	(1.76)*	(1.68)*	(1.74)*	(1.69)*	(1.79)*
Log Number of Branches		**4.85**	**5.65**	**4.67**	**4.53**	**-0.29**					
		[2.21]**	[2.46]**	[2.17]**	[2.12]**	[0.13]					
		(1.58)	(1.75)*	(1.55)	(1.51)	(0.09)					
Separate Unit for SME Clients Dummy							**6.66**	**7.87**	**6.53**	**5.76**	**4.01**
							[1.29]	[1.40]	[1.27]	[1.08]	[0.71]
							(0.93)	(1.01)	(0.91)	(0.78)	(0.50)
Maximum Coverage Registry or Bureau		**0.23**	**0.26**	**0.30**	**0.24**	**0.27**	**0.30**	**0.33**	**0.41**	**0.31**	**0.29**
		[1.23]	[1.40]	[1.28]	[1.30]	[1.53]	[1.74]*	[1.88]*	[1.87]*	[1.77]*	[1.73]*
		(0.89)	(1.01)	(0.93)	(0.94)	(1.11)	(1.25)	(1.36)	(1.35)	(1.28)	(1.25)
Legal Rights Index			**-2.18**					**-1.66**			
			[1.32]					[0.93]			
			(0.94)					(0.66)			
Time to Register Property				**-0.06**					**-0.09**		
				[0.60]					[0.97]		
				(0.43)					(0.70)		
Time to Enforce a Contract					**-0.01**					**-0.01**	
					[0.71]					[0.70]	
					(0.51)					(0.50)	
Time to Close a Business						**-2.01**					**-1.82**
						[1.12]					[1.02]
						(0.79)					(0.72)
Partial Credit Guarantee % of GDP	**19.46**	**17.24**	**18.17**	**16.31**	**15.85**	**19.68**	**15.80**	**16.42**	**14.33**	**14.53**	**18.74**
	[2.27]**	[1.97]*	[2.09]**	[1.84]*	[1.74]*	[2.34]**	[1.69]*	[1.76]*	[1.53]	[1.53]	[2.08]**
	(1.61)	(1.39)	(1.48)	(1.30)	(1.23)	(1.65)	(1.19)	(1.24)	(1.08)	(1.08)	(1.47)
Observations	164	164	164	164	164	145	162	162	162	162	143
Number of Countries	15	15	15	15	15	13	15	15	15	15	13
Number of Banks	87	87	87	87	87	77	86	86	86	86	76
Kleibergen-Paap F statistic	5970	7520	9116	8327	7617	13006	7565	9062	8184	7473	13011
Hansen J statistic	0.16	0.29	0	0.4	0.46	2.88	0.01	0.35	0.01	0	3.13
P value of Hansen J statistic	0.69	0.59	0.98	0.53	0.5	0.09	0.93	0.55	0.93	0.95	0.08

Appendix Table 1: Descriptive Statistics of the Variables Used in Regression Analysis

Variable	No. of Observations	Mean	Standard Deviation	Minimum	Maximum
SME Loans/Total Loans (%)	271	10.1	12.3	0.0	55.0
Investment Loans/SME Loans (%)	270	24.1	22.8	0.0	80.0
Log Total loans	339	20.8	2.4	13.8	24.7
Log Number of Branches	396	3.3	1.4	0.0	6.7
Maximum Coverage Registry or Bureau	381	8.0	9.8	0.0	36.0
Legal Rights Index	399	3.1	1.2	0.0	4.0
Time to Register Property	399	29.4	34.1	2.0	193.0
Time to Enforce a Contract	399	662.8	142.8	520.0	1010.0
Recovery rate for Closing a Business	348	31.0	15.1	10.0	63.0
Time to Close a Business	348	3.6	0.9	1.0	5.0
Partial Credit Guarantee % of GDP	399	0.1	0.2	0.0	0.9
Lag of Partial Credit Guarantee % of GDP	266	0.1	0.2	0.0	0.9
Median Coverage of PCG Scheme	210	68.1	7.5	60.0	82.5

Appendix Table 2: Correlations between variables used in Regression Analysis

	SME Loans/Total Loans (%)	Investment Loans/SME Loans (%)	Log Total loans	GCC Dummy	State Ownership Dummy	Maximum Coverage Registry or Bureau	Log Number of Branches	Separate Unit for SME Clients Dummy	Legal Rights Index	Time to Register Property	Time to Enforce a Contract	Recovery rate for Closing a Business	Time to Close a Business	Outstanding Credit Guarantee % of GDP	Lag Outstanding Credit Guarantee % of GDP
Investment Loans/SME Loans (%)	0.26***	1													
Log Total loans	-0.47***	-0.29***	1												
GCC Dummy	-0.50***	-0.35***	0.53***	1											
State Ownership Dummy	-0.01	0.17***	0.07	0.02	1										
Maximum Coverage Registry or Bureau	-0.30***	-0.1	0.40***	0.59***	-0.02	1									
Log Number of Branches	0.02	0.09	0.55*	-0.07	0.12**	0.02	1								
Separate Unit for SME Clients Dummy	-0.04	-0.07	0.31***	0.27***	-0.17***	0.13**	0.22***	1							
Legal Rights Index	-0.13**	-0.23***	0.43***	0.58***	-0.14***	0.42***	0.18***	0.49***	1						
Time to Register Property	-0.07	0.05	0.04	-0.32***	0.04	0.01	0.16***	-0.10*	-0.21***	1					
Time to Enforce a Contract	-0.12*	0.06	0.06	-0.47***	0.04	-0.19***	0.19***	-0.22***	-0.34***	0.60***	1				
Recovery rate for Closing a Business	-0.10	0.01	0.10	0.28***	-0.09*	0.46***	-0.22***	0.06	0.02	-0.08	-0.23***	1			
Time to Close a Business	-0.22***	-0.01	-0.18***	0.04	0.08	-0.23***	-0.18***	-0.09	0.07	-0.01	0.15***	-0.69***	1		
Outstanding Credit Guarantee % of GDP	0.30***	0.27***	-0.01	-0.40***	-0.15***	-0.04	0.22***	0.03	-0.10**	0.11**	0.13***	-0.18***	-0.10*		
Lag Outstanding Credit Guarantee % of GDP	0.29***	0.26***	-0.02	-0.4***	-0.15**	-0.07	0.22***	0.04	-0.08	0.17***	0.14**	-0.19***	-0.06	0.99***	1
Median Coverage Ratio of PCG Scheme	0.43***	0.29***	-0.42***	-0.3***	-0.26***	-0.31***	-0.25***	0.14***	0.23***	-0.44***	-0.39***	-0.21***	0.32***	0.60***	0.63***

* significant at 10%; ** significant at 5%, *** significant at 1%.

Appendix Table 3: Definition and Sources of variables used in Regression Analysis

Variable	Definition	Source
SME Loans	Total SME loans for a bank expressed as a percentage of total loans	UAB and World Bank SME Survey
Investment Loans	Total SME loans for investment purposes expressed as percentage of total SME loans	UAB and World Bank SME Survey
Log Total Loans	Logarithm of total loans for a bank	UAB and World Bank SME Survey and Bankscope Database
GCC Dummy	Dummy variable that takes value 1 if a bank is in GCC region and 0 otherwise	World Bank
State Ownership Dummy	Dummy that takes value 1 if a bank is owned by government and 0 otherwise	UAB and World Bank SME Survey
Log Number of Branches	Logarithm of total number of branches for a bank	UAB and World Bank SME Survey and Bankscope Database
Separate Unit for SME Clients	Dummy variable that takes value 1 if a bank has a separate unit for SMEs and 0 otherwise	UAB and World Bank SME Survey
Maximum Coverage Registry or Bureau	Highest coverage ratio of either the public registry or the private bureau and includes the number of individuals and firms listed with information on their borrowing history from past five years	World Bank's Doing Business
Legal Rights Index	The degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders and thus facilitate lending. The index ranges from 0 to 10, with higher scores indicating better protection	World Bank's Doing Business
Time to Register Property	Number of days that property lawyers, notaries or registry officials indicate is necessary to complete a procedure.	World Bank's Doing Business
Time to Enforce a Contract	Number of days counted from the moment the plaintiff decides to file the lawsuit in court until payment. This includes both the days when actions take place and the waiting periods between	World Bank's Doing Business
Recovery rate for Closing a Business	Recorded as cents on the dollar recouped by creditors through reorganization, liquidation or debt enforcement (foreclosure) proceedings	World Bank's Doing Business
Time to Close a Business	Number of years for creditors to recover their credit. The period of time measured is from the company's default until the payment of some or all of the money owed to the bank.	World Bank's Doing Business
Partial Credit Guarantee	Outstanding credit guarantees expressed as a percentage of GDP	Saadani, Arvai, and Rocha (2010)
Median Coverage of PCG Scheme	Median share of loan guaranteed	Saadani, Arvai, and Rocha (2010)

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