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### **Credit Information Sharing for Consumer & SMME Financing: Considerations for Implementation**

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The Policy & Economic Research Council, and the Asia-Pacific Credit Coalition



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## **1 INTRODUCTION: THE LOGIC OF REGULATORY AND INFORMATIONAL TRANSPARENCY FOR CONSUMER AND SME FINANCE**

Information sharing has come to be seen as an effective means of expanding access to credit and enhancing loan performance for consumers and for small and medium enterprises. By enabling a more comprehensive assessment of risk and reducing uncertainty in lending, information sharing extends credit to the private sector, lowers the average price of credit, and in many places lowers the costs of processing loans while improving loan performance. As such, it has come to be seen as an essential component of an economy's financial infrastructure. In fact, the development of sophisticated information-sharing systems is part and parcel of the modernization of the finance sector.

The choice that an economy faces is not simply whether to share information or not. Questions regarding some basic elements of information sharing need to be addressed. These questions include:

- what information should be shared?
- how is the data shared?
- what regulatory conditions promote information sharing while protecting consumers?

This brief first examines the challenges in lending that information sharing helps to overcome. These challenges are found in consumer and small business lending. It then presents evidence for the claim that information sharing expands credit access and lending, improves loan performance and results in a fairer or broader distribution of credit and thereby enables better macroeconomic performance and financial inclusion. In the course of doing so, we offer evidence-based answers to the three questions posed above. The remainder of this paper examines the issues and challenges in implementing an information sharing system for SME and consumer financing, focusing especially on regulatory questions.

We conclude with some suggestions for an outreach effort for the APEC region. These suggestions, if adopted, will help regulators and policy makers implement a more effective information sharing system as part of the financial infrastructure.

## **1.1 The Role Of Credit Information Infrastructure In Promoting Financial Inclusion And Prudent Risk Management**

To understand how the specific structuring of an information sharing system shapes outcomes, it is necessary to understand some of the inherent problems in lending and how information sharing addresses these problems.

Credit bureaus are institutions designed to solve the problem of information asymmetries in lending. Because there are costs to transacting, markets often have suboptimal outcomes. In credit markets, lower levels of lending result from these costs. Transaction costs found in lending include the cost of searching, contracting, monitoring, and enforcing a market exchange. These costs often stem from the lack of information and the price of gathering that outstanding information.

The main costs of transaction in lending are explicitly information problems. In extending a loan, the problem that a lender faces is that s/he does not know a borrower's intention and/or capacity to repay. The lender must infer the risk profile of the borrower. Such assessments are crucial because a loan involves an agreement to pay in the future. One long-run consequence is that credit in loan markets is rationed because of insufficient information, meaning that given borrowers with identical risk profiles, one will receive a loan and another will not. When there is little information to go on, lenders rely on a combination of pricing (interest rates) and rationing to maximize returns. However, higher interest rates, while covering the risk of borrower default, are also likely to result in adverse selection. A classic moral hazard problem is created in an environment where a borrower cannot be properly monitored after credit has been extended as this may result in the borrower making riskier choices with that credit.

Credit bureaus are institutional solutions to these two ubiquitous problems in lending (adverse selection and moral hazard) in the following way. Credit bureau data allows for better risk assessment by providing information about a borrower's obligations and past track record in meeting them; they thereby reduce the problem of adverse selection. Moreover, by threatening borrowers with higher costs of future borrowing or even inhibiting future borrowing if they do not fulfill their obligations, information sharing induces borrowers to pay on time and thereby helps mitigate moral hazard. Credit-reporting agencies thus: (a) lower interest rates for low-risk borrowers; (b) increase lending through reduced rationing; and (c) lower rates of delinquency and default.

Additionally, credit bureaus, by rendering information more homogenous, reduce the information rents that lenders can derive and thereby facilitate competition. Credit becomes more available and affordable as a result. However, the extent to which these results obtain depend on the structure of credit reporting, bureau ownership structure, and the kinds of information reported. That is, there is no single model of credit reporting and the differences in the model matter greatly for the scope of lending and the performance of portfolios. It is essential that economic policy makers take into account these differences when proceeding with credit reporting reform.

Research demonstrates that the extent to which these results are achieved depends on the structure of credit reporting, bureau ownership and the type of information reported. This finding appears to hold for credit bureaus generally, commercial and consumer.

The research suggests that: (a) the sharing of more data, especially positive data, across sectors increases lending to the private sector more than other reporting regimes; (b) private bureaus with positive and comprehensive data increase lending to the private sector; and (c) the sharing of more information, especially positive information drawn from multiple sectors results in better loan performance than segmented and negative-only reporting. The evidence for these three claims is extensive.

## **1.2 Regulatory Transparency and the Role of Clear Legal and Regulatory Architecture to Promote Secured Financing**

Whether the regulatory framework for reporting emerges through law and regulation, largely, or through contracting and industry norms, can shape the speed of implementation, depending on the legal-judicial framework of a society and the capacities of a legal system for enforcement. What must be common across both approaches is the need for regulatory transparency and a well-defined and thus predictable regulatory architecture.

We can specify two ideal types with illustrations from a number of economies. The first ideal typical approach is characterized by a fully integrated regulatory regime. Laws and regulations cover privacy, permissible uses, adverse action notification requirements, redress procedures, and accuracy specifications. Such a well-elaborated system has as its complement a well developed and elaborated enforcement system.

These features are found in the robust reporting systems of the United States and Canada but also Korea and Mexico. It should be noted that these economies have well developed regulatory enforcement mechanisms, can devote resources for compliance, and capacity for regulation.

The other ideal typical approach can be described as a system that evolves largely out of contracting between key parties of a system and consumer protection laws. In such a system the rules that govern the collection and use of data are develop through reciprocal arrangements and lending industry norms on information sharing. The laws on data protection and prevention of consumer harm provide a basis for enforcement and for intervention in defense of consumer interests. The best known and most elaborated of these systems is the credit-reporting regime found in the United Kingdom, in which the EU privacy directive provides guidelines for consumer rights and protections over data. (Regulatory guidelines in both systems often specify consumer rights that comport with the OECD Fair Information Principles.<sup>1</sup>)

It should be noted that these ideal-types are idealized. Actually existing systems include

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<sup>1</sup> See OECD, "OECD Guidelines on the Protection of Privacy and Transborder Flows of Personal Data." [http://www.oecd.org/document/18/0,3343,en\\_2649\\_34255\\_1815186\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/18/0,3343,en_2649_34255_1815186_1_1_1_1,00.html)

elements of both in different mixes. These idealizations refer, as such, to approaches that can be followed in implementation. The possibility of mixture provides policy makers with flexibility in bringing full-file, comprehensive credit reporting into being.

As many of the efforts to implement information sharing have been driven by regulation, a process in which elements must be transparent in order to (i) form a societal consensus for the effort and, more importantly, (ii) so that all actors can understand their rights, roles and obligation. That is, a well-structured and comprehensive legal and regulatory framework clearly provides a structure in which the expectations of data providers, data collection agencies such as bureaus, lenders and data subjects can be coordinated, but moreover, it can reflect a societal consensus on a system of information sharing. This societal consensus is important not merely for the stability of the system in the eyes of the public at large, but is also necessary for future changes in regulation that may arise owing to changes in practices - e.g. expansion of reporting to new categories of information or the inclusion of new sectors. At the core of this effort is the instillation of an understanding of how credit reporting works among the public. To be sure, there are and will be aspects of the information sharing regime that remain contested, but a core consensus will help to keep the system dynamically stable and, crucially, functioning to allocate credit efficiently and broadly to consumers and small businesses.

The virtue and importance of a transparent process rests in the fact that it is not only regulatory prohibitions but also regulatory uncertainty that can serve as a hurdle to modern, information-based lending. As the financial sector is a heavily regulated industry, regulatory uncertainty makes creditors unsure about sharing and using financial information. A transparent process also reduces the chances of a system in which the meaning of regulation is unclear.

The legal and regulatory framework will also help to structure public perception and understanding, and will be the basis for education and outreach. The framework must provide the foundation for the credit bureau, (a legal position in which it can exist) as well as establish the rules under which the credit bureau, its users, and the institutions that provide information to the credit bureau will operate.

Legislative drafts should be vetted through the appropriate avenues, such as financial and non-financial institutions that will participate in the credit system, to ensure that all framework ideas are considered.

## **2 EFFECTS ON DEVELOPMENT**

The economic impact of a stronger financial structure is a well-explored topic. Theoretically, finance has been thought to “mobilize savings,” or to move savings to uses that can assist consumption or can develop productive capacity through investment. At the level of the individual, it also has been thought to smooth consumption over a person’s life cycle. In the aggregate, it is thought to stabilize consumption and thereby decreases the swings of the business cycle. Moreover, at the level of the society, *wider*

access to finances may have positive consequences for economic fairness, equality and poverty alleviation, as access to credit helps in asset formation.

These theoretical claims have been empirically examined. Basically, three spheres of economic life are strongly shaped, directly and indirectly, by the structure of credit reporting:

- economic growth and stability;
- the price of credit; and,
- income distribution, as it relates to both poverty and equality.

These macro effects are achieved most commonly through a sustainable expansion of lending that comes with better risk assessment. Each is examined in turn below.

Three spheres of economic life are strongly shaped, directly and indirectly, by the structure of credit reporting: (1) economic growth and stability; (2) the price of credit; and (3) income distribution, as it relates to both poverty and equality. These macro effects are achieved most commonly through a sustainable expansion of lending that comes with better risk assessment.

## **2.1 Greater Economic Growth and Stability**

The research on finance and growth is extensive.<sup>2</sup> Multi-country estimates show that economies with larger financial sectors (under various measurements) have higher rates of growth, greater productivity increases, and faster growing capital stock. In cross-country estimations, Ross Levine estimated that an increase in private-sector lending by 30% of GDP should lead to an increase in GDP growth by one percent per annum, and an increases in productivity and capital stock by 0.75% per annum.<sup>3</sup> This is a conservative estimate and should also be considered in the context of our findings on the impact of higher participation rates in private full-file credit bureaus on growth in private-sector lending as a share of GDP.

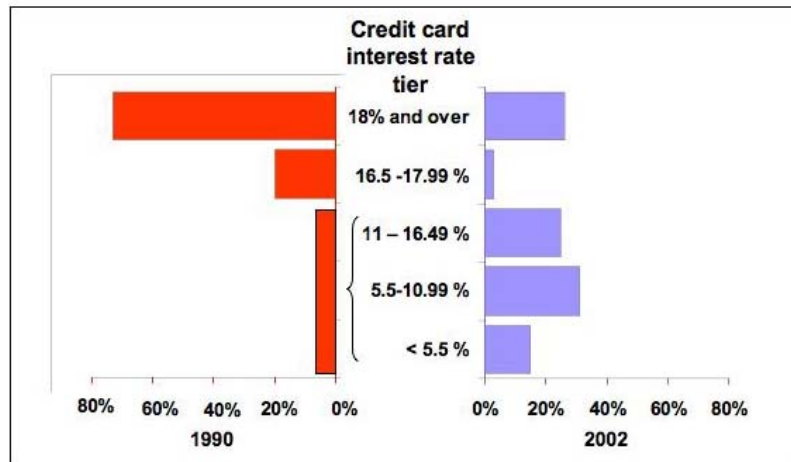
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<sup>2</sup> Walter Bagehot believed that England beat out its competitors not because it had more capital but because it could mobilize it better. Also see R. G. King and Ross Levine, "Finance, Entrepreneurship, and Growth: Theory and Evidence," *Journal of Monetary Economics* 32 (1993): 513-542; R. Levine and S. Zervos, "Stock Markets, Banks, and Economic Growth," *American Economic Review* 88 (1998): 537-558; Ross Levine, "Financial Development and Economic Growth: Views and Agenda" *Journal of Economic Literature* 25 (June 1997): 688-726; Jose De Gregorio and Pablo Guidotti, "Financial Development and Economic Growth," *World Development* 23 (3) (March 1995): 433-448; J. Greenwood and B. Jovanovic, "Financial Development, Growth, and the Distribution of Income," *Journal of Political Economy* 98 (1990): 1076-1107; J. H. Boyd and E. C. Prescott, "Financial Intermediary-Coalitions," *Journal of Economics Theory* 38 (1986): 211-232; F. Allen, "The Market for Information and the Origin of Financial Intermediaries," *Journal of Financial Intermediation* 1 (1990): 3-30; R. T. S. Ramakrishnan and A. Thakor, "Information Reliability and a Theory of Financial Intermediation," *Review of Economic Studies* 51 (1985): 415-432.

<sup>3</sup> Ross Levine, "Financial Development and Economic Growth," p. 706, and King and Levine, "Finance, Entrepreneurship, and Growth," find similar outcomes.

## 2.2 Lowers Average Interest Rates

Information-sharing can lower average interest rates in several ways. These dynamics



have been borne out both theoretically and empirically. First, without information on borrowers' risk profiles, a lender will mistake good risks for bad, and vice versa. The portfolio, therefore, will consist of more risky loans and, over time, as interest rates adjust to reflect loan performance, higher rates. Second, higher rates create incentives to engage in riskier projects, as lower-risk projects will not yield the return to compensate for the costs of the loan. Risky projects come to account for a larger share of the portfolio, thereby driving up the average rate. When information is shared, the ability to screen out riskier borrowers improves the portfolio's performance and allows lenders to offer lower rates to less-risky borrowers who would not have borrowed otherwise.

Figure 1 illustrates this dynamic as it played out in the United States, showing the distribution of credit card interest rates in the United States as information-sharing spread between 1990 and 2002.

**Figure 1: Distribution of U.S. Credit Card Interest Rates as Information-Sharing Expanded between 1990 and 2002<sup>4</sup>**

Risk-based pricing, determined from consumers' risk profiles using credit reports, altered the price of credit for many Americans, allowing for more nuanced pricing. To the extent there is sufficient competitive pressure, credit pricing will increasingly reflect the default rate. To this extent, then, better risk assessment translates to the desired macroeconomic outcome of lower rates.

## 2.3 Lowers Poverty and Improves the Distribution of Income

There is some preliminary evidence that greater access to credit can reduce poverty and improve the distribution of income. Beck, Demirgüç-Kunt, and Levine examined the

<sup>4</sup> Turner et al., *The Fair Credit Reporting Act*, Table 6., p. 30.



impacts of greater private-sector borrowing on (1) income inequality as measured by the Gini coefficient (a standard measure of income inequality; higher values mean greater income inequality); (2) relative poverty, in terms of the income share of the poorest quintile; and (3) absolute poverty, in terms of the share of the population that lives on less than US\$1 per day.<sup>5</sup> Controlling for factors such as education, inflation, and trade, Beck and colleagues found that greater private-sector lending:

- lowers the growth of the Gini coefficient;
- lowers the growth of the percentage of the population living under \$1 per day; and,
- increases the growth of the lowest (poorest) quintile's income share.

### **3 CREDIT REPORTING, ITS STRUCTURE, AND CONSEQUENCES: THE MICRO-LEVEL**

The specificities of structure of credit reporting shapes whether and to what extent the macroeconomic effects noted above are realized. The research suggests that (a) full-file, comprehensive credit reporting increases lending to the private sector more than other reporting regimes; (b) the presence of private bureaus with comprehensive data is associated with greater lending to the private sector; and (c) full-file, comprehensive reporting results in better loan performance than segmented and negative-only reporting. The evidence for these three claims is extensive.

The impacts of credit reporting and its structures have been examined in two ways. The first approach statistically estimates the impact of different systems of credit reporting worldwide, controlling for factors such as wealth and the legal system (particularly rights in collateral, bankruptcy, and property rights). The second approach uses individual credit files from an economy that engages in full-file reporting and simulates a restricted system by removing certain information.<sup>6</sup> Credit scores (predictions of default/delinquencies) made using the restricted and full data sets are then compared with actual outcomes in the observation period, the year or years following the timing of the credit scoring. The cost of the information restriction or the benefit of the information inclusion can then be measured in terms of economic trade-offs between extending credit and worsening loan performance. Smaller trade-offs are to the benefit of all.

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<sup>5</sup> The Gini, which is a ratio that takes values between 0 and 1, or 0 and 100 when indexed, measures income distribution with higher values indicating greater inequality. Thorsten Beck, Asli Demirgüç-Kunt, and Ross Levine, "Finance, Inequality, and the Poor" (National Bureau of Economic Research working paper no. 10979, January 2007). Available at [www.econ.brown.edu/fac/Ross\\_Levine/Publication/Forthcoming/Forth\\_3RL\\_Fin%20Inequality%20Poverty.pdf](http://www.econ.brown.edu/fac/Ross_Levine/Publication/Forthcoming/Forth_3RL_Fin%20Inequality%20Poverty.pdf)

<sup>6</sup> John M. Barron and Michael Staten, "The Value of Comprehensive Credit Reports: Lessons from the U.S. Experience," in *Credit Reporting Systems and the International Economy*, ed. Margaret M. Miller, 273-310 (Cambridge, MA: MIT Press, 2003).

### **3.1 Evidence on How to Structure Credit Payment Data**

Here, we elaborate on the dynamics at play in three scenarios: whether the files include timely payments (full-file) or only delinquencies (negative-only); whether the files contain information across all sectors (comprehensive) or are restricted to a single sector in which the consumer has a credit line (segmented); and, whether the credit bureau is owned by public agencies such as the central bank or banking superintendent, or by private owners.

#### **3.1.1 Full-file payment information versus negative-only data**

To most accurately judge risk, lenders generally need to know more than the past credit failures of the applicant. Systems that only report serious delinquencies do not capture many moderately late payments (30 to 60 days past due) that are often indicative of a borrower's risk. In addition, positive credit information provides a low-cost way of gathering data on applicants who have paid in a timely fashion, and it provides information on those who may often face discrimination, such as lower-income borrowers, women, racial minorities, and the young. Full-file reporting also allows creditors to measure a borrower's capacity to carry a loan by revealing the individual's existing lines of credit, associated balances, and credit limits.

#### **3.1.2 Comprehensive reporting versus segmented reporting**

In many ways, the issue of comprehensive reporting versus segmented reporting is akin to that of full-file versus negative-only reporting. More information allows for better predictions. In addition, comprehensive reporting provides a low-cost way of gathering data on those who apply for loans in another sector.

#### **3.1.3 Impact of non-financial “alternative” data**

There are potentially enormous benefits to adding non-financial payment data, such as utility and telecom payments, to consumer credit files. These non-financial services are broadly utilized in many countries, across socioeconomic groups and among many individuals that may not have participated in the formal credit markets and, thus, have little or no traditional credit history on file. The use of these sorts of data has the potential to make available affordable credit from mainstream financial markets to historically underserved consumers and entrepreneurs.

A PERC study measured the impact on access to credit with the inclusion of energy utility and telecom payment data in U.S. consumer credit files. (Some 35 to 54 million US consumer lack credit files or have too little information to assess risk and thereby remain outside the credit mainstream.) PERC's simulations found that when energy utility and telecom payment are included in credit files, there were greater rises in those

that become credit eligible (assuming a three percent target default rate) among ethnic minorities, lower income households, younger individuals, and older individuals. That is, those least likely to be in the credit mainstream, not having had multiple credit accounts in the past, are those most likely to benefit from the inclusion of non-financial data in credit files.

### **3.1.4 Evidence: The impact on loan performance**

The counterpart to greater acceptance rates at a given default rate is lower default rates at a given acceptance rate. The four negative-only to full-file simulations restricted to financial accounts (i.e., all but the Colombia simulations) show the default rate increasing by as little as 0.3 percentage points (or a 10% increase), which is still a considerable degradation of portfolio performance, to as much as 1.84 percentage points (a 170% increase) in cases restricted to financial accounts only. Majnoni and colleagues' simulation using Brazilian files reveals that even at an extremely high acceptance target of 80%, the default rate increases by 0.86 percentage points (or 30%). At a 60% acceptance target, the default rate nearly doubles (an 83% increase) under negative-only reporting compared with full-file reporting. These effects are significant for a lender and, moreover, as aggregated they can have a significant effect on an economy's financial stability and growth. (For more information see Section 3.) Comparisons using segmented and comprehensive files show similar shifts in performance as were evident in the shift from full-file to negative-only.

### **3.1.5 Evidence: The impact on credit access**

Simulations have used anonymous credit files from different economies to gauge the impact on credit of wider access to information. The first of these, conducted by the pioneers of this method, John Barron and Michael Staten, used U.S. files to simulate the impact of a system in which only negative information is provided and, separately, a system in which only retail payment information (i.e., segmented reporting) is provided.<sup>7</sup> Barron and Staten, using a 3 percent default target (that is, when a lender aims to have a nonperformance level that is no more than 3 percent), found that a negative-only reporting system would accept 39.8 percent of the applicant pool, whereas a full-file system would accept 74.8 percent. Several studies have verified this trade-off. Three are notable. The first, by PERC's uses U.S. data with commercial scoring models and includes one negative-only simulation, in which payment data less than 90 days past due were excluded.<sup>8</sup> The second and third studies use Latin American files—one using Brazilian and Argentinean files and the other using Colombian files.<sup>9</sup> The results from

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<sup>7</sup> Ibid., p. 298.

<sup>8</sup> Michael Turner, *The Fair Credit Reporting Act: Access, Efficiency, and Opportunity* (Washington, DC: The National Chamber Foundation, June 2003), Table 11, p. 50, scenario C results. Available also online at [http://infopolicy.org/pdf/fcra\\_report.pdf](http://infopolicy.org/pdf/fcra_report.pdf).

<sup>9</sup> For the Brazilian study, see Giovanni Majnoni, Margaret Miller, Nataliya Mylenko, and Andrew Powell, "Improving Credit Information, Bank Regulation and Supervision." Policy Research Working Paper Series, no. 3443 (Washington, DC: World Bank, November 2004), available at <http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2004/12/17/000.160016.20041217171024/Rendered/PDF/WPS3443.pdf>. For the other two studies, see Michael Turner and

these simulations are shown in the columns 2–5 in Table 1.

The most modest improvements in lending at the 3 percent default rate would accept an additional 7 percentage points or increase the number accepted by nearly 22 percent, depending on how improvements are measured. Either way, these are significant improvements. **There appears to be a fairly broad consensus in the results that greater use of full-file data materially improves and increases lending.**<sup>10</sup>

Table 1: Percentage Point Change in the Acceptance Rate by Shift in Reporting Regime (percentage change shown in parentheses) <sup>11</sup>							
	Negative-only to Full-file					Segmented (Bank-only) to Comprehensive Reporting	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Default Rate	Barron and Staten, U.S. files	Turner et al., U.S. files	Turner and Varghese, Colombian files	Majnoni et al., Argentinean files	Majnoni et al., Brazilian Files	Barron and Staten, U.S. files	Turner, Canadian files
0.5%							16.5 (52.7%)
1%							8.2 (13.1%)
2%		13.4 (47.0%)			15.9 (32.3%)		7 (8.8%)
3%	35 (87.9%)	9.2 (23.0%)	7.4 (290.6%)	10.7 (21.7%)	26.4 (47.3%)	8.0 (10.6%)	9.1 (10.9%)
4%	9.5 (12.9%)	8.4 (17.8%)			6.7 (7.9%)	10.0 (12.4%)	
5%	4.3 (5.1%)	4.9 (8.8%)	36.2 (702.9%)	0.6 (0.1%)	1.9 (2.0%)	2.2 (2.3%)	
6%	2.3	3.3					

Robin Varghese, *The Economic Impacts of Payment Reporting in Latin America* (Chapel Hill, NC: Political and Economic Research Council, May 2007).

<sup>10</sup> John M. Barron and Michael Staten, “The Value of Comprehensive Credit Reports: Lessons from the U.S. Experience.” In *Credit Reporting Systems and the International Economy*, edited by Margaret M. Miller (Cambridge, MA: MIT Press, 2003), pp. 273-310. Information for this table was taken from Table 8.6 (p. 303).

<sup>11</sup> (Columns 1 & 6) John Barron and Michael Staten, “The Value of Comprehensive Credit Reports,” Table 8.3, p. 298, and Table 8.6, p. 303. (column 2) Michael Turner et al., *The Fair Credit Reporting Act*, Table 11, p. 50; (column 3) Michael Turner and Robin Varghese, *Economic Impacts of Payment Reporting Participation in Latin America*, Table 6, p. 31; (columns 4 & 5) Giovanni Majnoni et al., “Improving Credit Information,” Table 4, Panel A.; (column 7) Michael Turner et al., *On The Impact of Credit Payment Reporting*, Table 6, p. 44. (columns 8 & 9) Michael Turner et al., *Give Credit Where Credit Is Due*.

	(2.5%)	(5.5%)					
7%	0.5 (0.5%)	2.3 (3.6%)	45.2 (332.5%)	1.76 (2.1%)			

### 3.1.6 Impacts on the distribution of credit

Some of the studies of information sharing examine how different systems of reporting affect the *distribution* of credit among different groups. Two such studies use U.S. credit files and the third uses Colombian files. The first three columns of Table 5 present results of studies using U.S. files, with columns 1 and 2 showing the distributional effects of adding utility and telecommunications payment information, and column 3 the effects of switching from negative-only to full-file.<sup>12</sup> These studies also use a 3 percent target default rate. All three changes (inclusion of utility data, inclusion of telecommunications data, and the shift to full-file data) are associated with higher acceptance rates for groups that have been traditionally under-served by the financial mainstream. That is, the young, ethnic minorities, and those with lower household incomes benefit the most from including positive and non-financial information in credit files. Thus, credit can both be expanded and distributed more equitably. In short, greater information sharing broadens and deepens credit access, makes it perform better, and makes credit fairer.

<b>Table 2: Change in the Acceptance Rate with Reporting Regime Change</b>		
	US Full-File (Neg.-Only = 1.00)	Colombia Full-File (Neg.-Only = 1.00)
<b>Ethnicity</b>		
Black	1.28	
Hispanic	1.37	
White	1.22	
<b>Age</b>		
18-25	1.47	18.31 (a)
26-35		
36-45	1.22	6.48 (b)
46-55	1.21	4.54 (c)
56-65	1.20	3.85 (d)
>65	1.19	
<b>HH Income (000)</b>		
<20	1.36 (a)	
20-29	1.3 (b)	
30-49	1.24	
50-99	1.21	
>99	1.18	

<sup>12</sup> Michael Turner, et al. 2003. *The fair credit reporting act: access efficiency and opportunity the economic importance of fair credit reauthorization*. Chapel Hill, NC. Information Policy Institute; and Turner et al. 2002. *Give credit where credit is due: Increasing access to affordable mainstream credit using alternative data*. Chapel Hill, NC: Political and Economic Research Council.

Gender		
Female		12.39
Male		5.91
(a) Actual Range is 18-32; (b) Actual Range is 32-42, (c) Actual Range is 42-50; (d) Actual Range is > 57.		

These results are notable. *These distributional effects in the access to credit can themselves be used as a monitoring device to evaluate whether positive data is broadening lending.* That is, changes in the distribution of credit itself serve to indicate the effective and efficient use of information. Such a change serves to indicate whether lenders and analytic firms are making the most of the data, and extracting desirable value out of it. If not, it may be the case that other prerequisites for efficient lending - e.g., skills in information use, value-adding analytic products - are missing or underused.

### 3.2 Importance of Secured Lending Products for SME financing

As has been noted in much of the research on SME Finance enablers, SME's historically have not enjoyed the same access to bank credit and other ready sources of financing as have larger or more established enterprises that may have developed lending relationships over time. Furthermore, since few SMEs are publicly registered companies with publicly listed securities, the market at large generally has less available public information on these companies, which affects the level of comfort they may have in making underwriting decisions. Solutions to this might include very onerous due diligence done on an individual borrower level, but this often increases the cost of financing for both the lender and borrower significantly, creating a substantial disincentive. As an alternative, in many economies with developed and sophisticated SME financing products, a critical role is played by various forms of asset-based finance. The reason such financing is attractive is that the credit support decision can essentially be made based on a valuation of the available collateral, which, by its nature, is a more standardized, and therefore less costly, process than individualized due diligence, and far less uncertain than review and estimation of a borrower's business plan for long-term viability.

Of course, this advantage of asset based lending is only enjoyed to the extent that the legal regime supporting it is deemed sufficiently clear and reliable by lenders. There are varying degrees of legal uncertainty remaining in the legal regimes around the APEC region, which are touched upon in greater length in Section 4.3 below. Suffice it to say here, however, that the various forms of asset-based lending, based on factoring, inventory finance, accounts receivable financing, and leasing, to name a few, are vitally important to the overall credit supply for commercial borrowers, particularly for SMEs who may have limited access to other funding sources such as public equity or debt, or unsecured bank lines of credit. As such, improving the legal regime to facilitate and encourage secured lending will play an important role in ensuring access to financing for SMEs.

### 3.3 Relationship Between Consumer And SME Financing

Perhaps the most acute difference between consumer and commercial borrowing is business risk, in the sense that commercial loans incur business risk as well as personal risk. Lenders and regulators understand that the risk and debt profiles of consumers and small businesses are different, and this understanding is often reflected in regulation.<sup>13</sup> One implicit reason is that businesses are risk-taking ventures and as such may exhibit stages of greater indebtedness, for example, during a period of building capital stock.

The most salient difference between consumer and commercial borrowing is the preponderance of trade credit for commercial transactions in many reporting systems, particularly those in advanced economies. That is, a considerable amount of the credit payment data on a business is input (stocks and supplies) purchased on trade credit. Consumer files are more restricted in scope and verification.

### **3.3.1 Overlapping market segments: consumer borrowing for SME financing**

Yet, on the whole, the logic behind lending practices is the same. Lenders use borrower behavior to subjectively or statistically measure the risk of default. Past payment and other account information is a good predictor of future payment behavior. In this sense, risk assessment is a practical, rather than explanatory, exercise. Using borrower behavior as a guide is also evident in one of the clearest overlaps between consumer reporting and commercial reporting—the use of the personal credit information of the owner or operator to assess the risk of a business loan. The practice of using personal credit information in lending to small businesses is common in many economies, notably in the United States. For very small businesses, the financial stability of the business is often inextricably linked to the financial well-being of its owner or operator. Lenders are therefore often just as interested in the credit profile of the business owner/operator as they are in the business plan and business financials.

### **3.3.2 SME credit scoring based on proprietor's credit history**

Because of this oft-found linkage between the credit risk of a business and the credit profile of a proprietor, Experian, one of the three major credit bureaus in the United States, relies on both its National Business Database and its Business Owners Link (BOL) database. The latter contains basic identifying information of the business owners/operators for those small businesses also included in the National Business Database. The BOL database contains information on millions of small businesses, defined as businesses with fewer than 25 employees and less than \$10 million in sales. The personal information includes titles, names, home address, gender, and government identification numbers of the owners and operators (officers) of the small businesses. This easily allows for lenders to append personal credit data to the National Business Database.

Because the logic and theory behind commercial and consumer reporting are similar, the

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<sup>13</sup> For example the South African National Credit Act's "reckless lending" prohibitions, for example, do not apply to small businesses that otherwise would fall within the purview of the act. Section 78 (1).

differences in outcome witnessed by the specific structuring of credit reporting systems on the consumer side likely also holds for systems on the commercial side. Moreover, it is common for small-business owners/operators to use consumer credit for business purposes, and the personal credit history of the owner/operator or entrepreneur can also loom large when underwriting small business or start-up loans. Therefore, the next section explores how variations in credit reporting affect credit access and loan performance, with much of the evidence coming from consumer lending.

### **3.3.3 Large lenders, SME financing and credit scoring**

Lenders and others are increasingly using analytic services and small-business credit scoring to assess risk. Credit analytics apply decision models to credit information, usually in credit reports, application data, and other easily accessible sources, to measure the likelihood of default. The method is used for both loan origination and account maintenance.

Credit scoring has drastically reduced the costs of processing a loan. In economies with advanced communications and information infrastructures, the price of and time needed to originate a loan have declined steeply. The U.S. government-sponsored mortgage broker Fannie Mae estimates that the costs of processing a loan have declined by more than 50 percent with automated systems.<sup>14</sup>

These statistical models have also permitted lenders to price by risk tier of the borrower, or engage in risk-based pricing. That is, prior to the development credit scoring, lenders largely priced risk in loans using average default rates. The result was that low-risk borrowers paid higher prices while high-risk borrowers were subsidized. Risk-based pricing reflects the risk associated with the specific consumer tranche. Over time, with more data, the number of these segments has grown.

The first SBSCS was introduced by Fair Isaac Corporation in the United States in 1995, using five years of data from more than 5,000 U.S. small-business loans from 17 banks.<sup>15</sup> The most recent Fair Isaac scores used information from 32 participating banks and more than one million loans.<sup>16</sup> Nonetheless, SBSCS has taken off far more slowly than consumer credit scoring.

The introduction of new, nontraditional consumer credit data has expanded access among low- and moderate-income entrepreneurs to mainstream credit markets by improving or expanding their personal credit histories. Fair Isaac's "start-up" score, designed for businesses less than two years old, relies heavily on the owner's personal credit information and application data. For such businesses, this start-up score outperforms

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<sup>14</sup> Terry Davis, "Technology Pays Off in 2001." *Mortgage Banking* (October 2002), p. 112.

<sup>15</sup> Ronald Feldman. "Banks and a Big Change in Technology Called Credit Scoring." Federal Reserve Bank of Minneapolis' *The Region* (September 1997) 19-25; and Loretta J. Mester, 1997. "What's the point of credit scoring?" Federal Reserve Bank of Philadelphia's *Business Review* (Sep/Oct 1997) 3-16

<sup>16</sup> "Small Business Scoring Services<sup>SM</sup> (SBSS)<sup>SM</sup> 6.0." Fair Isaac Corporation. Available at: [www.fairisaac.com/NR/rdonlyres/30FB9F27-E88B-4DB5-A19F-13A76241F82F/0/SBSS\\_6\\_PS.pdf](http://www.fairisaac.com/NR/rdonlyres/30FB9F27-E88B-4DB5-A19F-13A76241F82F/0/SBSS_6_PS.pdf)



either traditional small-business scores or consumer scores when lending to new businesses.<sup>17</sup> As consumer payment data become more available, larger institutions may be better able to efficiently extend credit to start-ups and micro-enterprises, even in the informal sector.

Larger lenders have generally been a minor presence in small-business lending markets in many economies. Small-business lending has instead been dominated by relationship lending, which local and smaller banks specialize in. Small banks often look past quantitative measures and focus on “softer” information derived from a personal relationship. As calculating business risk is costly, lenders have often relied on the subjective assessment of the entrepreneurialism of the borrower, and assessment they were better positioned than larger lenders to offer. Large banks, in contrast, tend to use standardized quantitative criteria to make small-business loan decisions—essentially a cookie-cutter approach. Large banks are more likely to extend small-business credit when the firm keeps formal financial records, is larger, has a longer track record, and has greater cash reserves.

A greater presence by large banks in the small-business sphere has gone hand in hand with the availability of reliable, standardized information on the business, and often the owner as well. Moreover, in recent years, information-sharing and automated models have allowed the larger banks to develop more focused relationship lending.

### **3.4 SME Financing and the Commercial Lending Products Suite: ABL, DIP Financing, Factoring, etc.**

## **4 CHALLENGES IN IMPLEMENTATION**

### **4.1 Regulatory Frameworks and Issues for Credit Information Sharing Systems**

Different sets of legal regulations may be appropriate, depending on whether a credit bureau is being implemented from scratch, or whether it is transitioning from a negative-only to a full-file system. Various legislative considerations must be taken into account according to the country in which the credit bureau is operating.

Certain aspects of regulatory framework are essential, such as provisions for equal treatment of all data providers, as well as stipulations for data expiration. In addition to these important cornerstones of credit bureau framework, a legislative series must address consumer protection, privacy, data protection, and credit granting and consumer credit regulations. Furthermore, these regulations must be subject to a reliable system of enforcement.

The current economic environment of each specific country will dictate the genre of laws

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<sup>17</sup> Ibid.

that are implemented to regulate credit bureaus. The goal is to establish laws that define operational space for credit bureaus, protect consumer and industry, and are enforceable. In currently evolving credit systems, two basic strategies have been successful. Some countries, such as several EU member states, have opted to use all-encompassing data protection laws to define credit bureau operation. These laws oversee not only the parameters of operation for credit bureaus, but also for broad categories of data management and information sharing. Other countries opt to specify regulatory laws uniquely for credit bureaus.

Effective legislation addresses several key operational factors, for the cases of concern here :

- equal treatment of financial and non-financial industries that report;
- protection of consumer rights, ensuring that the data that is collected is not abused, and that data and information is shared through a regulated process;
- maintenance of integrity of information privacy, including limited and regulated access to consumer information;
- management of information sharing, which may include incorporating a regulation that requires the borrower to consent to both information collecting and access to credit reports;
- data expiration regulation;
- provisions for the sharing of both positive and negative information;
- consumer protection, including individual rights to access personal information, and a system that addresses and rectifies consumer disputes; and,
- inclusion of financial, governance and security standards for credit bureaus.

How each of these operational factors is addressed will vary by economy, but these factors must be addressed in legal and regulatory frameworks.

## **4.2 Privacy/Permissible Purpose Balancing**

### **4.2.1 Information Collection, Storage and Sharing Rules**

The collection of information should be standardized across financial and non-financial institutions, such that all information is collected and processed without prejudice of its source. The U.S. Fair Credit Reporting Act, for example, stipulates the categories of data that may be collected and shared, requirements for the quality of data that is collected, statutes for fair and equal treatment of consumers, and the institutions that may provide data. Information that is used for credit decisioning and maintenance purposes must be treated in the same manner, whether it comes from a financial or non-financial institution. Treating all information sources equally allows for the equal treatment of consumer populations.

Legislation must stipulate data expiration regulations. A major function of the credit bureau is to provide a historical picture of a consumer's likely financial behavior such that a potential lender may assess consumer risk. Given this function, the credit bureau must maintain data that appropriately discloses the information needed to assess this risk.

A system that does not allow for data expiration may inappropriately describe a consumer's level of risk to a lender. As a consumer's capacity to participate in the market changes, so does his level of risk. Therefore, it is appropriate to expunge outdated information that no longer describes a consumer's financial behavior.

Equally, it is important not to expunge data prematurely. Data must have a lifespan that describes the current financial behavior of a consumer. If, for example, information is expunged from a consumer's record immediately upon repayment of a loan, the financial habits of this consumer are not exposed to new potential lenders. Any adverse information regarding the repayment of the loan is lost. Storing the information after the debt has been repaid is valuable to potential lenders as it allows for a more accurate prediction of a consumer's behavior. Data must also, however, expire after a certain time period to protect the consumer. Data that does not expire can effectively blacklist a person from obtaining credit.

Information sharing must be regulated from two fronts. First, the sharing of information must protect the privacy of consumers. Specific institutions will be authorized within the legal framework to access consumer information. If strict regulation of this standard is not enforced, consumers will not trust the credit bureau system and the credit bureau will fail. It is the onus of the bureau to prove to consumers and institutions that they can provide appropriate information security. Legal frameworks should require borrower consent for institutions to access their credit information. Second, the sharing of both positive and negative information must be regulated and restricted to very narrow purposes. Failure to specify the limits of this use cannot only violate privacy, but can also distort the market for lending.

Every credit system has its own set of laws that define data subject rights, and the afforded rights differ depending on political situation and framework of any existing credit system. Some data subject rights to consider are :

- Right to personal data: consumers have the right to knowledge of all personal data maintained by an institution, as well as to whom the information in their file has been disclosed (UK, US, EU, Japan);
- Right to Third Party Notification: consumers have the right to be notified of all third parties who have received subject data information, including information about rectification, deletion, or blocking of data (EU);
  - This right does not apply if it is a disproportionate effort for the data controller;
- Right to data controllers: consumers should have the right to have their file examined by a data controller, such that any final decisions made about their file is not an entirely automated decision, but is also monitored by a data controller (UK);
- A consumer is entitled to a free credit report if (US):
  - Adverse action is taken against the consumer based on information in the consumer's credit report;
  - A consumer is the victim of identity theft;

- A consumer's file contains false information due to fraud;
- A consumer is benefiting from public assistance;
- A consumer is unemployed, but expects to be gainfully employed within 60 days
- Right to Object: consumers have the right to object to the processing of their personal data (some exceptions exist) (EU);
- Right to Opt-out: consumers have the right to limit or control the collection of personal information, data controllers must describe the intended use and handling of personal information (Japan)
- Right to protected processing: consumers have the right to have their data protected from any adverse processes and be protected from use for direct marketing (UK, EU), or, consumers may limit the number of prescreened offers of credit or insurance and all prescreened applications must be accompanied with toll free numbers by which the consumer may cancel their participation (US);
- Right to compensation: consumers have the right to compensation should the use of their data by a data controller cause them damage (UK), or, consumers have the right to seek damages if federal law (specifically the FCRA) is violated during the handling of consumer information (US);
- Right of grievance: consumers have the right to examine the information in their file, and have the right to a system that helps them to correct inaccurate data (UK, US, EU, Japan);
- Right to correction of inaccurate data: a credit bureau is responsible for correcting information in a consumer credit file that has been proven to be false (UK, US, EU);
- Right to oversight: consumers have the right to request oversight of the data subject to ensure that the legislation is appropriately implemented and followed.
- Data expiration rights: credit bureaus may not report outdated negative information (US);
- Right to Erasure: a consumer has the right to have personal data erased in cases of unlawful processing of data (EU);
- Additional rights for identity theft victim and active duty military personnel: consumers who fall into this category are subject to additional data subject rights such as the right to "freeze" their file, and prevent access by anyone until the freeze is removed at the request of the data subject (US).

#### **4.2.2 Rules on Dispute/Verification**

Rules for dispute and verification of consumer data files are based on the data subject right to personal data, whereby a consumer has the right to know the personal information that an institution maintains, as well as the right to know with whom that information has been shared. As previously discussed, data subject rights must also include the right of grievance: a consumer may contest the information in their credit file and be provided with an appropriate venue for correction. Additionally, the legislative framework must provide for authentication of information. Credit bureaus must be prepared to receive grievances and verify the accuracy of complaints.

The legislative framework should provide for four basic phases of grievance resolution:

- Personal Information: a consumer requests documentation of the data held on them by an institutions (right to personal data)
  - Credit bureaus must be structured such that they can immediately release information to consumers
  - All information in the consumer file must be released, including the stored information, and those that have been provided with the consumer's information
- Receipt of Grievance: a consumer contests the information in their file (right of grievance)
  - Credit bureaus should have a streamlined system to receive complaints: consumers must have easy access to customer service
  - Each consumer complaint should be assigned a case, and framework for the resolution of each case should be in place
- Authentication of Grievance: the credit bureau must have a system to verify the authenticity of the dispute
- Grievance Resolution: credit bureaus must respond to each consumer case.
  - Credit bureaus must contact consumers individually to notify them of the result of their case.
  - Credit bureaus may provide for a system of appeals in the case that the consumer refutes the resolution.

#### **4.2.3 Enforcement Structure**

Oversight is essential for the operation of a credit bureau. Enforcement of the credit bureau framework and function allows the bureau to earn the trust of institutions and consumers such that they participate in the credit system and thus the bureau can provide the lenders the information needed to assess risk. Two basic strategies of enforcement have emerged: (1) self-regulation; and (2) regulation by supervisory body.

In the case of self-regulation, the credit bureau legislative framework will provide for regulation. This provides regulation limited to processing complaints, issuing clarifying statements, and filing suits.

#### **4.2.4 Use of information for Analytical Purposes: Cost/Benefit**

When implemented properly, value added services have the ability to positively affect a market. One such example is the case of small businesses. With the addition of positive reporting information, a bureau has an increased capacity to provide scoring models. Providing credit scores to entities such as small businesses increases the ability of sound small businesses to gain access to credit. As small businesses provide a large proportion of private sector employment, employment growth, and ultimately drive local economies, it is important that small businesses have access to the credit that they require to continue operation. As small business owner information becomes more available, it can be reviewed cooperatively with its associated small business. Aggregating this information through a new credit scoring model will enable lenders to better assess small business

risk. This seems especially to be the case with smaller loans; a U.S. Federal Reserve Bank of Atlanta survey of small business loans revealed that scoring was overwhelmingly the preferred decision mechanism for smaller loans (under US\$100,000). Crucially, the availability of more data allows larger lenders that do not engage in relationship lending with small businesses to enter the small business credit space, thereby expanding the credit available for small business activity. As more services become automated, the ability of banks to lend to small businesses increases. The evolution toward automated services offered through bureaus relaxes the need for manual underwriting of small business loans. Additionally, businesses can reach beyond their regional limitations to gain access to credit.

#### **4.2.5 Competitive Arguments for Limited Marketing Use**

There is some evidence that the use of credit data for marketing improves efficiency by helping credit issuers match offers to prospective borrowers through unsolicited offers of credit. The use of data reduces search costs, and entry costs for new lenders, rendering the market for credit more competitive. In prescreening, the most common means by which credit data is used for marketing, credit issuers establish a set of specific credit criteria and request from a credit bureau a list with the names and addresses of all consumers who meet these criteria. Prescreening is also often combined with targeting of consumers on factors other than the credit criteria. Those who meet the criteria receive offers of credit tailored to their credit needs, their credit capacity, and their credit worthiness.

Prescreening enhances the efficiency of the payment card market in two ways. First, by combining prescreening with targeting, credit issuers can increase the response rate of their solicitations by mailing to those most likely to respond, while at the same time attracting consumers with the proper risk profile for the particular credit offering. Second, by prescreening, the credit issuer uses information from the credit file twice, once in selecting the population for the original offer, and once in verifying that those who accept the offer still qualify for it based on the original selection criteria. Although an individual's credit score is reasonably stable, assessing it twice provides more information than does assessing it once. Consumers are said to benefit from improved efficiency, since the competitive nature of the market ensures that savings (as well as expenses) are passed along to consumers.

There are concerns that the use of credit data for marketing can lead to overextension by consumers. This consequence cannot be assumed as economies that restrict the use of marketing data have also seen debt crises akin to those that allow the use of credit data for marketing.

### **4.3 Regulatory Frameworks for Secured Lending and SME Financing**

In general, security enforcement regimes are intended to encourage provision of credit to commercial borrowers by recognizing and protecting the expectations of senior-secured lenders and providing legal certainty in the event of borrower insolvency. The legal certainty involved includes several components. First, the legal regime itself, whether embedded in the general civil law or civil codes, or in specialized security or perfection laws, must create a clear path for establishing and evidencing liens in various types of collateral. The recognized types of collateral should be sufficiently broad to cover all classes of security actually used by SMEs and other corporate borrowers in the marketplace, e.g. accounts receivable, inventory, equipment, intangibles, etc. Next, the practical working of a perfection registry must be such that security interests are easily filed, and equally easily and transparently accessed, so that all borrowers are dealing with the same information database and in that sense have a level “informational playing field” in which to make credit decisions.

However, a number of important gaps remain. The absence of clear legal frameworks to enforce rights of secured lenders is an impediment to credit availability, disproportionately affecting SMEs and other businesses that have historically had difficulty accessing bank credit.

#### **4.3.1 Importance of Universal, Exclusive Databases for Filing and Perfecting of Liens in Collateral**

The absence of information on collateral and security rights in movable property acts as a hurdle to lending in many economies. Lenders often note that it is not uncommon to find that collateral (equipment, debtors’ books, etc.) has been committed to multiple lenders. The absence of information in such areas renders rights in collateral and in bankruptcy less effective. As various studies have shown, rights in collateral and bankruptcy encourage lending by allowing lenders to mitigate risk.

Although the creditor has priority to collateral in bankruptcy proceedings, asserting this right is often difficult when more than one creditor is involved. The scale of the problem is unclear, but interviews with experts in the field suggest that creating such a registry would encourage lending by mitigating the risk that the lender’s right to collateral is relatively firm and unlikely to be contested by another lender.

The absence of information certainly raises the costs of lending given that it raises the costs of assessing risk. Information sharing can also reduce the price of loans and better reflect risk.

#### **4.3.2 Major Issues around the APEC Region and Goals of the Initiative**

Key issues related to the legal infrastructure for secured lending that need to be addressed in various member economies are the following:

- Absence of exclusive security interest registry, giving rise to the “hidden lien” problem
- Voidable conversion/preference

- Unclear perfection rules for certain types of collateral, such as movables, receivables and goodwill
- Absence of blocked account security precedence
- Untested debtor-in-possession process
- Treatment of floating charges or absence of such concepts
- Lack of broad licensing authority for commercial lending.

An APEC initiative to improve and harmonize standards for perfection and enforcement of security interests in collateral, as part of a system for developing a robust commercial finance market, would promote innovative financial products, enhance overall liquidity for the SME sector, and advance the goal of financial sector inclusion and sustainable growth. In addition to facilitating financing for SMEs, a harmonized approach would promote regional investment and trade in financial services in the APEC region. Such an initiative could focus on the following activities:

- A survey of key enablers of financing availability
- Developing model elements of an APEC or region-wide code of security interest creation, perfection and enforcement, which could include clear perfection rules, broad coverage of collateral types, exclusivity to eliminate the “hidden lien” problem, and provisions for debtor-in-possession financing.
- A model treatment of floating charges/accounts receivable financing
- Establishment of a public-private dialogue to validate improvements
- An APEC checklist for statutory/regulatory implementation

Promoting broad licensing authority for commercial finance, such as non-bank financial company charters

## 5 CONCLUSION

Each of the implementation issues raised above—(i) what path to the development of a regulatory framework works best for differing types of economies, (ii) which avenues to establishing a financial identity are most effective for a given reporting system, and (iii) how and when non-financial data should be engaged in the early development of a credit reporting regime—would benefit from systematic examination. Certain lessons for the development a well-functioning credit reporting system have been established by earlier generations of research. These lessons are that a full-file, comprehensive information sharing system owned by the private sector expands lending to the private sector. However, many economies, especially emerging economies face challenges in the implementation of such as system and may also need to consider factors, such as alternative data, upfront and in ways that developed economies have not had to consider. Examination of these issues can help assure that the well-established lessons can be acted upon effectively as these issues go to the heart of many implementation questions.

APEC would benefit from a number of steps that would help better address some of these outstanding issues and help policy makers engage implementation of credit reporting reform. The steps comprise research and educational efforts targeting senior financial



ministry officials, including:

- Workshops on including bank data, non-bank data, non-financial information, including public and governmental data
- A survey and policy dialogue on approaches to establishing financial identity, especially in ways that assist financial inclusion,
- Training seminars on approaches to developing a regulatory framework, including issues of
  - Implementation,
  - Regulatory enforcement,
  - Consumer rights, and
  - Legal frameworks for commercial credit reporting for SMME financing.

There is no 'one-size fits all' approach. Rather, an APEC effort to develop not a model bill, but detail elements of a model bill and present the framework for developing model regulation would assist economies in their efforts to develop their financial infrastructures. Any implementation effort would begin with policymaker education, as policymakers are increasingly drivers of the development of an information sharing system.

Research and experience have established that full-file, comprehensive reporting by privately owned bureaus greatly contribute to financial access and lending efficiency. How such a system is to be implemented will vary from economy to economy, as the various regulatory elements of an information sharing system interacts with specific, local conditions and capacities. The fact of local variation does not, however, mean that coordinated education efforts are of limited value. Rather, the fact of variation is cause for specific types of out reach efforts, ones that provides policy makers and regulators with tools and understandings that they can use in concert with local knowledge.