

Credit card lending distress in Korea in 2003

Taesoo Kang and Guonan Ma¹

Introduction

Korea experienced a painful credit card crisis in 2003, with a significant impact on its financial system. A massive credit card lending boom was followed by a wrenching bust. Many credit card issuers were on the brink of collapse as they struggled with deteriorating asset quality and difficult liquidity and solvency challenges, which in turn exposed the banking sector and financial markets to systemic risk and severely affected the real economy.

This paper, which is based partly on Kang and Ma (2007), aims to uncover the causes of the crisis and draw relevant policy lessons from it. Specifically, we try to shed light on three questions. First, why did competition in credit card lending, a line of business that is well established in many other countries, lead to excesses in Korea? Second, who were the main characters in the boom-bust cycle in the credit card industry? Third, what lessons can policymakers and market players learn from this episode? Answers to these questions will be valuable not only for Korea but also for other emerging markets, such as China and India, where credit card lending is just taking off.

The paper is organised as follows. First, we discuss the household lending and credit card sector in Korea. Second, we explore the factors driving the credit card lending boom. Third, we analyse the dynamics of the bust in 2003 and its impact on the financial system and the economy. Finally, we explore the policy implications of the credit card lending crisis before concluding.

Korea's credit card sector

After the Asian financial crisis in 1997, lending to households started outpacing total bank lending in Korea. Between 1999 and 2005, the share of household loans in total bank loans outstanding grew from 30 per cent to over 50 per cent, as bank lending to consumers grew twice as fast as total bank lending (Graph 1).

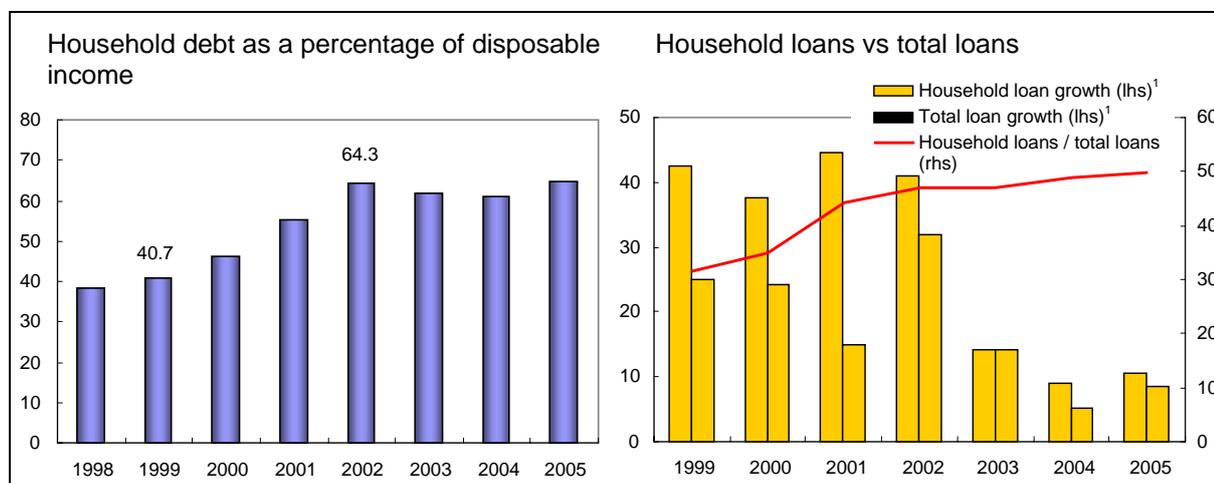
A combination of demand and supply side factors contributed to this marked shift to consumer finance. First, after the Asian financial crisis, weak corporate loan demand and the easing of monetary policy to stimulate the economy led to ample liquidity in the banking system. During 1998–2000, the loan-to-deposit ratio in Korea declined by 10–15 percentage points. With lending to households growing faster than the overall loan book, corporate loans as a share of total deposits fell even further. This, together with possible capital savings from the banks' mortgage business, drove banks to tap the consumer finance business more aggressively. Second, rising living standards and house prices in Korea increased consumer demand for credit, as consumer finance is often regarded as a superior good. Third, rapid progress in information technology reduced the costs of retail finance. Finally, financial

¹ Taesoo Kang is from the Bank of Korea and Guonan Ma from the Bank for International Settlements. The views expressed in this paper are those of the authors and are not necessarily those of the two organisations.

deregulation, new local and foreign entrants in the banking sector and government policies also boosted formal lending to the household sector.

Graph 1

Growth of household debt in Korea



¹ Year-on-year growth, in per cent.

Sources: Bank of Korea; Financial Supervisory Service of Korea.

Credit card business in particular has been one of the fastest-growing areas of unsecured retail finance in Korea, as banks diversify and seek higher returns on household lending and policymakers pursue a growth strategy that is less dependent on exports. A growing credit card market has also provided a broader portion of the population with improved access to financing and been a huge source of profits for banks and other lenders, thereby enhancing welfare and offering new business opportunities.

Table 1

Credit card market in Korea

| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|--|----------------|------------------|-----------------|-----------------|------------------|------------------|----------------|----------------|
| Number of credit cards issued ¹ | 39.0 (-7.2) | 57.9 (48.5) | 89.3 (54.3) | 104.8 (17.3) | 95.5 (-8.9) | 83.5 (-16.0) | 82.9 (-0.7) | 91.1 (9.9) |
| Trading amount ² | 90.8 (42.9) | 224.9 (147.8) | 443.4 (97.1) | 622.9 (40.5) | 480.5 (-22.9) | 357.8 (-25.5) | 363.8 (1.7) | 368.3 (1.2) |
| Total assets ² | 18.2 | 32.3 | 72.0 | 100.3 | 55.0 | 35.8 | 33.8 | 35.7 |
| Net income ² | -0.3 | 0.9 | 1.4 | 0.2 | -6.2 | -1.3 | 0.3 | 2.2 |

Year-on-year growth rates, in per cent, are shown in parentheses.

¹ In millions. ² In trillions of won.

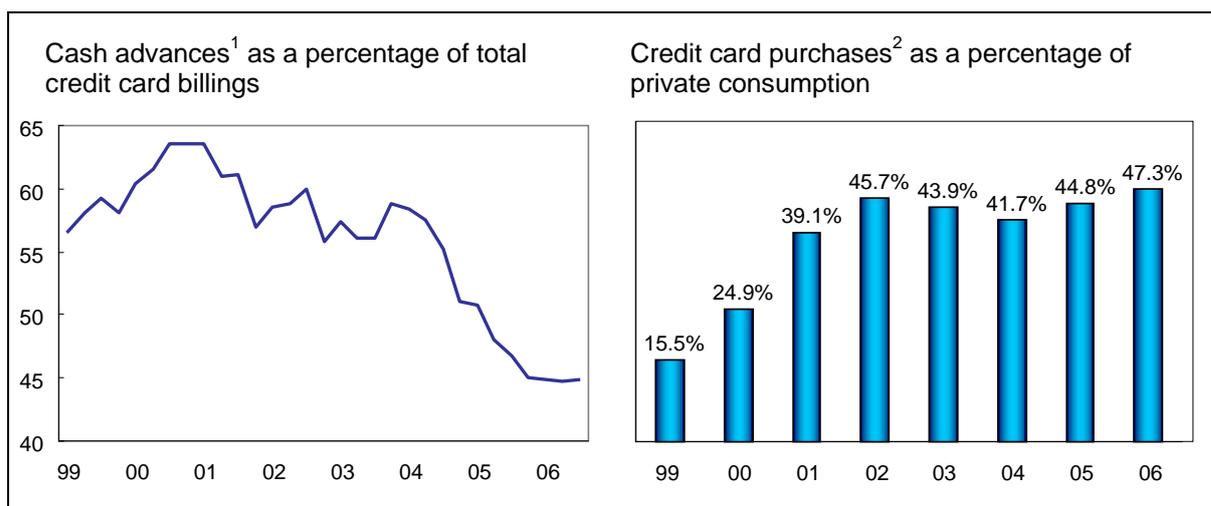
Sources: Bank of Korea; Financial Supervisory Service of Korea.

During 1999–2002, Korea’s credit card market grew substantially, thanks to policy measures put in place by the government. The number of credit cards tripled, from 39 million to 105 million, while the volume of total credit card transactions expanded more than sixfold. The net earnings of the Korean credit card industry swung from negative to positive between

1999 and 2001 (Table 1). Mostly as a result of this headlong expansion, the ratio of household debt to disposable income jumped to a high of 64 per cent in 2002, from 41 per cent in 1999 (Graph 1). Card purchases of goods and services were on an upward trend, accounting for as much as 45.7 per cent of private consumption expenditure in 2002, and cash advances soared to 65 per cent of total credit card billing at one point (Graph 2). Meanwhile, the per capita credit card balance outstanding and its ratio to household disposable income rose fivefold during the period. As a result, credit card receivables more than doubled as a share of total bank loans and total household loans (Table 2).

Graph 2

Credit card use in Korea: cash advances vs purchases



¹ Card loans; flows. ² All credit card purchases of goods and services; flows.

Sources: Bank of Korea; Financial Supervisory Service of Korea.

This paper focuses mainly on the lending side of the credit card business in Korea. Credit cards serve two primary functions: payment and financing. Accordingly, credit card users generally fall into two groups: “transactors”, who use credit cards mostly for payment convenience, and “revolvers”, who borrow regularly on their credit cards and pay interest accordingly. Transactors are typically better credit risks than revolvers, but they generate limited earnings for card issuers, principally through merchant discount fees. In contrast, compared to other forms of household credit, credit cards are a high-yield, unsecured form of personal lending; on average, they account for more than half of the net earnings of credit card issuers in Korea. The growth of credit card lending and increases in the size of credit card loans represent new opportunities both for consumers, in terms of improved access to credit and consumption smoothing, and for the financial industry, in terms of loan portfolio diversification and higher margins, but they also increase risks to the financial system.

Table 2

Credit card balances outstanding in Korea

| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|--------------------------------------|------|------|-------|-------|------|------|------|------|
| Amount per capita ¹ | 328 | 608 | 1,178 | 1,683 | 963 | 651 | 682 | 769 |
| As a percentage of total bank loans | 7.3 | 10.4 | 20.1 | 21.3 | 10.2 | 6.3 | 5.5 | 5.1 |
| As a percentage of household loans | 22.9 | 29.7 | 45.7 | 45.1 | 21.7 | 13.0 | 11.0 | 10.3 |
| As a percentage of disposable income | 5.4 | 9.2 | 19.7 | 25.9 | 13.6 | 8.4 | 7.6 | 7.6 |

¹ In US dollars.

Sources: Bank of Korea; Financial Supervisory Service of Korea.

The credit card lending boom

Government policies designed to cushion the severe economic downturn that followed the financial crisis of 1997–98 contributed in significant measure to the Korean credit card lending boom of 1999–2002. The policy package included tax benefits for merchants accepting credit cards and, for cardholders, income tax deductions linked to their credit card purchases. On the regulatory front, the authorities abolished both the administrative ceiling of KRW 700,000 (\$610) on monthly cash advances and the leverage limit (up to 20 times capital) for credit card issuers. Moreover, the weighted regulatory capital requirement for specialty issuers was only 7 per cent, despite the inherently undiversified nature of their unsecured credit card lending business. Such policy measures encouraged credit card companies to embark on an aggressive campaign for the initially lucrative cash lending business.

Although the government's tax incentives might indeed have stimulated credit card spending and made Korea a special case (Lee (2005)), one should not overstate their role in the card lending bubble. First, for cardholders, card issuers and card-accepting merchants alike, the tax incentives applied only to credit card purchases and not to credit card cash advances, and it was the latter that surged out of control during 2001–02, when issuers were deliberately targeting revolvers. Second, to the extent that the bulk of the increased credit card spending represented a simple substitution for (replacement of) cash spending, households' ability to service credit card receivables should not have been materially compromised. Third, even if some cardholders overspent to take advantage of tax benefits, interest rates on other available unsecured personal loans ranged from 7 to 9 per cent, compared with the prevailing 20 per cent annual interest rate on credit cards. Fourth, riskier households should have been much less motivated to take advantage of income tax deductions, as the marginal income tax rates for the lower income brackets are only 8–17 per cent. Finally, the income tax deduction related to card purchases, although reduced to 15 per cent in 2005, from 20 per cent in 1999, is still in effect. In sum, while tax incentives did promote the use of credit cards as a means of payment, we doubt that it was a principal cause of the boom.

We found that six factors were responsible for the relaxation of lending standards and excessive growth in credit card lending in Korea (Kang and Ma (2007)). First, as noted earlier, weaker corporate loan demand, ample liquidity in the banking system and lower

interest rates in the wake of the Asian financial crisis put pressure on banks and other lenders to focus more on consumer lending. Commercial banks in Korea financed not only their own credit card operations but also provided loans to the dominant monoline credit card issuers. Declines in interest rates at the time also led Korean households to seek higher yields in fixed income mutual funds of investment trust companies (ITCs), themselves heavily exposed to papers issued by monoline credit card companies. In a search for yield, pension funds and insurance companies also made sizeable investments in credit card companies.

Second, during a period of financial liberalisation in Korea, there was an influx of new and often less experienced entrants into the credit card market. These new players intensified competition among credit card issuers for market share, leading to the relaxation of lending standards and stronger credit expansion (Dell'Ariccia and Marquez (2006)). Some chaebols with limited consumer banking experience rapidly expanded their credit card business, capturing as much as 76 per cent of domestic credit card transactions by 2002. These changes in the competitive landscape probably led even some of the dominant existing firms to relax their screening and underwriting standards as well.

Third, economies of scale in the credit card business might also have contributed to competition for market share. The credit card business often involves large initial sunk costs, as companies set up the infrastructure for data processing, credit scoring, account management and settlement. Moreover, credit card issuers need a sufficient cardholder base to attract merchants (Evans and Schmalensee (2005)). Once the initial investment is made, however, the marginal cost of adding new accounts is relatively low, reinforcing the incentive to chase market share. Such industry and cost structures tend to intensify market competition. Also, Korean credit card issuers usually do not outsource many of their operations and therefore need more accounts for their credit card operations to break even (Yun (2004)). The period leading up to the credit card crisis witnessed aggressive marketing campaigns by companies seeking to recruit new cardholders through mass mailings, telemarketing and even street solicitation, with little screening of applicants.

Fourth, a limited infrastructure for credit reporting and sharing further contributed to the build-up of excessive risk in credit card lending portfolios. The coverage of Korea's credit reporting system was limited in terms of reporting lenders, debtor base and types of data collected (Miller (2003), He et al (2005), Jeong (2006), Park (2008)). Further complicating the situation, the Korean government erased as many as half of the available personal delinquency records at the local bankers association in May 2001, making it more difficult for card issuers to identify less creditworthy applicants (Lee (2005)). In particular, some leading credit card issuers did not participate in the credit reporting system, fearing that sharing certain customer information would reduce their monopolistic rents of private information on their own client base.²

Fifth, various forms of principal-agent problems could also have aggravated information asymmetry and further distorted incentives to screen and monitor borrowers. Agency problems related to the unregulated, commission-based broker system arose in 2002–03. Moreover, Korean card issuers relied heavily on wholesale funding, particularly securitisation (see below), to support their business expansion and thus might have been eager to inflate the quality of the assets in their card portfolios (via re-ageing – ie the rollover of delinquent credit card debt) and push risky card loans off their balance sheets, repackaging them as marketable securities and selling them to less informed third-party investors (Moreno (2006), White (2007)) – a practice resembling that recently seen in the US subprime mortgage market, where responsibilities are segregated among different agents. Without proper

² However, a well-functioning information sharing system alone is no panacea, as demonstrated by the 2006 credit card crisis in Taiwan (China) and the ongoing subprime woes in the US mortgage market, where credit reporting and sharing systems are in principle well developed.

prudential and regulatory arrangements in place to ensure sufficient risk-sharing and transparency, the “originate-to-distribute” model might have weakened the incentives of Korean credit card companies to screen borrowers.

Finally, higher lending rates on a fast-growing, but not well-seasoned, credit card loan portfolio initially generated attractive net earnings, enticing new and existing card issuers to focus still more on the credit card lending business, thereby intensifying competition. The seasoning effect in credit card lending appears to be similar to that in corporate high-yield bonds, which tend to have low default rates in the years immediately after their issuance, when cash flows are favourable. Credit card issuers also tend to record much higher yields initially, unless they provide explicitly for possible future losses. In Korea, cash advance fees and interest charges exceeded 20 per cent, while unsecured personal loan rates at the time were only 6–7 per cent. During the credit card lending boom, the share of cash lending in total credit card assets approached 65 per cent. In 2001, the estimated returns on the credit card companies’ assets were six times as much as the average returns of Korean commercial banks (Yun (2004)).

As a consequence, the composition of the cardholder base changed markedly, leading to bigger and higher-risk card lending portfolios. Typically, a disproportionate share of loans went to the least creditworthy borrowers, those most in need of unsecured lending. LG Card, a leading Korean issuer, found that 70 per cent of its bad loans came from accounts acquired during 2000–01, when the number of total credit cards in the economy more than doubled. On the basis of evidence from Korean income and expenditure surveys, Park (2008) shows that between 1999 and 2002, the average debt burden of asset-poor households rose much faster than that of other households. Much of this increased debt burden was presumably in the form of unsecured credit card debt.

The bust in 2003

The second phase of the credit card lending cycle began with the belated recognition, amid rising delinquencies, of excessive indebtedness and disproportional risk concentration. This resulted in greater caution on the part of the card issuers, tighter lending standards, credit contraction and prolonged balance sheet adjustments; these developments often affected the real economy.

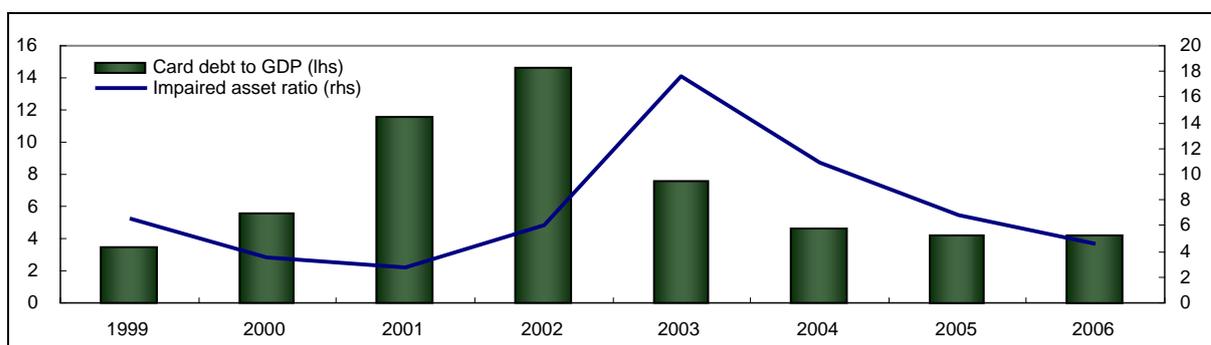
Although larger credit lines, the juggling of debt among various credit cards by borrowers with multiple cards, the re-ageing of card debt by issuers and, in some cases, the unloading of card loans via asset-backed securities (ABS) kept the lending boom going for a while, eventually some overstretched cardholders hit credit card limits. In addition, as credit card portfolios became more seasoned over time, delinquency and credit costs rose due to mounting provisions and charge-off expenses, which squeezed the issuers’ cash flows and profit margins. Before long, card issuers sensed trouble and became more cautious in extending credit lines to riskier card borrowers. In some cases, they even cut lending to creditworthy borrowers, further tightening credit.

Tighter credit in turn further pushed up delinquencies, especially among overleveraged card borrowers, resulting in a kind of credit crunch, with credit contraction and deterioration in portfolio asset quality reinforcing each other. This adverse dynamic was reflected in both the rapid declines in outstanding credit card balances and the sharp spikes in the impaired asset ratio – ie the sum of delinquencies and charge-offs as a share of credit card receivables. Korea’s impaired asset ratio approached 18 per cent at its peak (Graph 3).

Graph 3

Credit card distress in Korea

Credit card balances and non-performing credit card assets



¹ Ratio of total credit card receivables to GDP, in per cent. ² Ratio of the sum of delinquencies (receivables three months overdue) and charge-offs (annualised) to average card receivables, in per cent.

Sources: Bank of Korea; Financial Supervisory Service of Korea; authors' own estimates.

The business model adopted by Korean credit card issuers also helped shape the particular dynamic of the credit card crisis, mainly because of the relationship between asset quality deterioration and funding difficulties (Graph 4). Specialised credit card service providers dominated the Korean market but were prevented by regulation from taking deposits. Thus, during the boom, monoline issuers funded the credit expansion by tapping heavily into the capital market, with much of the paper (debentures, commercial paper or credit card ABS) they issued being purchased by ITCs, insurance companies and pension funds. But as credit card lending portfolios began to sour, investors, spooked by an accounting scandal at SK Global in March 2003, rushed to pull their investments out of ITC-managed funds. Panic redemptions forced ITCs to sell even their government bondholdings, as liquidity in the secondary corporate bond markets disappeared (Remolona and Wooldridge (2003)). In a matter of two weeks, the value of the ITC-managed funds fell by 15 per cent. Most credit card companies found it almost impossible to roll over their maturing debts. Funding difficulties also forced some issuers that were either insolvent or in a liquidity crunch to slow or even cut their lending to cardholders, further pushing up delinquencies and undermining the confidence of bond investors. Heavy reliance on wholesale funding thus subjected Korean card issuers to the sudden seizing-up of financial markets and a liquidity crisis just at the time when the quality of the assets in their lending portfolios was deteriorating.

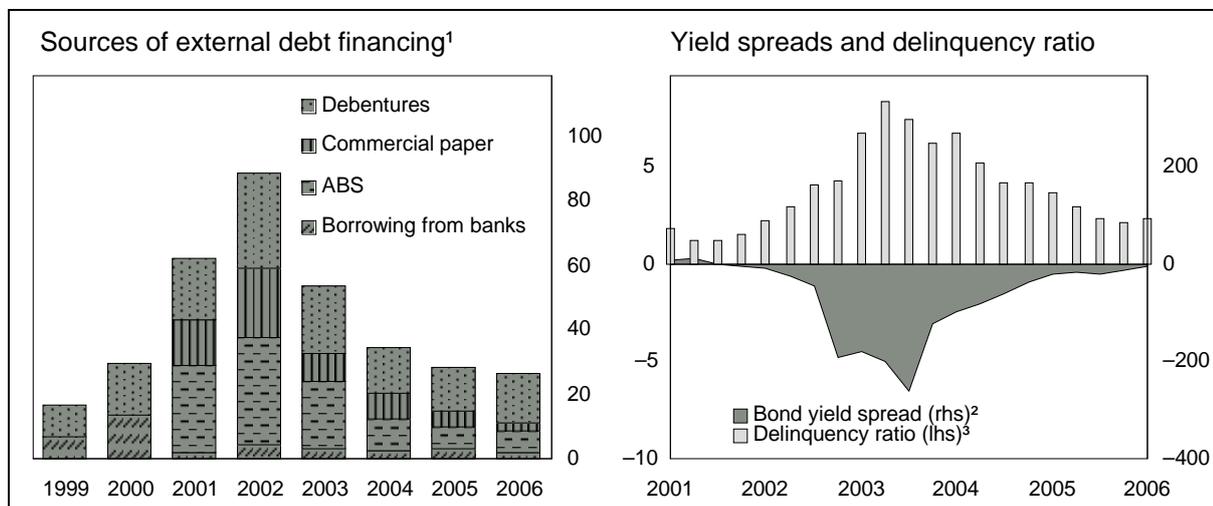
Initially, the Korean authorities tightened administrative and regulatory measures. Consultations between the regulators and credit card issuers over best practice guidelines for credit card operations and credit reference agencies were strengthened. First, the Korean authorities upgraded credit card asset classification standards, strengthened provision requirements and started applying prompt corrective action to standalone card issuers. They then raised the minimum capital adequacy ratio for card issuers to 8 per cent, from 7 per cent. The authorities also banned aggressive marketing practices, established a cap of less than 50 per cent of total credit card assets on cash lending, to be introduced by a specified deadline (the so-called "50 per cent rule"), and pressured credit card companies to lower their interest charges. While these measures are probably sound from a longer-term perspective or if deployed before a crisis occurs, in the shorter term some of them risk having additional contractionary effects, thereby exacerbating a credit crunch.

With the turmoil spreading to the bond market, policy interventions veered toward crisis management as policymakers became aware that systemic risks were increasing. Policymakers also changed their tactics over time. They intervened first by providing liquidity support to both the unsettled financial markets in general and to troubled credit card issuers

in particular, and second by arranging a rescue of the failing LG Card. These two interventions were large-scale operations.

Graph 4

The funding structure and asset quality of Korean credit card companies



¹ Year-end amount outstanding, in trillions of won. ² Benchmark corporate yields less credit card company bond yields, in basis points. ³ Three months overdue, in per cent.

Sources: Bank of Korea; Financial Supervisory Service of Korea.

First, within days of the mid-March 2003 bond market sell-off, the Bank of Korea injected substantial short-term liquidity – about KRW 4 trillion – into the system through open market operations such as reverse repos, outright purchases of government bonds and early redemption of Monetary Stabilisation Bonds. The government also persuaded domestic investors to roll over the matured debts of credit card companies and not to exercise their put options in credit card ABS.

Second, the government arranged a package through the state-owned Korean Development Bank (KDB) to rescue the troubled LG Card. The authorities initially pressured the majority shareholders of troubled credit card companies to inject capital into LG Card (on the order of KRW 4.6 trillion), then suspended the trading of LG Card bonds, arranged for the KDB to extend new credit to LG Card and, in 2004, coordinated a series of debt-equity swaps between LG Card on the one hand and many creditors on the other to ensure the joint control of LG Card by the creditor banks. At the peak of the crisis, KDB lending alone exceeded a quarter of total creditor claims – KRW 3.7 trillion – on LG Card.³ The creditor banks eventually recorded an accounting profit of KRW 3 trillion from a debt-equity swap in March 2007 when Shinhan Bank acquired LG Card through a public takeover bid in the stock market. So, ex post, the rescue of LG Card did not cost taxpayers money. On the other hand, as public sector resources and implicit government guarantees were obviously involved up-front, KDB's involvement entailed an ex ante increase in the government's contingent liabilities. Therefore, the institutional support for LG Card could be viewed as a joint private-

³ The KDB-led creditor committee seized management control of LG Card, replacing the chief executive officer and most of the senior management. During the restructuring of the company accomplished through debt-equity swaps, the entire equity of LG Card's majority shareholders was wiped out, while that of the minority shareholders was substantially written down, which should help contain the moral hazard risk.

public sector rescue characterised by a mixture of both bailout and bailin (Eichengreen and Ruehl (2000)).

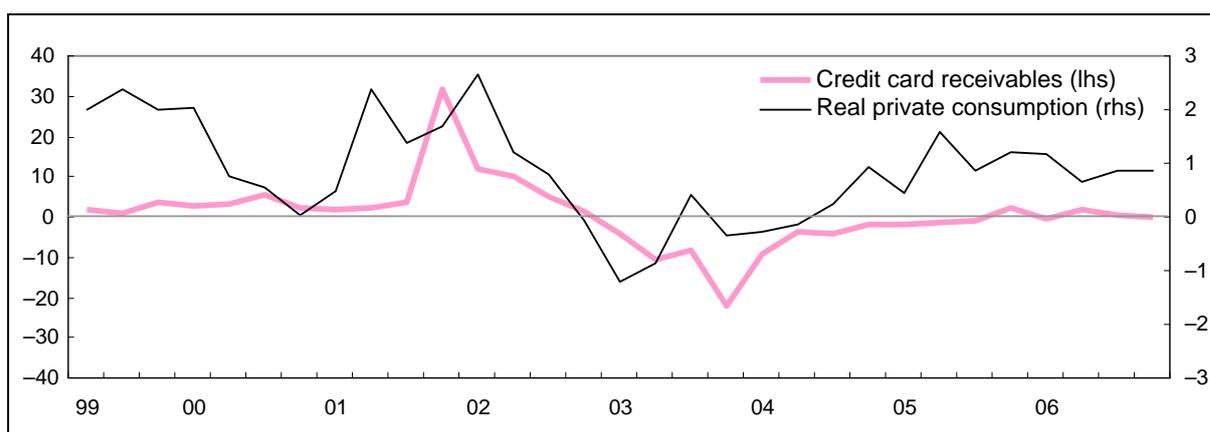
Meanwhile, regulatory forbearance of one form or another was exercised. The authorities reversed some earlier tough measures and allowed issuers to roll over delinquent credit card loans. This eased, at least temporarily, the burden of provisions and charge-offs on issuers, thereby also providing de facto regulatory forbearance. A credit counselling and recovery service programme was set up in October 2002 to facilitate debt rescheduling.

The effects of the credit card lending boom-bust on Korea's financial system were determined in part by the initial excesses of the boom and in part by the policy responses to the bust. Many leading issuers suffered heavy losses from their card lending business. It is estimated that about one third of the entire card lending book at its peak eventually had to be written off. Credit card balances for both bank and monoline issuers represented as much as one fifth of total bank loans outstanding at the peak of the boom. Moreover, commercial banks were themselves heavily exposed to monoline credit card issuers. As of March 2003, Korean commercial banks' lending to the troubled LG Card alone was KRW 11.2 trillion, or 38 per cent of the creditor banks' combined capital. The overall exposure of commercial banks to card issuers is estimated to have reached KRW 22 trillion on the eve of the credit card crisis (Park (2008)). Credit card debt distress spread to the broader financial markets, fuelling further disruption in Korea's financial system.

The rising number of delinquencies, in turn, began to have a negative impact on the real economy, mostly via weakened consumer spending. Deteriorating asset quality, funding difficulties and tougher regulations made the credit contraction worse, which clearly caused the private consumption downturn in 2003 (Graph 5). The unwinding of the excessive lending of the boom years was sometimes affected by, and in turn exacerbated, an ongoing business downturn. The economic downturn in late 2000 in the wake of the Asian financial crisis had been an adverse income shock that was still hampering households' ability to service their debts (Park (2008)). The turbulence in the corporate bond market following the credit crisis also indirectly contributed to a weakening in corporate capital spending that continued into 2004.

Graph 5

Credit card lending distress and consumption¹



¹ Quarterly change, in trillions of won. Real private consumption is seasonally adjusted using quarterly data.

Sources: Bank of Korea; Financial Supervisory Service of Korea.

Lessons and policy implications

Two of the lessons learned from Korea's credit card crisis are worth highlighting. First, the Korean business model of monoline credit card operations based on wholesale funding resembles the originate-to-distribute model that has come under criticism during the recent subprime difficulties in the US mortgage market. In an environment characterised by easy credit and fierce competition, this model might have encouraged regulatory arbitrage and the relaxation of underwriting standards by Korean credit card companies. Prior to June 2003, there was no explicit regulation establishing the amount of capital credit card companies needed to set aside to cushion the contingent liabilities they incurred in relation to credit card receivables-backed securities. In addition, ABS allowed monoline credit card companies to get around a regulation barring them from issuing debentures (bonds) equal to more than 10 times their capital.

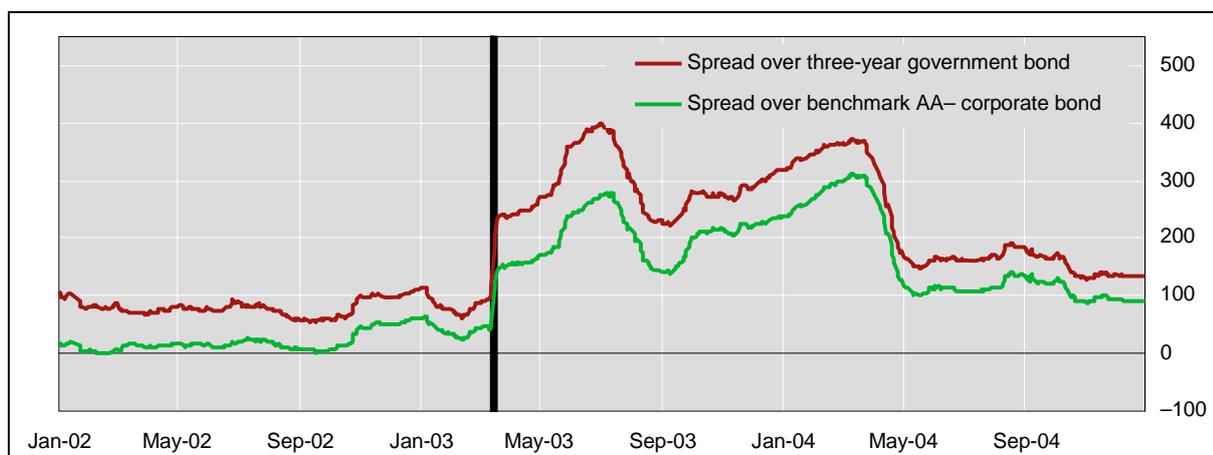
Furthermore, the credit card issuers' practice of re-ageing their loans inflated the quality of their assets and facilitated the transfer of credit risks to third-party securities investors, further reducing transparency and weakening incentives to screen and monitor card applicants. Re-ageing probably also delayed recognition of the problem and allowed excessive accumulation of risk during the lending boom. According to the estimates of the Financial Supervisory Service of Korea and Goldman Sachs (2003), re-aged loans might have accounted for as much as 30 per cent of the total assets of the top eight Korean credit card companies at the end of 2003.

A second and related lesson is that market discipline seems to have failed. Given that the credit card portfolio typically represented about 5 per cent of the total bank loan book, one might argue that yield spreads of bonds issued by commercial banks did not widen sufficiently or early enough to signal the rising underlying credit risk. Moreover, the Korean bond market failed to price such credit risks even as the quality of monoline issuers' portfolios deteriorated sharply, until the full crisis broke out in mid-March 2003. Between January 2002 and February 2003, the yield spread of credit card company bonds over three-year government bonds and benchmark corporate bonds with comparable ratings widened by less than 50 basis points (Graph 6).

Graph 6

Yield spread of credit card company bonds rated AA–

In basis points



Source: Korea Bond Pricing Incorporation.

This might have encouraged the credit card companies to continue aggressively expanding their balance sheets at a time when credit risk was already rapidly building up. The lack of effective market discipline as reflected in the mispricing of credit risk can be viewed as a particular case of market failure due to information asymmetry, which in turn might have been related to the regulatory authorities' belated disclosure of information about credit card companies to the public and authorisation of the practice of re-ageing debt as well as to the possibly opaque structure and excessive complexity of some ABS deals (Moreno (2006)). Finally, the failure of domestic rating agencies to promptly review the bonds and ABS issued by credit card companies certainly did not help.

The policy implications of Korea's experience with credit card lending distress may be valuable to policymakers in other Asian markets where credit card lending is starting to expand rapidly. First, the episode highlights the importance of placing greater emphasis on detecting early warning signs before the build-up of excessive imbalances has gone on for too long. Admittedly, it is a challenge to sound the alarm when profits are going up during a lending boom, but reasonable average debt-to-GDP or liability-to-asset ratios and low initial losses should not give rise to complacency. Even from a low base, rapid growth in indebtedness can overwhelm firms' risk management capacity and thus pose new risks, especially during periods marked by structural changes in the industry and/or the cardholding population. Nor should a benign economic environment lull us into ruling out the possibility of a consumer debt crisis. Moreover, given the time lags in data collection, problem recognition and the policy response, there is probably a need to strengthen the capacity of policymakers to conduct on-site examinations of banks and credit card companies and to maintain access to confidential information, particularly in the transition phase of market development.

Second, governments can enhance information flows to facilitate the functioning of the consumer credit market. For example, in order to mitigate information asymmetries between lenders and borrowers, credit information reporting and sharing should be encouraged (Miller (2003)). Credit reference agencies with a broad coverage of both the financial sector and types of credit data should in general help contain adverse selection problems, improve risk management capability, provide more reliable warning signals to regulators and permit more efficient product innovation and credit pricing. Enhancing information disclosure may also strengthen market discipline. Since 2003, credit information reporting and sharing in Korea have improved considerably, particularly with respect to the coverage of different types of credit data. Korea now has three private credit bureaus, which started collecting data in 2004.

Finally, policymakers may find it helpful to upgrade their prudential and supervisory frameworks, especially during the liberalisation process. These include both general regulatory rules as well as guidelines on best practice and prudential rules specific to the credit card business. For instance, there may be a case for more refined and differentiated provisioning requirements for credit card receivables: lending to regular revolvers is a higher-yield but riskier and more volatile business, while business from transactors has lower profit margins but is more stable. There should also be an explicit capital requirement to provide firms with a cushion against the retained exposure of, or the contingent liability arising from, off-balance sheet securitisation. A case can be made for imposing income tests, credit limits and minimum repayment requirements to cap risk exposure to the less than prime segment of the credit card market. Sometimes informally put in place through the bankers' association, some of these more "paternalistic" rules can be helpful safeguards, at least during the difficult transition periods of rapid structural change and financial liberalisation, but they need to be deployed pre-emptively or sufficiently early in order to enhance financial stability.

Conclusion

In sum, while the expanding credit card market offers vast business opportunities to the financial industry in an era of financial innovation and deepening, it is also subject to boom-bust cycles. Policymakers need to place greater emphasis on both identifying indicators of excessive credit growth and reacting to them.

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