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CHECKS IN ARGENTINA**

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Corporate Bonds, Asset-backed Securities and Deferred Checks in Argentina

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Abstract: We describe the evolution of three types of corporate securities in Argentina, namely, corporate bonds, asset-backed securities and deferred checks. Corporate bonds (*obligaciones negociables*) were legally authorized in 1988, and after a tax reform in 1991 they became an important financing vehicle. Asset backed securities (*fideicomisos*), legally created in 1995, have been issued since 1996. They typically bundle together small credits of a similar category. Deferred checks (*cheques de pago diferido*) exist since 1993, alongside standard checks. They can be negotiated on the exchange since 2003, and are akin to commercial paper. Corporate bonds have been overwhelmingly issued by large firms and banks, with an average issue size of 53 million dollars. Asset backed securities have an average value of 9 million dollars. Deferred checks are typically used by smaller firms, and those traded on the exchange of the Buenos Aires board of trade have an average value of 9 thousand dollars.

JEL classification codes: G3

Key words: private securities, corporate bonds, asset-backed securities, deferred checks

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I. Introduction

Until 1988, firms had to depend mainly on bank loans as a source of finance. While large firms also had access to private placements, small and medium enterprises (SMEs) used trade credit and postdated checks a lot. With the emergence of new private securities, the situation has changed substantially since then.

We review the evolution of three securities now issued by private firms. First, corporate bonds (*obligaciones negociables*). Second, asset backed securities (*fondos fiduciarios*). Third, deferred checks (*cheques de pago diferido*), which are akin to commercial paper. While corporate bonds are mainly issued by large firms, the other two instruments are basically used as a means of financing by SMEs.

A common characteristic of all three instruments is that the emergence of these markets is pretty recent. Though corporate bonds exist since 1988, the corporate bond market only took off after the government instituted tax changes in 1991.¹ Asset backed securities appeared in 1996, after the appropriate legal framework was approved in 1995. Deferred checks became a financing alternative in 1993, replacing the informal institution of post-dated checks used until then by small firms. Since 2003, they have been exchanged on the Merval (Mercado de Valores), the exchange associated to the Bolsa de Comercio the Buenos Aires (BCBA).

II. Corporate bonds

A. Primary markets

The possibility of issuing corporate bonds (*obligaciones negociables* or ON in Argentina) appeared when Law 23.576 was approved in 1988. The law allowed corporate bonds to be issued by incorporated companies, cooperatives and other organizations. The principal

¹ In Fernández, González, Pernice and Streb (2007), the evolution of corporate bonds are reviewed in conjunction with the behavior, over the 1985-2005 period, of sovereign bonds and bank loans. Section II of this document is mostly based on that review of corporate bonds.

could be indexed, interest rates could be fixed or variable, issues could be in foreign currency, payments could be made abroad, and there was free entry and exit from the country.

This law on corporate bonds was modified in 1991 by Law 23.962. It was only then that the market for bonds started to take off and develop. The modification introduced in 1991 basically had to do with tax exemptions of the value-added tax (VAT), the income tax and taxes on the transfer of bond instruments (*títulos valores*), giving corporate bonds the same tax treatment as sovereign bonds. All this had a positive impact on the incentives to issue corporate bonds. This leveled the field with bank loans; before that, companies basically preferred bank loans because of tax deductions allowed.

Small and medium enterprises (SMEs) were provided soon after with a simplified system to issue bonds that could be quoted on stock exchanges, to broaden their financing sources. By Decree 1.087 of 1993, SMEs were authorized to issue bonds, with the obligation of registering the bonds in the Comisión Nacional de Valores, the local securities exchange commission, and of complying with certain specific requirements of that commission. The restrictions which this simplified system imposed on SMEs had to do with the amount issued, the maturity and the type of investors. The maximum amount per firm was set at 5 million pesos. The bonds issued under this regime for SMEs could only be purchased by qualified investors within certain categories, for example, public organizations, pension funds, and individuals with certain minimum capital. Despite this simplified regime, bond finance is typical of large firms rather than SMEs.

Table 1 shows the evolution of corporate bonds as a percentage of GDP, while Table 2 shows their evolution in millions of dollars. The increase in nominal terms in 2002 in Table 1, as a percentage of GDP, merely reflects the threefold devaluation of the peso, with a stock that was almost completely in dollars. The figures are not corrected for pesification of bonds in dollars under domestic law.

These figures are based on a database constructed with information from the Bolsa de Comercio de Buenos Aires (BCBA). This data was complemented with information from the Comisión Nacional de Valores (CNV), to reflect as far as possible all corporate bonds that have been issued, not only those bonds registered to trade in the BCBA. Some information was also drawn from Mercado Abierto Electrónico (MAE). Bedoya, González,

Pernice, Streb, Czerwonko and Díaz Santillán (2007) explain in detail the construction of the database of corporate bonds.

Table 1. Stock of bonds issued by the corporate sector (as a percentage of GDP)

	Domestic currency			Foreign Currency	Total
	Nominal	Indexed to prices	Indexed to interest rate		
1989	0	0	0	0	0
1990	0	0	0	0.05	0.08
1991	0.05	0	0	0.31	0.36
1992	0.06	0	0	0.94	1.00
1993	0.05	0	0	2.57	2.61
1994	0.04	0	0	3.53	3.57
1995	0.04	0	0	4.23	4.27
1996	0.03	0	0	4.86	4.89
1997	0.11	0	0	6.82	6.93
1998	0.09	0	0	8.32	8.41
1999	0.15	0	0	8.82	8.96
2000	0.15	0	0	8.50	8.66
2001	0.19	0	0	8.00	8.19
2002	0.15	0	0	17.03	17.17
2003	0.12	0.01	0	11.97	11.75
2004	0.17	0	0	9.31	9.48
2005	0.14	0	0	7.63	7.78

Notes: Year-end figures. This information does not distinguish between domestic and foreign law issues. Our database was constructed with information from Bolsa de Comercio de Buenos Aires (BCBA), Mercado Abierto Electrónico (MAE) and Comisión Nacional de Valores (CNV).

Table 2. Stock of bonds issued by the corporate sector (in millions of dollars)

Year	Domestic currency			Foreign Currency	Total
	Nominal	Indexed to prices	Indexed to interest rate		
1989	6	0	0	0	6
1990	37	0	0	62	99
1991	89	0	0	514	603
1992	126	0	0	1,980	2,106
1993	117	0	0	6,072	6,189
1994	105	0	0	9,083	9,187
1995	93	0	0	10,933	11,026
1996	82	0	0	13,227	13,309
1997	325	0	0	20,013	20,338
1998	258	0	0	24,896	25,154
1999	407	0	0	25,014	25,422
2000	445	0	0	24,182	24,626
2001	522	0	0	21,346	21,867
2002	151	0	0	16,804	16,954
2003	153	11	0	14,787	14,951
2004	260	10	0	14,136	14,405
2005	259	8	0	13,829	14,096

Notes: Year-end figures. This information does not distinguish between domestic and foreign law issues. Our database was constructed with information from Bolsa de Comercio de Buenos Aires (BCBA), Mercado Abierto Electrónico (MAE) and Comisión Nacional de Valores (CNV).

Table 3, based on the database in Bedoya et al. (2007), shows the number of issues per year, the total amount issued, and the average size of each issue for those corporate bonds for which we have both amount issued and date of issue.

Table 3. Number and amount of corporate bonds issued

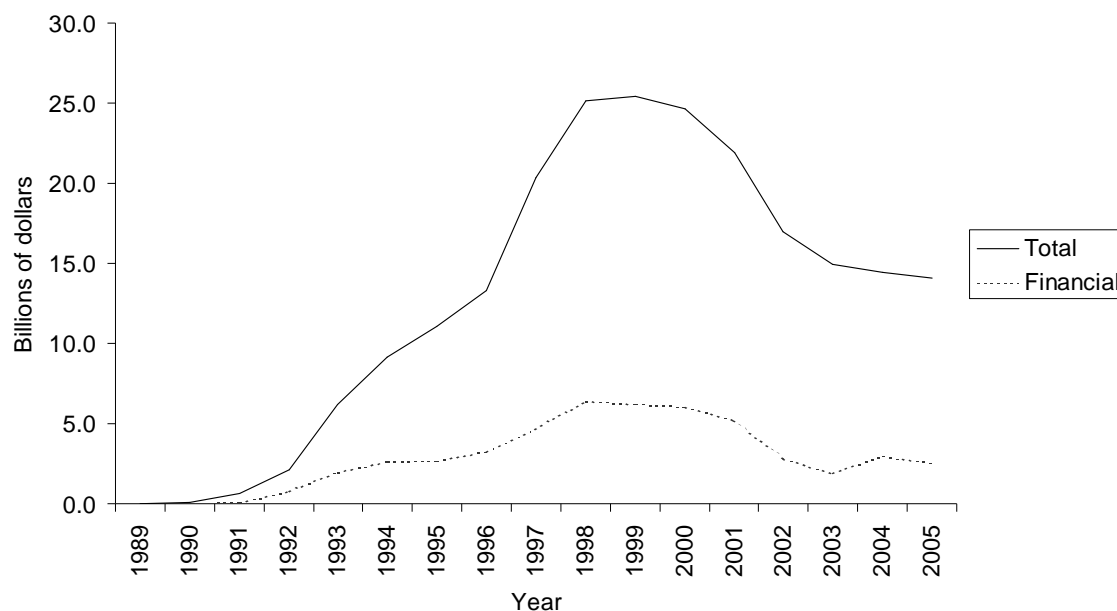
Year	Number	Value (in millions of dollars)	Average value (in millions of dollars)
1989	2	6	3
1990	10	98	10
1991	16	522	33
1992	52	1,621	31
1993	68	4,805	71
1994	77	4,030	52
1995	105	3,605	34
1996	106	4,904	46
1997	176	9,715	55
1998	175	10,611	61
1999	143	6,523	46
2000	104	6,569	63
2001	89	3,896	44
2002	39	2,923	75
2003	45	1,968	44
2004	39	3,409	87
2005	21	1,963	93
Total	1,267	67,167	53

Notes: For 1267 bonds we have both amount issued and date of issue, out of a total of 1356 bonds in database. The year 2005 covers up to September.

Table 3 shows that the average size of the corporate bond issues of slightly above 50 million dollars is extremely large when compared to the average size of the issues of asset-backed securities and deferred checks, which are described in Tables 10 and 11 below. Hence, this instrument is typical of large firms. Despite the special regime for SMEs, which allowed issues of not more than 5 million dollars during Convertibility, there were relatively few operations of that type, so they did not affect the total average much.

Figure 1 shows the composition of corporate debt in terms of financial and non-financial issuers. The issue of corporate bonds was nil until 1989. The market started to become significant in 1991. After ten years of rapid growth, the stock of outstanding bonds leveled off after 1998, and started falling in 2001. The stock of corporate bonds from 2002 on is preliminary, insofar as it is based on the original conditions at time of issue and does not reflect pesification and default.

Figure 1. Amount outstanding of corporate bonds and amount issued by financial institutions (in billions of dollars)



Source: our database of corporate bonds from Argentina.

Almost all corporate bonds were issued in foreign currency (almost all in US dollars). However, Tables 1 and 2 do not have a breakdown of these bonds according to domestic or foreign legislation. This breakdown is a key issue, because by Decree 214 of 2002, Article 8, all debt in foreign currency not related to the financial system, as was the case of corporate bonds, was converted to pesos at a ratio of one dollar equal to one peso, and by Article 4 the resulting amount was indexed by CER, a unit linked to the CPI to reflect past inflation. Of course, this decree only applied to debt under domestic legislation, not to debt under foreign legislation. Firms made use of this decree, so this marks a huge difference between domestic and foreign law corporate bonds.

The 2002 devaluation was different from past experiences in the 1970s and 1980s. In that period, devaluation melted down company debt denominated in domestic currency, leaving the company in a better financial situation. On the contrary, the 2002 devaluation provoked a financial suffocation in those companies that had begun to get deeply indebted abroad, because unlike the 1981/82 financial crisis the government did not take over private debt abroad, since the government itself fell into default. Though bank debt in dollars was pesified at a rate of 1 to 1, this debt had lost participation in total debt since loans to the

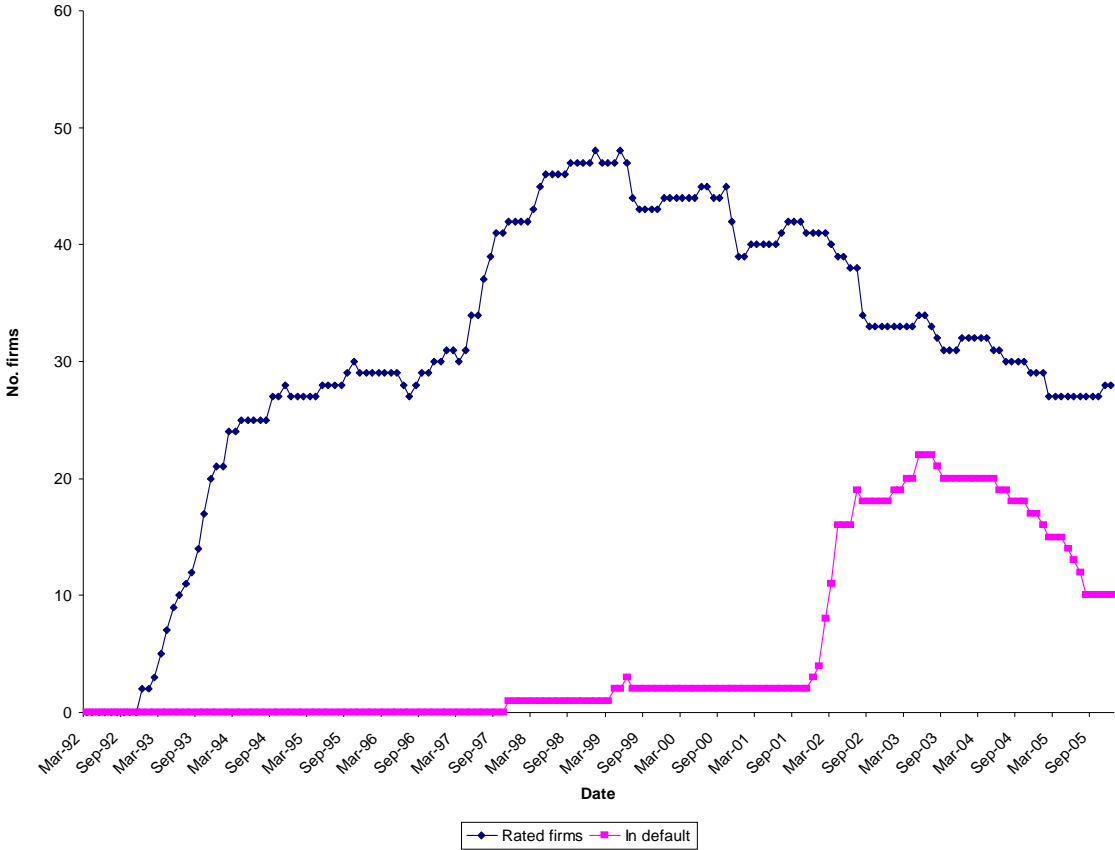
private sector had been continuously falling since 1998. Since we do not know the share in total bond debt of corporate bonds issued under domestic legislation, we cannot evaluate how much relief the pesification decree provided through this channel to highly indebted firms. However, during the Convertibility years, the ease of access to external credit and the good international financial conditions had stimulated the growth of financing abroad for large firms.

In early 2002, risk-rating agencies placed most firms in selective default as regards liabilities in foreign currency. This rating was based on the fact that with the 2001 crisis, besides the devaluation, a series of government restrictions were put in place. Foremost, the central bank started to control the remittance of foreign currency abroad, and an authorization was required to make payments abroad. This came together with great uncertainty about the final effects of the abandonment of Convertibility, in a context of government default, generalized violation of contracts, restrictions to withdraw funds from the financial system, and pesification of public service rates, deposits and debt. However, some companies were a lot less exposed than others to these risks. The greatest probability of default was for the firms that had suffered the pesification and freezing of their rates, and that served the domestic market, such as the distributors of gas and electricity, and the telephone companies. These firms were all heavily indebted in foreign currency.

Though at first the majority of firms did not comply with payment of principal, a great majority did meet interest payments. In this dimension, the default on private debt was much less severe than the default of government debt. The financial sector, which had issued short-term bonds (*valores de corto plazo*), whose maturity was less than a year, mostly complied with the payments of principal. By mid-2002, there were already renegotiations underway in some important firms (Pecom, Banco Hipotecario, Impsa, Capex, Aeropuertos 2000), with a high percentage of acceptance by bondholders. The new conditions were relatively good and did not include either haircuts on principal or pesification, though there were extensions of maturity and, in some cases, reductions of interest rates. Subsequently, the restructuring of private debt came in all sorts of combinations: extension of maturities, lower interest rates, repayment of principal in installments, haircuts on principal, early redemption at a discount. In all cases this implied a larger or smaller loss, in terms of present value, to the bondholders. Around 2003, with

several restructurings already completed, the market value of these bonds started to improve. This was due to improved economic conditions and the normalization of markets, as well as the anticipations of future debt renegotiations.

Figure 2. Corporate bond issuers and number in default, March 1992- December 2005



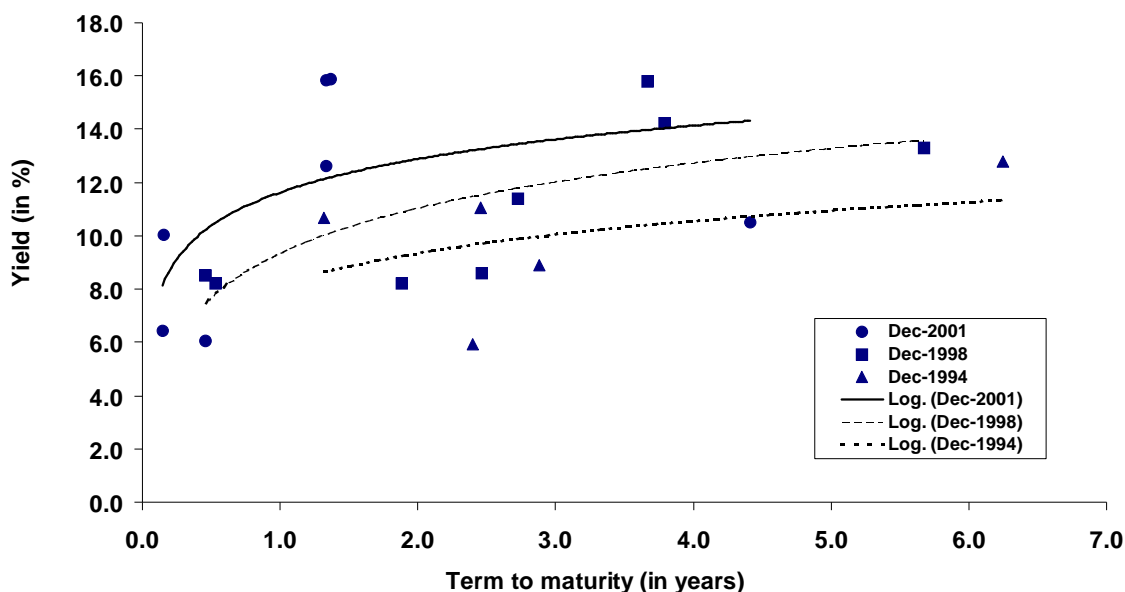
Source: based on firms rated by Standard & Poor's in Argentina.

Due to widespread corporate default, after the 2001 debt crisis the corporate bond market came to a standstill. As Figure 2 shows, about 2/3 of corporate issuers rated by Standard & Poor's went into default during 2002, and the process of renegotiation was pretty lengthy. However, by the end of 2005 most firms had renegotiated their debt.

B. Secondary markets

Figure 3 shows the yield curves for most liquid corporate bonds traded on the Mercado Abierto Electrónico (MAE). When a log curve is fitted to the data, one can clearly see that the curves shifted up over time, between 1994 and 1998, and again between 1998 and 2001.

Figure 3. Yield curves for corporate bonds

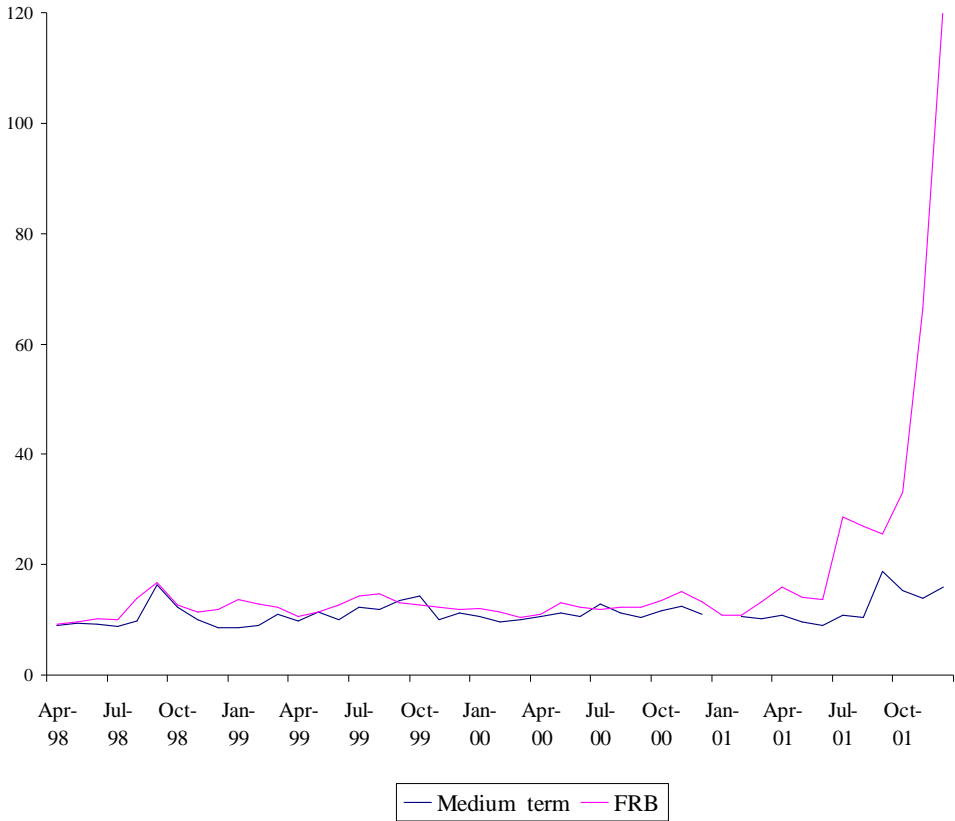


Source: based on most liquid corporate bonds, individual trades on Merval for 1994 and *Hechos*, MAE for rest.

We would have expected to see higher rates of return on corporate bonds in 2001, in view of the financial crisis, and of the widely announced and impending death of Convertibility. Figure 4 compares the evolution of a reference rate for medium term corporate bonds between April 1998 and December 2001, when the crisis burst and the market practically disappeared, with the rate of return on a representative sovereign bond, the FRB. The FRB had a maturity of 7 years in April 1998, and of 3.3 years in December 2001. To construct the reference rates for medium term corporate bonds, we used the median of the rate of return of the bonds with maturities above one year and up to three years that were most liquid. The median was taken from a list of between one and six bonds

whose rates of return were computed by MAE and reported in the monthly issues of *Hechos* (note that the set of corporations changes over time).

Figure 4. Rate of return on sovereign and medium term corporate bonds



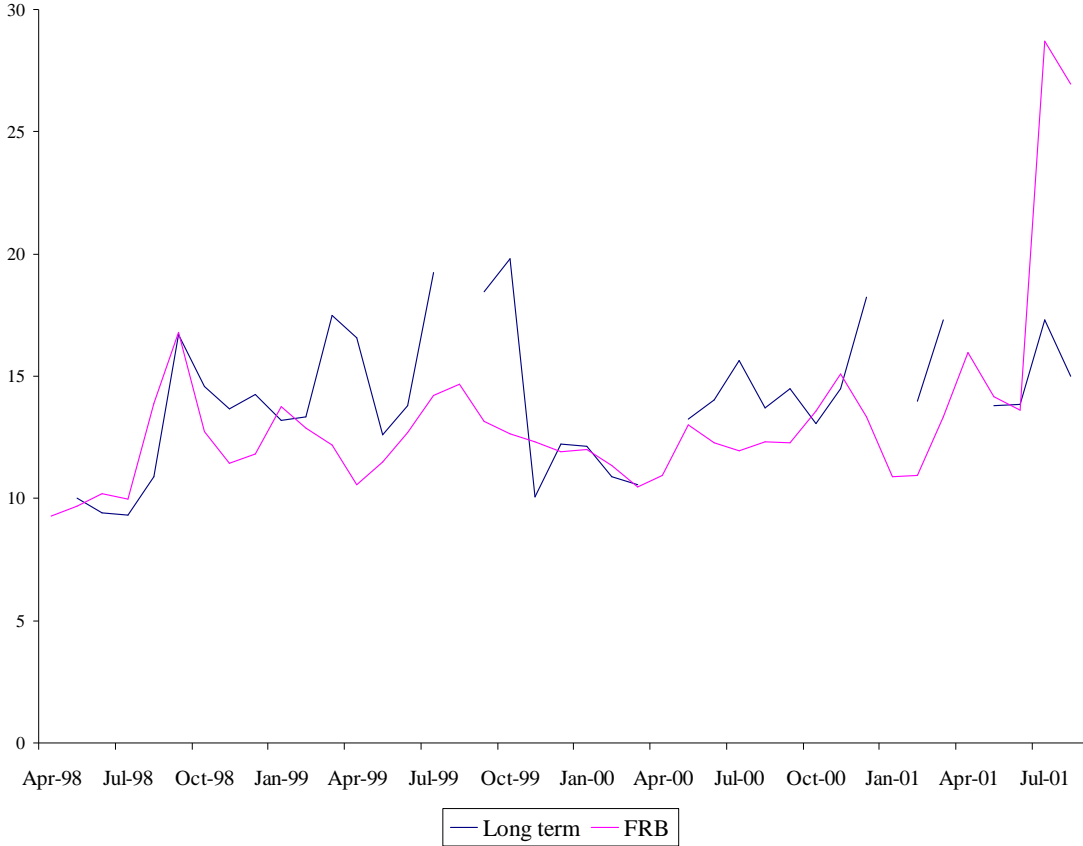
Source: based on *Hechos*, MAE, April 1998-December 2001.

The reference rate of return for medium term corporate bonds moved together with the FRB over most of this period. This is in agreement with the conventional view in Argentina that the risk of private and public sector are not separable, but rather that they move together with country risk. However, as of April 2001 the rate of return on the sovereign bond started rising steeply, while that of corporate bonds rose much more gently.

In Figure 5 a similar procedure was followed to define a reference rate for long-term corporate bonds. However, in this case there are usually only between one and three bonds, and in several months there is no data at all, especially during 2001, so this long term reference rate is even less representative than the medium term reference rate. The behavior

of both series over time was much closer. However, one again sees that there is a point where the series drift apart, in this case in July and August 2001.

Figure 5. Rate of return on sovereign and long term corporate bonds



Source: based on *Hechos*, MAE, April 1998-December 2001.

Table 4 gives as an example one particular long-term market bond issued by Transener, a company engaged in the transmission of electric energy. As the table shows, the rate of return rose slightly in November 2001. However, there were very few trades, and the amount traded was negligible in relation to the 150 million dollars of outstanding bonds.

Table 4. Trades of long-term bond from Transener on MAE

Month	Maturity (in years)	Rate of return (%)	Days traded	Amount traded (in dollars)	Turnover (amount traded /amount outstanding)
Sep-98	9.6	14.55	6	10,744,194	7.2
Oct-00	7.5	11.79	4	4,948,133	3.3
Feb-01	7.2	11.64	8	9,822,179	6.5
Nov-01	6.4	20.68	2	1,252,504	0.8

Source: based on *Hechos*, Mae and our database.

A possible explanation for the discrepancy between both sets of rates of return is that the prices of corporate securities were not as representative as sovereign bonds. The domestic market for corporate bonds was small to start with, and it shrank even further during 2001. Table 5 shows the evolution of trades on the MAE over this period. This helps explain why there were no almost any quotes of long term corporate bonds at the end of 2001, so the increasing risk might not have been fully reflected in market prices.

Table 5. Amounts traded on MAE (in millions of dollars)

Period	Sovereign bonds	Corporate bonds
1996	318,067	717
1997	337,937	903
1998	169,975	808
1999	153,295	778
2000	217,297	859
January 2001	18,345	94
February	19,951	86
March	20,111	35
April	9,155	28
May	12,365	92
June	18,252	39
July	9,601	36
August	8,032	42
September	3,983	47
October	5,980	50
November	4,389	45
December	282	29
2001	130,446	622
January 2002	54	3
February	178	1
March	485	3
April	507	1
May	1,026	1
June	196	1
July	557	0
August	806	0
September	296	5
October	204	8
November	379	15
December	393	14
2002	5,082	52

Source: based on *Hechos*, MAE.

Another explanation for the discrepancy between corporate and sovereign bonds might be due to the fact that the market considered that corporate bonds were not as risky as government bonds. Though in most of the Convertibility period both rates of return tended to move together, some corporate issuers indeed did not go into default in 2001 and after. Of those that did, the renegotiation of corporate bonds usually implied smaller haircuts for bondholders than the haircuts applied to sovereign bondholders. This might explain another part of the discrepancy in the yields between corporate and sovereign bonds in 2001. However, since there were very few trades on domestic secondary markets, we believe that the prices might not too representative and must be handled with care.

The yield curves for corporate bonds from 2004 on show that the yield on corporate issuers that did not default, for example firms from the oil industry like Petrobras Energia and YPF, was lower than those that defaulted like Autopistas del Sol, Banco Hipotecario, Banco Galicia. The difference was around 600 basis points in August 2004, and fell to 300 basis points in November 2005 (BCRA 2004 and 2005). We believe this spread basically reflects the fact that the firms that did not default were in better financial shape than those that did, and hence they presented a lower risk.

To analyze the liquidity of corporate bonds, we rely on data from Mercado Abierto Electrónico (MAE) and the Mercado de Valores (Merval), the most important domestic exchanges for bonds. Other exchanges outside of Buenos Aires are not very important in bond trading (Bolsa de Rosario and Bolsa de Bahía Blanca, for example, specialize in commodities).

Merval is closely related to the Bolsa de Comercio de Buenos Aires (BCBA), where many of the corporate bonds are listed. On the other hand, MAE is an over-the-counter exchange whose members are financial institutions focused on fixed income securities. To be negotiated on the MAE, corporate bonds have to be previously listed at the BCBA or some other board of trade in Argentina. Table 6 shows that the participation of MAE in the market for corporate bonds in Argentina is a bit larger, though the difference with Merval has dwindled with time (as to company shares, the two markets reached an agreement by which shares are only traded on the Merval since 1996).

The issues of national government bonds tend to be much more liquid than provincial bonds, which are sometimes traded only two or three times per month (if at all). The same holds for corporate bonds. Indeed, despite the fact that in 2000 the stock of corporate bonds was 24 billion dollars, compared to 98 billion dollars of sovereign bonds and 4 billion dollars of provincial bonds (a ratio of 1 to 4), the total volume of corporate bonds traded represents a mere 1%, or less, of the amount traded in government bonds (a ratio of 1 to 100).

Table 6. Trades on MAE and Merval, 1996-2004

Total volume operated in MAE and Merval (in millions of dollars)				
	Government bonds	Shares	Corporate bonds	Total
1996	448,744	35,221	717	484,683
1997	407,102	41,188	1,351	449,641
1998	204,287	30,528	1,169	235,985
1999	187,485	12,685	1,122	201,292
2000	245,486	9,691	1,469	256,646
2001	147,104	7,554	1,022	155,680
2002	16,803	1,570	111	18,484
2003	31,468	2,897	185	34,549
2004	51,005	4,489	601	56,095
Share of MAE in volumes operated in MAE and Merval				
	Government bonds	Shares	Corporate bonds	Total
1996	0.71	0.00	1.00	0.66
1997	0.83	0.00	0.67	0.75
1998	0.82	0.00	0.69	0.71
1999	0.82	0.00	0.69	0.77
2000	0.89	0.00	0.58	0.85
2001	0.89	0.00	0.61	0.84
2002	0.30	0.00	0.47	0.28
2003	0.63	0.00	0.73	0.58
2004	0.70	0.00	0.58	0.64

According to our database of corporate bonds, there were 68 companies with bonds outstanding in 2004, and 56 in 2005. In relation to corporate bonds that were actually traded, we looked at companies whose bonds traded at least once during 2004-2005 (until August) in both MAE and Merval. There were 18 such companies, of which 7 were banks and 11 were non-financial companies. Of the 11 non-financial companies, Table 7 shows their liquidity of the 8 on which we had information on revenues. Except for two of the

corporate bonds in Table 7, there were very few trades, and the rates of turnover were extremely small. In fact, the great majority of corporate bonds in Argentina resemble private placements, which are often tailored to specific investors and have extremely low liquidity.

Table 7. Liquidity of corporate bonds of eight non-financial firms in 2004

Firm	Revenue (millions of pesos)	Outstanding stock (millions of pesos)	Days traded in year	Total traded (millions of pesos)	Turnover (%)
Autopistas del Sol S.A.	154	325	5	10	3
Cablevisión S.A.	642	525	5	1	0
Edesur S.A.	920	120	7	3	3
Metrogas S.A.	720	321	2	2	1
Multicanal S.A.	575	450	359	465	103
Petrobras Energía S.A.	5494	1672	197	102	6
Transener S.A.	220	518	1	1	0
Transportadora de Gas del Sur S.A.	905	503	11	7	1

Source: based on database in Bedoya et al (2007), and information from Guía Senior on annual revenue.

III. Asset-backed securities (ABS)

The market for asset-backed securities (*fideicomisos financieros* in Argentina) is quite recent. The main reason was that there was no legal framework to carry out this type of operations until Law 24.441 created it in January 1995. It is worth mentioning that the drafters of the law had securitization of mortgages in mind, which explains why Law 24.441 was called the Law of Financing of Housing and Construction (Ley de financiamiento de la vivienda y la construcción). Despite these intentions, this law served as the framework for the securitization of very diverse classes of assets, such as credit cards and personal loans, to a much larger degree than the securitization of mortgages.

The market started to operate in 1996. Table 8 shows the evolution of the stock of asset backed securities in terms of GDP, while Table 9 shows the stock in millions of dollars. The characteristics of the market for ABS in Argentina are very peculiar, basically very short duration, so secondary markets are hardly existent. Hence, the database from BanVal provides unique information related to the investors' profiles.

Table 8 shows in 2002 a huge rise of ABS in terms of GDP. This is because of the devaluation. However, it greatly overstates the actual rise, because we have not adjusted the figures for the pesification of ABS that was decreed in early 2002. Many of the asset-

backed securities in foreign currency were pesified at an exchange rate of 1.40 pesos per dollar, and the amount in pesos was indexed by CER. However, this did not happen in all cases, since it depended on the underlying assets and the assemblies that convened for each asset-backed security.

Table 8. Stock of asset-backed securities (as a percentage of GDP)

Year	Nominal domestic currency			Foreign currency			Total
	Short-term	Long-term	Total	Short-term	Long-term	Total	
1996	0.00	0.02	0.02	0.00	0.07	0.07	0.09
1997	0.00	0.06	0.06	0.00	0.34	0.35	0.40
1998	0.00	0.09	0.09	0.00	0.41	0.41	0.51
1999	0.01	0.09	0.10	0.03	0.72	0.75	0.85
2000	0.01	0.17	0.18	0.03	1.51	1.54	1.72
2001	0.03	0.21	0.24	0.01	2.38	2.39	2.63
2002	0.00	0.08	0.08	0.01	6.16	6.17	6.25
2003	0.04	0.05	0.09	0.02	3.15	3.18	3.27
2004	0.15	0.19	0.34	0.01	2.48	2.48	2.82
2005	0.25	0.63	0.88	0.00	1.74	1.77	2.63

Notes: Year-end figures. Based on Banval. Short-term bonds have maturities up to one year, long term more than a year.

Table 9. Stock of asset-backed securities (in millions of dollars)

Year	Nominal domestic currency			Foreign currency			Total
	Short-term	Long-term	Total	Short-term	Long-term	Total	
1996	0	53	53	0	200	200	253
1997	0	171	171	8	1,005	1,014	1,184
1998	7	275	281	2	1,228	1,231	1,512
1999	28	242	270	80	2,049	2,129	2,399
2000	38	472	510	85	4,277	4,362	4,871
2001	75	567	641	29	6,387	6,416	7,057
2002	0	74	74	10	5,466	5,476	5,550
2003	55	58	113	28	3,978	4,005	4,119
2004	220	289	508	14	3,714	3,728	4,236
2005	436	1,096	1,531	43	3,076	3,119	4,651

Notes: Year-end figures. Based on Banval. Short-term bonds have maturities up to one year, long term more than a year.

Though the history of ABS is short, it is very rich in the sense that the qualities of ABS as financing vehicles were stress-tested in the 2001-2002 crisis. To get a better understanding of the evolution of the market of ABS, Table 10 shows the yearly amounts issued in domestic currency (expressed in thousands of pesos) and in foreign currency (expressed in thousands of dollars). Note that until 2001, the peso was at a one to one parity

with the dollar; after a big jump in 2002, the relation stabilized at a ratio of 3 pesos per dollar since 2003.

Between 1996 and 2001, slightly more ABS were issued in foreign currency than in domestic currency. The average value of ABS issued in foreign currency grew from 3 million dollars in 1996 to 74 million dollars in 2001. In contrast, the average value of amounts issued in domestic currency hovered around 7 million dollars in that same period. The overall result until 2001 was a rapid growth of the total amounts issued, due to the increasing size of individual issues, rather than an increase in the number of issues.

The market came to a standstill in 2002, just like the market for corporate bonds. ABS were affected by the behavior of the underlying assets. In particular, as mentioned above, ABS were strongly affected by the pesification of contracts after the crash. However, Table 10 shows that since 2003 there has been a quick comeback of the market for ABS. Indeed, ABS are the instruments that led the reopening of capital markets after the financial crash at the end of 2001. A reason for their rapid recovery was that, unlike other instruments, ABS were not subject to the lack of “willingness to pay”, as often happened with corporate bonds.

Table 10. Number and amount of asset-backed securities issued

Year	Issues in foreign currency			Issues in domestic currency			Average exchange rate (pesos per dollar)
	Number	Value (in thousands of dollars)	Average value (in thousands of dollars)	Number	Value (in thousands of pesos)	Average value (in thousands of pesos)	
1996	69	200,743	2,909	53	53,073	1,001	1
1997	44	818,003	18,591	17	121,029	7,119	1
1998	39	237,256	6,083	18	148,089	8,227	1
1999	50	1,103,358	22,067	26	117,976	4,538	1
2000	53	2,535,047	47,831	51	399,693	7,837	1
2001	36	2,667,311	74,092	51	387,517	7,598	1
2002	6	35,803	5,967	12	24,271	2,023	3.5
2003	11	59,798	5,436	52	236,982	4,557	3
2004	11	33,103	3,009	208	1,602,905	7,706	3
2005	25	205,497	8,220	353	4,373,062	12,388	3
Total	344	7,895,919	22,953	841	7,464,596	8,876	

Source: based on BanVal.

The main reason for the relative resilience of ABS was legal. From a legal viewpoint, unlike corporate bonds or other debt instruments, ABS had an encapsulated

guarantee, i.e., they were securities that were not attached to the balance sheet of the original corporation, but were rather off balance sheet financing. They were not attached to the ABS manager either, who merely acted as an agent of the holders of the ABS. This is the key point that differentiates ABS from corporate bonds.²

Despite being hit by pesification, this characteristic of an encapsulated guarantee allowed the rapid comeback of ABS issues, unlike corporate bonds where there were practically no new issues after the default, except for the few exceptions where the debtors paid on time, respecting the original terms, or where they extended the maturity but without imposing a discount on corporate bondholders. At any rate, the point is that encapsulated assets, combined with atomized debtors, turned out to be relatively resilient when compared to other private securities. This is significant in a country with the history of financial fragility that Argentina shows.

Analyzing what has happened from the end of 2002, ABS reflect the behavior of two sectors that have been very dynamic during the recovery of the Argentine economy, consumer durables (mainly household appliances) and exports of the agricultural sector.³ Without distinction of sector, very few ABS had a maturity of over one year. Reflecting the experiences of the recent financial crisis and the subsequent pesification, in no case were there funds in a currency different from its underlying asset, i.e., ABS in dollars were only issued when the loans encapsulated in the fund were payable in dollars. The characteristics as to maturity and currency can be typical of markets that emerge from sovereign default: a strong concentration of ABS in horizons up to 5 months at a fixed rate and denominated in pesos. When the maturity is over 5 months, and in pesos, the trust funds carry variable interest rates, either in terms of a reference interest rate (BADLAR) plus a spread, or

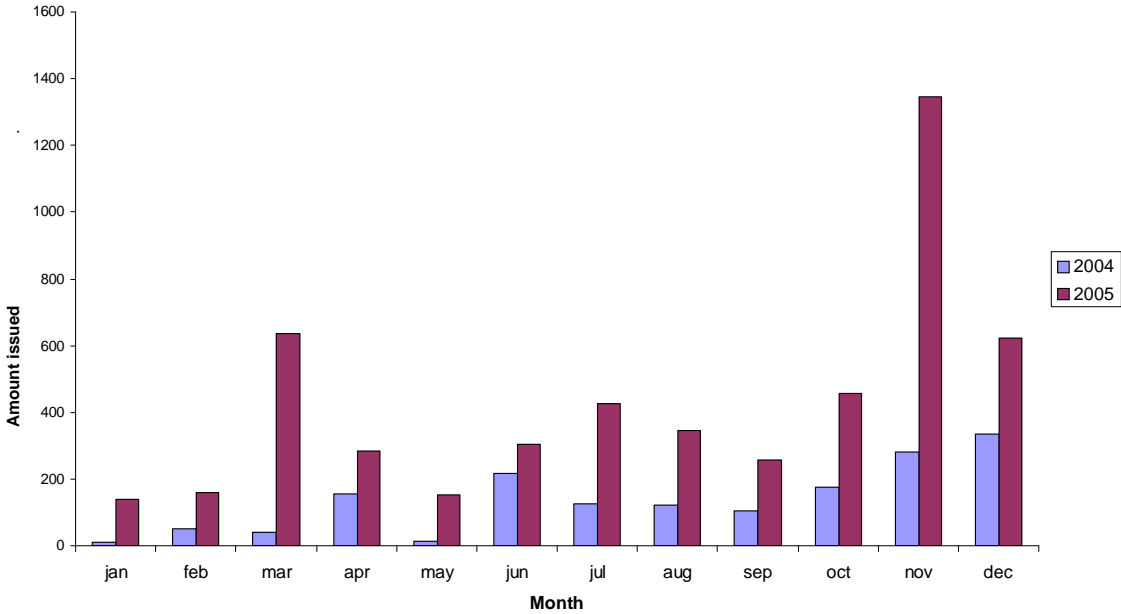
² From an economic standpoint, there was also a diversification of risk, because the majority of the ABS put together a large sum of small consumer and personal loans, as well as mortgages. The atomized debt included in ABS essentially originated from the financed sale of household appliances, as well as personal credits of all sorts instrumented through *mutuos personales*, or through credit cards. Unlike a lot of corporate debt, the vast majority of the individual debtors complied with their debt obligations, perhaps to preserve a good credit record, though the encapsulated guarantee provided an incentive to comply with debt payments.

³ Though it still has a long way to go, in 2005 the financial sector started to use ABS to securitize mortgages. This may expand in the future, and extend to the securitization of leasing and other assets on bank's balance sheets. One reason is that the 2001 crisis showed it was extremely risky to fund long-term loans with 30-day time deposits. ABS may also prove to be a vehicle for big corporations to securitize their credit to suppliers, thus turning it into off balance sheet financing. Multinational corporations might find this attractive to not violate restrictions on credit risk imposed by their headquarters, while local firms might find it attractive as a means of finance.

indexed to inflation (CER) plus a spread. These loans are basically related to financing of consumer loans or credit cards. As to the instruments denominated in dollars, the maturities were closer to one year. This basically had to do with financing of exports by small and medium-size agricultural producers.

As Figure 6 shows, the evolution of the market during 2005 was outstanding: whereas the amount issued during 2004 was for 1,625 million pesos (approximately 550 million US dollars), the amount issued during 2005 was 5,125 million pesos (almost 1,700 million dollars). In comparison, during 2003 the total issue of trust funds only amounted to 297 million pesos (100 million dollars).

Figure 6. Monthly amount of asset-backed securities issued, 2004-2005 (in millions of pesos)



Source: based on Banval.

ABS have allowed SMEs to access capital markets through the securitization of loans to finance exports of agricultural SMEs. This has been possible thanks to the financial structure of ABS, plus the guarantees in relation to risk performance provided by the Sociedades de Garantía Recíproca (SGR), organizations of reciprocal guarantees specially created to back loans to SMEs. The participation of SGR allows to standardize the encapsulated loans within ABS, and to have a credit risk rating, making it an eligible asset for institutional investors (AFJPs, Compañías de Seguro de Retiro, and Compañías de

Seguro de Vida). This type of structure has allowed hundreds of agricultural producers to access capital markets at convenient rates to finance their exports. By the end of 2005, around twenty series of these ABS had been issued. They were usually issued in US dollars, with maturity between 270 and 360 days. The issue in dollars was possible because repayment comes from export sales, so there is no currency mismatch. The maturity of these transactions replicated the agricultural cycle of the exported goods.

IV. Deferred checks

Deferred checks (*cheques de pago diferido*, checks with deferred payment) should not be confused with postdated checks (*cheques posdatados*). For a very long time, postdated checks were a major source of finance for small businesses, and their use was widespread in the economy. The use of postdated checks was not unique to Argentina. In Pagano (2001), the chapters on Chile, Brazil and Paraguay study the use of postdated checks as an informal means of financing.

Given the weak and slow legal systems to enforce debt contracts, postdated checks were an important informal source of finance that was backed by a legal mechanism: a check that is issued without funds is considered fraud, and the issuer can be legally prosecuted.

As to the deferred checks, they were created in 1993, when the longstanding informal practice of postdating checks was complemented by the formal figure of deferred checks. The minimum maturity is 30 days, and the maximum is 360 days. Deferred checks can be endorsed up to three times. In contrast to normal checks, where not having funds is considered fraud, not having funds on a check of deferred payment is simply considered commercial debt (Paraguay introduced a law similar to this in 1997). Hence, the main mechanism to insure payment of these checks is reputational: those with bounced checks are blacklisted in the private credit bureaus, and their checks are no longer accepted until they are removed from the list. In Argentina, the most important private credit bureau recording credit history has been Veraz.

Since December 2003, deferred checks can be publicly traded on the Mercado de Valores (Merval), the exchange that operates in the Bolsa de Comercio de Buenos Aires

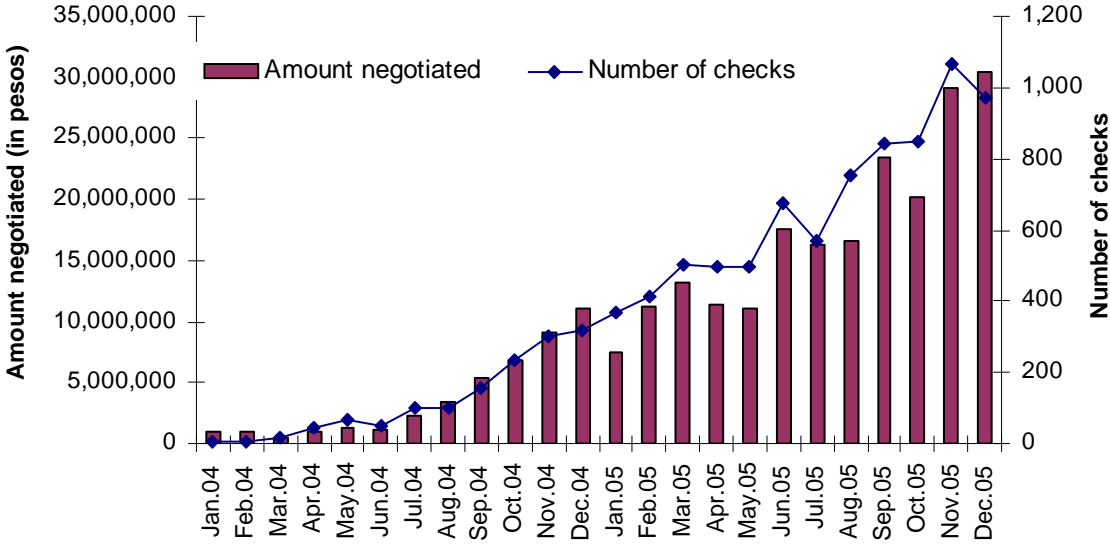
(BCBA), the Buenos Aires board of trade. Table 11 shows how the volume of deferred checks traded grew to around 40 million pesos in 2004, and 200 million pesos in 2005. The average value of checks traded was around 25 thousand pesos. The evolution of amounts traded each month in Figure 7 clearly shows the upward trend.

Table 11. Trading of deferred checks on the Merval

Year	Number of checks	Effective value (thousands of pesos)	Average value (thousands of pesos)
2003 (December)	13	329	25.46
2004	1398	43,780	31.32
2005	8002	208,197	26.02

Source: based on Merval

Figure 7. Monthly trades on Merval, January 2005-December 2005



Source: based on Merval.

Deferred checks are short-term instruments similar to commercial paper. The average maturity was one month in 2003, when the operations started, rising to 3 months in 2005. There are some operations with maturity of almost a year (around fifty operations have a negative maturity, calculated as the difference between the negotiation date and the maturity date, which may be due to registration errors). The effective value reported in Table 11 is smaller than the nominal value, because the checks are negotiated at a discount that represents the implicit rate of interest.

The end-year stock has been steadily rising, but the total values are still small, reaching about 25 million dollars at the end of 2005, as shown in Table 12.

Table 12. Maturity and stock of deferred checks

Year	Maturity (in days)				End-year stock	
	Average	Median	Minimum	Maximum	Effective value (in thousands of pesos)	Number of checks
2003	35	37	23	46	329	13
2004	72	63	-5	354	17,490	647
2005	89	76	-24	358	74,178	2573

Notes: Year-end figures. Based on Merval.

The trades on the BCBA represent a minimal fraction of the deferred checks, because the only checks that can be traded are those backed by institutions that reach a specific agreement with the BCBA as to the guarantees on those checks (“cheques patrocinados” and “cheques avalados”).

In a personal interview in early 2006, one of the most important market operators from Puente Hermanos said that most of the operations were done through the system of “cheques avalados”, backed by Sociedades de Garantías Recíprocas discussed above for ABS. Due to the specific guarantees required by the Sociedades de Garantías Recíprocas, SMEs that use this system can pay a nominal interest rate in pesos of 7.5% per year on these checks of deferred payment, with a total financing cost of around 11.5% per year once other expenses are included (in case of non-compliance, the guarantee assures investors that they will be paid in full at original maturity). In contrast, deferred checks that are issued without any guarantee can pay as much as 6% per month in pesos. This is a huge difference, but of course in one case there is a committed guarantee, in the other the issuer just puts its reputation at risk.

There is a huge informal market that discounts these checks. Table 13 shows the total amount of checks that go through the clearing system (this does not include checks that are cashed, or that are deposited in the same bank they are drawn on). Though the average value of these checks is only 4 thousand pesos, the volumes are large for Argentina. A conservative guess is that if only 10% of the checks had an average maturity

of 30 days (while the other 90% was basically used as equivalent of cash), this would give a stock of around 4.5 billion pesos, about 1.5 billion US dollars.

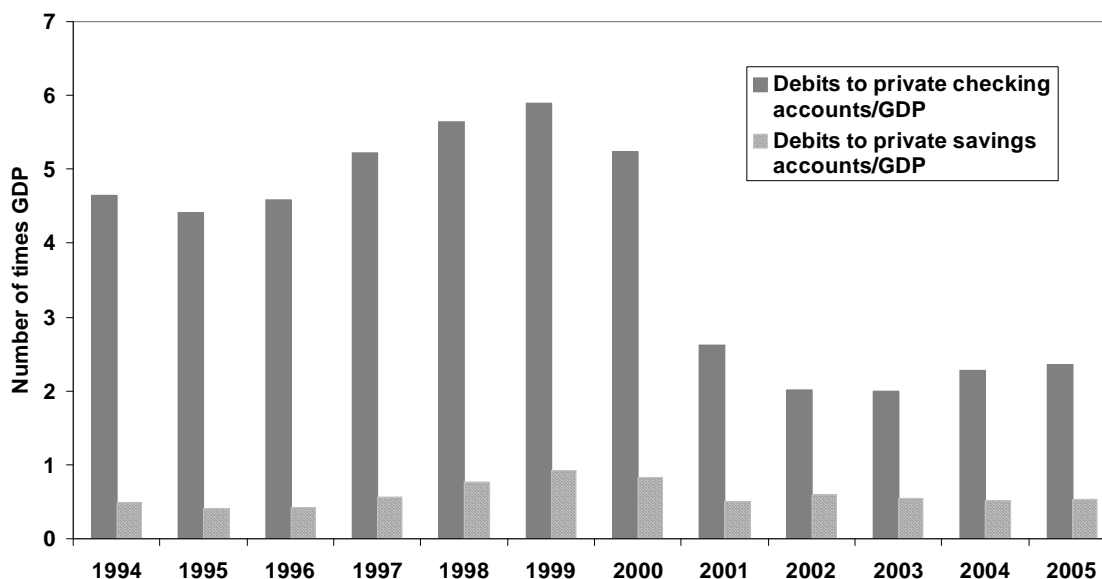
Table 13. Clearing house data on checks, 2000 to 2005

Year	Number of checks (in thousands)			Value of checks (in millions of pesos)			Average value (in thousands)	
	Compensated	Rejected	Percentage rejected	Compensated	Rejected	Percentage rejected	Compensated	Rejected
2000	111,036	4,328	3.90	287,928	7,481	2.60	2.59	1.73
2001	100,789	5,488	5.45	240,003	8,387	3.49	2.38	1.53
2002	91,112	4,305	4.73	222,429	7,646	3.44	2.44	1.78
2003	68,728	1,314	1.91	252,970	4,057	1.60	3.68	3.09
2004	77,764	1,435	1.85	345,172	5,062	1.47	4.44	3.53
2005	84,211	1,708	2.03	371,540	6,462	1.74	4.41	3.78

Source: based on BCRA.

Figure 8 shows how the use of checking accounts has evolved these last few years. For comparison, the figures for savings accounts are also shown.

Figure 8. Annual amounts debited from checking accounts and savings accounts of the private sector (as a percentage of GDP)



Source: BCRA and Ministerio de Economía.

In the case of checking accounts, there is a structural break in the series in 2001, when the use of checks fell from being about 6 times GDP, to a much lower figure of around 2 times GDP. This was the year when Cavallo introduced a tax of 1.2 percentage points on all transactions that went through checking accounts, leading to a large reduction in the turnover rate of checking accounts.

The tax on checks, which applies more generally to all debits to checking accounts, not only affected the use of bank money as a means of payment. This also led to a huge increase in financing costs for SMEs, since it implies an additional 1.2 percentage points on every operation, regardless of maturity, and deferred checks are typically used for very short maturities (thirty to sixty days). Though the original idea was to consider it as an advance tax payment, in practice this tax has been almost impossible to deduct from other taxes. From the point of view of instruments of credit for small firms, it has consequently been an ill advised measure.

References

- Banco Central de la República Argentina (BCRA), *Informe Monetario Mensual*, August 2004 and November 2005.
- Bedoya, Alejandro, Celeste González, Sergio Pernice, Jorge M. Streb, Alejo Czerwonko and Leandro Díaz Santillán, “Database of corporate bonds from Argentina”, Documento de Trabajo 344, Buenos Aires, Universidad del CEMA, April 2007.
- Fernández, Roque B., Celeste González, Sergio Pernice and Jorge M. Streb, “Loan and bond finance in Argentina, 1985-2005”, Documento de Trabajo 343, Buenos Aires, Universidad del CEMA, April 2007.
- Pagano, Marco, ed., *Defusing Default. Incentives and Institutions*, Washington, D.C., Inter-American Development Bank, 2001.