# Capital markets in Chile: from financial repression to financial deepening

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## 1. The evolution of capital markets in Chile

### Milestones in the institutional development of capital markets

Between 1975 and 1981 the Chilean financial system experienced a significant expansion, as a result of a liberalisation process that put an end to 30 years of financial repression.[2] This process was an integral part of a broad series of structural reforms introduced in Chile since the 1970s, including reforms of the trade regime, the social security system, the regulation of basic utilities, labour market legislation, social services and the privatisation of state-owned enterprises.[3]

However, the liberalisation of interest rates and the lifting of credit controls in 1974 and 1975 was not coordinated with the additional supervision capabilities required in a deregulated capital market. This weakness in regulatory institutions was the result of the "free banking" model favoured by the economic authorities at the time. When the 1982-83 recession ensued, the absence of a system of prudential regulation led commercial banks to exploit the de facto deposit insurance present in the system.[4] This gave rise to a severe financial crisis, in which almost all financial intermediaries were either liquidated or intervened. As a result, the consensus among policymakers shifted in the direction of introducing a system of prudential regulation.

In the early 1980s the country embarked on a second generation of reforms, significantly increasing the powers of supervision and control of the Superintendency of Banks and Financial Institutions (SBFI). In August 1981 the powers of the SBFI were enhanced to sanction institutions that threatened financial stability, particularly through connected lending practices (making loans to companies associated with the shareholders of the lending bank). These directives were, however, quickly evaded by the largest business groups, and connected lending continued until 1983.[5]

The most important regulatory reform took place in November 1986, when a new General Banking Law was enacted. By then, the Chilean financial markets – both agents and regulators – had accumulated significant experience about the operation of free capital markets. This learning process led to a more sober attitude on the part of borrowers, and a more effective evaluation of risk by regulators and financial institutions.

The reforms also modernised the non-banking areas of the financial system. A new pension system was created in 1980, when the existing state-operated pay-as-you-go system was replaced by a fully funded system with private provision.[6] A new Superintendency of Securities and Insurance (SSI) was created in 1980, with the objective of regulating issuers and traders of these instruments, including stock exchanges and insurance companies. The Securities Market Law of October 1981 opened the brokerage of securities to competition, allowed for the existence of securities dealers (Agencias de Valores) and modernised the regulations governing mutual funds.

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[2] De la Cuadra and Valdés (1992b), p 73.

[3] Corbo (1985), Corbo and De Melo (1987) and Corbo and Fischer (1994, 1995).

[4] De la Cuadra and Valdés (1992a) and Velasco (1991)

[5] De la Cuadra and Valdés (1992b).

[6] Diamond and Valdés-Prieto (1994), Valdés and Cifuentes (1990), Valdés-Prieto (1997) and Wagner (1983, 1991).

In October 1987, the Insurance Law and the Securities Market Law were modified to require all instruments eligible for investment by private pension funds to have a risk rating from two specialised private agencies. A parallel evaluation was conducted by the Risk Rating Commission established by the Private Pensions Law within the Superintendency of Pension Fund Managing Companies. This was a key step that allowed the development of a risk rating industry and the production of relevant information about the solvency of different instruments.

Another comprehensive modernisation of capital markets legislation took place in 1994 and 1995, when the Private Pensions Law, the Securities Market Law, and Mutual Fund and Insurance Company legislation were reformed to liberalise pension fund portfolio limits, improve regulations and add securitised assets and large infrastructure projects to the list of eligible instruments for pension fund investment.

### The state of Chilean capital markets: 1980-85

Table 1 describes the major characteristics of the structure and development of the Chilean capital markets between 1980 and 2000. Stock transactions (column 1) decreased markedly between 1980 and 1985, both as a percentage of GDP and in US dollar terms. This was a direct consequence of the economic and financial crisis experienced by Chile in 1982-83, whose effects extended until 1985. Fixed income transactions (column 2) increased as a percentage of GDP between 1980 and 1985 despite the recession. This is closely related to the development of the new private pension system (column 6), which initially invested a significant proportion of its portfolio in fixed income securities. The growth of insurance company reserves (column 5) between 1980 and 1985 is also related to the development of the new pension system, which mandates that the risk of disability and death of every worker must be covered.

Chilean financial markets experienced a severe crisis in the mid-1980s, when a good part of the banking system, including the two largest banks, were taken over by the government. Terms of trade were depressed, and foreign credit very scarce, due to the high risk premium charged by creditors to a heavily indebted country such as Chile.

### Financial deepening: 1986-95

From 1986, the external environment faced by Chile improved, and the structural adjustment policies adopted in 1985 started to bear fruit. As a result, Chile embarked on perhaps the longest period of sustained growth in its history, averaging 7.7% per year between 1985 and 1995. Not surprisingly, the Chilean capital market grew remarkably in size, depth and liquidity: stock transactions grew faster than GDP, from a little more than 2% of GDP in 1980, to 18% of GDP in 1995 (column 1). Fixed income transactions and financial intermediation (commercial paper and other short term securities) grew remarkably as well; the former reached 129% of GDP in 1995, while the latter approached 95% of GDP in the same year (columns 2 and 3). Stock market asset valuation increased from 42% of GDP in 1980, its previous peak, to 112% of GDP in 1995 (column 4). Asset values grew at an average rate of 56% per year between 1985 and 1995. This striking expansion, which cannot be explained by economic growth alone, is related to two developments: the growing volume of funds managed by institutional investors, and foreign capital inflows.

Pension funds increased their share of GDP from 11% in 1985 to 40% in 1995, while insurance company reserves rose from 3% of GDP to 10% in the same period (columns 6 and 5). When the pension system enters its steady state, the accumulated funds will approach the size of GDP. Insurance companies will also benefit from selling annuities to retiring workers, who will use the funds accumulated in their individual capitalisation accounts for this purpose. Because pension fund and life insurance companies tend to favour long-term instruments, these institutional investors are generating a considerable demand for this type of financial asset.

Mutual funds, foreign investment funds and corporate bonds also increased their share of GDP from negligible values in 1985 to 3-4% of GDP in 1995 (columns 7, 8 and 9).

Finally, the most comprehensive indicator of financial depth is the aggregate M7-M1. This is defined as total financial instruments (all types of deposits plus treasury and central bank instruments and mortgage-backed securities) less liquid money (currency and demand deposits). As shown in Table 1, it increased from 38% of GDP in 1985 to 65% of GDP in 1995 (column 10).

Table 1

**Structure and development of the capital market in Chile**

(as % to GDP)

| | Annual turnover | | | Equity market capitali-sation | Institutional investors | | | | Corp-orate bonds | M7-M1 |
|---|---|---|---|---|---|---|---|---|---|---|
| | Stocks | Bonds[1] | Financial inter-mediation | | Insurance company reserves | Pension funds | Mutual funds | Foreign invest-ment funds | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| 1980 | 2.4 | 0.3 | 3.3 | 41.9 | 2.0 | ... | 2.7 | . | 0.2 | ... |
| 1981 | 1.4 | 0.4 | 5.5 | 26.6 | 1.9 | 1.2 | 2.6 | . | 0.4 | 27.7 |
| 1982 | 0.6 | 3.3 | 10.4 | 21.6 | 2.3 | 3.5 | 2.4 | . | 1.7 | 32.2 |
| 1983 | 0.3 | 5.7 | 3.2 | 13.1 | 2.6 | 6.4 | 0.6 | . | 1.5 | 31.1 |
| 1984 | 0.2 | 4.4 | 2.9 | 11.4 | 2.9 | 7.6 | 0.5 | . | 1.4 | 31.1 |
| 1985 | 0.3 | 10.6 | 9.2 | 13.1 | 3.4 | 10.6 | 0.8 | . | 1.5 | 37.9 |
| 1986 | 1.7 | 24.3 | 16.5 | 22.9 | 3.9 | 12.7 | 1.2 | . | 0.9 | 39.6 |
| 1987 | 2.4 | 26.2 | 24.6 | 25.4 | 4.4 | 14.2 | 1.4 | . | 1.4 | 43.0 |
| 1988 | 2.5 | 34.1 | 40.1 | 27.5 | 4.4 | 15.0 | 1.4 | . | 2.0 | 42.1 |
| 1989 | 3.0 | 42.5 | 32.6 | 33.2 | 5.2 | 17.7 | 1.3 | 0.4 | 3.4 | 49.5 |
| 1990 | 2.5 | 45.5 | 17.3 | 43.7 | 6.7 | 24.2 | 1.6 | 1.7 | 4.6 | 58.9 |
| 1991 | 5.5 | 35.2 | 27.1 | 81.6 | 7.9 | 31.4 | 2.6 | 3.0 | 5.6 | 61.2 |
| 1992 | 4.8 | 53.2 | 39.2 | 69.6 | 8.2 | 30.6 | 2.3 | 2.7 | 4.9 | 61.7 |
| 1993 | 6.1 | 55.9 | 61.3 | 73.2 | 9.7 | 37.0 | 2.9 | 3.6 | 4.8 | 62.6 |
| 1994 | 10.1 | 89.0 | 63.3 | 124.8 | 8.7 | 41.0 | 3.9 | 3.9 | 4.5 | 62.6 |
| 1995 | 17.5 | 128.5 | 95.0 | 112.0 | 9.9 | 39.5 | 4.0 | 3.1 | 3.5 | 65.4 |
| 1996 | 11.7 | 119.0 | 167.3 | 99.0 | 11.5 | 40.9 | 4.2 | 2.1 | 3.1 | 72.8 |
| 1997 | 10.2 | 121.2 | 193.7 | 100.1 | 12.4 | 42.5 | 5.3 | 1.9 | 2.5 | 79.2 |
| 1998 | 6.2 | 127.4 | 273.2 | 73.0 | 13.4 | 43.3 | 3.8 | 1.2 | 3.0 | 81.3 |
| 1999 | 10.2 | 72.9 | 199.1 | 105.0 | 15.2 | 52.6 | 5.6 | 1.6 | 3.7 | 87.1 |
| 2000 | 8.9 | 64.5 | 191.8 | 91.7 | 16.7 | 53.9 | 6.8 | 1.0 | 5.3 | 87.5 |

[1] Fixed income securities; government, mortgage, leasing, bank and corporate bonds.

Sources: Arrau (1996); (1) to (4) Santiago Stock Exchange; (5) (7) (9) Superintendency of Securities and Insurance; (6) Pension Fund Superintendency; (10) Central Bank of Chile.

The extraordinary expansion between 1986 and 1995 led Arrau (1996) to claim that the Chilean capital market had become the most developed in Latin America, and perhaps among all developing countries. The private pension system was at the root of this important transformation, which greatly influenced the rest of the financial system. In 1995, the banking system was considered the healthiest and most competitive in Latin America, while other institutions, such as stock markets, financial intermediaries and institutional investors, have all showed a remarkable expansion since the mid-1980s.

### A trend towards illiquidity and concentration: 1995-2000

However, the extraordinary performance of the Chilean capital market was interrupted in 1995. In 1996 stock market transactions dropped to 12% of GDP and have not recovered their pre-1995 levels since (column 1). Fixed income transactions (column 2) increased as a percentage of GDP between 1995 and 1998, but fell in 2000 to half their previous peak.

Pension funds, on the other hand, have continued to increase their share of GDP, from 40% in 1985 to 54% in 2000 (column 6). Thus, there was no reversion in pension fund investments between 1995 and 2000. The same pattern applies to insurance company reserves (column 5), which continued to grow as a percentage of GDP between 1995 and 2000. This was undoubtedly related to the maturity of the new pension system, as workers purchase annuities at the end of their active life. Mutual funds also increased their share of GDP between 1995 and 2000, from 4% to 7% (column 7). This stood in stark contrast with the evolution of stock and bond transactions, however.

Corporate bonds issued in the domestic market decreased from 3.5% of GDP in 1995 to 2.5% in 1997, and then recovered to 5.3% in 2000, their second highest level in history (column 9). The evolution of this market is analysed in more detail in Section 4.

Foreign investment funds, which have operated in Chile since 1989, experienced a reduction in size as a proportion of GDP, from a peak of 3.9% in 1994 to less than 1.0% in 2000 (column 8). This is explained by the placement of American depository receipts (ADRs) in the New York Stock Exchange by Chilean corporations, which reduced the demand for foreign investment funds, and the sub-par performance of the Chilean stock market since 1995, which led to the liquidation of several of them.

Finally, the index of financial depth, the monetary aggregate (M7-M1) in column 10, shows consistent growth throughout this period. This suggests that the total pool of savings in Chile has increased systematically in the last five years.

How can we reconcile the continued growth of savings with the significant reduction in stock and bond transactions as well as in stock valuations since 1995?

### *Stock market liquidity*

It is interesting to note that this reduction in liquidity levels developed before the emergence of the Asian crisis, while capital flows were still abundant and the economy was growing at very high rates. More significantly, this trend towards lower market liquidity was not apparent in other emerging markets, with the exception of Mexico and Peru.[7]

One of the most important explanations for this “liquidity puzzle” is related to the application of taxes on the secondary issuance of ADRs in 1995, which seriously affected financial integration, and dried up liquidity in domestic markets. During the 1990s the combination of a semi-fixed exchange rate regime and decreasing sovereign risk reduced the effectiveness of monetary policy, and forced the monetary authority to impose taxes on capital inflows to regain monetary independence. As controls on short-term capital flows proved ineffective, the authorities extended these taxes to the secondary issuance of ADRs, which severely affected market arbitrage and liquidity. This factor must have played a significant role between 1995 and 1998, when these taxes were in place, but is no longer a factor today. Moreover, in September 1999 the central bank opted for a free float and then eliminated all controls on capital flows in April 2001.

A second explanation claims that domestic financial markets are overregulated, particularly in the case of pension funds, which has hampered innovation and creativity, and stimulated rent-seeking behaviour. Closely related to this argument is the role of taxation: high marginal income tax rates and capital gains taxes create a bias against the domestic stock market in the case of individuals and foreign residents. Section 3 discusses the way in which many of these issues have been addressed in the recent reform of capital markets legislation.

A third explanation is related to the structure of the market itself. The Bolsa de Comercio de Santiago trades almost exclusively stocks from large corporations. Small and medium-sized companies have little interest in listing their stock because of high costs and stringent regulations on pension fund investments. Thus, as large corporations issued ADRs on the New York Stock Exchange, transactions tended to shift to that market. The imposition of taxes on the secondary issuance of ADRs in 1995 accelerated this trend. Reforms to reduce the cost of listing small and medium-sized companies will stabilise liquidity in the domestic market. In Section 3 we describe how this problem has been addressed in the recent reform of legislation governing capital markets.

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7 Table 1 in Arrau (2001).

Another structural factor that impairs liquidity is that the domestic stock market is a poor representation of the economy's GDP. For example, the mining sector has a minimal representation, despite being a significant sector in the economy. On the other hand, power generation and distribution, telecommunications, and the forestry sector account for 50% of stock market valuation, but represent less than 15% of GDP.

Various authors emphasise that the "liquidity puzzle" is also related to the increased concentration of the pension fund industry, which has created a virtual monopsony among institutional investors, because of the small relative size of mutual funds and investment funds.[8] The trend toward concentration is also taking place among stock issuers, as a result of a series of mergers among large corporations. Thus, both the supply of and the demand for stocks have become more concentrated, thereby reducing transaction levels.

While these explanations are valid, we believe that they are only part of the story. Chile's exceptionally high growth rates between 1985 and 1997 were the result of two key ingredients: a significant increase in productivity, and benevolent external conditions (a dynamic world economy, favourable terms of trade, and moderate international interest rates). After the mid-1990s, the Chilean economy slowed down its reform effort, which affected productivity growth and expected returns. The economy continued to grow at high rates until 1997, however, as a result of large capital inflows, but stock market valuations and liquidity levels were already trending down in 1996. Controls on capital flows, overregulation, concentration, and other industry-specific factors added to this outcome. The recent reform of capital markets legislation outlined in Section 3, together with the elimination of restrictions on capital flows, will surely have a significant impact on stock market valuation and liquidity. But to ensure a lasting recovery of our financial markets will also require an acceleration of productivity growth and an improvement in external conditions.

### *Liquidity in the fixed income market*

The evolution of liquidity in the fixed income market differs from that in the stock market, and has its own determinants. In particular, developments in this market have been less dependent on international developments than in the case of the stock market.

Before going into more detail, it is important to note that transactions in this market have been dominated by bonds from the public sector.[9] Graph 1 shows that this primacy declined throughout the decade, however. Indeed, while public sector bonds represented 80-85% of transactions at the beginning of the 1990s, at the end of the decade their share was down to 50%. Graph 1 shows that the counterpart of this decline is the growth in transactions of mortgage-backed securities and corporate bonds. Each of these represented about 4% of transactions at the beginning of the decade, and reached 20-25% of the market in 2001. Their evolution across the decade, though, has been markedly different, with mortgaged-backed securities experiencing the largest increase in transactions until 1998. Since then, the most dynamic component has been the corporate bond sector, which shows a remarkable rise in transactions between 1999 and 2001.

Column 2 of Table 1 shows two distinct episodes in the evolution of transactions in this market during the 1990s, the period 1995-98 and the period 1998-2000. In the first period, transactions reached a peak in 1995 and stabilised around that level. During the second episode (1998-2000), transactions halved as a percentage to GDP.[10] Both facts can be explained by very specific developments in the Chilean market.

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8 Círculo de Finanzas de ICARE (1998).

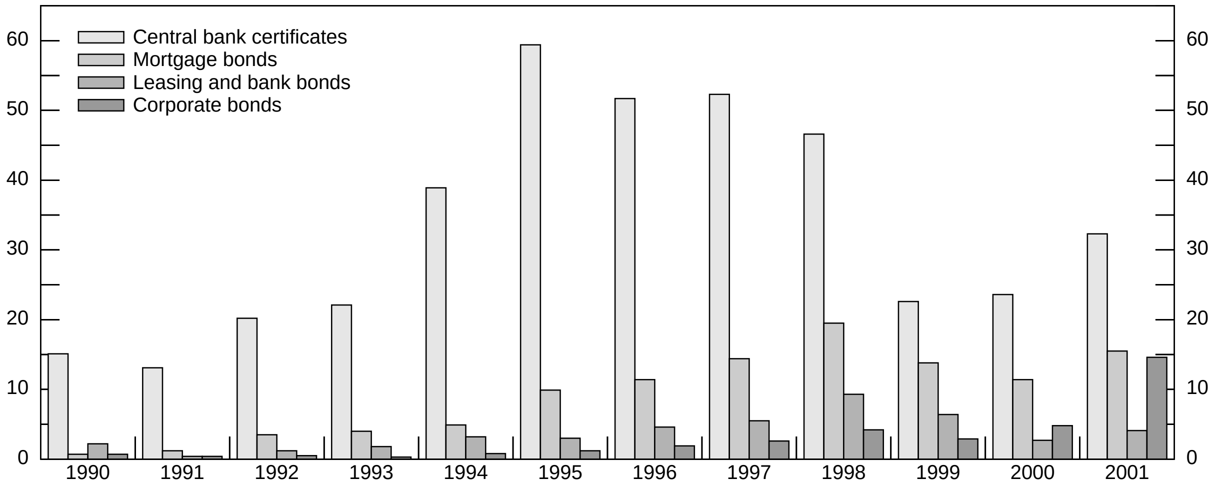
9 In Section 2 it is explained that public sector bonds traded domestically are exclusively central bank bonds.

10 The data in Table 1 refer to the Santiago Stock Exchange only. The Electronic Stock Exchange trades a similar volume. As trading on both exchanges shows similar patterns over the period covered, including it would not change the conclusions.

Graph 1

**Transactions in fixed income markets**

On the Santiago Stock Exchange; in billions of December 2000 US dollars




Note: Data for 2001 are projections based on January-October data.

During the first episode, transaction levels are closely related to an increase in concentration in the pension fund industry, which commenced in the mid-1990s. The number of pension funds rose from 14 in 1990 to 21 in 1994. Thereafter, a wave of mergers took place in the industry, bringing the number of funds down to eight in 1998. This affected transactions in the fixed income market for two reasons. The first is that pension funds are major holders of public sector (ie central bank) bonds. Approximately 70-75% of long-term bonds are held by pension funds. Since these bonds are, in turn, the most traded bonds in the fixed income market, it follows that an increase in concentration in the pension funds industry will translate into a lower level of transactions in this market. The second reason is that pension funds are obliged by law to conduct their secondary market transactions through public auction on an organised exchange. Therefore, the reduction in transactions between pension funds is fully reflected in measures of turnover. Graph 2 shows the Herfindahl Index, which measures concentration in the pension fund and banking industry.[11] Both show an increase in concentration starting in 1995, which is more pronounced in the case of pension funds.

Graph 1 shows the evolution of transactions for different fixed income instruments. We note that transactions of public sector bonds show a marked change of trend in 1995, which is not apparent in the case of other instruments. Transactions in other bond categories increase, particularly in the case of mortgage-backed securities. Banks and insurance companies hold a higher fraction of these securities, and concentration among them was milder.

The second episode starts with an important event that took place in 1998. During that year the Chilean peso faced significant pressure as a consequence of an unstable international context. This forced the central bank to increase interest rates sharply. In September 1998, the 90-day real interest rate reached a level of 17.6%. Long-term rates followed suit. The benchmark eight-year indexed bond rate increased by more than 100 basis points in the same month.

The resulting price changes brought significant capital losses to holders of fixed income instruments, who started to invest more cautiously, giving rise to a sharp reduction in transactions. The impact on transactions of corporate bonds was somewhat milder (see Section 4).

Graph 1 shows that the recovery in transaction levels in 2001 was fast, which confirms that the reduction that took place between 1998 and 2000 was of a transitory nature.

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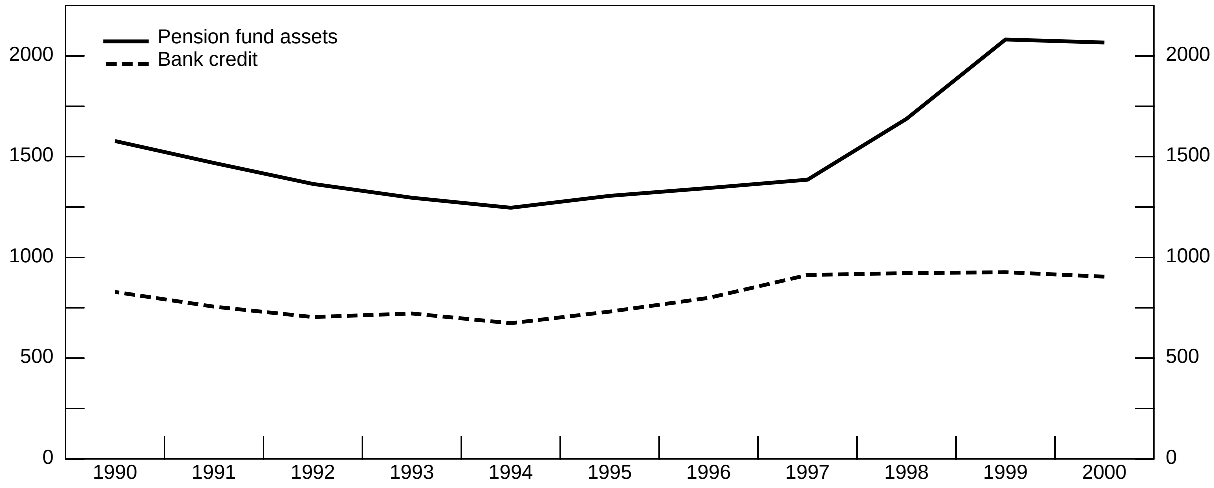
[11] The Herfindhal Index measures concentration as the sum of the squares of market shares, ie $\sum_{\forall i}(x_i / Total\ X)^2$ x 1000. A usual rule of thumb is to consider that concentration is high when this index is above 1,000.

Graph 2

**Concentration in pension funds and banking sector**

Herfindahl Index




## 2. Public sector balance and public debt instruments

The Chilean economy has a long history of public sector surpluses. The public sector balance has remained positive since 1986, with the sole exception of 1999, when a deficit of 1.5% of GDP was recorded. Due to this history of surpluses, the government has seldom issued debt instruments in the local market to finance its expenditures. However, the government issued bonds in international markets with the purpose of establishing a sovereign risk benchmark, in order to facilitate the placement of private sector debt in these markets. Thus, the government issued a US$ 500 million bond in 2000 and a US$ 650 million bond in September 2001.

When considering the issuance of debt instruments by the Chilean public sector, it is important to note the liabilities originated as a result of the pension system reform of 1980. Workers who chose to join the new system were issued a “recognition bond”, a zero coupon instrument that represents the contribution of the worker to the old pay-as-you-go system.[12] This bond is included in the worker’s capitalisation account and is redeemed at retirement.

The central bank is currently the largest issuer of public sector bonds in the local market. These are used as a mechanism to regulate the monetary base through open market operations, and to determine a benchmark yield curve for the economy. Debt instruments issued by the central bank have short- and long-term maturities, and they are denominated in local (both nominal and CPI-linked) as well in foreign currency. The main characteristics of the instruments issued by the central bank are shown in Table 2 below.

Central Bank bonds are issued through periodic tenders. In the case of long-term bonds, issuance is predetermined; in the case of short-term bonds, auctions are held on set days, but the size of the amount issued monthly per instrument is announced at the beginning of each reserve requirement period.[13]

[12] New entrants to the labour market after 1980 have been able to opt for the new private pension system.

[13] The reserve requirement period in Chile goes from the ninth day of the month to the eighth day of the next month.

Table 2
**Debt instruments issued by the Central Bank of Chile**

| Type of instrument | Characteristics | Average volume offered per auction | Frequency |
|---|---|---|---|
| **Short-term debt** | | | |
| PDBC | Local currency<br>Maturity: 30, 60, 90 and 360 days<br>No coupons | 30 days: $190m<br>60,90 and 360 days: $16m | 90 and 360 days: weekly<br>30 and 60 days: irregular |
| PRBC | Local currency indexed to UF[1]<br>360 days<br>No coupons | $24m | Weekly (previously quarterly) |
| **Long-term debt** | | | |
| PRC | Local currency indexed to UF[1]<br>Maturity: 8 and 20 years (previously also 10, 12 and 14 years)<br>Semi-annual coupons of interest and capital | 8 years: $19.2m<br>20 years $ 9.6m | Bi-weekly |
| PTF | Local currency indexed to UF<br>Maturity: 1-15 years<br>Semi-annual coupons<br>Floating rate interest (percentage of average interest rate disclosed by central bank) | | No longer issued, but some still outstanding |
| PRD | Local currency indexed to US dollar<br>Maturity: 2, 3 and 4 years<br>Semi-annual interest payments and capital at maturity | $88m Maturities alternate | Twice weekly |
| Zero | Coupons stripped out from PRD | | Traded upon request |
| Cero | Coupons stripped out from PRC | | Traded upon request |

[1] UF is a unit of account used for inflation-adjusted instruments, whose daily value is published by the central bank.

Bonds issued by the central bank are placed directly through a public auction in which banks and institutional investors – such as pension funds and insurance companies – can participate. These agents have provided a stable demand base, and therefore it has not been necessary to create primary dealers. They cannot be considered market-makers either, since they do not have any obligations related to secondary market transactions.

## 3. Recent reforms in legislation governing capital markets

In order to overcome many of the limitations described in Section 1, particularly at the regulatory level, the government and the financial industry agreed on the need for a “second phase of reforms”.[14] The aim was to develop a strategy of market deregulation, which would eventually lead to a financial “big-

[14] Arrau (2001) summarises the main requests of the finance industry.

bang" similar to that experienced by more developed markets such as Australia, New Zealand, United Kingdom, France, Spain and Japan in the 1980s.

Since the end of 2000, the government has enacted two laws to stimulate the development of domestic capital markets: the IPO Law and the recent Reform of Capital Markets Law.

### The IPO Law

The new legislation regulating initial public offerings (IPOs), enacted at the end of 2000, has eight objectives:

- to improve the framework for the acquisition of corporate stock in order to protect the rights of minority shareholders;
- to establish rules for corporate governance within the companies to protect the rights of minority shareholders and achieve a degree of self-regulation;
- to provide more flexibility to investment funds in the management of their funds;
- to regulate the participation of pension funds in the IPO process;
- to strengthen the regulatory powers of the Superintendency of Securities and Insurance;
- to establish additional capital requirements for banks with high concentration as a safeguard against systemic risk;
- to modify the Central Bank Organic Law, requiring the central bank to conduct an IPO process to dispose of the stock of commercial banks that it owns; and
- to allow the mechanism of stock-options in corporations.

In sum, this legislation seeks to avoid private transactions that may be unfair to minority shareholders. This should have a positive impact on market liquidity, as new agents take steps to enter the stock market.

### Reform of capital markets legislation

The Reform of Capital Markets Law enacted in 2001 aims to improve the liquidity and depth of financial markets and facilitate the access to capital markets of emerging companies. The reform focuses on the following areas:

- *Greater flexibility to access capital markets for small and medium-sized companies*. The reform establishes a new stock market for emerging companies and eliminates taxes on capital gains for these companies; it introduces the possibility of issuing commercial paper for short-term financing, limiting the application of stamp taxes on the companies; it reduces capital gains taxes for foreign investors; and it creates the category of "qualified investor".
- *More liquidity and depth in capital markets*. The reform eliminates the tax on capital gains for high-turnover stocks and for short sales of bonds and stocks. It regulates the private placement of securities, in which only "qualified investors" (including institutional investors) can participate. It opens the management of funds arising from voluntary savings to other institutions besides pension fund management companies. Portfolio limits for insurance companies, mutual funds and investment funds are more flexible. Certain requirements for companies to become eligible for pension fund investment are eliminated.
- *Greater competitiveness for the banking industry at local and international level*. The reform introduces more flexibility for banking regulatory capital and eliminates the 4% tax on interest from external credit, when the purpose of such credit is cross-border financial intermediation.

These two sets of legislation are expected to improve market liquidity and the access to funds by small and medium-sized companies. For example, the creation of a new stock exchange for emerging companies is expected to increase the number of companies listed, as has been observed in developed countries that have set up this kind of institution. Transactions of high-turnover stocks conducted at this institution will be exempt from the capital gains tax for three years, provided that the purchase and sale of the stock take place on the stock exchange. Private placement of securities, in which only qualified investors may take place, is allowed. This will give rise to specialised investors in the domestic capital market, particularly on the stock exchange.

These reforms also relax restrictions on institutional investors, allowing insurance companies to compete on equal terms with pension funds. This will increase competition in the local market for outstanding instruments and set up a better framework for developing new instruments in the future.

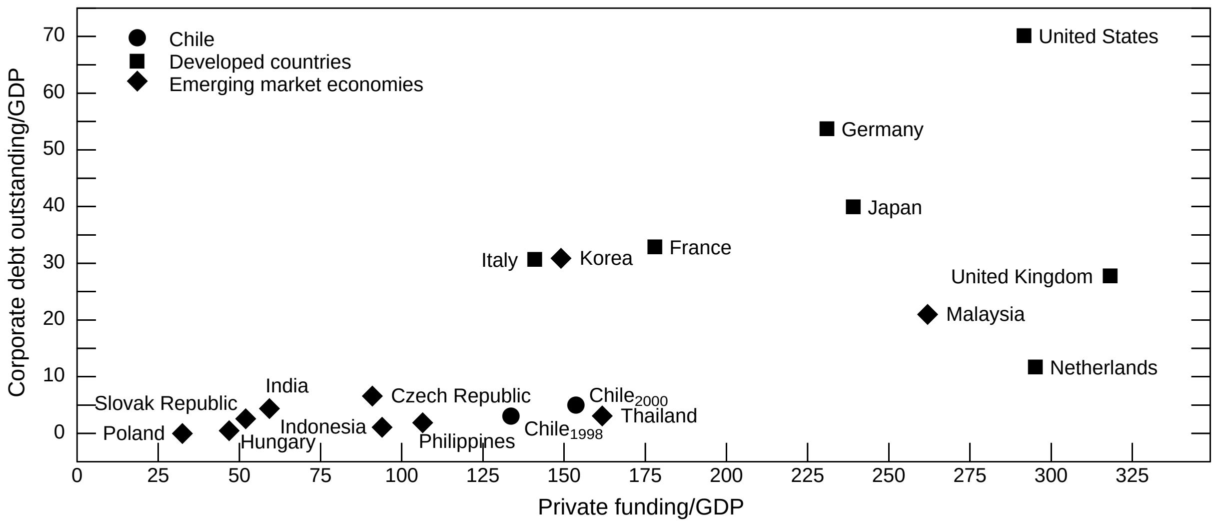
## 4. The market for private debt in Chile

### The market for corporate bonds: an international perspective

Currently, outstanding corporate debt in Chile amounts to 5% of GDP. In order to compare this figure internationally, we have to take into account the overall level of financial development of the country. Graph 3 compares the level of financial development of different countries (developed and emerging) and the level of corporate debt, both measured as a percentage of GDP. The overall level of financial development is measured as the sum of bank loans to the private sector, plus corporate debt and stock market capitalisation.

Graph 3

**Financial development and corporate debt, 1998**




Source: IMF and World Bank (2001).

The graph shows that countries differ substantially in the structure of their financial markets. While the Netherlands, United Kingdom and United States are among the most developed financial markets, they have substantially different levels of outstanding corporate debt. This shows that private debt does not necessarily come naturally as a consequence of financial development, but that it is a choice available to policymakers with regard to the type of financing system they want to promote.

In this comparison we can see that the current level of corporate debt issued in Chile is still low in relation to its overall level of financial development. Indeed, countries with similar levels of financial development (France, Italy, Korea) have a much larger corporate debt in relation to GDP. On the other hand, countries with similar levels of GDP, such as Malaysia, have higher corporate debt levels.

The advantages of developing private debt markets have been discussed in the literature.[15] Among them we can highlight the fact that private debt markets help to diversify risks in the economy, as firms

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[15] Endo (2000), Herring and Chatusripitak (2000) and IMF and World Bank (2001).

become less dependent on the banking sector for financial intermediation. Private debt markets also endow financial products with flexibility to accommodate the specific needs of investors.

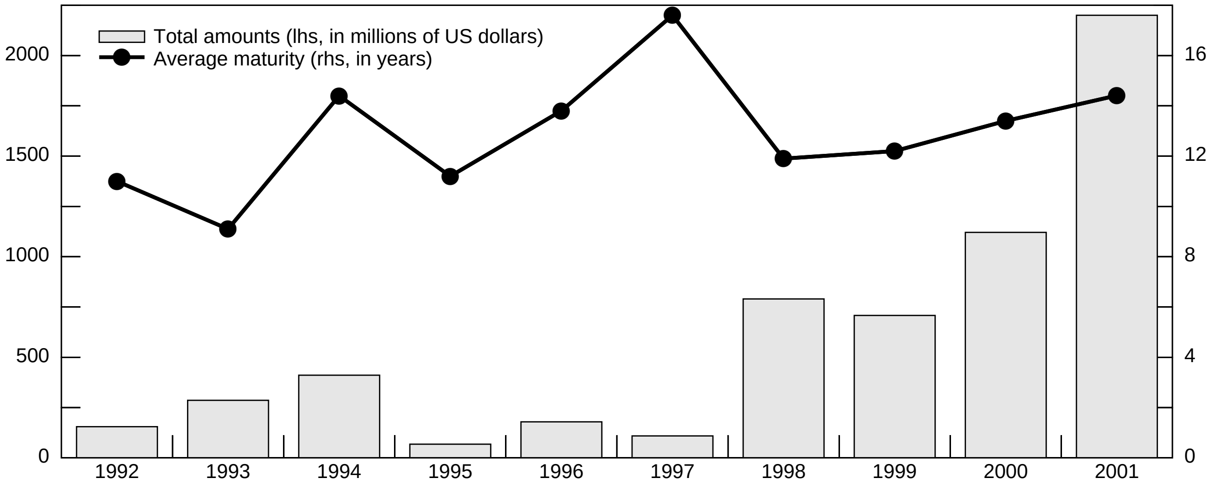
## Evolution in the last 10 years: volumes issued, terms and liquidity

### *Volume and maturity of placements*

In this section we describe the evolution of private debt since 1992. Graph 4 shows the evolution of volumes issued per year and the average maturity of these placements.

Graph 4

**Corporate debt: annual placements**




Source: Superintendency of Securities and Insurance.

Placements of corporate debt have increased substantially since 1998. Indeed, they are now more than double the previous peak. In the first 10 months of 2001 corporate debt placements exceeded US$ 2 billion, doubling the previous year's total. A gradual increase in maturity is also indicated in Graph 4.[16]

Additional facts about the evolution of corporate debt are depicted in Graph 5. This shows monthly data, with the average maturity of monthly issues on the vertical axis and the relative size of the markers ("bubbles") indicating the relative size of total monthly placements. Here we would like to highlight three facts:

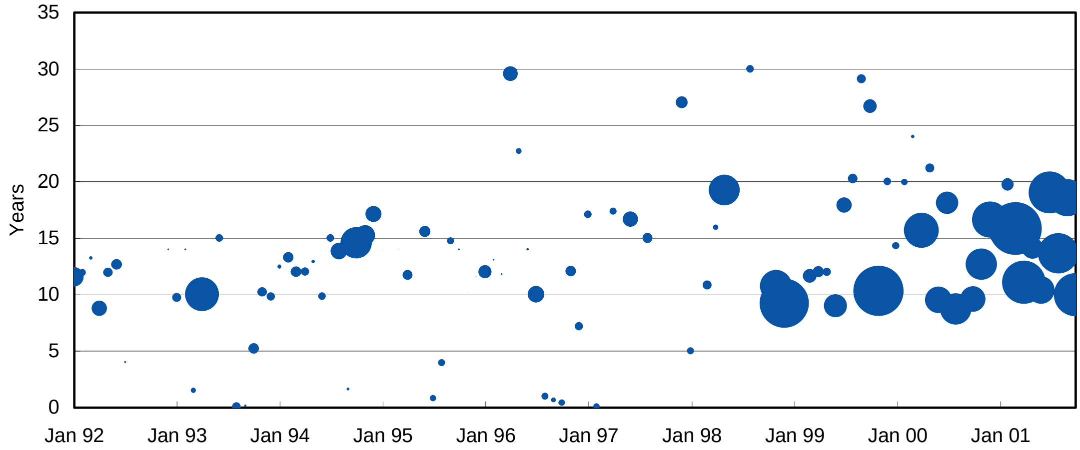
- Average maturity of placements between 1992 and 1995 was between 10 and 15 years. In the period 2000-01, the range of 15 to 20 years became more common. Moreover, placements with longer maturities have also been larger in recent years.
- Debt issues at terms shorter than a year disappeared by early 1997.
- As from 1996, 30-year corporate bonds started to become common.

[16] Average maturity also increased between 1995 and 1997, but this was because volumes were shrinking and longer maturities were among the survivors. The increase in average maturity between 1998 and 2001 is of a very different nature, because the amounts issued are now increasing.

Graph 5

**Corporate debt: monthly placements**

Total amount and average term




Source: Superintendency of Securities and Insurance.

### *Liquidity*

With regard to liquidity, Table 3 shows information about transactions in the secondary market and the outstanding stock of corporate debt, as well as transactions in all fixed income securities traded in the secondary market. Column (4) reports the data behind the story depicted by Graph 1, which shows that a sharp decline in fixed income transactions has taken place since 1998.

The impact of the 1998 events was milder in the market for corporate bonds. While total transactions projected for 2001 are still below their 1998 peak, transactions in corporate bonds declined only for one year, and recovered in 2000 to a level exceeding that of 1998. For 2001, transactions of corporate bonds are projected at a level that is three times higher than that of 1998.

The turnover ratio reached an historical maximum for this market in 2001. Although still too low for it to be considered a “liquid” market by common standards, liquidity is higher than in the case of other markets, particularly central bank long-term bonds. The turnover ratio of the latter declined from 7 in 1994 to 1.7 in 2000. Column 5 shows that, measured as a fraction of total transactions, corporate bond transactions recorded a persistent growth from 5.5% in 1998 to 22.5% in 2001. This is a remarkable evolution.

The above indicates that the Chilean market has already incorporated corporate debt among its standard trading instruments. The reason for this is that corporate debt issuers have managed to create products that satisfy market demands not covered by the major issuer of public debt in Chile, namely the central bank. In particular, private issuers offer maturities not available in central bank issues.

As we see, the Chilean market has been expanding in terms of both the volumes it can absorb and the range of maturities it offers to private issuers. Two factors have been crucial to explain this development. On the one hand, the international context has made it more attractive to issue debt denominated in domestic currency. On the other, institutional investors have provided a stable base for demand, ready to accommodate the increased supply of local issuers.

With respect to the international context, until the mid-1990s the continuous appreciation of the peso and low external interest rates led corporations to favour external indebtedness. A reversal of this situation since 1998 has changed the preferences of local companies, which now favour the issuance of domestic debt. Most debt placed domestically in 2001 was issued to prepay debt denominated in foreign currency.

But at the same time, issuance of dollar-denominated debt has also risen within Chile, increasing the bias of issuers in favour of the local market. Despite a few placements of dollar-denominated debt in the early 1990s, this market only became relevant at the end of 1999, with the issue of a US$ 200 million bond by a mining company (Escondida). Other companies issued a similar amount thereafter.

Table 3

**Secondary market transactions in Chile**[1]

(millions of US dollars)

| | Corporate bonds | | | Total fixed income securities transactions | (1)/(4) |
|---|---|---|---|---|---|
| | Transactions | Outstanding stock | Turnover | | |
| | (1) | (2) | (3) | (4) | (5) |
| 1990 | 723 | 1,698 | 0.4 | 18,661 | 3.9% |
| 1991 | 461 | 2,270 | 0.2 | 15,099 | 3.1% |
| 1992 | 477 | 2,262 | 0.2 | 25,289 | 1.9% |
| 1993 | 347 | 2,369 | 0.1 | 28,241 | 1.2% |
| 1994 | 854 | 2,431 | 0.4 | 47,917 | 1.8% |
| 1995 | 1,260 | 2,225 | 0.6 | 73,530 | 1.7% |
| 1996 | 1,906 | 2,092 | 0.9 | 69,513 | 2.7% |
| 1997 | 2,708 | 1,677 | 1.6 | 74,817 | 3.6% |
| 1998 | 4,353 | 2,048 | 2.1 | 79,627 | 5.5% |
| 1999 | 2,971 | 2,544 | 1.2 | 45,520 | 6.5% |
| 2000 | 4,927 | 3,738 | 1.3 | 42,483 | 11.6% |
| 2001[2] | 14,987 | 6,228 | 2.4 | 66,536 | 22.5% |

[1] Transactions on Santiago Stock Exchange. [2] Annual projection based on data for January-October.

Source: Superintendency of Securities and Insurance.

It is interesting to note that dollar-denominated debt began to develop at the same time as the exchange rate regime in Chile moved towards a free float. In this context, different economic agents became more aware of the risks they faced from exchange rate fluctuations, and increased their demand for foreign denominated securities for hedging purposes.

Costs and some procedural issues make it easier for transactions to take place in the domestic market. According to local investment banks, the costs of placing debt in the domestic market are about one seventh of those of placing debt in foreign markets. The local market has the advantage of being open all year round, while placing debt in foreign markets requires a “window of opportunity”, ie a period of time in which market conditions are appropriate.

Institutional investors provide an important demand base. The pension reforms of the early 1980s therefore significantly affected the development of bond markets, through both direct investment in bonds by pension funds, and through the annuities that insurance companies sell to retirees under the new system. Insurance companies that offer such products are required by regulations to match the duration of their assets and liabilities. This implies that they are an important source of demand for securities with maturities of 20 or more years.

It is important to note that market agents have been able to adapt well to the changing conditions of the market. For example, in the face of increased concentration in the pension fund market, private issuers have reduced the terms offered in the short range of maturities from approximately 10 years to approximately five years. This has extended the demand for such instruments to banks, mutual funds and retail investors.

### Infrastructure for development: what is behind and what is ahead of the bond markets in Chile

This subsection reviews the state of the “infrastructure” for the development of private debt markets, with emphasis on the role of regulation and the challenges ahead.

### *Government benchmark issues: the yield curve*

The central bank is the main issuer of long-term public debt. Since the early 1990s, it has consistently been issuing debt at a range of maturities that goes from eight to 20 years. This has given the market a benchmark yield curve of significant length.

A feature of this debt is that it has equally sized semiannual coupons, ie coupons are not interest only, as all of them include some capital. This implies that determination of the yield curve is cumbersome, since the coupon effect has to be factored out. As a way of overcoming this type of problem and making bonds more attractive, the central bank has allowed bonds to be stripped since 1999. Transactions of these securities have provided a useful benchmark for the market.

### *Investor base: pension funds and insurance companies*

As mentioned above, institutional investors are a crucial part of the demand for corporate debt. In Chile, the pension reform of the early 1980s was responsible both for creating a privately managed pension fund system of considerable size, and for increasing the demand for debt instruments from insurance companies.

Private pension funds have been around for 20 years now. One of the outcomes is an increase in the experience of the dealer community. This accumulated knowledge has been crucial for the growth of the corporate debt market.

On the other hand, investment regulations for private pension funds limit the risk that they can take in a bond. This has meant there is little room for companies and/or series with higher risk profiles. Along similar lines, investment limits favour public debt. While this implies a form of crowding-out of corporate debt by public sector debt, it is justified by credit risk considerations.

### *Recent developments in the derivatives market*

Since 1999, banks have been allowed to participate broadly in interest rate derivatives for both holding and hedging purposes in the local market. Along with interest rate derivatives, the central bank also allows the short selling of securities in the case of the banking sector. This has enabled banks to enhance their portfolio management capabilities.

Currently, pension funds are also permitted to participate in the interest rate derivatives market, but for hedging purposes only. Pension funds can also lend central bank instruments that are part of their portfolio to other agents, with the purpose of facilitating the short selling of securities by banks and other agents. In this way, the portfolio of pension funds represents a strong base of instruments that can be used to deepen the domestic capital market.

The presence of the banking sector and pension funds in the market for interest rate derivatives has helped to enhance the liquidity of the debt market and is evidence of the development of the Chilean financial system. Although the authorisation for the banking sector to operate in derivatives in the local market is very recent, the depth of this market has increased remarkably in the last two years. An indication of this is the fact that the notional value contracted by banks in October 2001 was 3.2 times the notional value registered in December 2000.

### *Credit rating systems*

An important requirement for the development of corporate debt is a credit rating system. In Chile, rating agencies were created as a consequence of the pension reform. All securities offered publicly require at least two independent credit ratings. At the beginning, ratings by private agencies were revised by the Risk Rating Commission, in order to secure an adequate procedure in the market. Nowadays private ratings are not revised, although the Commission can order a third rating if the two original ratings differ considerably.

### *Disclosure systems and information*

The Superintendency of Securities and Insurance (SSI) requires all issuers of publicly offered securities to disclose a standardised set of information. Normally the information has to be provided to the SSI and all stock markets and intermediaries. This set of information includes:

- economic and financial data: quarterly and annual reports and financial statements; reports on capital variations;
- disclosure of essential or relevant facts;
- other information, such as reports from stockholders' meetings and changes in administration.

***Specific regulation: shelf registration***

Shelf registration is allowed in the Chilean market. This gives issuers a larger degree of freedom to select the timing of their placement.

***Infrastructure***

Among the areas that require improvement in the Chilean market are trading platforms, which need to be upgraded. Private issuers complain that the current structure is not suitable for large placements.

## 5. Concluding remarks

Between 1975 and 1981 the Chilean financial system experienced a significant expansion, as a result of a liberalisation process that put an end to 30 years of financial repression. This process ended in a severe financial crisis in 1983, as the liberalisation of interest rate and credit controls was not accompanied by the additional supervisory capabilities required by a deregulated capital market. As a result, in the mid-1980s the country opted for a system of prudential regulation, which improved banking supervision and modernised the non-banking areas of the financial system. The main reform was the development of a new pension system, where the existing state-operated pay-as-you-go system was replaced by a fully funded system with private provision.

Since the mid-1980s the Chilean capital market has grown remarkably in size, depth and liquidity. The private pension system is at the root of this important transformation, which has greatly influenced the rest of the financial system. The Chilean banking system became one of the healthiest and most competitive in Latin America, while other institutions, such as the domestic stock market, financial intermediaries and institutional investors all expanded markedly.

However, this extraordinary performance came to a halt in 1995. In 1996 stock market transactions fell significantly and did not recover their pre-1995 levels. Controls on capital flows, overregulation, concentration of the pension industry, and other industry-specific factors have reduced the liquidity of the stock market. The elimination of restrictions on capital flows in April 2001, together with reform of capital markets legislation, will surely have an important impact on stock market valuation and liquidity.

Fixed income transactions, on the other hand, increased as a percentage of GDP between 1995 and 1998, but fell significantly in 2000. The evolution of liquidity in the fixed income market differs from that in the stock market, however, and is explained primarily by two domestic developments. These are the increase in concentration of the pension fund industry, and the financial contagion created by the Russian crisis in 1998, which led the central bank to increase policy interest rates sharply to defend the currency, and resulted in major capital losses for the holders of fixed income instruments. This event gave rise to a sharp reduction in transactions.

Since the end of 2000, the government has enacted two laws to stimulate the development of domestic capital markets: the IPO Law and the Reform of Capital Markets Law. These reforms are expected to improve market liquidity and the access to funds by small and medium-sized companies, increase competition in the local market for outstanding instruments, and set up a better framework for developing new instruments in the future.

The paper pays particular attention to the evolution of the market for corporate debt in Chile, with special emphasis on the ways in which public policy in general, and the management of public debt in particular, helped to foster its development.

In this respect, the paper stresses two points. First, public debt has been issued regularly at specific maturities for almost 10 years. This regularity has implied that a yield curve exists which can be used to price bonds issued by the private sector. A particular characteristic of this curve is that it has long maturities denominated in local currency, which is unusual for emerging markets. The Central Bank of Chile has been issuing 20-year bonds since 1993.

A critical feature for the development of a long-term debt market in Chile has been the UF (unidad de fomento), an indexing unit that protects contracts from inflation. The existence of this unit has allowed the Chilean economy to have long-term assets denominated in local currency.

The second critical point is the reform of social security that took place in Chile in 1980, which established a stable demand for fixed income instruments through pension fund investments, and also a demand base for the development of a life insurance industry. Both pension funds and the life insurance companies form a significant demand base for public as well as private bonds. They each specialise in a different segment of the market, with the life insurance companies demanding the longer maturities.

The pension reform implied a major change for the Chilean financial market. It generated a large demand for regulatory and institutional innovations. These innovations implied a positive externality for other agents in the financial market, since they benefited from an environment that made financial markets more modern and transparent.

In contrast to the stock market, private debt markets have shown a continuous recovery in recent years. A significant reduction in domestic interest rates and the depreciation of the Chilean peso have motivated firms to look for funding in the local market. Private issuers have been active in tailoring products to make them more attractive to investors in terms of maturities, denominations and payment schedule.

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