Working Party on Financial Statistics

Securities by securities database and the Chilean Financial Accounts

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This document has been prepared by Ivette Fernandez (Central Bank of Chile) and will be presented under item 8 of the draft agenda.

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Securities by securities database and the Chilean Financial Accounts

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Outline

I. Background

II. Methodology

III. Results

IV. Conclusions
The DCV data are used to measure debt securities.

- The Central Bank of Chile publishes the National Accounts by Institutional Sectors” (NA–SI) at quarterly frequency from 2011.
- In the NA–SI, the financial account and the balance sheets of different sectors of the economy are measured.
- The information from the Depósito Central de Valores (DCV, “Chilean Custody Service”) is used to measure the securities other than shares.
Weekly records are contained in the DCV data.

- DCV is an institution that provides most of the services of custody, administration, compensation and liquidation of securities traded in the Chilean market.
- The DCV database contains weekly records of value-to-value data, including information about issuers, holders, currency denomination and maturity of debt securities.
- Nevertheless, this information does not have either financial transactions or the valuation at market prices.

DCV manages 96.5% of debt securities issued in Chile.

- The value of fixed-income securities held at the DCV was 115,316 million dollars at the end of 2011 (46.3% of Chilean GDP).
- This amount represents 96.5% of the total debt securities issued in the Chilean market.
- In 2011, 99% of total transactions corresponded to clearing and settlement made at the DCV.
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The market values, the financial transactions, and the revaluations are calculated using DCV.

<table>
<thead>
<tr>
<th>Description</th>
<th>Formulas</th>
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<tbody>
<tr>
<td>* Instrument in Chilean Pesos (CLP$)</td>
<td></td>
</tr>
<tr>
<td>* Par Value t-1</td>
<td>(9) Price t-1</td>
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<tr>
<td>* Par Value t</td>
<td>(10) Price t</td>
</tr>
<tr>
<td>* Financial Transaction (2)-(1)</td>
<td>(13) Financial Transaction (3x10)</td>
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<tr>
<td>* Instruments in UF or USD$</td>
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<tr>
<td>* Par Value UF or USD t-1</td>
<td>(1) Par Value UF or USD t-1</td>
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<td>* Par Value UF or USD t</td>
<td>(2) Par Value UF or USD t</td>
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<tr>
<td>* Financial Transaction UF or USD (2)-(1)</td>
<td>(3) Financial Transaction UF or USD (2)-(1)</td>
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<td>* Currency indicator t-1</td>
<td>(4) Currency indicator t-1</td>
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<td>* Currency indicator t</td>
<td>(5) Currency indicator t</td>
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<td>* Average currency indicator</td>
<td>(6) Average currency indicator</td>
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<td>* Market values and Financial transactions</td>
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<td>* Market value t-1</td>
<td>(7) Par Value CLP$ t-1</td>
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<td>* Market value t</td>
<td>(8) Par Value CLP$ t</td>
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<td>* Financial Transaction (2)-(1)</td>
<td>(3) Financial Transaction (2)-(1)</td>
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<td>* Revaluations</td>
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<tr>
<td>* Currency of issue fluctuation effect (8)-(7)-(13)</td>
<td>(14) Currency of issue fluctuation effect (8)-(7)-(13)</td>
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<tr>
<td>* Marking to market effect</td>
<td>(15) Marking to market effect (12)-(11)-(13)-(14)</td>
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</table>
Beside of the DCV database, it is necessary to use other sources.

- The main sources are as follows:

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<th>Information</th>
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<td><a href="http://www.apensiones.cl">www.apensiones.cl</a></td>
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<td>Indicators by currency type (UF, exchange rate)</td>
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<td>Monthly report of issue of bank debt securities</td>
<td>Monthly</td>
<td>Superintendence of Banks and Financial Institutions (SBIF)</td>
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<td><a href="http://www.sbif.cl">www.sbif.cl</a></td>
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<td>Statistics of issued debentures</td>
<td>Monthly</td>
<td>Superintendence of Securities and Insurances (SVS)</td>
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<td></td>
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<td><a href="http://www.svs.cl">www.svs.cl</a></td>
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</tbody>
</table>

Source: Authors’ elaboration.

- From these data, and considering the methodology explained above, the results are obtained by instruments, and also by issuer and holder sectors.
By issuers and holders: The main issuers are Non-financial corporations and the main holders are Pension funds.

Figure 1. Issuers of debt securities by institutional sector (left), and holders of debt securities by institutional sector (right), Q2 2012.

(percentage of the GDP, upper indexes; percentage of the total, lower indexes)

By issuers and holders: The main issuers are Non-financial corporations and the main holders are Pension funds.

Source: Authors’ elaboration based on DCV data.

The network shows that the Pension funds hold the most of debt securities issued.

Figure 2: Sector interlinkages in Debt Securities, Q2 2012.

(percentage of the GDP)

Source: Authors’ calculations based on DCV data and made using the Pajek software.

Note: Arrows between sectors represent the cross-sector exposure “Who issues debt securities and whom holds these debt securities”. The thickness of each line illustrates the size of the exposure. The size of the circle indicates the net position between holding and issuance. Red circles indicate “which sector emits more debt securities than what it holds”; and blue circles represent “which sector holds more debt securities than what it issues”.

Source: Authors’ elaboration based on DCV data.
By transactions: The emissions of debt securities have decreased in recent quarters.

By currencies: Most of the issuance are expressed in domestic currency and linked to the UF*.

* Unidad de Fomento (UF) is an index used in Chile, which is adjusted according to inflation.
By maturities: the networks show the compromise among sectors in debt securities.

Figure 5. Sector interlinkages in residual values of Debt Securities, Q2 2012. (percentage of the GDP)

Source: Authors’ calculations based on DCV data and made using the Pajek software.

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Conclusions

- The DCV database is one of the sources of information in the compilation of the Chilean financial accounts.
- This dataset provides detailed information about the issuers, nominal values of each instrument, maturities, and agents who hold each asset.
- Furthermore, this information is being used for economic analysis, and also for the control of the financial stability at the Central Bank of Chile.

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