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Corporate-Sector Functional Currency: An International Comparison*

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Abstract

Since 2012, Chile's corporate debt has increased as a percentage of GDP, mainly explained by external debt, high even relative to comparable countries. This dynamic owes mainly to firms that use the U.S. dollar (USD) as their functional currency in their financial statements, so for these firms dollar-denominated debt does not generate a currency mismatch in their balance sheets. This paper studies the relevance of firms with the USD as their functional currency using a cross-country comparison at the asset level of the corporate sector. Our results show that the case of Chile is not isolated as, for example, Canada, Norway, Israel, Australia, and Peru exhibit an important share of firms with this characteristic. We also find that Chile is the country with the highest proportion of firms with dollar accounting with respect to GDP (64% in 2017). In addition, these countries share a common factor, since these companies' assets are concentrated in economic sectors oriented towards international trade. In Chile the importance of these sectors, like Basic Materials, Forestry and paper, and Mining, explains the high proportions of firms with USD as their functional currency. These conclusions are important to consider when analyzing a country's external debt and the potential exchange rate risks, such as currency mismatch, due to the effect of dollar debt in the balance sheet. During depreciations, it has been a concern among Latin-American firms, especially during the emerging-market financial crises of the 1990s.

Resumen

Desde 2012, la deuda corporativa de Chile ha aumentado como porcentaje del PIB explicado principalmente por la deuda externa, alcanzando un nivel alto en relación con países comparables. Esta dinámica se explica principalmente por las empresas que utilizan el dólar estadounidense (USD) como moneda funcional en sus estados financieros, por lo cual para estas firmas la deuda denominada en dólares no genera un descalce cambiario en sus balances. Este documento estudia la relevancia de las empresas con moneda funcional USD utilizando una comparación entre países a nivel de activos del sector corporativo. Nuestros resultados muestran que el caso de Chile no es único ya que, por ejemplo, Canadá, Noruega, Israel, Australia y Perú exhiben una participación importante de empresas con esta característica. Encontramos que Chile es el país con la mayor proporción de empresas con contabilidad en dólares con respecto al PIB (64% en 2017) en nuestra muestra. Además, estos países tienen común que los activos de estas empresas se concentran en sectores económicos orientados al comercio internacional. En Chile, la importancia de sectores como Materiales Básicos, Silvicultura y Papel, y Minería, explican la alta participación de empresas con

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USD como su moneda funcional. Estos resultados son relevantes al analizar la deuda externa de un país y los posibles riesgos de tipo de cambio, como el descalce cambiario, debido al efecto de la deuda en dólares en el balance. Por ejemplo, episodios de depreciaciones cambiarias han sido una preocupación entre las empresas latinoamericanas, especialmente durante las crisis financieras de los mercados emergentes de la década de 1990.

1. Introduction

In several reports, Chile presents a relatively high external debt over GDP ratio in comparison with similar countries¹. Two thirds of this debt (excluding intercompany loans) corresponds to firms that use the U.S. dollar (USD) as their functional currency, so there is no balance sheet effect of this debt in a depreciation event. In order to analyze how high this proportion is, we carry out an international comparison of companies' functional currency using their assets from their balance sheets. We use assets and not liabilities because country-level external debt data is not available to us at the firm level. The results shows that in a large sample of countries where the dollar is not the country's official currency, Chile ranks first in corporate sector assets with dollar accounting with respect to GDP (64% in 2017). What explains this high participation? Does Chile share some common factors with other countries that also have a high participation of companies with dollar accounting? How has the corporate sector with dollar accounting evolved in Chile to reach such an outstanding participation compared to other countries?

In order to answer these questions it is important to explain the importance of the functional currency, which in simple terms is the main currency of company income and expenses. Therefore, a company with USD accounting should have no effects when the exchange rate increases or decreases. The effect of dollar debt on balance sheets during depreciations is relevant in the case of Latin-American firms, which were severely affected during the emerging-market financial crises of the 1990s (Bleakley and Cowan, 2009). This issue is especially important in the case of Chile because since 2012 its corporate debt has increased as a percentage of GDP mainly explained by the external debt². As was mentioned before, a notable aspect of this growth was that a significant share of the external debt was issued by reporting firms that designate the USD as their functional currency³.

We believe that a first step before investigating the potential effects on companies' balance sheets is to understand the predominance of companies with accounting in dollars⁴, because these companies face different exchange rate risks than companies with their financial statements in local currency. Our main goal is to identify common factors across countries that help us to understand why companies use the dollar as their functional currency. A second objective is to understand the evolution of this group of firms in Chile.

Among our main results, first we observe that accounting in dollars —as a foreign currency in the respective country— is not a phenomenon unique to Chile. We identified a sample of comparable countries —Canada, Norway, Israel, Australia and Peru— with a significantly dollarized corporate sector. We will use the concept of *dollarization* when referring to a sector where corporate assets with dollar accounting represent an important part of the total assets of that sector⁵. A second result is that

¹ See Financial Stability Report, first half 2019; Oxford Economics (Dec. 2018, Jan.2019); Fernández, Pino and Vásquez (2020).

² See for example Article IV Consultation, Chile (IMF, Nov.2018).

³ The group of companies that submit their financial statements to the FMC (Financial Market Commission) will be identified in this document as *reporting firms*. (<http://www.cmfchile.cl/portal/principal/605/w3-propertyvalue-26173.html>).

⁴ In the document we will use dollar for US dollar.

⁵ Depending on the definition, above 60% or 70% of total assets.

the assets of these companies are concentrated in specific economic sectors, and we refer to them as *mainly exporters*⁶. In addition, these sectors normally account for a significant share of GDP.

In the case of Chile, we identified the following sectors as dollarized given our basic definition: *Basic Materials, Forestry and paper*, and *Mining*. All of them are *mainly exporters*. Additionally, we identified the *Airline* sector in Chile as dollarized, a situation we normally see in other countries, but with a higher relative importance in terms of GDP. In summary, the answer for the question about the Chilean proportion of dollar accounting companies is that it is high in particular sectors in relation to GDP, not a particular sector that shows a different pattern to other countries.

This document makes two major contributions. First, for a sample of countries, we find that companies oriented towards international trade are relatively more likely to have dollar accounting. Second, for the case of Chile, we show that firms with accounting in dollars have economic reasons and their functional currency is in line with accounting requirements. This conclusion is important to consider when talking about a country's external debt and when evaluating the potential exchange rate risks of the corporate sector. To the best of our knowledge no other work has used functional currency in this type of analysis with the exception of Cowan et al. (2005), who incorporate the accounting currency of Chilean companies as an explanatory variable in their research related to investment and currency mismatch⁷.

Finally, it is important to bear in mind that the identification of the functional currency does not allow us to identify the precise exposure to exchange risk of companies, because more detail about assets, liabilities and derivatives by currency is required, together with more detail at individual and consolidated balance sheet levels. We understand that the use of the dollar as a functional currency does not necessarily mean that the firm is not exposed to financial risk as it could be exposed, for example, to other currencies⁸.

2. Conceptual framework and literature review

According to the International Accounting Standard 21 functional currency “is the currency of the primary economic environment in which the entity operates”. To guide in determining the functional currency, the standard lists certain indicators to consider, commonly known as primary and secondary factors. The primary factors relate to the currency that influences sales prices, costs, or the currency of the country that determines sales prices. Secondary factors include –among others- the currency in which the company is financed or whether the entity is a foreign operation of a parent company.

As it can be seen, the identification of the functional currency is not a free choice of the entity since it has an economic justification related to the business in which the company develops its activities.

⁶ As will be explained in detail in the document, the definition of exporting sectors is made on the basis of information from the sample of comparable countries defined in this study and does not extend to other studies.

⁷ With the adoption in Chile of IFRS (2009), part of the corporate sector changed its accounting currency. So the sample used by Cowan et al. (2005) changed its composition after that date.

⁸ For further information about Chilean companies' exposure to other currencies, see Fernández, Valencia and Vásquez (2019).

One of the main effects in the determination of the functional currency is that once it has been identified, the rest of the currencies in which transactions are denominated or settled will be considered foreign currency and will normally affect results and balance sheet.

A simple example will help us to understand the consequences of determining the functional currency in a company. If a company has the dollar as its functional currency and has debt in dollars, a variation in the exchange rate will not affect the value of its debt. On the other hand, if a company has the local currency as its functional currency and issues debt in dollars, a significant depreciation of the local currency in relation to the dollar will increase the value of its debt measured in local currency. Studies such as those of Benavente et al. (2003), Beakley and Cowan (2008), and Chow (2015) show that currency depreciations can have negative effects on the balance sheet of companies in emerging countries, particularly in firms with high foreign-currency debt. In this sense, an important number of studies using micro data at the firm level, seek to analyze the impact that depreciations and exchange rate appreciations have on investments, access to credit or on the value of companies (Hansen and Hyde; 2013, Kim et al., 2015, Hardy 2018, Álvarez and Hansen, 2017)⁹.

Cowan et al. (2005), using a panel of Chilean companies between 1995 and 2003 that report their financial statements to the Superintendencia de Seguridades e Inseguridades (SVS, today CMF), find that faced with a depreciation of the real exchange rate of 20%, as occurred in Chile in 2001, the rate of accumulation of real assets is reduced by 5% in those firms where half of their debt in dollars, compared to those that have no debt in dollars, *ceteris paribus*. These same authors find that firms with positive net position in derivatives invest more before depreciations of the exchange rate.

Despite the importance of the concept of functional currency for a company, this information is normally not considered in the studies we have reviewed, with the exception of Cowan et al. (2005)¹⁰. One possible explanation is that, to the best of our knowledge, the information available in the financial statements databases is normally the presentation currency and not the functional currency. The presentation currency is the currency in which an entity must present or chooses to present to the public its financial statements. Under IFRS, an entity can present its financial statements in any currency. Examples of the former correspond to firms that by some regulation of the supervisor must present their financial statements in local currency or subsidiary firms of a foreign parent that must present their information in the functional currency (foreign currency) of the parent.

In the case of Chilean companies, there are no discrepancies between the presentation currency and the functional currency. However, we have seen important differences in these variables in other countries. This explains why a review of the information needs to be carried out first in order to make a fair comparison. The following section details the proposed methodology for such a comparison.

⁹ Fernández, Pino and Vásquez (2019) study the effects on results from exchange rate movements in the sample of companies used in this document. Among its main results negative effects are observed in companies with local functional currency that operate in export sectors.

¹⁰ They use an interactive dummy with the lagged capital stock and exchange rate variation for those firms that maintain accounting in dollars. Its objective is to control for an automatic revaluation of dollar assets associated with prices and not quantity.

3. Dataset and methodology

The data used in this document come from two main sources. First, financial statement data were drawn from Thomson Reuters Datastream. From this database, we use asset information, presentation currency of the financial statements and industry. We use this information to identify countries comparable with Chile in terms of assets in firms with dollar presentation currency over GDP and we added some countries of South America. Then, we conducted a micro data review of at least 70% of the assets of the corporate sector in each of those countries to ensure that the presentation currency is the same as the functional currency. In the case of Chile, an additional review was made on the industry classification and the double parent-subsidiary accounting that might exist in the main firms in term of assets. In the case of the rest of the countries, the functional currency was reviewed through publicly available information. Industry information corresponds to the classification based on the ICB CODE, which represents an industry code within the Industrial Classification Benchmark (ICB), which was implement because of a merger of the industrial classification of Dow Jones and FTSE (Source: Thomson Reuters Datastream).

Second, to estimate the degree of exposure to international trade of each sector/country, we use exports indicators from UN Comtrade Database for goods and IMF Trade Statistics database for services, provided by the Atlas of Economic Complexity elaborated by Center of International Development at Harvard University¹¹. This database contains trade data for 250 countries, classified into 20 categories of goods and 5 for services. In total, the coverage is for over 6,000 products. This detail allows us to differentiate between sub-sectors more oriented towards international trade. Any sub-sector representing over 3% of each country's total exports in 2016 was defined as exporter.

A sectoral standardization was carried out between financial statement information and export information by country/sector. In this way, we are able to relate the dollarized sectors by country and their degree of export orientation.

Given the importance in the document of the accounting terms we want to explain them in detail using the International Accounting Standard 21:

- Functional currency: “is the currency of the primary economic environment in which the entity operates”. Once the functional currency is identified, all other currencies correspond to foreign currency.
- Presentation currency: “is the currency in which the financial statements are presented”. The “standard permits the presentation currency of a reporting entity to be any currency (or currencies)”.

Usually both currencies are the same for companies but in some cases they differ. For example, the Argentinean state oil company YPF indicates in its financial statements that the dollar is it functional currency. However, it is further reported that according to the provisions of Resolution No. 562 of the CNV (Comisión Nacional de Valores, Argentine capital market regulator), the company must present its financial statements in pesos. Other relevant cases were identified as Cemex in Mexico and Embraer in Brazil, where the presentation currency differed from the functional currency. In all

¹¹ In order to obtain consistent information the data was elaborated using Bustos-Yildirim Method. For more details about methodology visit: <http://atlas.cid.harvard.edu/data>

these cases the functional currency was dollar so the revision allow to us to add more dollar accounting companies.

4. International Comparison.

For a broad sample of countries, in a first review of the information, we use the presentation currency of the financial statements and then rank the countries according to the level of assets in dollars in relation to GDP at 2017 (**Figure 1**).

Figure 1: Total assets of the corporate sector by presentation currency, 2017 (percent of GDP)

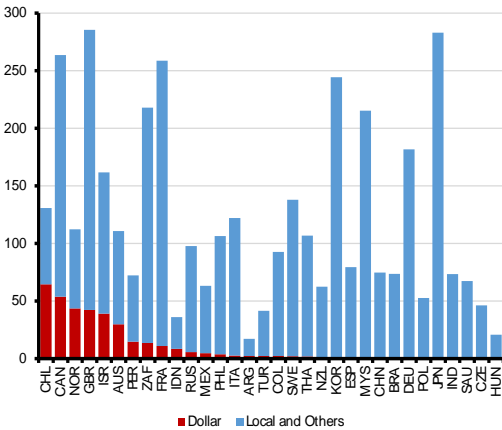
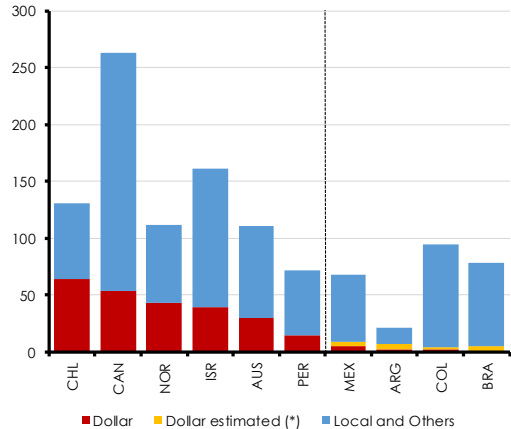


Figure 2: Total assets for a sample of countries in the corporate sector by functional currency, 2017 (*) (percent of GDP)



(*) In this sample of countries, to ensure accordance between the presentation currency and the functional currency, a review was conducted using the public financial statements of companies that together account for at least 70% of the total assets of each country's corporate sector. The estimation of assets in dollars (yellow area) was carried out on the basis of sector estimates (mainly exporters) for the portion of assets not reviewed.

Sources: Datastream, World Bank and additionally Financial Market Commission in the case of Chile.

Chile (CHL) appears in first place in the ranking with assets of firms with dollar presentation currency that reaches 64% of GDP. It is closely followed by countries such as Canada (CAN, 54%), Norway (NOR, 44%) and United Kingdom (GBR, 42%). A little further, it appears countries like Israel (ISR, 39%), Australia (AUS, 30%), Peru (PER, 15%), South Africa (ZAF, 14%), France (FRA, 11%) and Indonesia (IDN, 9%).

A second issue to consider is that in Chile the total assets of the corporate sector represent 131% of GDP in 2017. Normally the assets of the corporate sector represents a greater proportion of GDP in developed countries compared to developing countries (185% of GDP in the former compared to 111% in the latter, using a simple average). In this context, Chile presents an indicator above the average of developing countries and even surpassing some developed countries.

a. Analysis of comparable countries: identification of the functional currency

In the case of Chile, using firms' public information from the Financial Market Commission (FMC) we can corroborate the congruence between the presentation currency and the functional currency of the companies. We chose Canada, Norway, Israel and Australia as comparable countries in terms of the level of assets in dollars respect to GDP. We also included Peru due to the similarity in terms of sectoral distribution of assets of firms with accounting in dollars, a topic that will be cover in the next section. For these countries we make at firm level review of the functional currency, in order to compare with the reporting currency. The micro-data review includes at least 70% of the total assets in each country in between 2017 and 2016. As a result, no major discrepancies was observed (**Figure 2**). In other words, we can see that accounting in dollars -as a foreign currency in the respective country- is not a phenomenon isolated only in Chile.

In order to include other comparable countries, the information from Mexico, Argentina, Colombia and Brazil was reviewed. In these countries discrepancies were identified between presentation and functional currency but, even considering these companies with their corrected functional currency, we see that these countries have a corporate sector in dollars that is lower than the average of the sample of comparable countries. As we mentioned before, we made a firm level review for most of the firms and estimated level continues to be much lower in comparison with our sample, which justifies not including them as comparable countries.

b. Sectoral identification.

Once comparable countries have been identified, we incorporate international trade sector information that will allow us to differentiate them according to their level of exports¹². In order to do this, we use foreign trade information from the Comtrade database, which was previously homologated with the industry information from the Datastream database. In this way, five main groups are established according to their level of export-orientation:

1. *Mainly exporters*: It made up of particular sectors that are normally exporters and homogeneous in its components firms. These correspond to *Mining, Oil and Gas, Forestry and Paper, Basic Materials and Health Care*¹³.
2. *Exporters and Importers*: It is composed of broader sectors and which are normally exporters and/or importers and more heterogeneous in their composition in relation to the *Mainly exporters*. These correspond to *Consumer Goods, Technology, Industrials and Consumer Services*.
3. *Financial Services*: These firms are separated due to the particularity of their business and because they are sometimes subject to different regulations than those of other sectors.

¹² Unfortunately, at the time of doing this work, international trade information was updated to 2016, so the figures presented for assets in dollars in this section may differ from those shown in the previous section.

¹³ As will be seen below, the inclusion of this last sector is due exclusively to what has been observed in Israel.

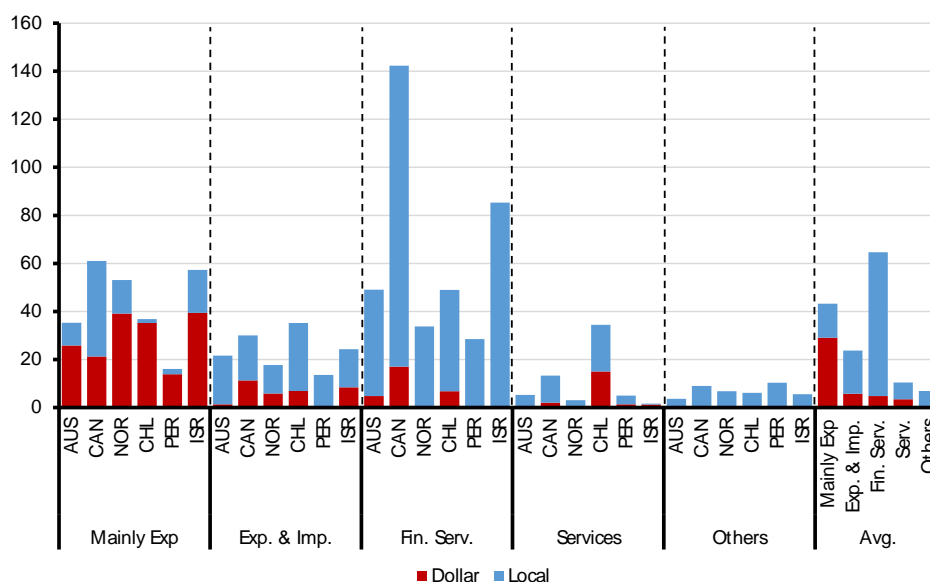
Additionally, we have seen that the parent companies of subsidiaries are included in this sector, which makes it difficult to interpret the functional currency.

4. *Services*: It comprises particular sectors that, in our sample, have some exposure to foreign trade. These correspond to *Airlines* and *Utilities*.
5. *Others*: It comprises sectors normally considered non-tradable. These correspond to *Home Construction*, *Telecommunications*, and unclassified sectors.

It is important to mention that the definition and grouping of sectors from the most tradable to the least tradable is particular to this work, and depends on the sample of countries we are using. For example, *Health Care* is classified as tradable sector because in Israel represents a significant portion of exports under the definitions used in this paper.

The result of this classification is depicted in **Figure 3**, where we use the classification just described (tradable sectors) to characterize the assets of companies by functional currency. First, it is remarkable that a significant part of the assets of *Mainly Exporters* is usually dollarized. On a simple average, the dollarized assets of these companies represent 29% of GDP in the sample of comparable countries. By country, in Chile, dollarized assets represent 96% of *Mainly Exporters* total assets, Australia (73%), Norway (74%), Peru (86%), and Israel (69%). The exception is Canada with 35% of total assets. In contrast, in *Exporters and Importers*, local currency assets have a majority share (on average almost 80%).

Figure 3: Total assets in the corporate sector by functional currency, 2016 (percent of GDP)

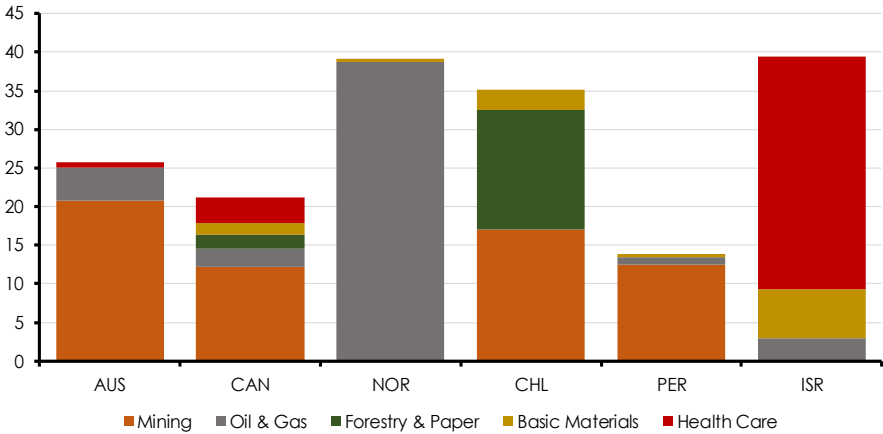


Sources: Datastream, UN Comtrade, World Bank and FMC.

Financial Services are normally important in each country. Independent of the reporting currency, on a simple average, it represents 65% of GDP, with Canada standing out with a 142% of GDP. Similarly, assets in local currency normally have on average a greater participation in relation to the assets of dollar currency firms (which on average represent only 6% of the assets of this sector). Finally, the dollarization of the Services is relevant in Chile. The latter is explain by the *Airlines* sector (for more details see next section and **Table 1**).

Into exporters accounting-dollar firms could be predominant, given the relevant market. So, it is interesting to review in detail *Mainly Exporters* from Figure 3 in **Figure 4**. *Mining* appears as a commonly dollarized sector among comparable countries. However, although Chile, Norway and Israel have a similar corporate sector participation in terms of dollarization, a different composition is observed. For example, in Chile the dollarization of assets is explain by the *Mining* and *Forestry and Paper* sectors, while Norway only by the *Oil and Gas* sector and Israel mainly by *Health Care*. Peru appears with a high *Mining* participation, in this sense very similar to Chile, however at the same time with a low level of report with respect to GDP.

**Figure 4: Assets of dollar functional currency, 2016
(percent of GDP)**



Sources: Datastream, UN Comtrade, World Bank and FMC.

c. Detail at country and sectorial level

Table 1 shows the detailed information by country, sector and sub-sector. As mentioned in the previous section, sectors are ordered in relation to their exposure to international trade. Additional information is incorporated indicating the dollarization of the sub-sector through the color of the cells. The green color indicates a sub-sector with a dollarization over 70% of its sectorial assets, while the yellow color indicates a dollarization over 60%¹⁴.

¹⁴ The dollarization of a given sector is measure as the sum of the assets of firms with dollar as a functional currency over the total assets of the sector.

It can be seen that the countries used in the comparison have an important corporate sector with respect to GDP, with the exception of Peru (see row “Assets/GDP”). It should be borne in mind that in the case of Chile, the mining sector is underrepresented considering that there is an important part of the firms that does not trade its shares, so it is not captured in the Datastream base. Preliminary information indicates that a similar situation occurs in Peru. Another point to consider is the participation of the firms' assets in dollars over total assets (see row “Assets USD/Assets TOT”), where Norway and Chile stand out with 40% respectively.

Mainly Exporters includes sectors normally dollarized, in other words the green cells are concentrated in this area. In addition, the dollar assets of the sectors that compose it represents a greater share of GDP in relation to the other sectors. *Exporters and Importers* includes few sectors that could be considered dollarized and its representation in terms of assets in dollars over GDP is lower, with the exception of Canada, country in which each of the sectors has an important representation with respect to GDP and the *Financial Services*, which has an important relative participation in Australia, Canada and Chile, although it is not dollarized in any of the cases.

**Table 1: Total assets for dollar functional currency firms, 2016
(percent of GDP)**

Sector	Sub-sector	AUS	CAN	NOR	CHL	PER	ISR
Mainly Exporters	Mining	20.8	12.2	-	17.0	12.5	-
	Oil & Gas	4.2	2.4	38.8	.	0.9	2.9
	Forestry & Paper	-	1.8	-	15.5	.	-
	Basic Materials	-	1.5	0.3	2.7	0.5	6.4
	Health Care	0.8	3.3	-	-	.	30.1
Exporters and Importers	Consumer Goods	-	2.4	-	2.8	0.4	0.7
	Technology	-	1.1	0.3	0.2	.	5.2
	Industrials	1.3	3.1	5.5	3.9	0.1	2.5
	Consumer Services	-	4.7	-	-	-	-
Financial Services	Financial Services	4.8	17.0	0.2	6.8	-	0.1
Services	Airlines	-	-	-	7.6	.	1.2
	Utilities	0.1	2.0	0.7	7.4	1.3	-
Others	Home Construction	-	-	.	-	.	-
	Telecommunications	0.1	0.1	-	-	-	-
	S/C	-	-	0.3	-	-	-
	Assets USD/GDP	32.1	51.6	46.1	63.9	15.7	49.1
	Assets USD/Assets TOT	28.0	20.2	40.3	39.6	21.4	28.2
	Assets Local/GDP	82.7	204.0	68.3	97.6	57.8	124.9
	Assets/GDP	114.8	255.6	114.4	161.5	73.5	174.0

Sources: COMTRADE (UN), Datastream, World Bank and FMC.

On the other hand, in *Services*, the representation that it has with respect to GDP in Chile stands out. *Airlines* sector appears dollarized in both Chile and Israel, although in the latter country it has a much smaller share in relation to GDP. In our review of financial statements we identified that normally the dollar is the functional currency of *Airlines* sector across countries. Finally, in the sectors in which

less exposure to international trade is assumed –Others- there are no dollarized sub-sectors and there is a low representation with respect to GDP.

One point to note in the table is that the dollarized sectors in Chile, i.e. *Mining, Forestry and Paper, Basic Materials* and *Airlines*, are transversally dollarized across countries in the sample when they are present. In other words, dollarization in these sub-sectors is not a particularity of Chile; what is exceptional is the high representation of these sectors in relation to Chile's GDP.

In summary, we find that Chile stands out in the ranking of assets of companies with accounting in dollars. Using a revised sample of comparable countries we can observe that the use of the dollar as functional currency is concentrated in certain sectors mainly oriented to international trade and that represent an important share of GDP. In this sense, Chile is not an exception. What is striking, though, is the important representation of sectors such as *Mining, Forestry* and *Basic Materials* over GDP.

5. Evolution of the Chilean corporate sector with dollar functional currency

Prior to the adoption of IFRS standards in Chile (2009), dollar accounting was used in the corporate sector (**Figure 5**). This possibility was available only to firms that had an authorization from the Supervisor (SVS, today FMC) and the tax authority (SII), which required significant justification from companies.¹⁵

With the adoption of IFRS, the supervisor required companies to make a formal declaration regarding the functional currency to be used¹⁶ and it was no longer necessary to have prior authorization from the tax authority. **Figure 5** shows that assets and the number of companies with dollar accounting increased significantly between 2008 and 2009, showing a stabilization after 2012.

As mentioned above, IAS 21 include some primary factors that must be given priority in determining an entity's functional currency, like the currency that mainly influences sales prices for its goods and services and of the country whose competitive forces and regulations mainly determine the sale prices of its goods and services. Secondary factors are the currency in which funds from financing activities and the currency in which receipts from operating activities are usually retained. IAS 21 also describes some other factors to consider in determining whether the functional currency of a foreign operation is the same as that of the parent company.

A characterization was made, using public information, of the main reasons why the Chilean companies changed their functional currency between 2008 and 2009. As can be seen in **Figure 6** in 2009, 60% of the total assets of companies with dollar accounting corresponds to companies that registered this currency before the adoption of IFRS. In these cases, the formal declaration of functional currency is not available in all cases, so a review of the financial statements was carried

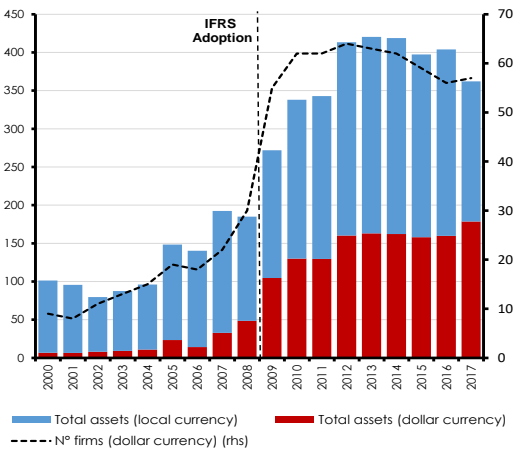
¹⁵ Article 18 of the tax code provides the possibility of keeping tax accounts in foreign currency, provided that it is justified by important foreign trade operations, when the capital has been contributed from abroad or the debts have been contracted mainly in foreign currency or when the taxpayer is a subsidiary company, without a significant degree of autonomy, among others. Circular N°331 (1983) issued by the Supervisor (SVS) indicates that entities may not keep accounting records in a currency other than that in which their capital is expressed. Circular N°1711 (2004) indicates that entities that want to keep their accounting records in foreign currency must request authorization from the Supervisor, prior authorization of the SII.

¹⁶ This is mentioned in the following documents issued by the CMF: Circular N°427 (2007) and Circular N°457 (2008).

out, mainly identifying what we would call primary factors in the vast majority of cases. Using the formal declaration we identify firms that changed their functional currency referring to primary factors (20%), secondary factors (9%) and both (8%).

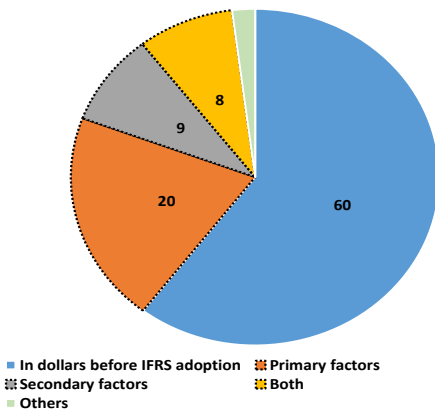
The predominance of primary factors supports the idea that the use dollar accounting is due to economic reasons and not just an accounting issue. The Firms that refer only to secondary factors also have an economic support, but it is not as clear as the previous one.

Figure 5 : Evolution of firms with U.S. dollar as functional currency in Chile (total assets in UF millions, number of firms)



Sources: Datastream, and Financial Market Commission.

Figure 6: Share of firms with dollar as functional currency, 2009 (percentage of total assets)



In summary, the review of the financial statements and formal currency reports shows that Chilean companies keep their accounting in dollars mainly due to primary factors¹⁷. Since 2012, Chile’s corporate debt has increased as percentage of GDP¹⁸. This trend is mainly explained by the external debt, which has become more relevant in recent years, going from 26% of GDP in 2012 to 41% of GDP in 2018. An important part of the external debt was issued by companies with accounting in dollars (e.g. in 2018 the external debt of this group represent 13% of GDP). From the analysis presented in this document, this group of companies should not be exposed to the exchange-rate risk peso-dollar. This does not mean that there is no exposure to other currencies in these companies, but the issuance of dollar debt is in line with the currency of income, and therefore we would expect a natural hedge between revenues and expenses.

¹⁷ Just to reinforce our conclusion. In the case of Chilean companies with accounting in dollars belonging to the “Forestry and paper” sub-sector, we have seen that they indicate debt hedging via dollar/peso swaps in the event of issuing debt in Chilean pesos. This hedge is not performed when they issue external debt in dollars (source: public notes attached to the financial statements).

¹⁸ According to the Financial Stability Report (FSR) prepared by the Central Bank of Chile (CBC), among other official documents, debt grew from 98% in 2012 to 115% of GDP in 2018.

6. Conclusions

In this document we present a detailed analysis of the functional currency of the Chilean corporate sector and a sample of comparable countries. It is important to identify the functional currency when assessing the currency risk of companies in a country. Companies with accounting in dollars should not face currency mismatch problems in case of issuing debt in dollars.

In the sample of comparable countries we can identify highly dollarized—in terms of assets—export sectors. In this sense, Chile is not different from the other countries; however, it stands out in terms of the relevance of the dollarized sectors with respect to GDP.

Chilean firms that keep their books in dollars do so mainly for economic reasons, like the relevant market currency. These firms are behind the rise in the external debt of the Chilean corporate sector in recent years. The issuance of this debt should not generate exposure to currency risk.

This first step in understanding the functional currency of the corporate sector will allow to continue in a future research agenda. First, to correctly assess the effects that exchange rate movements can have on the results of companies and in currency mismatch analysis. Second, to analyze structural factors between countries with high corporate assets with dollar accounting. Finally, to aggregate this information in order to improve the analysis of topics like foreign external debt, including a variable that can help to understand some differences between countries (Bank for International Settlements 2020).

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