

REGULAR REPORTS BY THE BANK OF ISRAEL TO INTERNATIONAL INSTITUTIONS

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Abstract

Reliable up-to-date data are an essential need for managing economic policy, as they make it possible to examine economic developments over time and by international comparison. In order for the data on various countries to be comparable and consistent over time, the international institutions, chiefly the International Monetary Fund, define and develop methodologies for calculation, reporting, and detailed metadata.

The Bank of Israel Information and Statistics Department fulfills in practical terms the central bank's statistical reporting requirements to international institutions. As such, the Department creates and produces the various reports, remains constantly up-to-date on changes in international standards, and adapts its statistical systems to changing informational needs.

This paper presents the variety of reports that the Bank of Israel sends to the international institutions directly and through the Central Bureau of Statistics, and focuses on a number of the reports that provide a significant and useful reporting framework.

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1. INTRODUCTION

One of the main needs in managing economic policy is the existence of reliable and up-to-date data that can be used to examine economic developments over time and to conduct the appropriate policy. As the economy has become increasingly global and economic ties between countries have become more widespread and complex, monitoring the economic parameters of each country and monitoring them at the international level has become more important. Comparable data on a uniform, high-quality basis make an important contribution to researching and managing economic policy as part of the global economy.

In order for the data on various countries to be comparable and consistent over time, the international institutions, chiefly the International Monetary Fund, define and develop methodologies for calculation and reporting in the various subject areas. In addition to the data themselves, these include detailed metadata, meaning information about the information. The developments in the financial markets, particularly global economic crises, have over the years exposed information gaps and methodological issues that have made it necessary for the international institutions to act constantly to improve the methods underpinning the databases, develop new databases, and adjust the reporting frequency to informational needs. In addition, Israel's accession to the OECD required it to meet the international standards required by the organization in various fields, including statistics.

The main entities that create national statistics in each country are the central bank and the statistics bureau. The division of roles between the bank and the bureau that is common both in Israel and abroad is that the central bank is responsible for the gathering, processing and dissemination of financial and monetary data and for the financial account of the balance of payments, while the bureau is responsible for the collection, processing, and reporting of real and fiscal data.

The Information and Statistics Department fulfills the Bank of Israel's statistical reporting obligations to the international institutions. As part of this, it creates and produces the various reports regarding a range of subject areas, remains constantly up-to-date on changes in international standards, and adapts its statistical systems to changing informational needs.

The aim of this paper is to present the variety of reports that the Bank of Israel sends to the various international institutions, most of which are also available on the Bank of Israel's website. The paper will provide greater detail on the discussion regarding three reporting frameworks—Monetary and Financial Statistics (MFS); Financial Soundness Indicators (FSI); and the Coordinated Portfolio Investment Survey (CPIS)—including a sampling of international comparisons on these topics.

2. REVIEW OF THE BANK OF ISRAEL'S REPORTS TO THE INTERNATIONAL INSTITUTIONS

The national statistics, in their direct economic aspect¹, deal with a variety of subject areas: the labor market, prices, national accounts, foreign trade and the balance of payments, the financial markets—money and capital markets—the housing market, the public sector, and more.

There are subgroups of data and aggregates for each subject area, which reflect most of the existing information on the topic. The methodical collection of the data makes it possible, among other things, to identify risks at the state level and at the global level, whether financial risks (credit risks, market risks, currency risks, and others) or real risks that reflect a turning point in the business cycle.

The international standards for collecting and reporting information in each subject area, as well as the optimal reporting frequency, have developed over time, and generally involve learning from global experience.

How the information is produced, the selection of series, aggregates and data frameworks that represent each subject area, and learning from accumulated global experience, are discussed constantly in working groups and at periodic conferences that are sponsored by the international institutions, chiefly the OECD, the IMF, and the Bank of International Settlements (BIS). Based on the knowledge and global experience, the IMF develops standards for the development and publication of data in various fields, and a guide for calculating the data is provided for each subject area. The aim of the international calculation and reporting standards is to create a high-quality uniform database for many countries.

Table 1 summarizes the Bank of Israel's reports to the international institutions by subject area. The table lists the name of the report, the topic, and an explanation of the reporting rules, as well as the sources from which the Bank takes the reported information, and the reporting frequency. Most of the reports are intended for the IMF, so the table notes the international institution to which the information is sent only if it is different from the IMF.

The International Monetary Fund launched the initiative to establish data reporting standards in order to increase the data transparency regarding its member countries and to advance the development of statistical systems. The need for data standards was emphasized following the financial crises of the mid 1990s, when information gaps were revealed. As part of the data standards initiatives, the IMF launched the Special Data Dissemination Standard (SDDS) in 1996 to increase the availability of comparable economic and financial data to the public, and to make main data that are important for monitoring systemic risks accessible to decision makers.

In 1997, the International Monetary Fund presented the General Data Dissemination System to provide countries with a system for developing their statistical systems, through which they can

¹ Alongside other social issues with an indirect economic impact and economic relevance, such as demographics, healthcare, education, higher education, and many more.

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Table 1: Summary of the reports sent to the international institutions					
Sector	Topic	Data	Source of data	Frequency	
Financial sector	The banking system	2SR - Banking system balance sheet broken down by instrument, currency, and countersegment (as part of MFS) Accessibility survey (FAS): Various data on the population's access to financial services, such as number of branches	Banks' reports to the Banking Supervision Department	Monthly Yearly	
	The central bank (Bank of Israel)	1SR - Bank of Israel balance sheet broken down by instrument, currency, and countersegment (as part of MFS)	Bank of Israel Accounting Unit	Monthly	
	Other financial corporations	4SR - Assets of the institutional investors: mutual funds, provident funds, advanced training funds, and insurance companies, by instrument, currency and counter segment (as part of MFS) 7II - Details of assets by asset type, range, and residence of the countersegment. Includes mutual funds. Reported to the OECD.	Institutional investors' reports to the Bank of Israel	Monthly Quarterly	
	Monetary aggregates	5SR - Israel's monetary aggregates: Components of the broad aggregate and the monetary base (as part of MFS).	Bank of Israel Accounting Unit, Banks' reports to the Banking Supervision Department, Tel Aviv Stock Exchange, mutual fund reports, and the Postal Bank	Monthly	
	Interest rates and yields	6SR - Interest rates, yields, and share prices (as part of MFS).	Banks' reports to the Banking Supervision Department, Bank of Israel, and Tel Aviv Stock Exchange	Monthly	
	Financial soundness (FSI)	Financial soundness indicators of the banking system, institutional investors, the business sector, households, the liquidity market, and the real estate market.	Banks' reports to the Banking Supervision Department, reports by institutional investors, Tel Aviv Stock Exchange, Central Bureau of Statistics, and financial statements of publicly traded companies.	Quarterly	
	Financial account of the balance of payments	Transactions in the financial account of the balance of payments.	Reports by the banks and companies to the Bank of Israel	Quarterly	
	International Investment Position (IIP)	Israel's assets and liabilities vis-à-vis abroad, and changes in the balances - net movements, price differentials, exchange rate differentials, and other changes.			
	External sector	Foreign exchange reserves	Total end-of-month balance	Bank of Israel	Monthly
			Currency composition of foreign exchange reserves (COFER)		Quarterly
Geographic composition of the reserves (SEFER)				Yearly	
Composition of reserves by asset (INFER)				Yearly	
External debt		External debt divided by type of asset, broken down by sector and term to repayment	Bank of Israel	Quarterly	
Representative exchange rates		Shekel exchange rate against various currencies and effective exchange rate	Bank of Israel	Daily	
Foreign exchange market		Trading volumes and opening balances of OTC foreign exchange and interest rate derivatives - reported to BIS	Reports by the banks and investment houses to the Bank of Israel	Three times a year	
Tradable securities	Israelis' holdings of foreign tradable securities, and Israeli securities held by nonresidents - CPIS	Reports by the banks and investment houses to the Bank of Israel	Semi-annually		
Direct investments	Nonresidents' direct investments in Israel and Israelis' direct investments abroad - CDIS Balances and transactions in Israelis' direct investments abroad and in nonresidents' direct investments in Israel. Reported to the UN Statistics Division.	Reports by the banks and companies to the Bank of Israel	Annually		

In addition, selected series on these topics are reported to the BIS each month. The series include data on debt in the economy—loans and bonds—by various segmentations, share indices, real data, monetary aggregates, interest rates and yields, exchange rates, and more.

disseminate reliable comprehensive data. The dissemination standard relates to selected series on four main sectors: real, fiscal, financial, and foreign. All of the data are made accessible and are published on a page dedicated to the topic on the Central Bureau of Statistics website.²

In February 2012, the IMF expanded the dissemination standard (SDDS Plus) in order to deal with information gaps that were uncovered during the Global Financial Crisis of 2008. SDDS Plus includes 9 additional subject areas in the four sectors listed, some of which are currently reported separately, and some of which have new reports: sectoral balance sheets, public sector accounts, public debt, nonbank financial institutions, financial soundness indicators (FSI), bond balances by issuing sector and holding sector, CDIS, CPIS, and COFER (Table 1). Israel is expected to join SDDS Plus in 2019.

3. A CLOSER LOOK AT SOME OF THE REPORTING FRAMEWORKS

3.1 Monetary and Financial Statistics (MFS)

In the years since the Global Financial Crisis of 2008, the leading international institutions (IMF, World Bank, OECD, and others) have done comprehensive, thorough, and methodical work to develop a coordinated and uniform data infrastructure of financial information at monthly frequency that will replace the partial quarterly reporting that had been done beforehand.

The MFS reporting framework includes balance sheet details of three sectors—central bank, banking system and money market funds, and “other financial institutions”, which are the institutional investors—as well as reporting on monetary aggregates and various interest rates in the economy.³

The reporting requirement is monthly, and includes balance sheet details by asset, currency, and counter-sector. The sectoral information is intended to enable decision makers to examine the effects of economic developments in each sector on the other sectors. Such information makes it possible, for instance, to analyze who holds liquidity in the economy, what sectors are leveraged and to what extent, what is each sector’s exposure to the activities of the other sectors, and so forth. Using this information, decision makers can analyze the risks from changes in the financial strength of each of the sectors and their effect on systemic stability, and respond in a timely fashion to developments in order to prevent or minimize contagion that can undermine the stability of the economy as a whole. The following is a list of the reports as part of the MFS, how they are calculated and their data sources:

Balance sheet of the central bank (Bank of Israel) (ISR report): The processing and production of the Bank of Israel’s balance sheet vis-à-vis counter-sectors was completed in 2008. Since then, the balance sheet is sent to the International Monetary Fund on a monthly basis.

Balance sheet of the banking system and money market funds (2SR report – Other Depository Corporation): The Bank of Israel’s Banking Supervision Department collects the monthly balance

² http://cbs.gov.il/reader/imf/dsbbisr_new.htm

³ For more information, see <https://data.imf.org/?sk=B83F71E8-61E3-4CF1-8CF3-6d7FE04D0930>

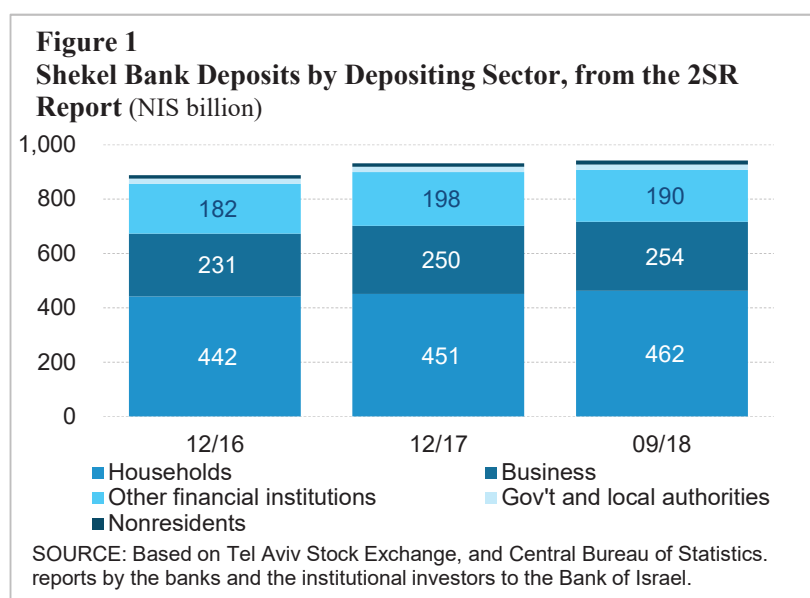
sheets of the banks in Israel. These balance sheets are the basis for reporting, but since they do not include a detailed sectoral breakdown, the estimates of each section are sorted and calculated. Money market fund data are taken from the reports published by the companies, which include detailed data on the funds' holdings of various assets.

Institutional investors' assets (4SR report): The Ministry of Finance and the Bank of Israel receive a detailed report from the institutional investors on their assets each month. In order to sort the hundreds of sections in the report by sector, comprehensive work is done to adjust the various asset items of the institutional investors to the report items required by the IMF. In some cases, estimates are calculated to overcome a lack of information.

Monetary aggregates (5SR report): A report that comprises Israel's monetary aggregates, particularly the broad monetary aggregate. Information in the report is taken from the 1SR and 2SR reports, and from other sources.⁴

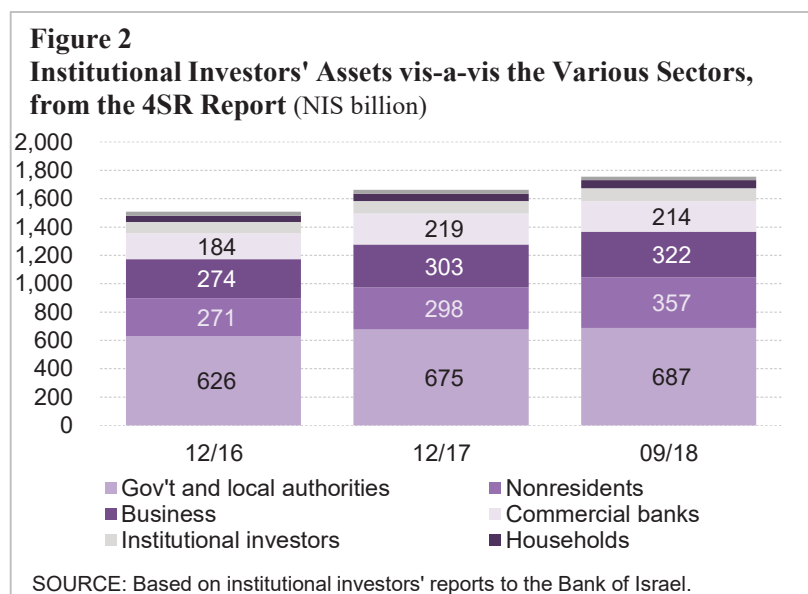
Interest rates and yields (6SR report): A collection of data that includes information on interest rates—the Bank of Israel rate, the interbank rate, the average rate on deposits and various types of credit (late-payment rate, ordinary unindexed rate, indexed and unindexed mortgage rates), and *makam* yields—and the Tel Aviv 125 share price index.

The set of sectoral MFS reports provides insights into the domestic financial system. Figure 1 shows the sectoral distribution of shekel deposits in the domestic banks, and shows the slow increase in the volume of deposits in all sectors in recent years, in view of the low interest rates in the economy.



⁴ For more information, see: https://www.boi.org.il/en/NewsAndPublications/RegularPublications/Documents/StatBulletin2015/money%20aggregate_chap%20b-2015.pdf

Figure 2 shows institutional investors' investments by counter-sector, from which we can see that about 40 percent of their investments are vis-à-vis the government of Israel, meaning government debt to the institutional investors, about 20 percent are vis-à-vis abroad, and about 18 percent are vis-à-vis the business sector.



3.2 Financial Soundness Indicators (FSI)

Due to the tremendous importance of monitoring the financial system and the risks that have systemic influence, the IMF developed Financial Soundness Indicators in 2000, with the aim of supporting macroprudential analysis and assisting informed decision-making based on reliable, up-to-date data that can help evaluate the strength of the financial system. The FSIs are comprised of 40 indicators that are used as measures of the financial strength of the various institutions in a country: financial institutions—banks and institutional investors—as well as businesses and households. The indicators include aggregate information on the institutions, as well as information on the various domestic markets in which the institutions operate.

The IMF developed a broad and in-depth method for calculating the indices, which is detailed in a special guide, and the Information and Statistics Department operates according to the definitions set out in the guide.⁵

The 40 indicators, which are calculated at a quarterly frequency, are divided into two groups—a core set that includes 12 indicators, and a recommended set that includes the

⁵ <https://www.imf.org/external/pubs/ft/fsi/guide/2006/index.htm>

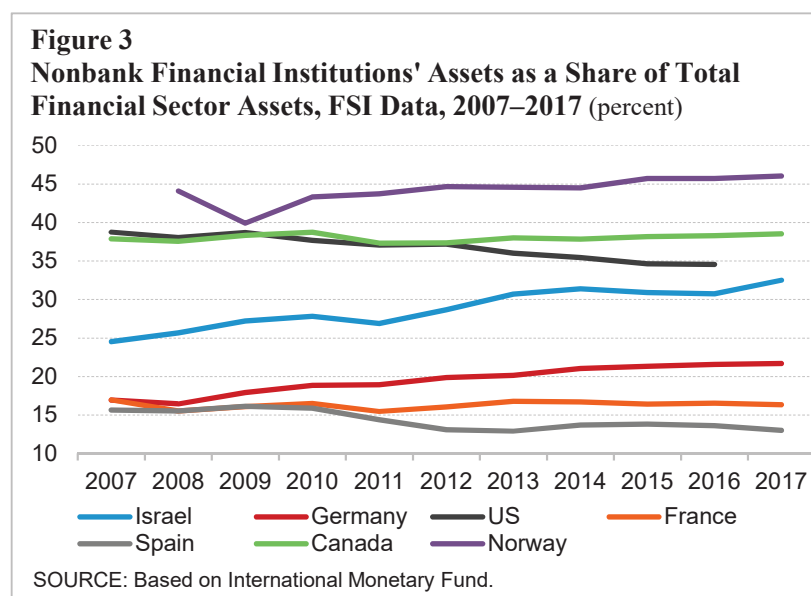
Table 2: Israel's Financial Soundness Indicators, 2016–18 (percent)

Core set - banking system	2016:Q4	2017:Q4	2018:Q2
Minimum capital ratio	14.7	14.5	14.1
Initial capital ratio for risk components	10.9	11.1	10.9
Ratio of debt for which there is no loan loss provision to capital	2.2	0.8	0.7
Ratio of gross nonperforming debt to total gross credit	1.6	1.3	1.3
Bank credit: Total Israelis	91.7	92.3	92.3
of which: To other financial institutions	4.6	4.6	4.5
To the public sector	3.2	3.2	3.2
To the nonfinancial banking sector	35.8	36.0	36.5
To households	48.1	48.4	48.0
Bank credit: Total nonresidents	8.3	7.7	7.7
Return on assets	1.0	1.0	1.0
Return on equity	13.9	13.8	14.0
Financing profit as a share of total pre-tax income	58.6	61.7	63.2
Ratio of nonfinancing expenses to total pre-tax income	67.1	65.5	64.3
Liquid assets as a share of total assets	24.5	24.1	22.8
Ratio of liquid assets to liquid liabilities	135.3	124.8	125.5
Ratio of net foreign exchange position to capital	-65.6	-55.4	-54.2
Recommended set - banking system			
Ratio of equity to assets	7.2	7.4	7.4
Exposure to large borrowers as a share of capital	323.4	312.2	...
Share of credit issued to Israeli residents	83.8	...	84.6
Share of credit issued to advanced economies	15.6	...	14.8
Share of credit issued to developing economies	0.7	...	0.6
Ratio of gross derivatives position to capital, assets side	29.5	26.5	27.7
Ratio of gross derivatives position to capital, liabilities side	30.5	26.7	25.8
Trading income as a share of total pre-tax income	5.3	5.2	...
Manpower and peripheral expenses as a share of total nonfinancing expenses	58.0	57.8	52.8
Gap between the interest on credit and the interest on deposits	3.0	3.1	...
Spread between the highest and lowest interest rates in the interbank market	...	...	...
Ratio of the public's deposits to total gross credit	121.6	121.5	119.2
Foreign exchange credit as a share of total gross credit	11.4	10.3	11.5
Foreign exchange liabilities as a share of total liabilities	25.9	23.3	24.1
Ratio of net position in shares to equity	3.8	5.2	4.5
Recommended set - nonbank financial institutions			
Assets as a share of financial sector assets	30.8	32.6	32.9
Ratio of assets to GDP	140.4	149.8	150.4
Recommended set - business sector			
Ratio of debt to equity	190.5	204.6	198.3
Return on equity	10.9	1.7	6.7
Ratio of total operating profit to net financing expenses	233.3	38.8	144.7
Exposure to foreign exchange as a share of capital	...	...	...
Number of bankruptcies	...	...	...
Recommended set - households			
Bank credit to private individuals as a share of GDP	41.2	41.8	42.0
Debt servicing as a share of disposable income	...	...	...
Recommended set - liquidity in the markets			
Average BID-ASK spread in the bond market	0.029	0.026	0.029
Turnover rate in the bond market	0.500	0.317	0.401
Recommended set - the real estate market			
Index of owner-occupied home prices	5.7	1.4	-0.5
Index of income-producing real estate prices	...	...	...
Bank housing credit to private individuals as a share of total bank credit	35.4	35.4	35.4
Bank real estate (including income-generating) credit as a share of total bank credit	13.4	14.2	14.6

other 28 indicators. The IMF's goal is that the countries should report at least on the core set. The Bank of Israel calculates 35 indicators, reports on them to the IMF, and publishes them on the Bank's website.⁶ Other than the indices themselves, additional data are calculated, including the aggregate balance sheet and profit and loss statement of the banking system. There are also comprehensive and uniform meta-data for all reporting countries, to enable uniform and consistent international comparisons. The information on all countries is available on the IMF's website.⁷

Table 2 presents all the indicators at three time points, and shows improvement in the banking system's financial stability indices in the past two years. This is reflected in a decline in the volume of problematic credit, improved profit margins, and a decline in exposure to large borrowers alongside an increase in credit to the nonbank business sector and to households.

An international comparison of the financial stability indicators shows that the assets of the nonbank financial institutions (institutional investors and mutual funds) as a share of financial sector assets in Israel is in the middle of the range of selected countries, and has been consistently increasing in recent years (Figure 3).⁸

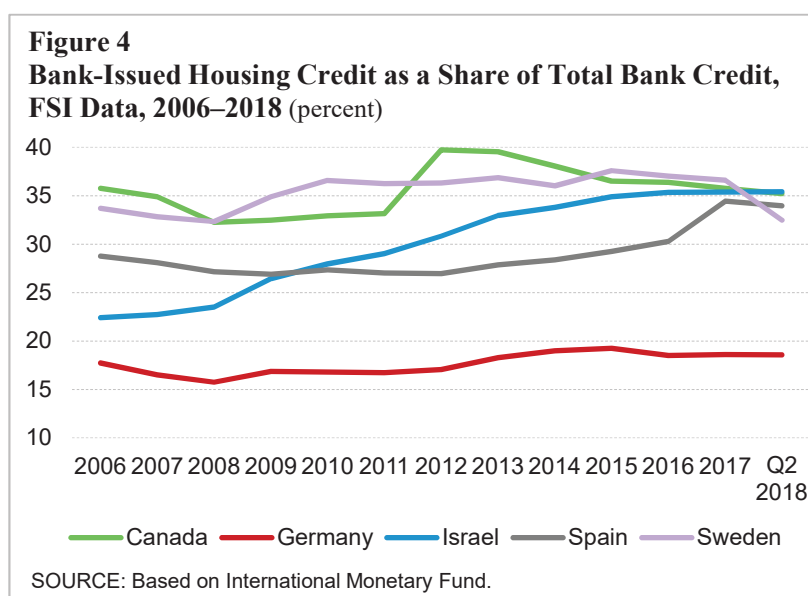


⁶ The other five indicators are not calculated due to a lack of data.

⁷ <http://data.imf.org/?sk=51B096FA-2CD2-40C2-8D09-0699CC1764DA>

⁸ For an international comparison of the Global Financial Crisis's effects on Israel's relative position, see Rosenman, D. (2014), "Changes in the indicators of the Israeli economy compared to the OECD", Bank of Israel. <http://www.boi.org.il/en/Research/Pages/occasional-pp1405.aspx> (in Hebrew).

Figure 4 shows, through an international comparison of housing credit to individuals as a share of bank credit, that as a result of developments in the housing market in the past decade, the weight of housing credit in Israel, which was relatively low in 2006, has been increasing consistently, reaching about 35 percent of total credit in the past two years, similar to, and even slightly higher than, the rates in Canada, Switzerland, and Spain. In contrast, the weight of housing credit in Germany is significantly lower.



3.3 Coordinated Portfolio Investment Survey (CPIS)

The Coordinated Portfolio Investment Survey (CPIS) is a report to the IMF regarding financial investments in securities—both Israeli investments abroad (assets) and nonresidents' investments in the Israeli economy (liabilities). The report contains a number of indices: the State (in which the economy invests and that which invests in Israel); the investment currency; the investing or invested-in sector (financial, nonfinancial business, institutional investors, households, or government); and the type of asset (bonds or shares). Thus, the report makes it possible to monitor a variety of systemic risks derived from exposures to market risks, currency risks, or country risks.

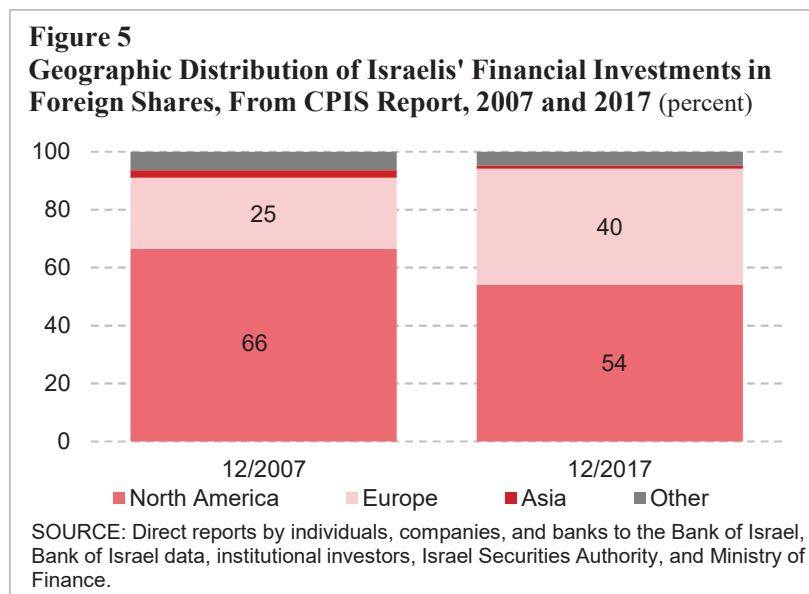
The report is currently semi-annual, and in the near future, it will become part of the SDDS Plus framework to which Israel is expected to move during 2019. The report is submitted about half a year after the end of the half-year to which it relates.

Table 3: Israelis' financial investments abroad
 CPIS - Reported Portfolio Investment Assets by Sector of Holder and Economy of Nonresident Issuer, December 2017 (Equity, end-of-period, \$ million)

Investment in:	Total	Banks	Other financial institutions	of which:		Nonfinancial companies, households, and non-profit organizations	of which:		
				Insurance companies and pension funds	Other		Nonfinancial business corporations	Households	Non-profit organizations
Australia	80		44	43	1	36	4	32	
Austria	190		176	167	9	14	4	10	
Belgium	38		27	17	10	11	1	10	
Canada	356		275	263	12	81	18	63	
Cayman Islands	123		89	89		34	13	18	3
China, P.R.: Hong Kong	207		191	149	42	16	5	11	
Denmark	13		9	4	5	4	1	3	
Finland	17		13	9	4	4	1	3	
France	3,487	2	2,952	2,894	58	533	217	308	8
Germany	4,369	15	3,634	3,336	298	720	228	473	19
Ireland	2,910		2,579	2,532	47	331	74	226	31
Italy	223		180	152	28	43	4	39	
Japan	501		481	408	73	20	9	11	
Luxembourg	10,350		9,671	9,649	22	679	194	463	22
Netherlands	441	1	301	275	26	139	39	100	
Norway	11		5	1	4	6	2	4	
Singapore	13	1				12	1	11	
Spain	164		123	106	17	41	17	24	
Sweden	117		58	50	8	59	4	55	
Switzerland	543		294	275	19	249	21	224	4
United Kingdom	8,405	4	6,776	6,542	234	1,625	873	743	9
United States	41,971	3	21,467	19,540	1,927	20,501	6,664	13,660	177
Virgin Islands, British	30		16	16		14	6	6	2
Not Specified	3,637		2,050	1,653	397	1,587	949	623	15
World	78,224	26	51,424	48,176	3,248	26,774	9,354	17,130	290

Table 3 presents Israelis' financial investments in foreign shares, divided by investor's sector and the country in which the investment is made.⁹

Figure 5 shows the development over time of the geographic distribution of Israel's total assets abroad in tradable shares, from which we can see that in the past ten years, the geographic distribution of this asset portfolio has increased, while the weight of investments in North America has declined in favor of investments in Europe. At the end of 2017, 54 percent of the portfolio was invested in North America (the vast majority in the US)—a significant decline compared with 2012 when it was 66 percent. At the same time, the weight of investments in Europe increased from about 25 percent in 2012 to about 40 percent at the end of 2017.



4. CONCLUSION

This work outlines the reports that the Bank of Israel submits to the international institutions directly or through the Central Bureau of Statistics, and discusses some of them, which serve as a significant reporting framework, in depth.

These reports require a lot of input, through the gathering, processing, and on-going adjustment of data to changing international standards, but they generate great benefit, since they provide policy makers and researchers in Israel and abroad with a very broad set of up-to-date data on a variety of fields of activity—real, fiscal, financial and monetary. These data enable decision makers to monitor the links between the domestic sectors, and those between the Israeli and foreign economies. They also help them obtain important insights from the international comparisons.

⁹ For editing purposes, the Table was narrowed to just the countries for which data are higher than 10 million. As such, individual figures may not add up to the total shown. The IMF's database contains data on all of the countries and regions of the world, totaling close to 200.

The reports to the international organizations also provide a benefit to those producing the data and generating the reports: In the course of studying the methodological frameworks for the reports, they increase their proficiency in the economic ties among the various sectors and the relationships among the range of economic subject matter. The international institutions hold regular conferences and seminars that include discussions of methodological issues concerning the data, which enable colleagues from participating countries to learn from each other.

The publication of these reports together on the websites of the international organizations also provides the broad public, researchers, and analysts around the world with easy access to the main economic data on each economy.