The Knesset

Research and Information Centre,

Budget Control Department

The Implications of the Strengthening of the Shekel on the Economy, And an Analysis of Policy Tools

Submitted to the Finance Committee

March 19, 2017 **Writing: Victor Fatal, Itamar Millard, Economists**

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This document was prepared at the request of MK Tamar Zandberg, towards a discussion in the Knesset Finance Committee on Mach 21, 2017 on "The strengthening of the Shekel and the implications on the Israeli economy - the policies of the Bank of Israel and the Ministry of Finance". This document will present a description of the economic environment (GDP, exports, imports and the labour market), the change in the rate of the Shekel compared to other currencies, implications of the strengthening of the Shekel, and the policy tools used by the Bank of Israel, including foreign exchange purchases, and the Ministry of Finance.

1. The Economic Environment

1.1. The Gross Domestic Product (GDP)

Table 1 below provides details on the growth rates of GDP by components, in the years 2011 to 2016

Table 1 - rate of change in the components of GDP for the years 2011-2016 (real terms)[1]

Year	Private consumption	Public consumption	Investment in fixed assets	Exports of goods and services	GDP	GDP Per capita
2011	3.6%	2.4%	14.9%	9.5%	**5.1%**	**3.1%**
2012	2.9%	3.7%	6.6%	-1.9%	**2.4%**	**0.5%**
2013	3.8%	3.5%	0.3%	3.6%	**4.4%**	**2.4%**
2014	4.3%	3.7%	3.5%	1.4%	**3.2%**	**1.2%**
2015	4.3%	3.3%	3.0%	-4.3%	**2.5%**	**0.5%**
2016	6.3%	3.8%	7.2%	3.0%	**4.0%**	**2.0%**

It emerges from the data in the above table that **GDP in the year 2016 increased by 4%** compared to the previous year. For the sake of comparison, in the OECD states the GDP increased, on average, by 1.7%. In the comparison of GDP per capita, the gap diminishes in the growth of GDP compared to the OECD due to the higher birth rates in Israel - 2% growth in Israel compared of 1.1% in the OECD. It emerges from the data published by the Central Bureau of Statistics (CBS), based on seasonally adjusted data on the development of GDP by quarters, that in the fourth quarter of 2016 GDP grew by 6.5% based on an annual calculation,[2] compared to growth by 3.5% in the first quarter, 5.3% in the second quarter, and 4.1% in the third quarter.

Private consumption, whose weight stood in 2016 at around 52% of GDP, was the main growth engine, with a quantitative increase of 6.3%, the highest increase in the period examined. However, the local

[1] The Central Bureau of Statistics, *notice to the media - Israel's national accounts for the year 2016*, Table 1. March 9, 2017. (Unless otherwise indicated, all publications are in Hebrew)

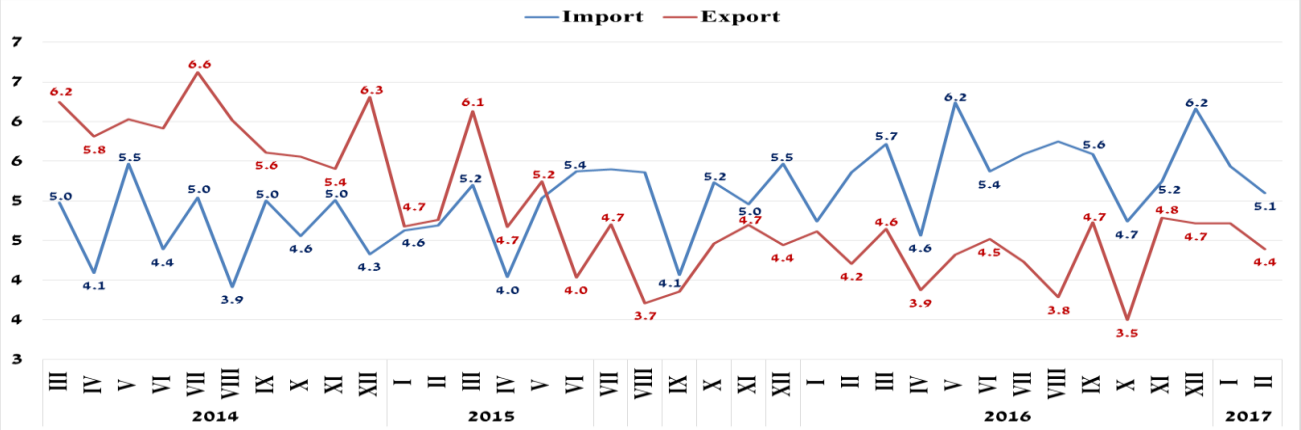
[2] A significant part of the growth in the last quarter of 2016 is the result of the enhanced import of motor vehicles.

added value of this component is partially offset (since a significant part of private consumption is of imports), and consequently its effect on employment is partial. In public consumption, since 2012 the growth rate remained at a range of 3 to 4 percent. The 3% growth in exports also contributed to the rise in GDP, following a fall of 4.3% in 2015. The weight of exports in GDP was around 31%, and has relatively high domestic added value.[3]

1.2. The development of exports and imports

Chart 1 below presents data for the export and import of goods in the last three years.

Chart 1 - Export and import of goods from March 2014 to February 2017 (in billions of Dollars)[4]



It emerges from the data on the chart that the export of goods fluctuated in recent years between around 3.5 billion Dollars to around 6.6 billion Dollars per month, and that imports fluctuated between around 3.9 billion Dollars to around 6.2 billion Dollars per month. In addition, it emerges that the direction of the changes in the export and import of goods are usually similar in recent years, despite occasional changes in the rate of exchange of the Shekel compared to the Dollar and the Euro (see article 2 below). It is possible to see that in the export of goods there is a decline in mid-2015, followed by stability, while in the import of goods there is a trend of increase in recent years. Similar findings emerge from a study prepared in the Interdisciplinary Centre in Herzliya, in which export and import data were examined over years, and it was found that the directions of change are similar, and that the level of correlation between them is significantly high.[5]

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[3] It should be noted that the ratio between exports to GDP can be misleading, since exports are measured as **gross income**, in other words including imported components, while GDP is measured in terms of **added value,** in other words with the deduction of the import components. Exports can be measured in terms of added value by deducing the imported components. In such a measurement the rate of exposure of the GDP to a change in exports is lower.

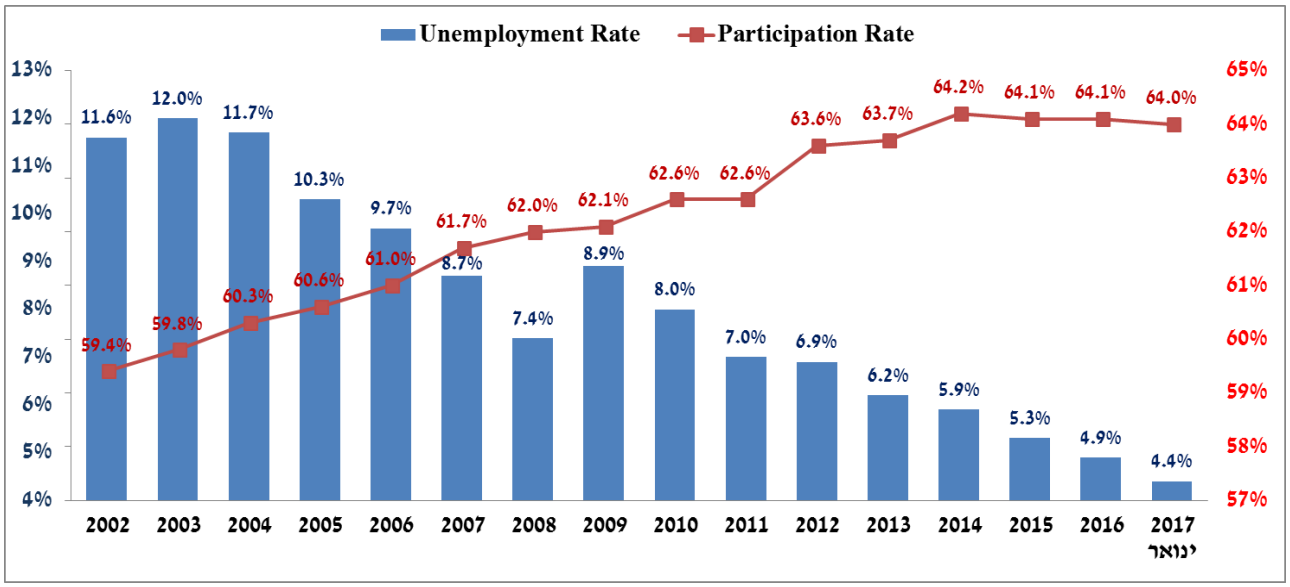
[4] The Central Bureau of Statistics, *Notice to the media - Israel's Foreign Trade*, various months, original data. Accessed: March 19, 2016.

[5] The Interdisciplinary Centre Herzliya (IDC), *Does the encouragement of Capital Investments Law contribute to the economy and to the society, and achieve its declared goals?* Assaf Zimring and Omer Moav, October 2015.

1.3. Rates of participation in the workforce, and rates of unemployment

According to the data of the CBS, in the last decade a significant increase took place in the labour market, which manifests itself in the addition of hundreds of thousands new work places, a steep decline in unemployment rates (the rate of those not employed) to an historic low, and a steep rise in the rate of participation in the workforce.[6] Chart 2 presents the rates of participation and the rates of unemployment in the labour market as of the age of 15.

Chart 2 – Participation and unemployment rates in the labour market (ages 15 and above)[7]



It emerges from the data on the chart that the rate of participation in the labour market (ages 15 and above) grew from 59.4% in the year 2002 to a level of 64% in January 2017. In addition, **the rate of participation of the main working ages, 25-64, reached 80.1% in January 2017, and the rate of unemployment fell to 3.7%.**[8] It also emerges from the data on the chart that the unemployment rate in the population of working age fell from 11.6% in 2002 to 4.4% in January 2017. These data indicate a significant increase in the labour market in the last decade.

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[6] **The rate of participation in the workforce**: the rate of those participating in the labour market (those employed and those not employed, who are actively searching for employment) within the population of working age (ages 15 and over). **The rate of unemployed:** the rate of those unemployed among the participants in the labour market (employed and unemployed), in other words, whoever is actively searching for employment, but is not employed. The rate of those not employed in this document, is termed "the level of unemployment". However, according to the definition of the National Insurance Institute (NII), an unemployed person is a person, who is not employed, who presents himself as unemployed at the Employment Service Bureau, which submits data to the NII.

[7] The Central Bureau of Statistics, *Monthly surveys of manpower January 2017*, Table 1, February 23, 2017.

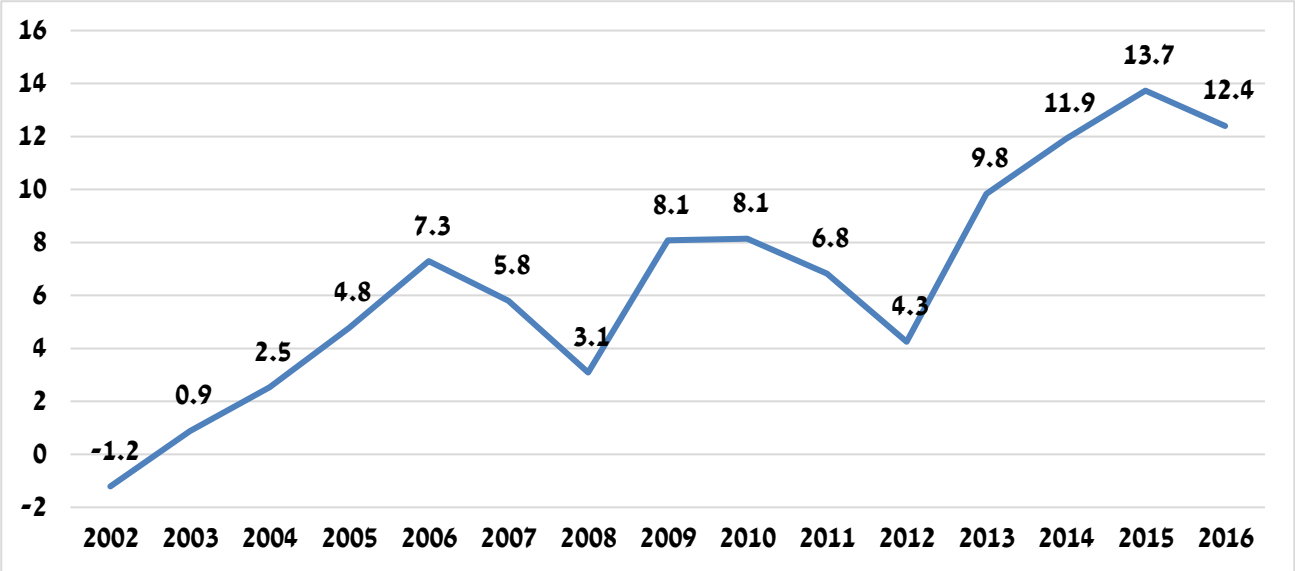
[8] Ibid. table 7, February 23, 2017 (Hebrew).

2. Balance of Payments and the Trend of the Shekel's Strengthening[9]

2.1. The balance of payments

The balance of payments is the difference between the payments abroad and receipts from abroad. Four streams are included in the balance: **the balance of goods** (the exports of goods less the import of goods), **the balance of services** (the export of services less the import of services), **primary revenue balance (**the balance resulting from work and income from financial investments), and **secondary revenue balance** (the balance resulting from current transfers). The meaning of a positive balance is that the total of revenue coming in is higher than the total payments going out.[10] Chart 3 below presents the surplus/deficit in the balance of payments in recent years.

Chart 3 - the surplus/deficit in the balance of payments (billions of Dollars, 2002-2016)[11]



It emerges from the data on the chart that in 2016 the surplus stood at **12.4 billion Dollars**, and that the peak of the surplus occurred in 2015, in which the surplus stood at 13.7 billion Dollars. The trend of the balance of payments surplus is upwards in these years, excluding several significant declines in some of the years.

Chart 4 below presents the components of the surplus in the balance of payments.

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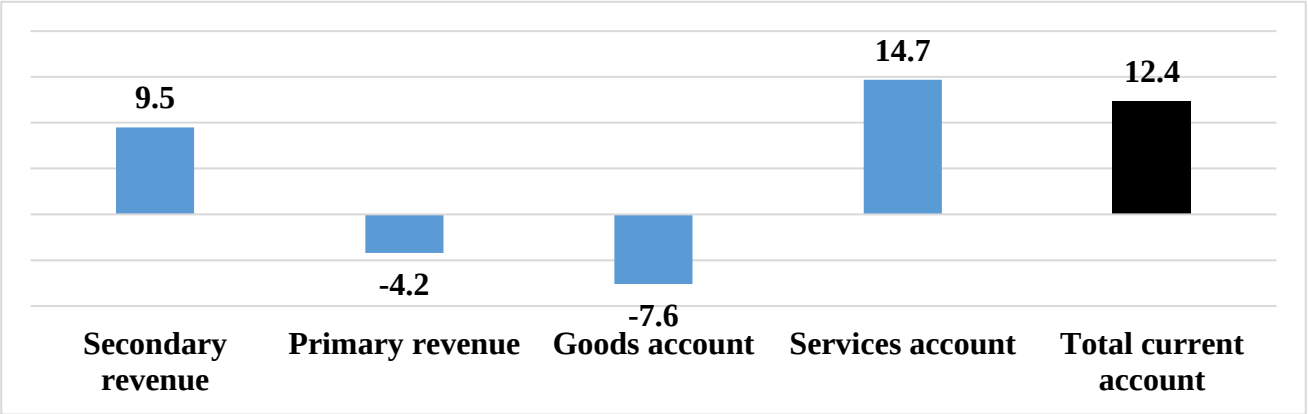
9 Bank of Israel, Markets, Representative rates of exchange, (Hebrew) entry March 16, 2017

10 Itamar Milard, Macro-economic glossary, the Knesset Research and Information Centre, January 2013 (Hebrew).

11 The CBS, *Summary of the balance of payments of Israel for 2016*, March 8, 2017.

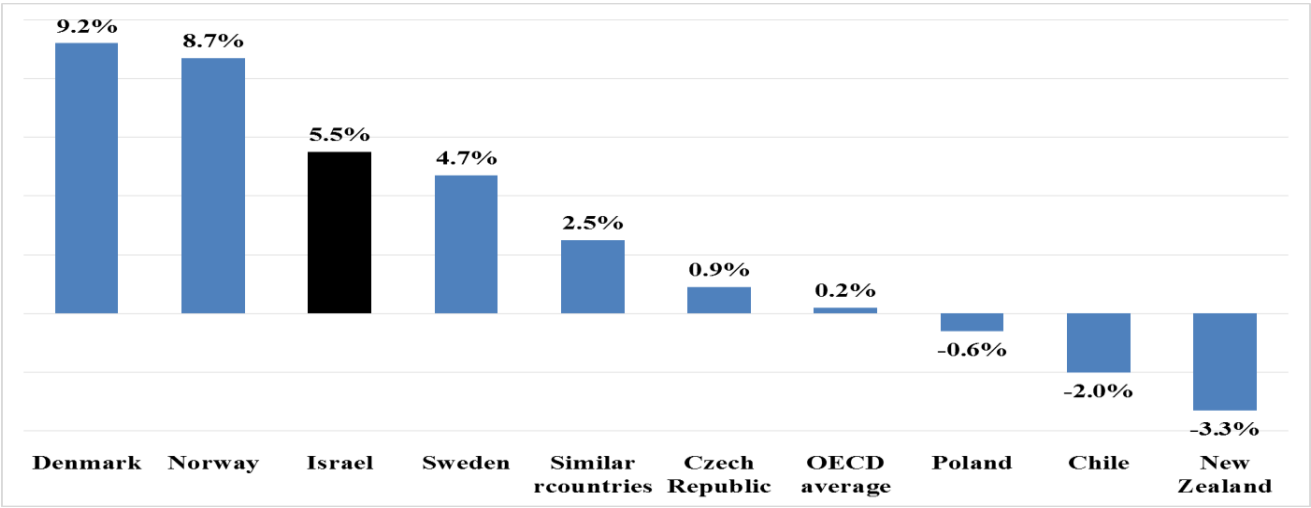
Chart 4 - the components of the balance of payments surplus (billions of Dollars, 2016)[12]



It emerges from the data on the chart that an examination of the components of the surplus in the balance of payments in 2016 demonstrate that the surplus in the services account (the export of services less the import of services) stood at **14.7 billion Dollars**, the surplus in the revenue account (primary and secondary) stood at **5.3 billion Dollars**, and the deficit in the goods account stood at **7.6 billion Dollars.**

Chart 5 below presents the surplus in the balance of payments as a percentage of GDP in Israel, in developed countries, the average in states with economies similar to that of Israel[13], and the average in the OECD states.

Chart 5 - Surplus in the balance of payments as a percentage of GDP (2015)[14]



[12] Ibid.

[13] Denmark, Poland, the Czech Republic, Norway, Sweden and New Zealand.

[14] OECD, OECD DATA: Current account balance, Accessed: March 16, 2017.

It emerges from the data on the chart that in Israel the balance of payments surplus stood at around 5.5% of the GDP. This surplus as a percentage of GDP in higher than the average surplus in similar countries (around 2.5%) and the average in OECD states (0.2%).

These data demonstrate that in the last decade there is a surplus in the balance of payments that creates pressure to appreciation of the Shekel's exchange rate.

2.2. The change in the Shekel's exchange rate

In Table 2 below the rates of exchange of the Shekel in opposite of Israel's main trading currencies (Dollar, Euro and Sterling) and opposite the currencies of countries similar to Israel (open, small economies such as Sweden, Norway and Denmark).

Table 2 - changes in the exchange rate of the Shekel vs other currencies in the last two years[15]

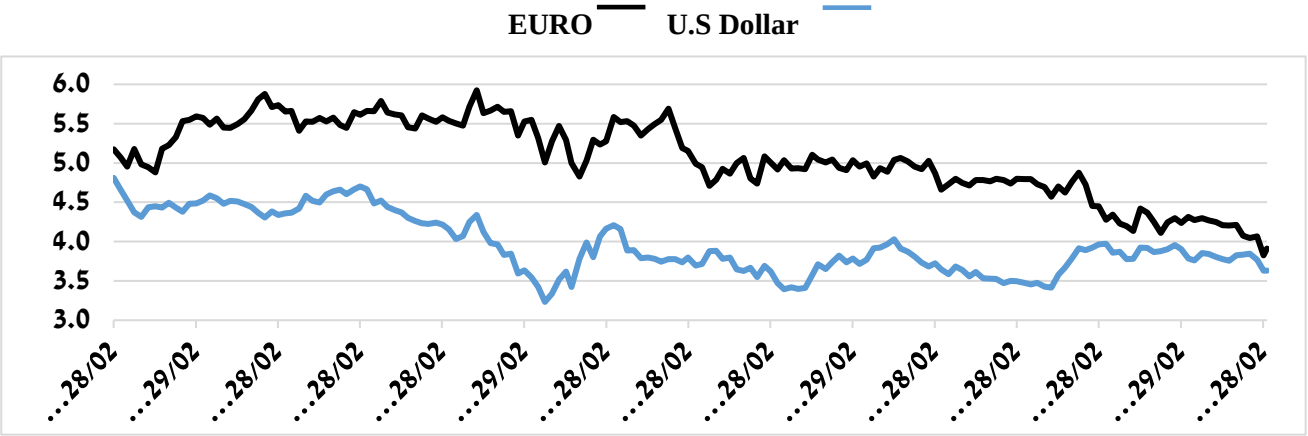
Date	U.S. $	U.K. £	Euro €	Swedish SEK	Norwegian NOK	Danish DKK
16.3.2015	4.019	5.946	4.238	0.4631	0.4882	0.5677
15.3.2016	3.891	5.5166	4.3255	0.4677	0.4552	0.58
15/3/2017	3.658	4.4618	3.8874	0.4068	0.4257	0.5229
Change 3.2015-3.2017	-9.0%	-25.0%	-8.3%	-12.2%	-12.8%	-7.9%
Change 3.2016-3.2017	-6.0%	-19.1%	-10.1%	-13.0%	-6.5%	-9.8%
Change from beginning 2017	-5.2%	-5.8%	-3.0%	-3.3%	-4.4%	-3.0%

It emerges from the data in this table that in the last two years the Shekel strengthened opposite all the currencies examined, and that the strengthening even increased from the beginning of 2017. The exchange rate of the Shekel strengthened at a rate of 5.2% opposite the Dollar from the beginning of 2017, with the strengthening found also in relation to the currencies of similar countries.

Chart 6 below shows the development of the Shekel's rate of exchange compared to the Dollar and the Euro in the last 15 years.

[15] Bank of Israel, *Exchange Rates*. Accessed: March 19, 2017.

Chart 6 - the rates of exchange of the Shekel compared to the Dollar and the Euro (March 2003 to March 2017,)



The data on the chart indicates that in the last 15 years an appreciation of the Shekel opposite both the Dollar and the Euro occurred. Thus, the rate of exchange of the Shekel stood in March 2003 at 4.81 Shekels per Dollar, and stands today at 3.63 Shekels per Dollar (an appreciation at a rate of around 24.5%), and the exchange rate of the Shekel stood in March 2003 at around 5.2 Shekels per Euro, while in March 2017 is stood at 3.8 Shekels per Euro (an appreciation at a rate of around 26.1%). It should be noted that at the end of February 2017 it is the lowest exchange rate of the Shekel opposite the Euro in the last 15 years, but not at the lowest exchange rate of the Shekel opposite the Dollar in the last 15 years (the exchange rate of the Dollar stood at 3.23 in May 2008).

2.3. Main implications of the strengthening of the Shekel

The strengthening of the Shekel has complex, and frequently contradictory, implications on the Israeli economy, and especially on Israeli industry. Following is a short description of the effect of the strengthening of the Shekel on exporters and importers in the short term.

The appreciation of the local currency leads to a decline in the **exporters'** profitability, since they receive their return in foreign currency, while a significant part of their expenses, such as salaries, are made in Shekels. On the other hand, part of their expenses are made in foreign currency, such as the purchase of raw materials, machines and equipment, and consequently the effect is offset. The effect on the **importers** is the exact opposite - the purchase of goods and services is made in foreign currency, while the return is made mostly in Shekels, and therefore the strengthening of the Shekel affects their profits positively. On the other hand, part of their expenses are made in Shekels, as for example salaries, and consequently the effect is offset. Table 3 below describes the effect of the strengthening of the Shekel on the profitability of the business sector

Table 3 - The effect of the strengthening of the Shekel on the profitability of the business sector in the short term

Purchases/Sales	Sales in Shekel	Sales in foreign currency
Purchases in Shekel	There is no direct effect on the rate of profitability.	A decline in the rate of profitability. The effect is primarily on exporters depending on domestic added value.[16]
Purchases in foreign currency	Growth in the rate of profitability. The effect is primarily on importers and companies that purchase inputs in foreign currency, and sell outputs in shekels, such as communications companies.	The effect depends on the rate of differences between foreign currencies in which transactions are carried out.

3. Policy Tools

It is possible to divide the policy tools into two types:

- **Policy tools that directly affect the exchange rate.** These tools are designed to affect the exchange rate of the Shekel in the short term. They include direct intervention in the foreign exchange market, changes in the interest rate of the central bank, and additional tools.
- **Policy tools that affect the results of the strengthening of the Shekel.** These tools are designed to improve the competitiveness of the Israeli market in face of the strengthening of the Shekel in the long term, especially by means of state budgets and tax policy.

3.1. Policy tools that directly affect the exchange rate

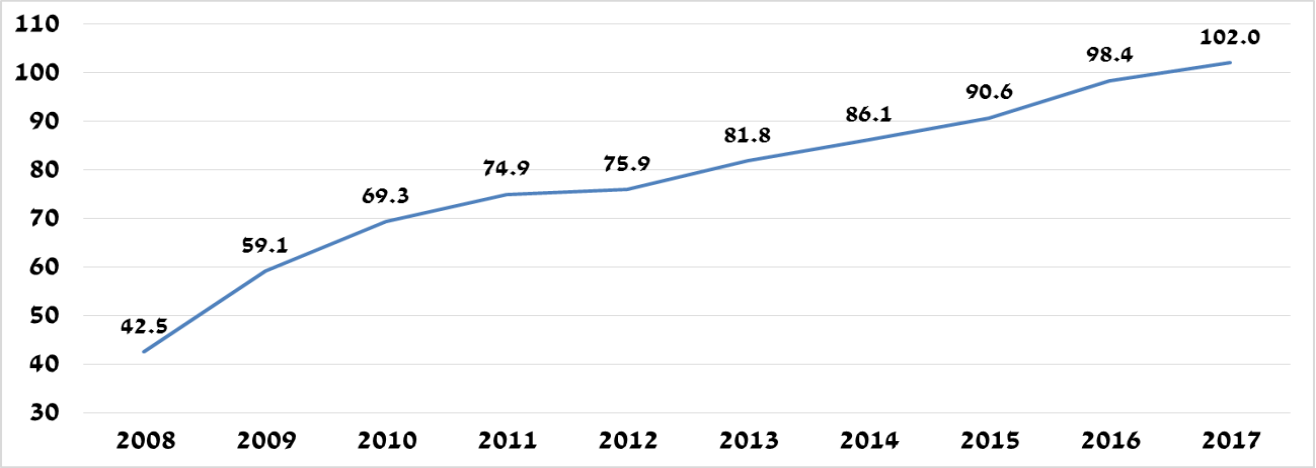
In accordance with the Bank of Israel Law-2010, the Bank has three goals: to maintain price stability; to support other goals, especially growth, employment and the reduction of social gaps (without effecting the goal of price stability); maintenance of the stability of the financial system. Attaining these goals is performed primarily by means of setting short term interest rates on a monthly basis. The Bank also operates directly in the foreign exchange market by means of purchasing and selling foreign currency.

[16] **Domestic added value**: the salary and the profit component of domestic production, i.e. output without the import components.

3.1.1. Foreign currency purchases

As stated above, one of the tools used by the Bank of Israel in recent years is the purchase of foreign currency, in order to weaken the foreign exchange rate of the Shekel. Significant purchases of foreign currency create pressure to weaken the Shekel's rate of exchange. Chart 7 below presents the foreign currency reserves of the Bank of Israel in the last decade, at the end of every year until February 2017.

Chart 7 - the development of Israel's foreign currency reserves (in billions of U.S. Dollars)[17]



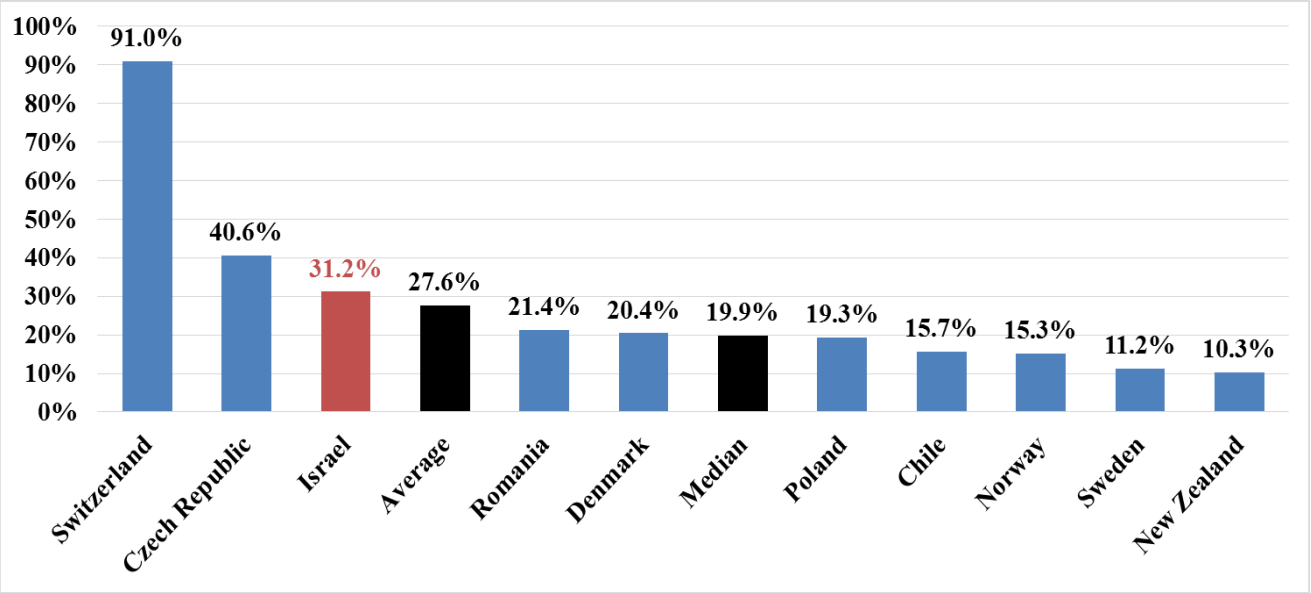
It emerges from the data on the chart that during the last decade the foreign exchange reserves of the Bank of Israel grew from around 42.5 billion Dollars to around 102 billion Dollars - a cumulative increase of around 140%. It should be noted that changes in the foreign exchange reserves might result from purchases or sales, or from returns or revaluation of existing foreign exchange reserves. The rise in 2016 was caused primarily as a result of foreign exchange purchases by the Bank of Israel, which totalled to around 6 billion Dollars.[18]

Chart 8 below displays a comparison between the rate of foreign currency reserves from GDP in Israel and the compared states. The compared states presented are economies whose GDP is relatively similar to that of Israel (except for Switzerland and Sweden), with relatively open economies, and with an independent currency (not the Eurozone countries).

[17] **2008-2015:** Bank of Israel, *Reports on foreign exchange reserves*, various years; **2016-2017:** Bank of Israel, *Foreign exchange reserves in the Bank of Israel for February 2017*, March 7, 2017. The level of reserves over the whole survey period includes allocations of drawing rights by the IMF for members of the Fund (SDRs Allocations) and balance in the Fund (Reserve Tranche).

[18] Bank of Israel, *Investment of foreign exchange surplus - report for 2016*, March 2017.

Chart 8 - Rate of foreign currency reserves from GDP (end of 2016, in billions of U.S. Dollars)[19]



It emerges from the data on the chart that the rate of foreign currency reserves from GDP in Israel in 2016 stood at around 31.2%, which is high compared to the average of the compared states (27.6%) and compared the median in the compared states (19.9%).

According to the monetary policy report of the Bank of Israel for the second half of 2016, one may attribute a significant part of the revaluation of the Shekel opposite the Euro in the last months to the monetary expansion in Europe. It should be noted that the interest rate in the Eurozone for bank deposits is negative,[20] so that in order to continue with the monetary expansion, the Central European Bank follows a policy of "quantitative easing" - i.e. purchases of bonds by the Central Bank in the markets with the goal of increasing the quantity of the money. This policy has led to the weakening of the Euro opposite other currencies, including the Shekel. Other states in Europe, such as Switzerland and Sweden were forced to adopt a similar policy, including foreign currency purchases.[21]

According to the Governor of the Bank of Israel, based on the principles approved by the Bank's Monetary Committee, an appropriate level of foreign exchange reserves is a level that enables the Central Bank to realize the goals of the public policy that were defined for it. The range of the appropriate set in 2015 by the Governor is **70 to 110 billion Dollars that are equal to around 21%**

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[19] **Reserves**: **C**entral **I**ntelligence **A**gency, The World Factbook, Reserves of Foreign Exchange and Gold, accessed: 16th March 2017; **GDP**: **I**nternational **M**onetary **F**und, World Economic Outlook Database, accessed: 15th March 2017. IMF data are approximate data due to forecasts done towards the end of 2016 for the end of the year.

[20] The Central European Bank, *Interest rates for March 16, 2017.* Accessed: March 20, 2017.

[21] Bank of Israel, *Monetary policy report for the second half of 2016*, February 2017.

to 34% of the GDP.[22] The level of reserves today, which is around 102 billion Dollars, is close to the ceiling of the appropriate range.

It should be noted that in the period 1999 to March 2008 the Bank of Israel did not intervene in the foreign exchange market. In March 2008 intervention in the foreign exchange market began, at first in sums that were determined in advance for daily purchases, and as of August 2009 the Bank started to purchase foreign currency according to its discretion in varying sums. At the beginning of 2013, upon the beginning of the production of natural gas from the Tamar field, the Bank of Israel announced a plan for additional purchases, with the goal of offsetting the effects of the natural gas on the appreciation of the Shekel.[23]

It emerges from the data presented above that in recent years the Bank of Israel increased its foreign exchange reserves sharply in face of the strengthening of the Shekel. However, it also emerges from the data presented above that the purchase of foreign currency by the Bank of Israel did not stop the continued strengthening of the Shekel, though one may assume that it restrained the trend, which might bear witness on the strength of the currency flows that are still strengthening the Shekel.

An updated study by the Bank of Israel examined whether the Bank's intervention in the foreign exchange market contributed to a depreciation of the rate of exchange, or alternatively, slowed down the appreciation trend. It emerged from the study that in the period from September 2009 to the end of 2015, **every purchase of 100 million Dollars contributed to a depreciation at a rate of 0.07-0.09% in the rate of the Shekel,** assuming that the rest of the affecting factors were constant.[24]

As a result of the purchases of foreign currency the assets and liabilities of the Bank of Israel in its overall balance grew. The increase in the balance usually takes place in the balance of assets in foreign currency, and in the expansion of liabilities in the domestic currency (including short term loans). Table 4 below presents the balance of the Bank's assets and liabilities in the years 2007 and 2015.

[22] Bank of Israel, *Investment of foreign exchange reserves report 2016*, March 2017.

[23] Bank of Israel, *Bank of Israel will purchase foreign exchange in order to offset the effect of the gas production in Israel on the rate of exchange*, May 13, 2013.

[24] For further details see: Bank of Israel, Notice to the press: *A new study in the Bank of Israel: the causes for the intervention of the Bank of Israel in the foreign exchange market, and the effect of the intervention on the rate of exchange*. March 19, 2017.

Table 4 - balance of assets and liabilities of the Bank of Israel (2007, 2015)[25]

Item		2007		2015		Change
		Billions of Shekels	As % of the balance	Billions of NIS	As % of the balance	
Assets	Foreign currency	122.5	92.3%	357.4	96.9%	191.7%
	Domestic currency	8.9	6.7%	10.2	2.8%	14.7%
	Other	1.3	1.0%	1.3	0.4%	1.7%
	Total	**132.7**	**100%**	**368.9**	**100%**	**178.0%**
Liabilities	Cash and coins	29.0	21.8%	73.5	19.9%	153.7%
	Foreign currency	20.5	15.5%	19.7	5.3%	-3.9%
	Domestic currency	94.4	71.1%	305.2	82.7%	223.3%
	Revaluation	5.7	4.3%	26.7	7.2%	371.1%
	Share capital	4.0	3.0%	4.0	1.1%	0.4%
	Surplus balance	-20.8	-15.7%	-60.1	-16.3%	188.7%
	Total	**132.7**	**100%**	**368.9**	**100%**	**178.0%**

It emerges from the data in the table that:

- The total balance of the Bank of Israel in 2015 was **368.9 billion Shekels**, while between 2007 and 2015, the balance extended at a rate of 178.0%
- Most of the Bank's assets in 2015 were **in foreign currency, that constituted around 96.9%** of total assets, and they include mostly tradable securities (around 337.0 billion Shekels, or around 91.4% of the Bank's assets). Between 2007 and 2015, a relatively steep rise occurred in foreign currency assets (191.7%).
- Most of the Bank's liabilities in 2015 was in **domestic currency that constitutes 82.7%** of the Bank's liabilities, and they included especially deposits by banking institutions (about 170 billion Shekels or 46.1% of the Bank's liabilities) and short term loans (around 116 billion Shekels or around 31.4% of the Bank's liabilities). The Bank's liabilities also include cash and coins to the sum of around 73.5 billion Shekels (around 19.9% of the liabilities).
- As for 2015, the Bank of Israel had public losses amounting to around **60.1 billion** Shekels **that** had grown from 20.8 billion Shekels since 2007 (an increase of 188.0%).

[25] Bank of Israel, *Financial report for 2015*, March 22, 2016; bank of Israel, *Financial report for 2008*, March 23, 2009.

The gap between the interest received (including currency differentials) from the Bank's assets, mainly foreign exchange reserves, and the interest paid on the Bank's liabilities (mainly bank deposits and short term loans), leads to annual losses or profits, dependent on the scope, the risks and the yields of these assets and liabilities.

Table 5 below gives a summary of the Income statement for 2015.

Table 5 - Income statement of the Bank of Israel (2015,in millions of Shekels)[26]

Item	2014	2015
Interest revenue	1,991	2,145
Interest expenditures	2,269	821
Net revenue from interest (1)	**-278**	1,324
Revenue from securities	1,115	1,417
Revenue from differences in exchange rates	-1,158	-9,986
Various revenue	-22	-29
Other revenue (2)	**-65**	**-8,598**
Total profit from financial activity (1+2)	**-343**	**-7,274**
Expenditure on the printing of money	59	70
Expenditure on administration and general	695	673
Other expenditure	0	54
Total non-financial expenditure (3)	**754**	**797**
Total profit (1+2+3)	**-1,097**	**-8,071**

It emerges from the data on the table that the Bank of Israel lost around **8.1 billion Shekels in 2015.** These losses emanated especially from losses from financial activity, which stood at around 7.3 billion Shekels. Most of these losses emanate from losses due to currency rate differentials. This indicates that an appreciation of the rate of the Shekel in 2015, compared to the average rate of exchange of the Shekel through purchases of foreign currency by the Bank of Israel over the years, led to an annual loss resulting from differentials in the rates of currency rates. **As a result of the annual losses over recent years, the balance of the Bank's surpluses diminished to a level of around -60 billion** Shekels**.**

[26] Bank of Israel, Annual Report – 2015, March 22, 2016; Bank of Israel, Annual Report – 2008, March 23, 2009.

Up-to-date data for 2016 indicate that the return on the balances in 2016 stood at around 1.56% in terms of the foreign currencies basket, similar to the average return since the crisis, and above the average return in the last three years, which stood at 1.16%. According to the Bank of Israel, the ability to attain a relatively high return, despite the negative return on a significant part of the central European country bonds, results from a long term process, within the framework of which the part of risky assets in the portfolio was increased.[27]

According to article 76 of **the Bank of Israel Law-2010**, the Bank must transfer to the Government within three months from the end of the year part of its profits, if in that year there is a profit, and the Bank's capital (including surplus balances) is higher than 1% of total assets.[28] As for the end of 2015, the surplus balance of the Bank of Israel was negative, and stood at around 60 billion Shekels, so that as long as cumulative annual profits do not reach 60 billion Shekels, the Bank of Israel will not transfer any annual profits to the state treasury. From table 4 it emerges that there was an increase of around -40 billion Shekels in the surplus balances in the balances for 2007 and 2015. **In other words, there was an average annual loss of around 5 billion Shekels.**

Nevertheless, the loss in the Bank of Israel balance is primarily of a balance sheet nature and does not involve any actual cost. As stated, it emanates from a change in the exchange rate of the Shekel, and it is possible that during a future crisis, the Shekel will be devalued significantly, the Bank of Israel will realize its foreign currency reserves, and the unrealized losses will turn into realized profits.

As stated, this policy has both advantages and disadvantages. The central advantage is the slowing down of the appreciation of the Shekels with the purpose of strengthening the competitiveness of the exporters in their coping opposite foreign markets and opposite imports. The main disadvantages are the rising price of imported investment goods and inputs, and the rising price of consumption goods. Nevertheless, as stated, despite the intervention of the Bank of Israel in practice, the Shekel was appreciated, and consequently the prices of imported goods were reduced. Even though, without the intervention of the Bank of Israel, the reduction of prices would have been at a higher rate.

3.1.2. The interest rate in the economy

The central bank uses interest rates within the framework of its monetary policy, in order to keep the inflationary target. A reduction in the interest rate will lead to a reduction in interest gaps, and the weakening of the Shekel. For example, an interest gap between the Shekel and the Dollar that is too

[27] Bank of Israel, *Investment of the foreign currency surplus - report for 2018*, March 2017.

[28] Article 76 of **the Bank of Israel Law-2010**.

large could lead currency traders to take a loan in Dollars at a low interest rate, convert the money into Shekels, invest in Shekel bonds with a higher return, and enjoy the profit that results from the interest differential.[29] The risk taken by these traders is a future change in the rate of exchange.

A reduction in the interest rate is liable to lead in certain circumstances to a weakening of the Shekel without causing a rise in inflation. However, in certain circumstances this step is liable to lead to an increase in inflationary pressures and the creation of "bubbles" in markets such as the housing market and the motor vehicle market. Furthermore, the effect of this tool is short term, and its use cannot bring about a significant change in long term trends resulting from a strengthening of the Israeli economy. Nevertheless, these tools are liable **to provide the Government and exporters a window of opportunity**, to improve the competitiveness and increase exports despite the strengthening of the Shekel.

The bank of Israel's interest rate in the last two years has stood at 0.1%, and therefore the ability to adopt an additional expansionary monetary policy would have to be based on a negative interest rate, or on "a quantitative easing" (the purchase of bonds or foreign currency). The rise in the interest rate in the United States could increase the interest gap between the Shekel and the Dollar, and moderate the pressures for appreciation the Shekel opposite the Dollar.

In 2016 the consumer price index fell by around 0.2%,[30] below the price target of the Bank of Israel, which is 1-3%. According to the Bank's Monetary Committee in the Bank of Israel, the main reason for the decline in prices is not the moderation in demand, but supply factors (such as a decline in the prices of goods, and government measures for the reduction of prices). In the opinion of the Committee, "the expansionary monetary policy that it follows - i.e. extremely low interest rates over time, and purchases of foreign currency - will contribute to returning inflation to the target limits towards the end of 2017".[31]

3.1.3. The reduction of speculative capital movements

In 2011, a joint team of the Bank of Israel and the Ministry of Finance declared a list of measures to reduce movements of speculative capital movements,[32] which influence the balance of payments and

[29] Such deals are known in the world foreign currency market as **carry transactions**.

[30] The Central Bureau for Statistics, *The consumer price index in 2016*, Announcement to the media, January 15, 2017.

[31] Bank of Israel, *Monetary policy report for the second half of 2016*, p. 12, February 2017.

[32] Foreign Investment in order to achieve gains in the short term. The traders purchase short-term bonds with positive interest rate difference between Israel and other countries. These capital movements (called "Currency Carry Trade") can cause fast fluctuations in the currencies exchange rates.

the rate of exchange. These measures included the application of " liquidity requirement" on the banks on transactions in foreign currency derivatives, and the cancellation of exemptions from tax given to foreign investors on profits emanating from investment in short-term securities (MAKAM in Hebrew) and short term government bonds. According to an analysis of the Chief Economist Section in the Ministry of Finance, these measures proved to be effective, and the use of the short term investment channel diminished significantly in consecutive years. It should be noted that the Bank of Israel cancelled the liquidity requirement towards the end of 2014.[33]

3.2. Policy tools that affect the results of the strengthening of the Shekel

Primarily tools that will bring to **the strengthening of the competitiveness capability of the Israeli economy, and the raising of productivity in Israel**, in recognition of the fact that the appreciation is a long term trend, which emanates from the process of the strengthening of the Israeli economy. Use of these tools is likely not only to offset the effects of the strengthening of the Shekel by increasing competitiveness capability, but also to bring about **a diminution of social gaps** in Israel, and decreasing centralization in the business sector in Israel. Available tools:

- Extensive increase of government investments **to employment encouragement and human capital.**
- Implementation of structural reforms that will lead to the reduction of costs, to increase supply and the competitiveness of Israeli industry, such as reforms in the seaports and airports, and the communications and electricity markets.

It is possible to adopt additional policy tools, such as: reducing the corporation tax, and setting a lower corporations tax for small businesses; prolonging the validity of accelerated depreciation regulations,[34] thus increasing the rate of depreciation recognized for tax purposes for small and medium sized businesses; increasing assistance budgets for small and medium sized businesses in international marketing, R&D, business and administration mentoring, industrial design, environmental policy, advice in of foreign currency hedging and insurance of foreign trade risks.

[33] Chief Economist section, the Ministry of Finance, *Weekly economic survey. November 20, 2016*, November 2016.

[34] **Accelerated depreciation:** a tax benefit by which one grants businesses the right to depreciate the value of a property in the books over a shorter period than usual, and thus reduce tax liability of the business in those years. This benefit is designed as a relief for the business, since it improves its cash flow in the first years.

3.2.1. Expenditures on Active Labour Market Policies (ALMP)

Productivity in Israel is significantly low compared to the developed countries.[35] In recent decades the governments unsuccessfully tried to increase productivity, especially in relatively traditional sectors, in which productivity is low. Thus, ten years ago the Ministry of Economics and Industry established a committee to examine means of empowering the periphery and traditional industry (the Makov Committee).[36] The Committee's report, published in October 2007, recommended a series of policy tools, including the encouragement of industry sectors that are not hi-tech to invest in R&D in order to improve the production processes, and in order to increase their competitiveness. The purpose of the proposed policy was to lead to the creation of a parallel, rather than an alternative growth engine, to that of hi-tech industries, also in the traditional industries, while reducing gaps between the centre and the periphery. Recently, a committee was established, headed by the Director General of the Ministry of Finance, to formulate means for strengthening industry and increasing productivity, especially by means of improving human capital.[37]

Small developed countries with open economies for world trade, take continuous measures to increase productivity in face of the strengthening of their domestic currency.[38] One of the steps is active government involvement in the labour market, with the goal of **improving the human capital.** This involvement is designed to bring about growth in productivity and competitiveness capability, and it compensates, to a certain extent, for the decline in the competitiveness in foreign trade that results, *inter alia*, due to the strengthening of the domestic currency. In Israel this expenditure includes, primarily, professional training, benefits for encouraging investment in employment, integration of persons with disabilities in the labour market, quality placements in the employment agency, assistance in the employment of immigrants, and a program for absorbing immigrant scientists. Chart 9 below presents the expenditure on active labour market policies as a percentage of GDP in the developed states.

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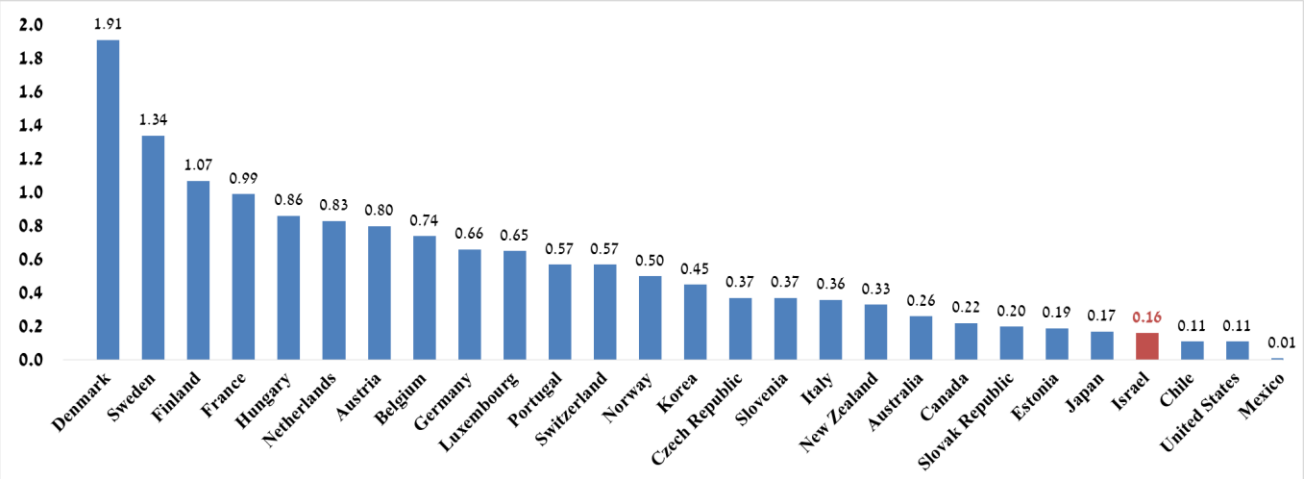
[35] Eliezer Schwartz and Ami Zadik, *Productivity in Israel and industrializ4ed countries, and the factors that affect it*, the Knesset Research and Information Centre, August 2015.

[36] The Ministry of Economics and Industry, *Report of the Committee for examining means to empower the periphery and traditional industries* (the Makov Committee), October 2007.

[37] The Ministry of Finance, *Convention of the public committee for strengthening industry*, March 9 2017.

[38] Small states in Europe (including Switzerland, Denmark, Sweden, Finland, and the Netherlands) stand at the top of the **Global Competitiveness Index**, which was founded by the World Economic Forum.

Chart 9. Public expenditure on active labour market policies as percentage of GDP (2014)[39]



From the data on the chart it emerges that the public expenditure on active labour market policies as a percentage of GDP in Israel in 2014 stood at **0.16%, compared to 0.55% in the OECD states**. It should be noted that in relatively small countries, with a strong independent currency, the weight of the public expenditure on active labour market policies as a percentage of GDP is relatively high - **1.91%** in Denmark and **1.34%** in Sweden.

3.2.2. The Implementation of structural reforms

The effect of a high level of competitiveness on the economy of the state is significant:[40] GDP per capita is higher, the rate of employment is higher, salaries are higher, and social equality is higher (even before renewed distribution of income by means of progressive taxation). For example, the reform in the cellular market in Israel that was applied in recent years, led to a fall in the prices of the services of mobile telephony by removing transfer barriers among the service providers, and regulation of the entrance of new providers.[41] The reform led both to the increase of the competitiveness of the Israeli market by means of reducing costs for exporters, and to the reduction of inequality in the economy, by means of a reduction of the expenditure by households on mobile telephony services.

The introduction of structural reforms occasionally leads to opposition from groups in the public; For example, the employees of a monopoly are liable to fear damage to employment conditions and rights

[39] OECD, Employment and Labour Market Statistics, accessed: March 16, 2017.

[40] Disregarding additional explanatory variants, such as relative advantages, natural resources, and population homogeneity.

[41] Bank of Israel, annual report, *Chapter B' - Product, uses and the economic branches*, B'-2 box - the reform in the sphere of cellular communications, March 2013.

as a result of the opening of their market to competition (such as the electricity market);[42] shareholders are liable to fear the reduction of profitability rates of the companies in the market in which a structural reform was introduced (such as mobile telephony market).

3.2.3. Additional tools for influencing the consequences of the Shekel's strengthening

Shifting of trade to countries in which the currency is relatively strong: In recent years there has been a growth in Israeli exports to new destinations, especially in the Far East. This process is likely to compensate for the fall in the profit margins in exports to states in which the currency rate is falling in relation to the Shekel, such as the Eurozone states. However, the **shifting of trade is a complex and long process,** which frequently leads to the loss of market shares, customer contacts and distribution systems that were built with great effort over years.

Raising prices in target markets: Many exporters are unable to raise the prices of their products due to the strengthening of the Shekel in relation to the Dollar. Nevertheless, the greater the R&D intensity of an industry, the ability of the enterprises to increase the prices of their products grows as a reaction to the strengthening of the Shekel. On the other hand, the weight of salaries in R&D intensive industries is relatively high, and therefore the strengthening of the Shekel has a major effect on these industries.

The purchase of protection from exchange rate fluctuations: Exporters can protect the Dollar return from their export transactions by various means, such as the purchase of options for the preservation of the exchange rate (hedging). However, these tools cannot serve as protection over time from the trend of the strengthening of the Shekel. Nevertheless, it appears that the accessibility of small and medium sized enterprises to these protective tools is relatively low.

Increasing specialization in market niches: Many small and medium sized enterprises in Israel - for example, in the metal industry, and the plastic and rubber industry - concentrate on market niches in which the competition is relatively small. These enterprises are busier in the production of products in small series that do not require much manpower, but require a reasonable level of quality. However, the concentration on small market niches can impair the growth ability of these enterprises over time.

Innovation based growth: Focusing on the R&D of innovative products. This strategy leads to protection against the strengthening of the Shekel by means of the relative advantages which innovation creates. These companies frequently invent new markets from nothing by developing innovative products and services, and granting solutions to customer needs that were not previously met.

[42] It should be noted that frequently, as a result of the opening of a branch to competition the number of employees grows in the whole branch.