



**Bank of Israel**  
Research Department

Research and Policy Analysis Notes



# The Impact of Monetary Policy on Private Consumption in Israel: A Test Using Credit Card Expenditure Data

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## The Impact of Monetary Policy on Private Consumption in Israel: A Test Using Credit Card Expenditure Data

- The study uses credit card expenditure data to examine how monetary policy affects private consumption expenditure in Israel.
- The analysis indicates that monetary tightening through a one percentage point increase in the interest rate reduces private consumption expenditure (domestic, excluding housing) by up to approximately 5 percent in the first six months following the interest rate hike, and by about 2 percent on average during the year following the interest rate hike.
- Interest rate increases have varying impacts on different components of private consumption expenditure. They significantly reduce consumption of leisure services, which has a higher weight in the consumption of households in the upper quintile; reduce the consumption of manufacturing products and of services; but do not affect food consumption, which has a higher weight in the expenditures of the lower quintile.
- The study shows that the interest rate increases since April 2022 have moderated private consumption and can explain the relatively slow growth of consumption in the following year.

### 1. Introduction

The primary objective of monetary policy is to maintain price stability. The main tool for achieving this is the interest rate set by the Bank of Israel. The interest rate influences inflation through various mechanisms, with the primary one being its impact on demand, particularly private consumption. Raising the interest rate encourages saving over current consumption<sup>1</sup> and increases the debt repayment burden of households, especially for variable-rate debt. The moderation of demand for private consumption is expected to alleviate upward pressure on prices and thus the rate of inflation.<sup>2</sup> This analysis aims to examine the main channel through which monetary policy operates—the extent to which changes in the interest rate affect private consumption and its components.

While National Accounts data, available quarterly, best measure private consumption, real expenditure data from credit cards are available monthly, and current expenditure data from credit cards are available even daily. Since interest rate decisions are made more frequently than quarterly, using daily and monthly data allows for examining and identifying the response and behavioral change, particularly

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<sup>1</sup> In contrast, a higher interest rate works to increase households' net interest income, and may thus work to increase their consumption. A higher interest rate also works to lower the value of assets (equities, dwellings), which is expected to lower the tendency to consume. The general assumption is that an increase in the interest rate works in the end to reduce private consumption.

<sup>2</sup> Raising the interest rate also affects inflation through the exchange rate, since raising the interest rate will tend to create appreciation, which lowers the cost of imports. It also moderates inflation expectations.

in the short term, in relation to interest rate changes, while associating it with the exact timing of the occurrence.

The existing information from credit card data also allows for analyzing the different expenditure components of households, in order to examine the impact of policy not only on total consumption but also on different components of consumption—for example, consumption of goods versus services and particularly leisure services consumption.<sup>3</sup> The analysis presented here aligns with the literature discussing the impact of monetary policy on economic activity, and private consumption in particular. One early channel of the literature examines the issue using aggregate macroeconomic data. In Israel, various articles have examined the relationship between monetary policy and consumption within broad models, such as the Bank of Israel Research Department's DSGE model (Argov et al., 2012), as well as through specific analysis of the consumption function using aggregate data, as done by Barak (2017) or in an early study by Lavi (1998). Barak (2017) found that an increase in the value of financial assets and residential property significantly increases private consumption, but did not identify an additional separate impact of monetary policy, possibly because at least part of the changes in financial and real assets were caused by changes in monetary policy, but could not be explicitly identified. Holm et al. (2021) rely on detailed annual data for all households in Norway and show that in response to a decrease in disposable income, there is a significant reduction in consumption, particularly for liquidity-constrained households, depending on the household's exposure to interest rate changes.

Another research channel uses low-frequency individual data, such as data from household expenditure surveys. Cloyne, Ferreira, and Surico (2020) analyzed the different impact of policy on consumption by households that own homes versus those that rent, showing that the main impact is on durables consumption by households with mortgages. In Israel, Kahn and Ribon (2014) examined the factors influencing household consumption, including monetary policy and housing prices, using quarterly data from the household expenditure survey. They did not find a direct impact of the interest rate after including housing prices and the value of financial assets in the estimated equations. Ribon (2023) also used data from the household expenditure survey and found that restrictive monetary policy mainly reduces the consumption of durable goods and primarily affects households in the upper income quintiles. Caspi, Eshel, and Segev (2024) found that households more exposed to prime rate-linked mortgage payments, which respond immediately to changes in the Bank of Israel's interest rate, reduced their private consumption more significantly in response to an interest rate increase than other households.

Recent studies use detailed high-frequency data, particularly daily credit card expenditure data, to track changes in consumption in response to various shocks. Due to their availability, the use of such data to track the effects of the COVID-19 pandemic

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<sup>3</sup> The credit database includes individual data for the entire population that holds credit cards, but does not include information regarding the various consumption components, and the historical depth of the information is relatively short.

stands out.<sup>4</sup> For example, Hacıoglu-Hoke, Kanzik, and Surico (2020) examined the pandemic's impact on income and consumption by individuals in different parts of the income distribution in the UK, and Bounie et al. (2020) analyzed its impact in France. Despite the broad use of daily or intradaily data to identify the effects of monetary policy, we did not find extensive literature using high-frequency consumption data or other macro variables to examine the impact of monetary policy on private consumption. One such working paper is by Buda et al. (2023), who examine the impact of monetary policy shocks on daily consumption using daily transaction data across all payment methods and find an almost immediate impact on private consumption. Grigoli and Sandri (2022), based on detailed credit card expenditure data from Germany between 2017 and the end of 2021, found that short-term interest rate changes have a more significant impact on private consumption expenditure than long-term interest rate changes, and that the impact is not symmetric. They found that monetary tightening has a stronger impact, while monetary accommodation does not affect consumption.

The results of this study, which adopts a similar approach to Grigoli and Sandri (2022), indicate that monetary policy significantly impacts private consumption expenditure, as reflected in credit card expenditure (excluding housing). A one percentage point increase in the short-term interest rate leads to a reduction of up to approximately 5 percent in expenditure within six months after the increase, a result similar to that of Grigoli and Sandri (2022), who showed a decrease of about 5.5 percent in expenditure after a few months. We find that not all consumption components respond equally to interest rate changes. The expenditure component for leisure goods and services, whose demand elasticity relative to income is the highest and whose weight in consumption is higher in the upper income quintile than in the other quintiles, is also the component that is most sensitive to interest rate changes. In contrast, food expenditures, which constitute a relatively large part of the expenditure of households in the lower quintile, hardly respond to interest rate changes.

The study consists of four parts. Following the introduction, the second part presents the data and estimation method. The results are detailed in the third part, and the final part briefly summarizes the main insights of the study.

## **2. Data and Estimation Method**

### **2.1 Credit Card Transaction Data**

The information regarding credit card transactions comes from two sources. The first is the monthly data published by the Central Bureau of Statistics (CBS), which refers to real (fixed prices) credit card expenditure, seasonally adjusted, and classified into various subsectors. The second is nominal daily data received by the Bank of Israel, also classified into several subsectors—slightly different from those in the monthly data. The main analysis presented here is based on the monthly data at fixed prices. Later, we will also present a brief examination of the results based on the daily data.

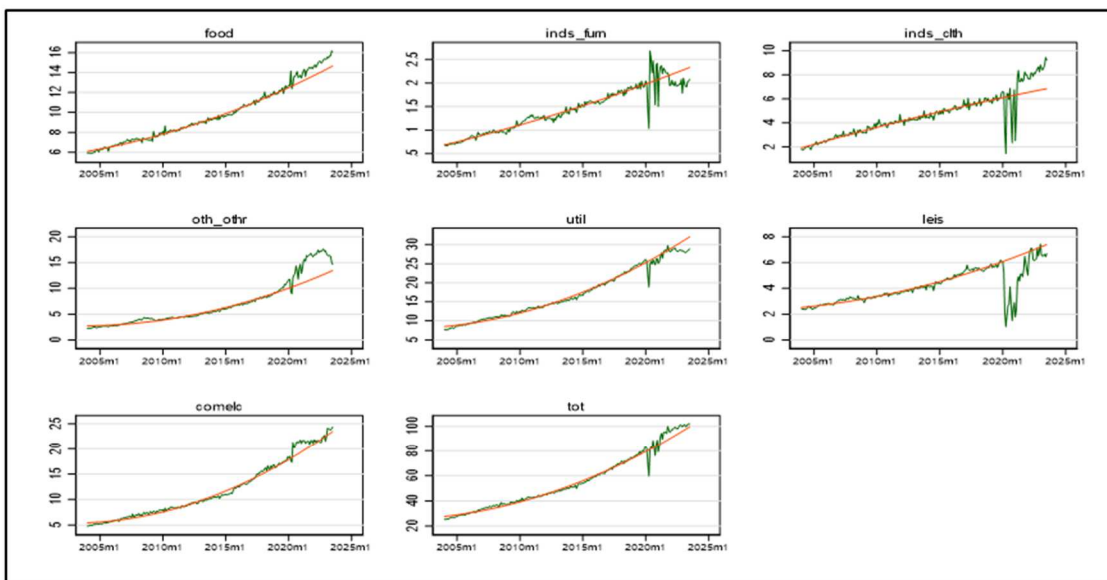
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<sup>4</sup> See also the reference list in Grigoli and Sandri (2022).

### Monthly Data at Fixed prices

The data published by the CBS refer to purchases by private consumers and are obtained from all credit card companies operating in Israel. These data are divided into four main purchase groups according to the credit card companies' classification of businesses, and include purchases made by Israelis (not foreigners) in Israel only (not abroad). The data are seasonally adjusted and reported in real terms. The benchmark estimation data cover the period starting in 2016 and ending in mid-2023 (before the outbreak of the war). The advantage of these data is that they reflect the consumed quantity after adjusting for price changes and are available for a relatively long period. However, the monthly frequency of the data somewhat impairs the ability to identify the impact of the surprise (the unexpected part) in interest rate decisions.

**Figure 1 | Credit Card Expenditures, 2004–2023**  
(seasonally adjusted monthly data at fixed prices)



\* Food = food and beverages; inds\_furn = furniture; inds\_clth = clothing and footwear; oth\_othr = other goods and services; util = current expenditures; leis = tourism and leisure; comelc = communications and electronics; and tot = total expenditure.

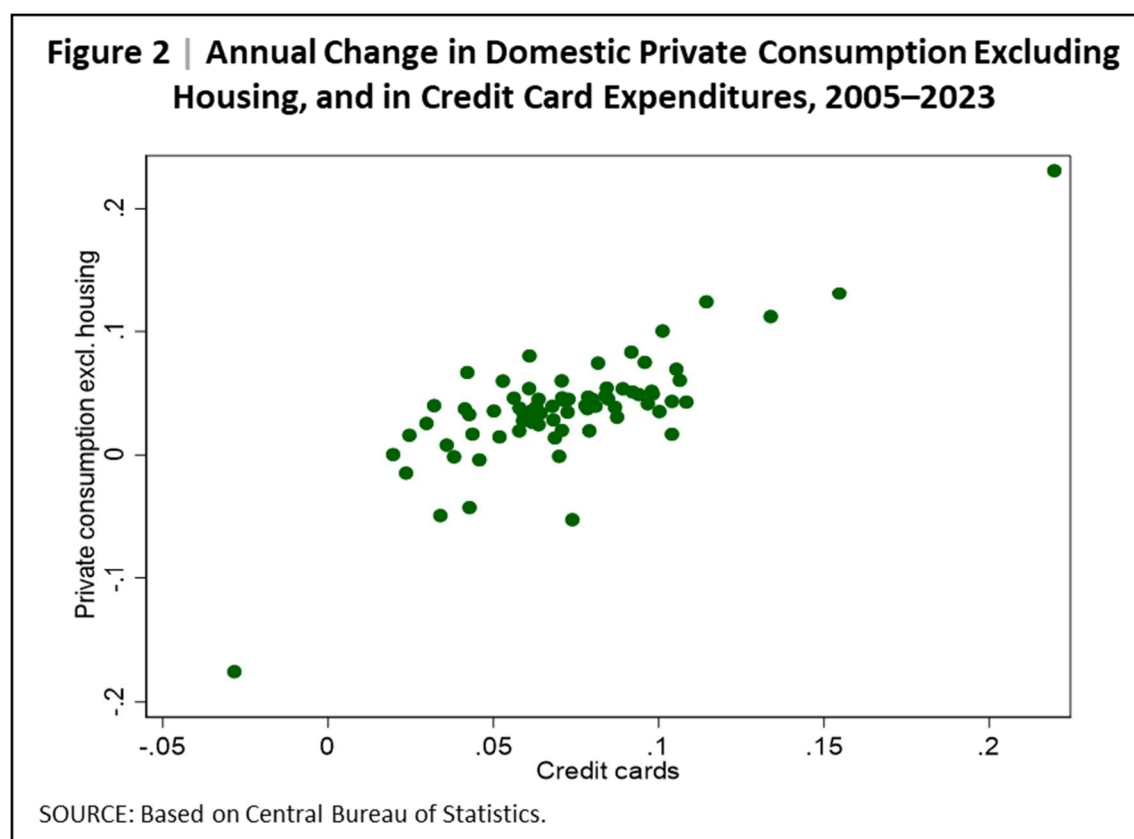
For the analysis, we combined some of the 15 subsectors, resulting in 7 consumption groups. Table A-1 in the Appendix presents the distribution of transactions according to CBS data.<sup>5</sup> Figure 1 presents the monthly data for the defined groups and the total (shown in the bottom right box, framed), along with a quadratic trend estimated on the basis of the data up to 2019. It appears that the increase in total credit card expenditure and most components over most years matches a quadratic trend

<sup>5</sup> The CBS data are published as indices, alongside the average expenditure weight for each subcategory in 2023. This weight can be used to derive the relative quantities of expenditure in each subcategory in different years. The weights are consistent with the weights as published in those years, with slight deviations.

indicating an acceleration in the growth rate. However, in recent years following the COVID-19 pandemic, some components show a significant deviation from the trend.<sup>6</sup>

### Comparison to National Accounting Data

We compared the monthly data at fixed prices to the local private consumption data excluding housing (at fixed prices), both seasonally adjusted.<sup>7</sup> Since the CBS credit card data refer to Israelis' local consumption only, we adjusted the private consumption data to exclude foreign consumption by Israelis. Generally, credit card activity and its changes provide a good reflection of consumption and its changes over time (Figure 2).<sup>8</sup>



<sup>6</sup> It seems that some of this deviation is a result of changes in the share of nonclassified transactions, and not in actual consumption expenditures in each of the components.

<sup>7</sup> Private consumption excluding housing services constitutes about 78 percent of total private consumption.

<sup>8</sup> The correlation between these two is about 0.79.



## 2.2 Monetary Surprises

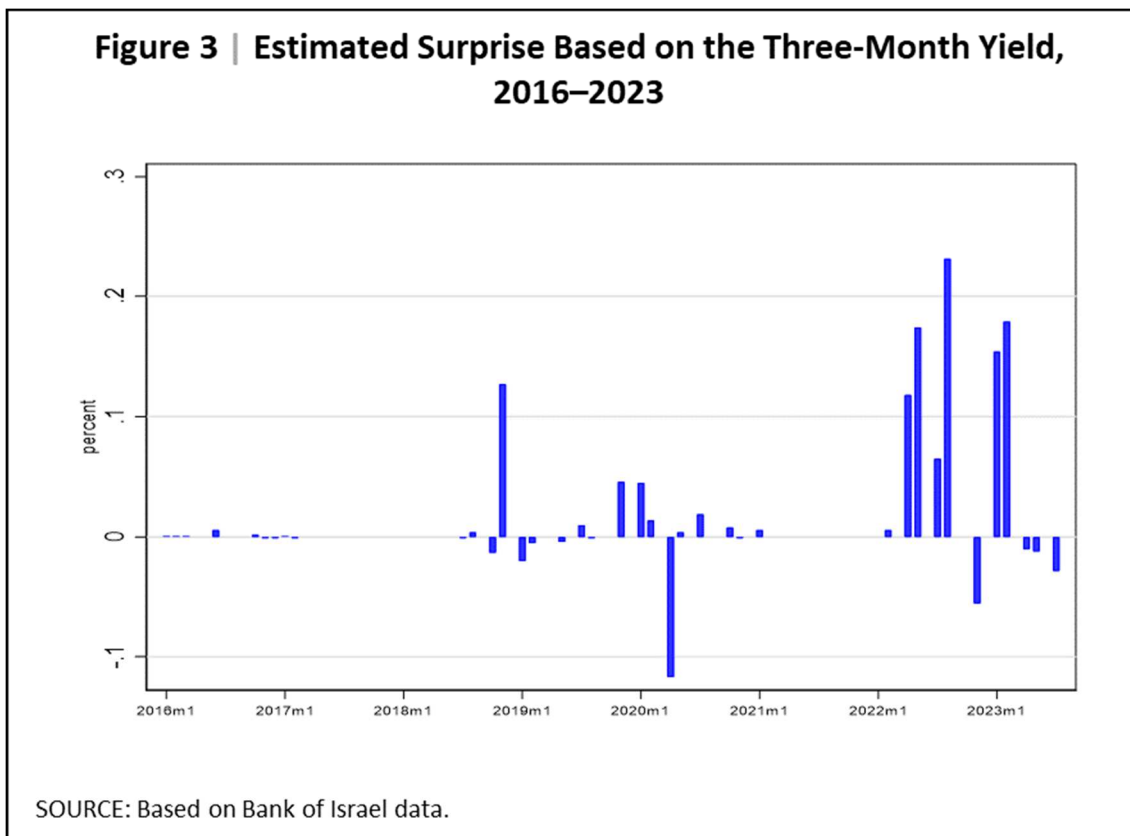
To identify the impact of monetary policy on consumption, it is necessary to examine the response to unexpected policy changes. If a policy change is anticipated, consumer behavior may adjust in advance, obscuring the relationship between the policy change and the behavioral change at the time of the change. A common method for identifying unexpected changes relies on examining short-term changes in capital market yields. The assumption is that changes in yields within a short window around the interest rate decision reflect the market's response to the surprise component of the policy decision (see Kuttner (2001) and Gurkaynak, Sach, and Swansson (2005)). If the decision was expected, yields would show minimal changes as they would have already adjusted to the anticipated change. The indicator for the unexpected change in the interest rate used in this study is derived from the change in yields in the Telbor market (for three months and one year), measured in the window between the day of the interest rate announcement and the trading day following the announcement.<sup>9,10</sup>

Figure 3 presents the changes in three-month yields, which form the basis of our main analysis, with the main period for our analysis starting in 2016. From that year until the beginning of 2022, there were generally no surprises, with a few notable exceptions such as the decision to raise the interest rate in November 2018 from 0.1 to 0.25 percent, and the decisions to lower the interest rate during the COVID-19 crisis. Since the beginning of the cycle of interest rate hikes in April 2022, there were more significant positive surprises because the interest rate increases were faster than expected.

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<sup>9</sup> Kutai (2023) adopts a similar approach, and calculates the monetary policy surprises based on the Telbor rates for one month and for three months. The correlation between the surprises that we use here and those that appear in Kutai (2023), which took place from 2007 onward, is about 90 percent.

<sup>10</sup> The Telbor market price (yields up to one year) is set at 11:00 am. As such, we must examine the difference in yields between the day of the interest rate announcement and the following day.



During the estimated period, starting in 2016, there were a total of 65 interest rate decisions. Of these, 23 featured positive surprises, 15 had negative surprises, and the rest were neutral, as derived from the change in three-month yields. Positive shocks generally tended to be larger than negative ones.

### 2.3 Estimation Method

We estimate the impact of unexpected changes in the Bank of Israel's interest rate on credit card expenditures, representing the volume of private household consumption. We use the local projections methodology introduced by Jorda (2005) to assess the change in each of the expenditure components described above and in total credit card expenditure.

The estimated equation is:

$$\begin{aligned}
 (1) \quad & y_{t-1+h} - y_{t-1} \\
 &= \alpha_{(h)} + \beta_{(h)}\varepsilon_t + \sum_{i=1}^k \gamma_{(h)i} (y_{t-i}) + \sum_{i=1}^m \delta_{(h)i} (\varepsilon_{t-i}) \\
 &+ \eta_{(h)}x_t + u_{(h),t-1+h},
 \end{aligned}$$



where  $y_t$  is the log of credit card expenditure in the examined component;  $\varepsilon_t$  is the policy surprise as measured by the immediate change in the 3-month yield on the Telbor, including lags of the dependent variable and of monetary shocks; and  $x_t$  describes the other control variables, which are detailed below.

### 3. Estimation and Results

#### 3.1 Response of Expenditure in Different Consumption Categories

We examine the impact of monetary policy on private consumption expenditure using local projections, as described above, for the period from 2016 to July 2023, with a total of 91 monthly observations.<sup>11</sup> Standard errors are calculated using the Newey-West method, which corrects for possible autocorrelation in the dependent variable.

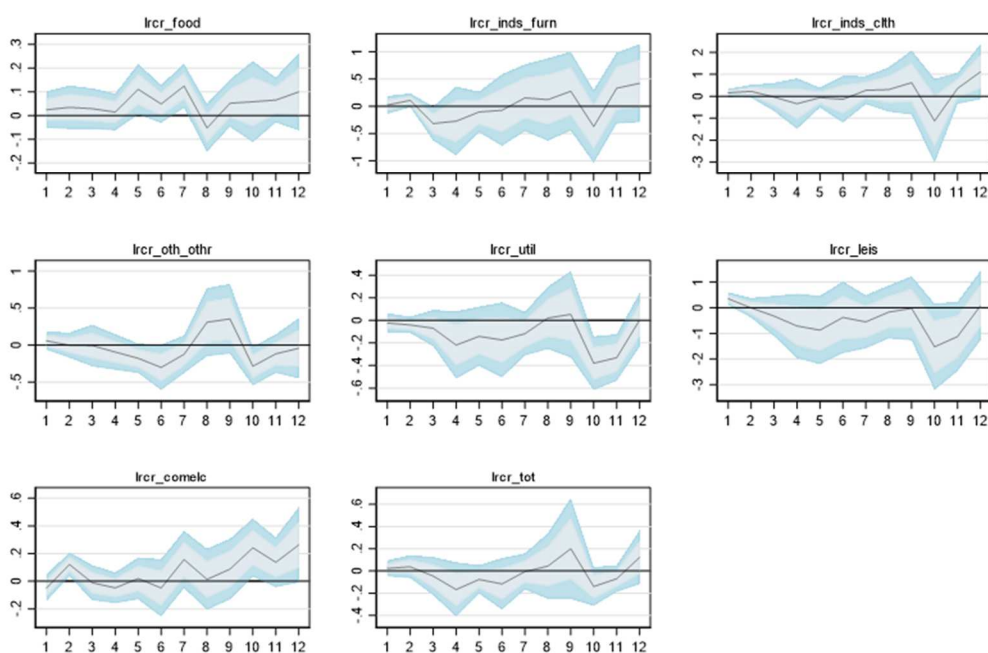
The dependent variable is alternatively the log of monthly expenditures on each of the seven expenditure components described above and total expenditure. The variables included in the estimation as control variables are the dependent variable and monetary surprises with six lags, inflation expectations, and unemployment (ages 25–64), both with a one-month lag. We also included the quadratic trend of the estimated expenditure component, as presented above, dummy variables for the months of the year, and monthly dummy variables for the period from March 2020 to February 2021 to account for the COVID-19 period.

The estimation indicates that tightening monetary policy acts to reduce the real expenditure on private consumption with varying intensities across different consumption components (Figure 4 and Table 1). The significance of the impact is clearer on current expenditures, leisure and entertainment, and total expenditure, while no clear impact is identified on other components, particularly not on food consumption.

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<sup>11</sup> The data on monthly credit card expenditures exist from the beginning of 2004, but in order to enable a comparison with the results obtained on the basis of daily data, which exist only from 2016 onward, we chose to examine a shorter period. Sensitivity tests on a longer sample are presented below.

**Figure 4 | The Response of Credit Card Expenditures at Fixed Prices, 2016–July 2023 (seasonally adjusted)**



\* The gray area denotes a confidence interval of 66% (one standard deviation). The blue area denotes a confidence interval of 90% (1.65 standard deviations).

**Table 1**  
Change in consumption by components in response to a 1% increase in the interest rate (percent)

		3-month average	6-month average	12-month average
1	Food and beverages	2.9	4.3	5.0
2	Furniture	-6.2	-10.7	2.4
3	Clothing and footwear	11.6	-3.1	11.3
4	Other goods and services	1.5	-8.8	-3.7
5	Current expenditures	-4.3	-11.0	-11.7
6	Tourism and leisure	0.9	-32.1	-11.8
7	Communications and electronics	2.0	-0.3	7.3
8	<b>Total</b>	0.5	-5.7	-1.6
9	<b>Total - equalized excl. housing services</b>	0.4	-4.4	-1.3
10	<b>Total - indirect calculation - equalized credit weights</b>	0.7	-5.1	-2.3
11	<b>Total - CPI weights - equalized</b>	0.1	-5.9	-5.0

### 3.2 Weighting the Impact on Total Consumption Expenditure

A direct estimation of the impact of a one percentage point increase in the monetary interest rate on total consumption expenditure (via credit cards) shows an average decrease of about 5 percent in total expenditure in the first six months and about 2 percent on average in the year following the increase. Private consumption measured in the National Accounts also includes the imputed value of housing services for households that own a home, which is not an actual expenditure component and constitutes about 18 percent of total consumption according to the price index. Therefore, assuming this component is not affected directly and in the short term by monetary policy, the actual impact on total consumption will only be about 80 percent of the estimated impact. Consequently, the impact after six months adjusted for this component, as shown in Row 9 of Table 1, is about 4 percent, and after a year it is about 1 percent on average.<sup>12</sup> Alternatively, summarizing the response of each expenditure component as defined above, weighted by its share in total credit card expenditures, yields a similar impact: an average reduction of about 5 percent in consumption over six months, as shown in Row 10.

An alternative calculation considers that the distribution of consumption expenditures via credit cards differs from the distribution of consumption expenditures across all payment methods, as households choose to use other payment methods, particularly cash, at different rates for different types of expenditures.<sup>13</sup> Therefore, we mapped the components of the consumer price index to the subsectors we defined, based on the distribution of household expenditures on private consumption components.<sup>14</sup> Here too, we adjusted for the "housing services" component. The weights according to the price index are presented in Table A-1 in the Appendix in the rightmost column.<sup>15</sup> When examining the impact on total consumption expenditure (excluding owner-occupied housing) by weighting the impacts on the different components according to their weight in the price index, a similar magnitude of impact is obtained: a decrease of 5–6 percent after six months, but a stronger impact after a year.

Since monetary policy has different impacts on various consumption components, it is interesting to examine the consumption composition of households belonging to different income quintiles. Figure 5 presents the distribution of expenditure items according to the mapping of index components to credit card expenditure items for

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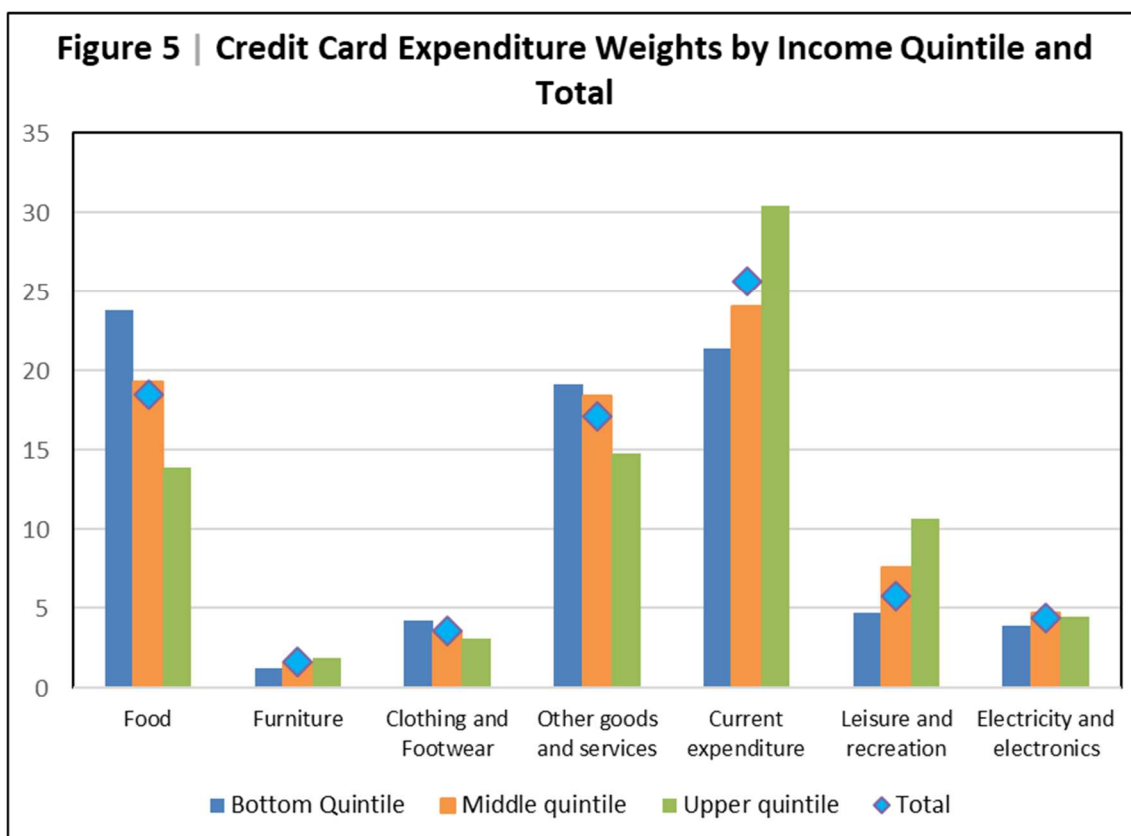
<sup>12</sup> Assuming that demand for housing services does not respond in the short term.

<sup>13</sup> According to a survey published in the Currency Department's reports for 2020–2022, the tendency to pay in cash differs for various expenditure types, and has declined in some uses. Large amounts are paid at a higher rate using checks or bank transfers.

<sup>14</sup> We cannot uniquely map the expenditure components. Details of the mapping can be obtained from the author.

<sup>15</sup> The weights are as a share of total expenditure that can be attributed to credit card expenditures. The weights are inflated such that they also include expenditures on rent, household help, and the purchase of vehicles and motorcycles, which cannot be attributed to one of the components of credit card purchases.

different income quintiles.<sup>16</sup> Food expenditure as a share of consumption in the lowest quintile is larger than in other quintiles, while the share of expenditure on leisure and tourism services is smaller. Since interest rate changes do not affect food consumption and have a strong impact on leisure and tourism services consumption, the lowest quintile’s share of consumption that exposed to the interest rate impact is smaller. However, it is possible that the response of households in the upper quintile to income loss due to interest rate increases is smaller than that of other quintiles<sup>17</sup>, and therefore, ultimately, the impact on their consumption will be smaller.



### 3.3 The Derived Impact of Recent Interest Rate Increases

The presented analysis estimates the change in private consumption expenditure components (excluding housing) in response to a one percentage point increase in the monetary interest rate. In practice, since April 2022, the monetary interest rate has risen from a prolonged low of 0.1% to 4.75% in June 2023. Based on the cumulative impact estimated over six months for each interest rate increase and considering the lag structure, it is possible to estimate the impact of the recent interest rate hike process on real consumption expenditure.

<sup>16</sup> About 20 percent of households in the upper income quintile are homeowners, compared with just 12 percent in the lower income quintile. The calculation of the impact on total consumption expenditure also relates to this.

<sup>17</sup> We cannot identify the volume of consumption of households in the various quintiles or their response to changes in the interest rate using the data available to us.

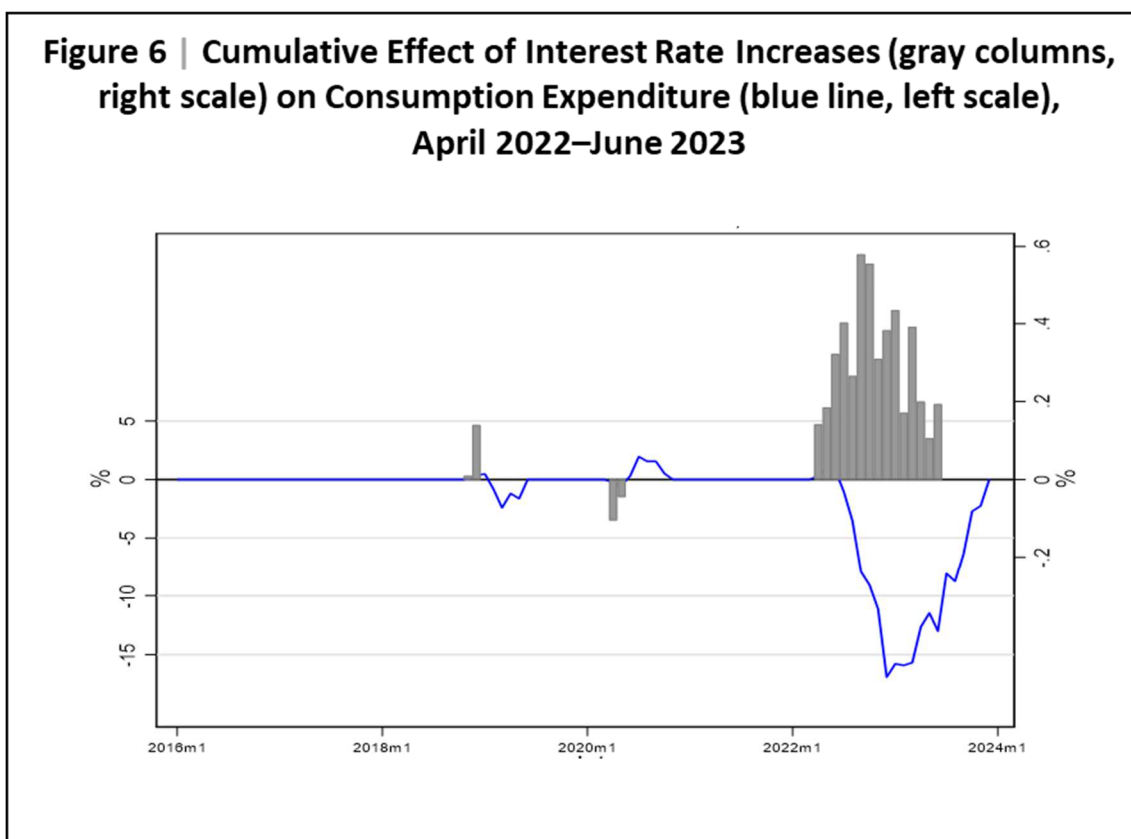


Figure 6 presents the actual interest rate changes (in gray bars, right axis) and the cumulative impact on real private consumption expenditure (left axis) until the end of 2023.<sup>18</sup> According to the actual path of interest rate increases, the cumulative impact of an interest rate increase of more than 4.5 percentage points at its peak results in an average decrease of about 6% in consumption expenditure (derived from credit card expenditure) from April 2022, the beginning of the increases, until the end of 2023, with a relatively strong impact towards early 2023. This is likely an overestimation of the impact, as the calculation is based on the assumption of an identical impact for each percentage point increase of the interest rate. The significant impact lasts only a few months before gradually diminishing. A similar analysis for leisure and tourism expenditures indicates an even more significant cumulative impact, while the change in basic expenditure shows a more moderate decrease, about half of the impact on total consumption. The sharp decline in leisure and tourism expenditure aligns with the assessment that these components are more sensitive (higher elasticity) to changes in effective income and therefore respond more strongly. According to the analysis in the Bank of Israel Annual Report for 2023<sup>19</sup>,

<sup>18</sup> Since the data here are at a monthly frequency, while the interest rate decisions are made eight times a year on different dates within the month, the change here is the change to the average interest rate level in the month, which is different from the change set in each individual interest rate decision.

<sup>19</sup> See Chapter 2, and particularly Figure 2.5a. According to Caspi, Eshel, and Segev (2024), the increase in the interest rates beginning in April 2022 contributed less than one percent to the decline

private consumption deviated by more than 5% from the pre-COVID trend in the first three quarters of 2023 (before the war), and in particular the Report notes that the downward deviation from the trend is relatively large in the entertainment and leisure sectors. The analysis presented here, and particularly the strong response of expenditure on leisure services, can at least partially explain the deviation of consumption from the trend.

### 3.4 Additional Tests

In addition to the basic estimation referring to the years 2016–2023, we tested the sensitivity of the results to both the policy change indicator and the estimation period. The first row of Table 2 presents the results from the basic estimation (Row 8 in Table 1). The following rows present the results from alternative estimations (summarizing the impact on the components). These tests indicate that the impact of a one-year yield surprise, reflecting the longer-term interest rate path, has a similar but slightly weaker impact on consumption expenditure than that obtained when examining the change in the three-month yield. Using the gap between the actual interest rate change and the median projections of professional forecasters (Row 3) yields a stronger impact on consumption, while using the actual interest rate change (and not the surprise relative to market expectations) yields weaker results than those in the basic estimation. Since households can adjust their consumption to expected interest rate changes in advance and are supposed to respond only to the unexpected parts of the changes, partial attention of households may explain why the entire change (and not just the unexpected part) still affects consumption to some extent. Estimation over a longer sample yields weaker results, likely due to changes in consumer behavior regarding credit card usage over time.

		3-month average	6-month average	12-month average
<b>1</b>	<b>Total - basic estimation</b>	0.5	-5.7	-1.6
<b>2</b>	<b>Change in one-year yield</b>	3.6	-1.9	-0.6
<b>3</b>	<b>Interest rate surprise according to the forecasters' median</b>	8.3	-6.7	-4.6
<b>4</b>	<b>Actual change in the Bank of Israel interest rate (monthly average)</b>	0.5	-1.1	-2.6
<b>5</b>	<b>2012–2023.7 sample</b>	0	-1.4	1.3
<b>6</b>	<b>2012–2021 sample</b>	-2.2	-3.4	0

### 3.5 Use of Daily Frequency Data

Another source of information on the volume of credit card expenditure is daily frequency data that the Bank of Israel receives regularly from the SHVA company. These data, held by the Bank of Israel, cover daily payment card<sup>20</sup> activity from 2016 until the end of September 2023, and describe the daily volume of credit card transactions processed through SHVA's local switch. The data include transactions by Israelis and foreigners in the domestic market but do not include foreign expenditures

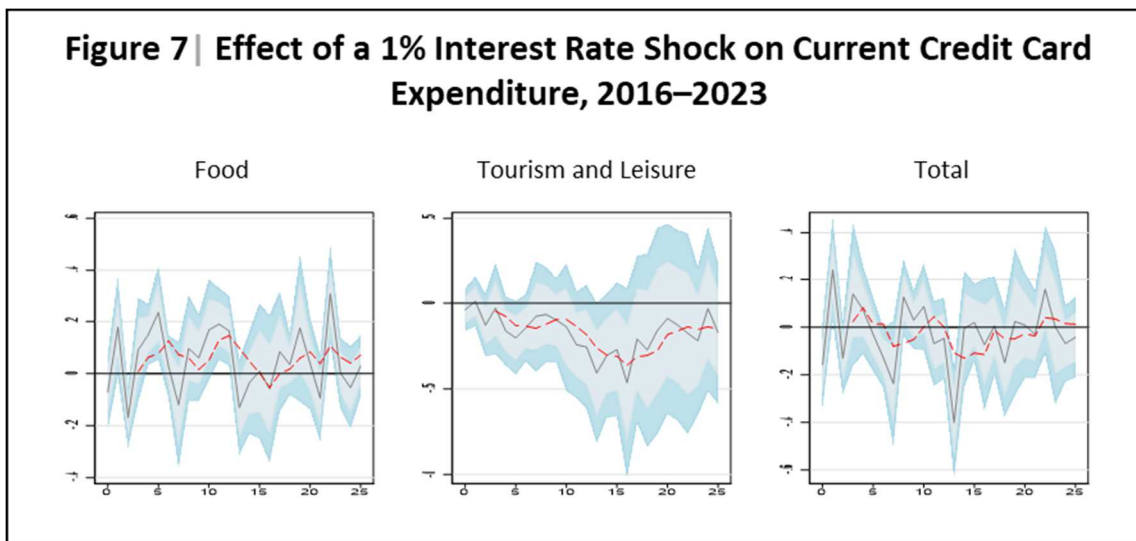
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in private consumption through the reduced disposable income of households with mortgages linked to the Bank of Israel interest rate (prime-linked mortgages).

<sup>20</sup> Referred to here for simplicity as credit cards.

by Israelis.<sup>21</sup> The data used for estimation here are daily frequency data that have been seasonally adjusted by the Bank of Israel. Since the data are characterized by significant daily volatility even after seasonal adjustments, the estimation was performed after converting the frequency from daily to weekly.

The dataset we have includes information for ten defined subsectors and an unclassified remainder that sums up to the total of credit card transactions. Since there is no one-to-one correspondence between the classification of the monthly data at fixed prices and the daily data, we present results here only for three expenditure subsectors: food, culture and leisure (including, according to this classification, education and leisure services, restaurants, and tourism), and the total.



**Table 3**  
**Change in consumption expenditures by component in response to a 1% increase in the interest rate**  
 (weekly data in current prices, percent)

		13-week average	26-week average
1	<b>Food</b>	7.7	5
2	<b>Tourism and leisure</b>	-12.1	-17.2
3	<b>Total</b>	-0.8	-2.5

Table 3 and Figure 7 show that the impact of monetary policy on consumption expenditure, based on weekly data, operates in the same direction as the results obtained from monthly data. However, the intensity of the impact on total consumption is smaller. This may be due to the noise and significant volatility in the weekly frequency data, making it more challenging to identify the policy's impact.

<sup>21</sup> In the obtained raw data, the transaction date that appears is the processing date, such that the figure generally represents activity on the previous day. The raw figure recorded for Sundays or days following a holiday generally includes activity on the weekend or holiday. See also Suhoj (2024).

## 4. Summary

We identify the impact of changes in the Bank of Israel's interest rate on private consumption expenditure using credit card expenditure data and daily shocks derived from short-term yields on interest rate decision days. The main finding is that a one percentage point increase in the Bank of Israel's interest rate is expected to reduce private consumption expenditure (at fixed prices, excluding housing) by about 5 percent in the first half-year following the change and by about 2 percent on average in the year following the change. This result is similar to the 5.5% decrease found by Grigoli and Sandri (2022).<sup>22</sup> By using expenditure data by consumption categories, we identify that an interest rate increase significantly impacts leisure services expenditure, which constitutes a larger part of consumption in the upper income quintiles, but does not affect current food expenditure, which has a larger weight in the lower quintiles<sup>23</sup>. This result aligns with the assessment that the demand for food consumption is less sensitive to income changes than nonessential consumer goods. The results also indicate that the interest rate hike process over the past two years had a significant and relatively rapid impact on private consumption expenditure, consistent with the relatively slow expansion of private consumption in 2023 (prior to the war). While the current analysis does not allow for identifying the mechanisms through which this impact operates, it enables a clear assessment of the relationship between interest rate changes and changes in consumption patterns.

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<sup>22</sup> The paper presents a response of 1.7% in credit card expenditures to a change of one standard deviation in the two-year yield. Further clarification shows that the size of a standard deviation is 30 basis points.

<sup>23</sup> Ribon (2023) found that policy has a stronger effect on consumption in the higher quintiles.



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## Appendix

<b>Table A1</b> <b>Credit card transaction components, monthly data, and their weight in various years</b> (percent)						
Consumption group	CBS expenditure item	CBS classification	2004 weight - calculated	2016 weight - calculated	2023 weight - published	CPI weight
<b>1</b>	<b>Food and beverages</b>	Food and beverages	<b>23</b>	<b>17</b>	<b>16</b>	<b>24</b>
<b>2</b>	<b>Furniture</b>	Furniture	<b>3</b>	<b>3</b>	<b>2</b>	<b>2</b>
<b>3</b>	<b>Clothing and footwear</b>	Clothing and footwear	<b>7</b>	<b>9</b>	<b>9</b>	<b>5</b>
<b>4</b>	<b>Other goods and services</b>	Other	<b>9</b>	<b>11</b>	<b>15</b>	<b>22</b>
<b>5</b>	<b>Current expenditures</b>		<b>30</b>	<b>32</b>	<b>28</b>	<b>33</b>
	Fuel, electricity, and gas	Other goods and services	8	7	5	7
	Medicine and medications	Other goods and services	7	6	5	10
	Transportation	Other goods and services	4	4	3	1
	Insurance	Services	6	7	6	6
	Government and municipal services	Services	5	8	9	9
<b>6</b>	<b>Tourism and leisure</b>		<b>9</b>	<b>8</b>	<b>7</b>	<b>8</b>
	Tourism flights	Services	6	5	3	7
	Leisure and recreation	Services	1	2	2	0
	Books, office equipment	Other goods and services	2	1	1	1
<b>7</b>	<b>Communications and electronics</b>		<b>18</b>	<b>21</b>	<b>24</b>	<b>6</b>
	Computers and software	Other goods and services	1	6	11	1
	Communications	Other goods and services	10	7	6	2
	Electricity and electronics	Manufactured goods	7	8	7	3