**Chapter 3**

**Monetary relations between Israel and the PA territories**

This chapter analyzes the scope of and mechanisms for monetary relations between Israel and the WBG including issues such as the Israel shekel’s role in the Palestinian banking system, monetary policy in Israel, the mechanisms of transfer to the Palestinian economy, correspondent banking relationships, and the amount of NIS cash in circulation in the WBG.

* 1. **The Israeli shekel’s role in the Palestinian banking system**

Article IV of the PP sets forth the regulations for monetary and financial issues between Israel and the PA territories and states that:

* The New Israeli Shekel (NIS) will be one of the circulating currencies in the areas and will legally serve as a means of payment there for all purposes, including official transactions. Any circulating currency, including the NIS, will be accepted by the PA and by all its institutions, local authorities, and banks when offered as a means of payment for any transaction.
* Both sides will continue to discuss…the possibility of introducing mutually agreed Palestinian currency or temporary alternative currency arrangements for PA.
* Banks in the Areas will accept NIS deposits.
* The PMA will have the right to convert the BoI excess NIS received from banks operating in the areas into foreign currency in which the BoI trades in the domestic interbank market.

The main function of the Bank of Israel (BoI) is to maintain price stability, that is, to preserve the currency’s purchasing power. Monetary policy is primarily directed at this objective, the achievement of which is essential for growth and economic stability. As is the case in many advanced economies, the main monetary policy tool of the central bank is the management of interest rates, that is, the price of money. The optimal range for price stability is defined as the target rate of annual inflation which, as of 2022, is 1–3 percent. It is the BoI’s responsibility to decide what short-term interest rate is required to meet the inflation target set by the Israeli government, with the Bank of Israel Law granting the BoI autonomy in this area. The BoI operates a flexible inflation-targeting policy that allows temporary deviations from the target but is designed to ensure that inflation returns to within the target range within two years at most.[[1]](#footnote-1) The Palestine Monetary Authority (PMA) does not conduct an independent monetary policy, and the Palestinian economy operates within a financial system that uses a large number of currencies affected by the monetary policy of their issuing countries or institutions. Interest rates in the Palestinian market, including those on deposits and loans, are linked to market mechanisms and competition within the banking system, but also to interest rates in the issuing countries of the U.S. dollar (USD), the Jordanian dinar (JD), and the NIS.[[2]](#footnote-2)

Due to the importance of economic ties with Israel, the NIS is one of the main currencies used by businesses and consumers in the Palestinian economy in day-to-day trading. The Palestinian banking system maintains accounts in three main currencies (the NIS, the USD, and the JD). In 2019, for example, this multi-currency reality was reflected in general activity and in the share of NIS deposits out of the total deposits (36 percent), the share of shekels out of the total credit (40 percent), and the proportion of checks presented for clearing in shekels (80 percent). Figures 14, 15, and 16 illustrate an upward trend in the use of NIS in core banking operations:

**Figure 14: Distribution of deposits in PA governorates by currency in equivalent millions of USD and by percentage**

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*Source: PMA*

**Figure 15: Distribution of gross credit facilities in PA governorates by currency in USD equivalents in millions and by percentage**

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*Source: PMA*

**Figure 16: Distribution of checks presented for clearing in the PA governorates by currency in USD equivalents in millions and by percentage**

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*Source: PMA*

Scholars have examined the possibility of the PA issuing its own independent currency. Arnon and Spivak (1995) argue that there are substantial gains to be made from the introduction of a Palestinian currency, yielding short­-term revenue exceeding 22 percent of the GDP in the first five years and around 1.29 percent annually in the long­ run. Revenues would decrease in direct proportion to increases in the money­ multiplier.

Cobham (2004) suggests that a Palestinian state would have no alternative initially but to opt for a relatively hard peg, with a low level of discretion in monetary policy. Cobham also argues that the eurozone will become the PA’s most important trading partner in the long run, as the euro is a suitably stable anchor currency and that the long-term goal should therefore be establishing a monetary framework with a peg to the euro, but with some short-run discretionary scope and including a lender of last resort function. According to Tobin, in the short run, the PA should move toward this goal via the introduction of a Palestinian currency under the control of a currency board, with a peg to the NIS initially but later to the euro.

Wazir, Atallah, and Sarsour (2011) consider the problems in estimating money supply in the PA territories complex because of the absence of a national currency, the regular use of the JD, USD, and NIS, and the lack of data on currency in circulation there. They discuss a method for determining the value of a putative Palestinian national currency using three indicative ratios (cash: GDP; cash: bank deposits; and GDP: money supply) from Jordan and Israel to estimate the money supply in the PA territories.

More recently, Arnon and Bamya (2015), discussing how the PMA would carry out the functions of a modern central bank in a scenario of political and economic sovereignty, argue that to be successful, any Palestinian currency would have to be stable and credible to the public.

* 1. **Monetary policy in Israel, the transfer mechanism, and the effects on the Palestinian economy.**

Arnon and Spivak (1996) found that Israel and the WBG were closely integrated economically, but the WBG and Jordan were much less so. They computed the shocks to the economies and the correlation between the transitory and the permanent shocks. They concluded that based on the circumstances in the past, the imposed monetary union between Israel and the Palestinian economy was warranted. However, optimal monetary arrangements in the future would depend on the extent of changes in real flows and on a satisfactory settlement of the seigniorage issue.

Beidas and Kandil (2005)’s analysis of the quantitative behavioral responses of key economic variables in the Palestinian economy in the face of major economic shocks shows that: wages and prices are flexible in the face of various shocks; real wages appear to be stable in the face of various shocks and have increased despite higher unemployment; an appreciation of the real effective NIS exchange rate decreases exports and imports; and demand for money appears to be stable in the face of exchange rate shocks. They conclude that, although a fixed exchange rate system may be desirable initially to establish the new currency’s credibility, some exchange rate flexibility is beneficial over time.

Sarsour (2012) investigates the channels through which external or internal monetary policy shocks can affect the real economy and inflation in the WBG. Empirical results in general indicate that monetary policy shocks have limited influence on economic activities and inflation in WBG. However, results also show that pass-through from domestic lending interest rates of the USD and the JD is higher than for the NIS. Sarsour finds significant but relatively low pass-through for policy rates onto domestic lending interest rates and, therefore, onto real economic activity. Israeli monetary policy has a significant impact on Palestinian real economic phenomena, mainly net exports and the inflation rate. Furthermore, the exchange rate channel influences GDP by affecting wealth and net exports.

Draghma and Iriqat (2016) examine the causality between the Palestinian, Jordanian, and Israeli economies using three macroeconomic indices for the years 1997–2014: GDP, the inflation rate, and the unemployment rate. Their statistical findings support the notion that GDP in both Israel and Jordan affect the Palestinian GDP. Figure 4 shows recent evidence for the impact of the interest rate channel.

**Figure 17: The BoI key policy rate and the interest rate on NIS loans in the Palestinian banking system**

*Source: BoI and the PMA*

Inflation in the West Bank is affected mainly by price trends in Israel and around the world. In contrast, the Gaza Strip, where there are barriers to the movement of goods, is less affected by these trends. Local prices are therefore affected largely by the prices of basic commodities in the global market as well as by import costs, mainly from Israel, and are also affected by local prices of similar goods in Israel.[[3]](#footnote-3)

**Figure 18: Annual inflation rate in Israel and the WBG**

*Source: BoI and the PMA*

Figure 19 shows the percentage of the Gross National Income (GNI) of the total credit and deposits in the Palestinian banking system by currency. This index may reflect the impact of Israel’s monetary policy on the Palestinian economy.

**Figure 19: The percentage of the GNI of total credit and deposits in the Palestinian banking system by currency**

*Source: PMA*

* 1. **The correspondent banking relationship between Israel and the WBG**

The definition of correspondent banking by the IMF (2017) is:

The provision of a current account (called a nostro account) by a bank to another bank, which uses this nostro account to facilitate cross-border payments and trade finance transactions of its customers (e.g., individuals, legal entities, or even other banks). The bank may also use the nostro account for its own liquidity management and related services (cash clearing, short-term borrowing and investment services in other currencies). The bank providing the nostro account is called the correspondent bank, and the bank using the nostro account is called the respondent bank. The relationship between the correspondent and respondent bank is called a Correspondent Banking Relationship (CBR).[[4]](#footnote-5)

According to Article IV of the PP: “The clearing of money orders and transactions between banks operating in the areas and banks operating in Israel will be done between the Israeli and the Palestinian clearing houses on the same working day basis, according to agreed arrangements.” It also stipulates: “Both sides will allow correspondential relations between each other’s banks.” The means of payment used in transactions between Israel and the WBG include checks when their individual average value is up to tens of thousands of shekels and bank transfers for payments whose average value is in the millions.

Transactions settled through CBRs represent a large part of the WBG’s economic activity, according to the IMF (AHLC SEP 2016).[[5]](#footnote-7) Palestinians issued approximately 300,000 checks to Israeli beneficiaries deposited with Israeli correspondent banks in 2015 and Israelis issued 800,000 to Palestinian beneficiaries deposited in Palestinian banks in the same year. These transactions were estimated at NIS eight billion and NIS seven billion respectively, about 30 percent of the WBG’s GDP. A similar system was used to transfer money in and out of the shekel, which amounted to around NIS 8 and 14 billion, about 16 and 28 percent of the WBG’s GDP respectively.

Figure 20 shows the yearly number of checks and the money transfer volume between Palestinian and Israeli banks in NIS billions. We can see that the upward trend stopped at the end of 2016 due to, among other things, the decision of the Israeli banks to end the CBR, as will be explained below.

**Figure 20: Yearly checks and money transfer volume between Palestinian and Israeli banks in NIS billions**

*Source: PMA*

Cash is also used for low-volume transactions, wage payments to Palestinian workers in Israel, and purchases made by Israeli Arabs in the West Bank. This cash flows into the WBG and generates excess cash in the Palestinian banking system. The excess cash is deposited in the correspondent bank accounts, using a quota mechanism, enabling Palestinian banks to manage their liquidity. The excess cash, however, imposes significant costs on the Palestinian banking system in insurance fees, transportation cost, deposit fees, and loss of alternative yields. The Israeli government reported in April 2022 that a mandatory solution for the transfer of salaries to Palestinian workers in Israel exclusively through bank transfer would be presented before the end of the year.[[6]](#footnote-8)

**Figure 21: Palestinian banks’ excess cash deposited in Israel (in NIS billions)**

*Source: PMA*

Settlement and clearing processes between Israel and the WBG take place within the framework of the correspondent services that Palestinian banks receive from Israeli banks. Palestinian banks are members of the Israeli Banking-Clearing House (CH). The decision in principle regarding their acceptance to the CH was made even before the establishment of the PA. The CH obligates its members to act in accordance with its rules and principles that include, among other things, requirements regarding standardization, records and transfers, forms and dates, and the transmission of messages between members. CH rules allow members to participate in clearing settlements themselves or to be represented by another CH member acting as a correspondent bank. In order to mitigate risks in the clearing process, correspondent banks require collateral from Palestinian banks. The Palestinian banks are not directly connected to the CH and, therefore, cannot send payment instructions directly to the system, given the fact that correspondent banks and Israeli banking corporations operate control measures against money laundering and terrorism financing**.**

Over the past decade, a process of a reduction in relations between banks around the world has taken place, referred to as “de-risking.” This began due to global correspondent banks being held liable for illicit international bank transfers made through them, given that they know the transfer data involved. Law enforcement agencies and regulators, mainly in the United States, have issued fines in the billions of dollars and tort claims have been brought, mainly in relation to financing terrorism against global correspondent banks.

In recent years, and especially given regulatory uncertainty, correspondent banks have begun to scrutinize who the end-recipients of such transfers are and to demand that the representative banks refrain from transfers to customers of a certain type.[[7]](#footnote-9) Concerned about the economic impact of this phenomenon, in 2017, the IMF recommended that countries and territories drastically affected by the decline in CBRs examine whether it was worthwhile to establish temporary mechanisms, including through public entities, to provide payment and settlement services.[[8]](#footnote-11) In 2016, due to the money laundering and terrorism financing risks involved in those services, Israeli correspondent banks had already informed their government that they planned to terminate the services they provided to Palestinian banks.

Given the high level of integration between Israel and the WBG, terminating CBRs could reduce transactions between Israelis and Palestinians in a manner that will harm consumers, increase employment, and hamper Palestinian economic growth. It could also undermine the supply of essential services to the PA (electricity, fuel, water) and the transfer of tax revenues. In addition, it could be a shock to the stability of the Palestinian financial system through the payment systems.[[9]](#footnote-12) There is the possibility of further de-risking with foreign banks and damage to the effectiveness of money laundering and terrorist financing countermeasures by expanding the use of means of payment and financial agents whose supervision is less than strict.

In 2017, the government of Israel (GoI) approved the provision of letters of indemnification and immunity to Israeli correspondent banks for a limited period and instructed the authorities to find a long-term solution for the CBR with the Palestinian banking system.[[10]](#footnote-14) In 2018, it endorsed the recommendations of an BoI-led inter-ministerial team and established a new government company to provide correspondent services instead of the Israeli correspondent banks.[[11]](#footnote-16) This company will represent the PMA in relation to the CH and the PMA will represent the Palestinian banks in a government-to-government sector solution. In Feb 2021, the PMA consequently announced the establishment of the Palestinian Correspondent Company to facilitate the implementation of financial transactions and procedures for purchases, sales, and cash transfers, which will contribute to accelerating the economic cycle.[[12]](#footnote-17)

* 1. **Assessing the amount of NIS cash in circulation in the WBG**

It is arguable that physical currency should be diminishing as payments increasingly become electronic, with new technologies rapidly emerging, and with governments seeking to reduce cash transactions as a way to reduce crime and tax evasion. Nonetheless, the quantity and value of banknotes and coins in circulation are also affected by several other factors, such as changes in the extent and number of transactions, the rate of inflation, and population growth as well as the use of automated teller machines, checks, credit and debit cards and advanced means of payments (Judson 2017).

**Figure 22: Ratio of cash in circulation to GDP in selected countries/territories**

*Source: Department of Currency Report 2019, Bank of Israel*

The BoI has the sole right to issue currency in Israel. According to the BoI (2019), the habit of using cash and other means of payment is influenced by changes in technology and regulation more now than in the past. The BoI encourages the use of advanced paperless means of payment and supported the legislative process for the Reducing the Use of Cash Law 5778–2018 that came into force in January 2019. The continued increase in the circulation of cash, as well as survey findings, show that cash remains a significant means of conducting transactions in Israel. Cash expenditures constituted about 26 percent of the total, while credit cards or debit cards accounted for about 38 percent. Cash transactions are mostly in low amounts.

**Figure 23: Cash in circulation and its ratio to GDP**

*Source: BoI*

NIS cash is also heavily used in the WBG. How much cash circulates in Israel and how much in the WBG is a very important matter to calculate for policymakers and anti-money laundering authorities, as well as for devising financial inclusion strategies. Although part of that circulation is related to illegitimate activities such as tax evasion, most relates to trade and employment and so should also indicate the level of economic integration.

There are both direct and indirect methods of calculating the level of cash in circulation that can be used. As already noted, Wazir, Atallah and Sarsour (2011) propose a method for determining the value of a putative Palestinian national currency using three indicative ratios (cash: GDP; cash: bank deposits, and GDP: money supply) from Jordan and Israel to estimate the money supply in the PA territories. which is a complex matter because of the absence of a national currency. In each case, they assume that the same ratio holds in the WBG and apply it to the known total of bank deposits and nominal GDP. The results derived from the cash in circulation and GDP-to-money supply produced poor results that are inconsistent with the Palestinian reality. However, the cash-to-demand deposit ratios predict broadly similar amounts of cash in both cases.

Where,

= cash in circulation in WBG outside the banking system.

= demand deposits in WBG in all currencies.

CC/DD = ratio of cash in circulation to demand deposits in Jordan or Israel.[[13]](#footnote-18)

Figure 24 shows the results of this exercise in addition to the average results for cash in circulation to GDP ratios.

**Figure 24: Currency in circulation in Palestine according to cash-to-demand deposit ratio in USD millions**

*Source: Wazir, Atallah and Sarsour (2011)*

The European Central Bank (ECB) uses a linear combination of two methods.[[14]](#footnote-20) Two estimates were chosen to set boundaries to circulation outside the euro area by establishing a lower limit and an upper limit. The mean point of the interval is proposed as the point estimate of circulation outside the euro area.

Lower bound: accumulated shipments of high denomination banknotes:

where represent the circulation abroad as the accumulation of official exports and imports (,) based on information of official exports and imports shipments of euro banknotes to/from countries outside the euro-area, and the accumulation of other unofficial cross-border flows (, ), e.g., travel/tourism or other cross-border cash payments. Given that there is no suitable information for the unofficial flows, net shipments serve as a lower bound to F if the assumption is that the unofficial channel presents net positive outflows.[[15]](#footnote-21)

Upper bound: ratio of coins to banknotes:

Where “B” is total banknotes in circulation, “C” coins and “r” the maximum value of the coins-to-banknotes ratio. The upper bound uses an indirect method, combining observed information on domestic circulation, coin circulation, and assumptions on what is not observed, in turn based on an assumption of the maximum possible ratio of coins to banknotes in domestic circulation.

The observed coins to total banknotes ratio prevailing in 2002 (4.16%) was chosen as the maximum ratio (r), i.e., the actual unobserved ratio is assumed to lie below that level. Using the fixed coins-to-banknote ratio estimated for 2002 implies that the growth of banknote issuances since that year that exceeded the growth of coin issuances is attributable entirely to non-resident holdings, an assumption that may indeed be justifiable only for an upper bound estimate**.**

By taking the average of the lower and upper bounds, the method estimates the results below:

**Figure 25: Holdings of euro banknotes by non-euro area residents**

**(EUR billion at end of period)**

Chart, line chart

Description automatically generated

*Source: Estimate of euro currency in circulation outside the euro area, ECB*

**Figure 26: Net monthly shipments of euro banknotes to destinations outside the euro area (EUR billions; adjusted for seasonal effects)**

Chart

Description automatically generated

*Source: Estimate of euro currency in circulation outside the euro area, ECB*

According to Judson (2017), demand for USD banknotes continues to grow and consistently increases at times of crisis, both within and outside the United States, because it the U.S. currency remains a desirable store of value and medium of exchange in times and places where local currency or bank deposits are less so. Judson also presents updates on indirect methods of estimating the stock of currency held abroad. These methods continue to indicate that a large share of U.S. currency is held abroad, especially in the $100 denomination. Judson uses the following indirect methods of calculation:

* Estimates based on money demand and comparisons with Canada: Canada has similar income levels, payments technologies, holiday patterns, and GDP growth rates to those in the United States, but little Canadian currency is believed to circulate externally. If we assume that the Canadian ratio of currency to nominal GDP is the same as its U.S. counterpart for domestic demand, then the foreign share of U.S. demand can be estimated (foreign component) as:

An alternative assumption would be that Canadian and U.S. domestic demands for currency relative to income are the same at the same levels of per capita income. In order to construct an estimate of the share of U.S. currency abroad using this assumption, Judson regressed the ratio of Canadian currency to GDP on the log and level of Canadian per capita GDP and then constructed the estimated domestic share of U.S currency for a given level of USD per capita GDP using the regression results. The estimate is then constructed as:

* The Seasonal Method: In general, the seasonal method presupposes that U.S. currency held abroad behaves differently than U.S currency held at home in some measurable respect. The average measured characteristic of currency, suppose X, will be a weighted average of the characteristic for the domestically held currency, ,and of that for the foreign-held currency, , as follows:

Where the weight β is the domestic share of total currency outstanding, and 1 − β is the foreign share. By observing the overall behavior of currency, we can determine X. It is necessary to exploit various data to infer or , thus enabling an estimate of the shares of currency held at home and abroad. The seasonal method, also known as the seasonal variation technique, uses relative seasonal variations in the currency circulating in the United States and Canada to infer overseas holdings of dollars. The share of U.S. currency abroad can be deduced by comparing the seasonality of Canadian currency in circulation to the seasonality of all U.S. currency in circulation.

* The biometric method: This method mimics a technique used by biologists to estimate the size of an animal population when they can capture only a sample of the population at any given time.[[16]](#footnote-22) The approach used estimates how much U.S. currency is abroad by combining information about currency shipped to and from local banks to obtain virtually continuous ‘‘samples’’ of currency and statistics for the series note which contains an embedded security thread. Thus, for any geographic area, the total population of notes to be estimated, N, can be expressed in relation to three known numbers: M, the total number of marked notes; n, the number of notes in a sample; and m, the number of marked notes in a sample. Assuming that the notes circulate freely and randomly, so that the sampled proportions of marked notes are representative of the notes circulating in the area chosen, the biometric approach tells us that the sample proportion of marked notes is equal to the proportion of marked notes in the whole population:
* Estimating a currency demand function:This approach specifies a demand function for U.S. currency that allows for foreign shipments as well as domestic factors. The general assumption has been that currency demand consists of two components: a domestic component, which should be correlated with the typical determinants of money demand (GDP, short-term interest rate); and an international component, which is driven by routine as well as crisis-related fluctuations in foreign demand for U.S. currency.

Dias (2018) discusses the non-trivial problem of a country’s currency circulation within a monetary union, focusing on an internationally relevant currency with significant cash flows inside the euro area. He examines alternatives for estimating the amount and value of euros in circulation in certain euro area countries based on different hypotheses, techniques, and data. Although using a structural money demand model may be useful for some countries, his conclusions suggest that allocating a proportion of the euros estimated to circulate in the euro area to each country is more adoption-ready and could offer relatively harmonized estimates.

Given the available data, I have adopted the methodology used by the ECB to assess how much NIS cash circulates in the WBG. Using data published by the BoI and the PMA, I calculated an upper and lower bound and their average represents my final estimate.

The upper bound is also based on the ratio between coins and total cash in circulation. I took a ratio of 4.8 percent, the average of the years of the “Second Intifada” (2002–2004), when the volume of economic activity between Israel and the WBG decreased significantly. I chose these years to reflect, as much as possible, a ratio of coins to total cash in circulation based mainly on the use by Israelis. This time period is similar to that referred to by the ECB, which chose 2002, the year of the euro’s launch in cash form. The lower bound is based on the amount of NIS cash held in vaults by the Palestinian banking system. The estimate is a simple average of the lower and upper bounds.

I found that the share of NIS cash that circulates in the WBG was on average 20 percent of total NIS circulation between 2010–2019 and an estimated NIS 18 billion in 2019. Excess cash deposited in Israel by Palestinian banks is positively correlated with my estimate. This means that some of the NIS cash that flowed to the WBGs remained in the Palestinian economy for the purposes of store of value and means of payment. The increase in NIS cash in Palestinian banks vaults reflects, among other things, liquidity needs, but also the inability of the Palestinian banks to deposit the excess cash back to the Israeli banking system for reasons already explained.

**Figure 27: Estimated amount of NIS cash circulating in the WBG in NIS billions**

**Figure 28: Estimated share of NIS cash circulating in the WBG out of total NIS cash in circulation**

*Source: Author*

The estimate of cash in NIS relative to GNI is on average 23 percent over this period.

**Figure 29: Estimated amount of NIS cash to GNI in the WBG**

*Source: Author*

Israel’s revised ratio of NIS in circulation to GDP is 4.9 percent against the published ratio of 6.2 percent.

**Figure 30: Ratio of cash in circulation to GDP in Israel**

*Source: Author*

* 1. **Conclusions**

Monetary relations between Israel and the WBG are significant for both sides but especially for the Palestinian economy. The degree of economic integration affects the extent of the use of the NIS within the Palestinian economy and not only activity between the regions.

Terminating banking activity between Israel and the PA in NIS may damage economic integration, but may improve the ability to carry out digital banking transactions, a result that would certainly strengthen interregional economic integration and the dominance of the NIS in the PA.

1. BoI website. [↑](#footnote-ref-1)
2. PMA Annual Reports. [↑](#footnote-ref-2)
3. PMA annual reports. [↑](#footnote-ref-3)
4. mailto:https://www.imf.org/en/Publications/Policy-Papers/Issues/2017/04/21/recent-trends-in-correspondent-banking-relationships-further-considerations [↑](#footnote-ref-5)
5. https://www.imf.org/en/Countries/ResRep/WBG/News-Archive [↑](#footnote-ref-7)
6. https://www.gov.il/ar/departments/news/onlinepayment [↑](#footnote-ref-8)
7. mailto:http://www.fatf-gafi.org/media/fatf/documents/reports/Guidance-Correspondent-Banking-Services.pdf [↑](#footnote-ref-9)
8. Recent Trends in Correspondent Banking Relations—Further Considerations, IMF, March 16, 2017. [↑](#footnote-ref-11)
9. AHLC Report, IMF, April 2016 page 6. [↑](#footnote-ref-12)
10. https://www.globes.co.il/news/article.aspx?did=1001236634; https://www.haaretz.co.il/news/politics/1.3425881 [↑](#footnote-ref-14)
11. https://www.gov.il/he/departments/policies/dec4207\_2018 [↑](#footnote-ref-16)
12. Governor of the Monetary Authority: Establishing the Palestinian Correspondent Company to facilitate the implementation of financial transactions [↑](#footnote-ref-17)
13. Where for Jordan + = DD, and for Israel + = DD. Since the data is only for total holdings of currency in both Jordan (Israel) and PA territories they take the ratio of this amount to total demand deposits in both Jordan (Israel) and the PA territories. [↑](#footnote-ref-18)
14. Estimate of euro currency in circulation outside the euro area, ECB 6 April 2017. [↑](#footnote-ref-20)
15. According to the ECB, anecdotal evidence, for example, indicates that euro area travelers or migrant workers take a significant quantity of euro banknotes with them when traveling to non-euro area countries. [↑](#footnote-ref-21)
16. See G.A.F. Seber, *The Estimation of Animal Abundance and Related Parameters*, 2d ed. (Macmillan, 1982). [↑](#footnote-ref-22)