



PALESTINE MONETARY AUTHORITY

PALESTINE MONETARY AUTHORITY (PMA)



Inflation Report

Second Quarter 2015

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Executive Summary

The inflation rate in Palestine reaccelerated during 2015Q2, compared to both the previous and corresponding quarters; it increased to its highest level in more than two years. Inflation increased to 2.8% in 2015Q2 compared with 0.6% in the previous quarter, and 1.3% in the corresponding quarter 2014. This acceleration was mainly driven by the huge increments in commodity prices in Gaza Strip under blockade and, to a lesser extent, by the moderating decline in global commodity prices, which contributed to lower deflation in neighboring countries. However, inflation in Palestine was much lower than that registered in the MENA region in 2015Q2, but exceeded that in Jordan and Israel. Analysis revealed that inflation in Palestine is largely imported and shows high sensitivity to world prices, particularly for food and fuel.

The approach followed in this report for inflation analysis and forecasting purposes depends on two key variables: (i) cost of imports, which reflects the inflation and exchange rates of Palestine's main trading partners, among which Israel accounts for the highest portion (80% of exports and 70% of imports on average), and (ii) world food prices, as food has the highest weight (35%) in the consumer price index in Palestine.

Inflation forecasts show that consumer prices in Palestine are expected to increase by around 1.6% during 2015, on average. Moreover, prices are also expected to rise by around 1.1% during the third quarter of 2015 on an annual basis. Forecasts depend on assumptions concerning the most likely future paths for (i) prices and exchange rates in Palestine's most important trading partners, and (ii) prices in the international food markets, as predicted by international organizations such as the IMF and foreign central banks.

Given that Palestine's inflation may deviate from the baseline scenario, due to deviations in foreign prices and exchange rates, the forecast is supplemented with a risk analysis. Beside the baseline, the forecast takes into account four alternative scenarios based on positive and negative one-standard deviation shock in Palestine's cost of imports and in world food prices. The expected effects on Palestine's alternative inflation outcomes show that a positive one-standard deviation shock in external conditions may increase Palestine's inflation by 0.5 points to nearly 2.1% on average during 2015. On the other

hand, a negative one-standard deviation shock may bring inflation in Palestine down by 0.5 points to 1.1% during the same period.

As for financial developments in Palestine, 2015Q1 data indicate that average lending rates on the USD and the JD have increased compared to the previous quarter, while the rate on the NIS has declined during the same period. On the other hand, average deposit rate on the JD and the NIS has increased, while it decreased on the USD. The margin between lending and deposit rates in Palestine remained relatively higher than its counterpart in the issuing countries. However, it declined on the NIS to 8.29 percentage point, whereas it increased on the JD and the USD to 6.64 and 6.02 percentage points, respectively, during 2015Q1.

The Palestinian stock market performance stabilized during 2015Q2 compared to the previous quarter. The stock market index (Al-Quds Index) marginally grew (by less than 1%) during 2015Q2 compared with 2015Q1, reaching 478.4 points. This decline could be attributed to the deteriorating performance of all sectors, except a moderate growth in the services sector during the quarter.

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I. Recent Economic Developments

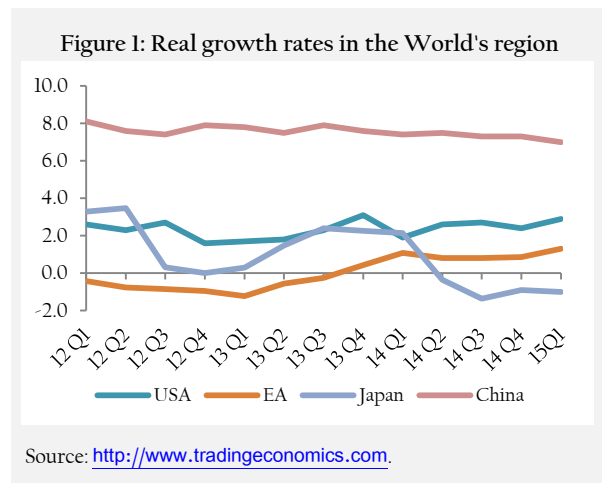
Real GDP

The year 2015 began with mixed signals about global economic performance; some developments indicated a better performance in some advanced economies, while others pointed to another year of economic slowdown and weak trade. However, those developments led the IMF to revise down its forecasts¹ for the global economic growth during 2015 to 3.3%, but it kept the previous forecast for 2016 stable at 3.8%.

A closer look at major economies in 2015Q1 shows that the United States economy (US) achieved strong and continued recovery as private demand expanded under lower commodity prices, and due to improved consumer confidence. As a result, the US economy grew by 2.7% in first quarter of 2015, compared with 2.4% in the previous quarter. However, in light of expectations of the negative effects of a continued dollar appreciation on the trade balance, the IMF has revised down its expectations to the US economic growth in 2015 and 2016 by 0.6 and 0.1 percentage points, to around 2.5% and 3.0%, respectively.

Similarly, the Euro area (EA) economy continued to recover during the first quarter, consistent with previous expectations. Despite the slowdown in the German economy, the EA economic growth rate accelerated to 1.3% on annual basis in 2015Q1, compared with 0.9% in the previous quarter. This notable progress led the IMF to keep previous growth expectations for 2015 unchanged, at 1.5%. However, the IMF revised its 2016 forecast upward to about 1.7%.

In contrast, the Japanese economy failed to avoid slipping into another recession, as local demand remained weak despite government's demand-stimulating policies. Data revealed a progress in Japanese exports as the yen depreciated against major currencies; however it wasn't sufficient to avert a contraction of 1.0% during 2015Q1, compared with a contraction of 0.9% in the previous quarter. In light of these developments, the IMF revised down growth expectations for the



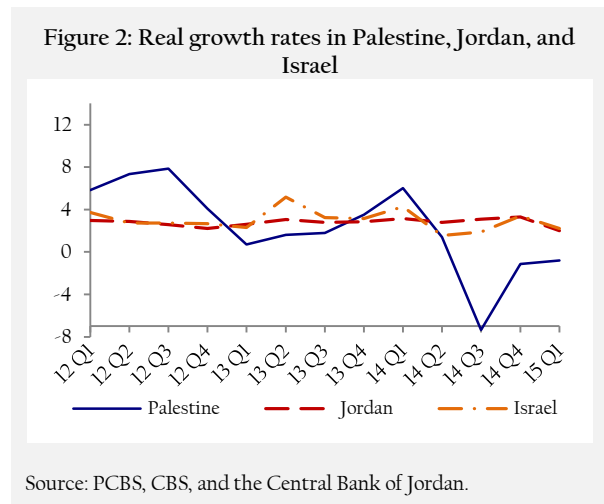
¹ IMF, World Economic Outlook, April 2015, while the previous forecasts were published in January 2015.

Japanese economy in 2015 by 0.2 percentage points to become 0.8%, but kept the previous expectations for 2016 at 1.2%.

Meanwhile in China, the economy slowed down again to its lowest level in six years, due to the notable slowdown in exports, decline in industrial production, and weak service and real estate sectors. The Chinese GDP grew by only 7.0% during 2015Q1, with expectations of further slowdown in the current and coming years, reaching 6.8% and 6.3% in 2015 and 2016, respectively.

Many countries in the Middle East and North Africa (MENA) region continued to suffer from several political and economic problems, as in Iraq, Syria, Egypt, Libya, and Yemen. In light of the economic and political uncertainty, in addition to negative effects of oil price falls on oil exporting countries, the IMF expects the region to grow by 2.8% in 2015, and to accelerate to 3.7% in 2016.

Looking at the neighboring region, both the Israeli and Jordanian economies slowed down in 2015Q1 on annual basis. The Jordanian economy grew by around 2.0%, compared to 3.3% during the previous quarter, affected by the notable decline in construction, along with slowdown in agriculture, industry, trade, and most of service activities. The IMF expects the Jordanian economy to grow by 3.5% in 2015, with expectations of a slowdown in 2016 to 3.3%.



Also, the Israeli economy slowed down again, growing by 2.2% in 2015Q1 compared with a growth of 3.4% in 2014Q4, as exports, private consumption and investment all weakened. However, IMF expects a growth of 3.7% and 4.5% in the Israeli economy in 2015 and 2016, respectively.

Locally, the Palestinian economy experienced a contraction for the third consecutive quarter during 2015Q1 as the Gazan economy shrunk, along with a modest growth in the West Bank. As a result, the GDP declined by around 0.8% on annual basis, compared with a contraction of 1.1% in the previous quarter.

In the WB, the economy was hit hard by the government's financial crisis: public servants didn't receive their full salaries for three months, and the accruals (arrears) to private sector have accumulated way beyond ability to pay. In sum, the WB economy growth dipped to 1.8%, compared with 4.9% in the previous sector.

During the quarter, most economic activities have declined in varying degrees. Industrial activity contracted by around 10% from its level in the corresponding quarter in 2014, followed by a shrinkage in construction by 8.1%, and in public administration and defense by 4.7%. Furthermore, agriculture and trade activities declined by 1.5% and 0.5%, respectively. In comparison, financial and insurance activities' growth peaked at 15.6%, transportation and storage surged by 14.2%, and services and information and communications edged up by 3.1% and 1.1%, respectively. However, those improvements were not enough to compensate for the spillover effects of government's financial crisis, which shows the sensitivity of the economic cycle to the current expenditure.

However, economic activity in GS has shrunk for the third consecutive quarter, falling by around 8.2% on annual basis, compared to a contraction of 18.3% in 2014Q4, due to low production and the slow recovery of main economic activities. Agriculture and industry went below their levels in 2014Q1 by 27.0% and 26.8%, respectively. Moreover, trade activities contracted by 16.8% on annual basis, while services, and transportation and storage shrank by 18.7% and 7.5%, respectively. In contrast, data revealed some recovery (11.1%) in construction during 2015Q1 in light of the increase in the flow of raw materials to the Strip for the first time in months. Also, financial and insurance activities grew by 24.3%, and public administration and defense by 6.0% on annual basis.

Aggregate demand

Gross Domestic Product (GDP) in Palestine dropped again, reaching USD 1,863.0 million in 2015Q1, a decline by around 0.8% on annual basis as a result of the decrease in investment, and a widening trade deficit (see table 2). Investment has decreased again, dropping by around 8.7% as investment in GS deteriorated

Table 1: Aggregate demand at constant prices (2004=100)
(USD million)

	2014				2015
	Q1	Q2	Q3	Q4	Q1
Private consumption	1,601.3	1,684.3	1,612.9	1,676.9	1,656.2
Government expenditure	444.9	510.9	583.1	500.3	532.9
Investment	352.6	397.0	271.1	342.6	321.9
Exports	344.6	359.1	346.2	437.1	407.6
Imports	1,020.1	1,137.9	1,092.9	1,165.6	1,146.7
GDP	1,877.2	1,934.9	1,758.3	1,878.6	1,863.0

Source: PCBS.

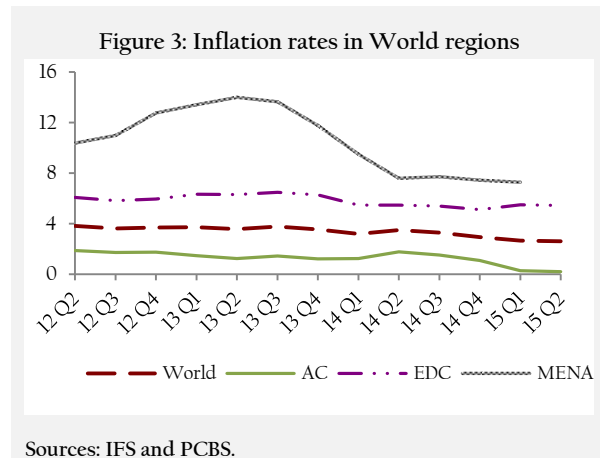
sharply. On the other hand, the improvement in exports in both the WB and GS was not sufficient to compensate for the trade deficit, which had expanded by 9.4%, reaching USD 739.1 million. In the event, exports grew by over 18.0%, while imports increased by around 12.4% in the same period.

Government consumption has remarkably grown (19.8%), increasing in both the WB and GS. However, private consumption notably increased in the WB (6.8%), but remained below its pre-war levels in GS, declining by around 5.3%, compared to the corresponding quarter of 2014.

Inflation

Decline in commodity prices abated somewhat during 2015Q2, resulting in a decline in inflation for most countries compared with the previous quarter. The global inflation rate has slightly declined from 2.7% in 2015Q1 to around 2.6% in 2015Q2, (figure 3).

Gauging price movements by country groups between 2015Q1 and 2015Q2, inflation has slightly declined in both advanced, and emerging and developing groups, but marginally decreased (from 0.3% to around 0.2%) in advanced countries (AC). The AC suffered from deflationary pressures due to weak private demand. Low world commodity prices spurred aggregate demand and lowered the inflation rate in the US by 0.04%.

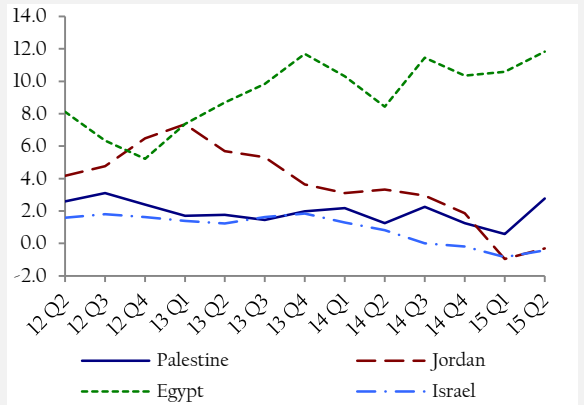


Similarly, inflation in the emerging and developing countries (EDC) in 2015Q2 has marginally receded to 5.5% compared with 5.4% in the previous quarter. It is worth mentioning that the EDC have experienced persistent price hikes during the past few years, when inflation had reached its peak in 2011, before it started to decline afterwards. In the MENA region, which experienced one of the highest inflation rates in the world, inflation reached 7.3% during 2015Q1, as the most recent data indicate.

As for Palestine, figure (4) indicates that the movements of inflation rates are highly consistent with those in Israel, and to a lower degree, with those in Jordan and Egypt. However, this pattern was somewhat different in 2015Q2, as inflation in Palestine increased, while prices in both

Jordan and Israel continued to decline (although at a lower pace), affected by a moderating decrease in global prices. As a result, prices in Jordan and Israel experienced lesser deflation in 2015Q2, as prices shrank by 0.3% and 0.4%, compared with 0.9% and 0.8%, respectively, in the previous quarter. In contrast, inflation in Egypt increased from 10.6% to around 11.8% during the comparison period. It is worth mentioning that the relatively high inflation rates in Egypt reflected, in good part, the continuous political turmoil. In Palestine, the marked increase in inflation (to 2.8% in 2015Q2 from 0.6% in the previous quarter) largely reflected the huge price increase in GS due to the continuous Israeli siege.

Figure 4: Inflation rates in Palestine, Jordan, Egypt, and Israel

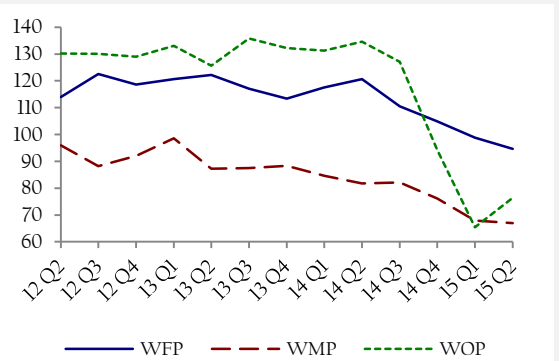


Sources: IFS and PCBS.

Global and local prices

The change in global, regional, and local inflation rates is mainly due to the change in commodity prices worldwide. Figure (5) shows a downward trend of global prices during the last few quarters, although the decline abated during 2015Q2, and world oil price (WOP) recovered somewhat on a quarterly basis.

Figure 5: Indices of primary commodity prices, 2010=100



Source: IFS.

Although world oil price (WOP) witnessed a significant decline (43.2%) on annual basis, it resumed its growth on a quarterly basis for the first time in three quarters, rising by 16.8% over the previous quarter. Such growth consisted with higher aggregate demand coupled with a higher-than-expected slowdown in oil production in the US.

In comparison, world food price (WFP) continued its downward trend during 2015Q2, benefiting from the previous decline in oil prices, and declining by 21.6% on annual basis, and by 4.2% compared to the previous quarter. Likewise, world metal price (WMP) has dropped by around 18.0%, compared with the corresponding quarter of 2014, and by around 1.4%, compared with the previous quarter.

Meanwhile, local prices witnessed several distinct developments during 2015Q2, yet the changes in the WB prices were largely different than those in GS due to different price determinants. Price developments in the WB were highly sensitive to changes in global prices, while the blockade in GS continued to be the dominant factor.

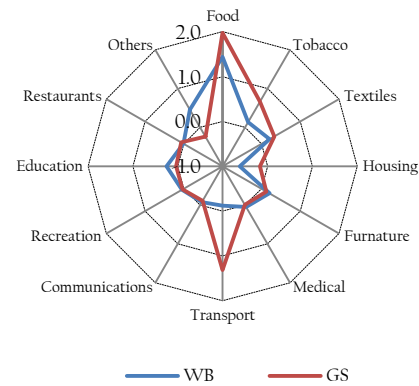
Prices in the WB grew on both quarterly and annual bases by around 1.0% and 2.0%, respectively as most consumer basket commodities' prices have increased. The food price index resumed its increase, rising by around 4.4% on annual basis, while the price indices of education, furniture, and textiles increased by 6.6%, 4.5%, and 3.6%, respectively. In comparison, the fuel price index continued to decrease but at a slower pace, reflecting the abating decrease in world oil prices during the same period. The price indices of communication and housing dropped by 2.5% and 6.4%, respectively.

However, the annual decline in world oil prices was not sufficient to offset the effect of the fuel supply crisis in Gaza, hence the transportation price index rose substantially (17.5%). Also, the tobacco price index continued to increase substantially (25.9%), affected by the continued blockade and the destruction of smuggling tunnels. In general, most consumer basket commodities' indices have increased, though in various degrees, except for a decline in communications and housing indices by 3.5% and 1.9%, respectively. In addition, the miscellaneous goods and services group index experienced a lower increase. In sum, the Gazan CPI in 2015Q2 increased by 4.0% on annual basis, and by 1.8% on a quarterly basis.

Generally speaking, the main driver of inflation in the WB prices was the increase in food price, which contributed 1.4 percentage points to inflation during the 2015Q2, (figure 6). On the other hand, the main factors behind price jumps in GS during the same period were: food prices, which contributed 2.1 percentage point to inflation, and transportation prices, with a similar contribution of 1.3 percentage point.

It is worth noting that inflation in the WB is less than its counterpart in GS, unlike the case two years ago. For the WB, prices have witnessed continuous hikes during the past two years, affected by successive jumps in global commodity prices, especially for food and fuel. Meanwhile, prices in GS in the same period declined steadily due to cheap commodities that entered the Gazan market through smuggling tunnels.

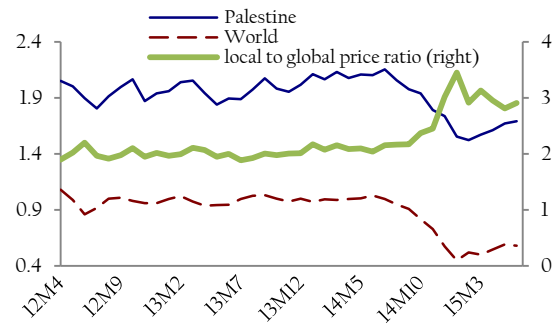
Figure 6: Web chart of the CPI components contribution to the inflation rate in Palestine



Regardless of differences between the WB and GS, commodity prices in Palestine hit much higher levels than in the world market. Moreover, changes in global prices do not get reflected in local prices immediately.

Tracking price movements during 2015Q2 reveals that the drop in global gasoline prices dropped by about 43.2% below their 2014 level. Meanwhile, the gasoline retail price in Palestine declined by only 20.9% during the same period. Likewise, the global price increased on a quarterly basis by 16.8%, but the local price grew by only 7.0%. Consequently, the gasoline price in Palestine in 2015Q1 has become 2.9 times its level in the global market and around 3.1 times the price in the previous quarter. This decline partially reflects the delay in the transmission effect, in addition to the depreciation of the USD against the NIS during the same period. However, one liter of gasoline was about USD 1.7 (around NIS 6.4), compared with USD 0.6 the global price during 2015Q2.

Figure 7: Gasoline prices in USD per liter

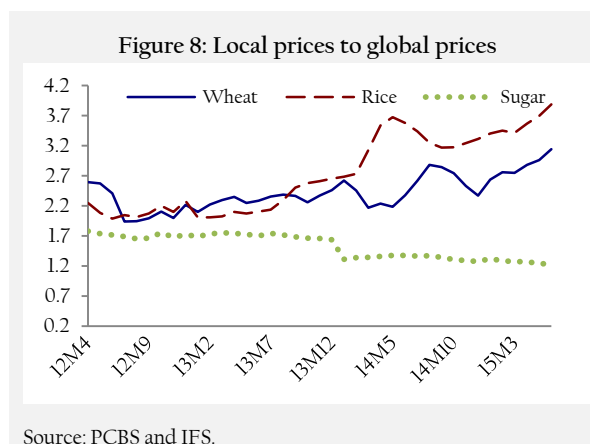


Source: PCBS and IFS.

As is the case in gasoline prices, other commodity prices like for wheat, rice, and sugar are much higher than the world prices. During 2015Q2, global prices of the three above-mentioned commodities have decreased in varying degrees. In comparison, the decrease in local prices of wheat and rice was much lower. Consequently, the gap between local and global prices for the mentioned commodities widened to 3.1 times and 3.9 times, respectively (figure 8).

It is worth noting that reduction in sugar prices in the local market was higher than the reduction in global market, which narrowed the gap between the two prices in 2015Q2 to 1.2 times. Several factors stand behind the discrepancy between world prices and local prices of these products. These include: the taxes imposed on imported products, their high cost of transportation and storage, and oligopolistic prices.

Also interesting are prices for some non-imported commodities, like fresh chicken and beef meat. Local prices of these commodities are not sensitive to global trends but are still much higher than world prices due to their high cost of production. Besides, these prices experienced further increase in 2015Q2. Fresh chicken meat prices in Palestine were around 1.7 times the world price and beef meat prices were more than 3.1 times the world prices during 2015Q2. Table (2) shows the price developments for some selected commodities (imported and non-imported) in local market during the current and previous quarters.



**Table 2: Prices of selected commodities in Palestine
NIS per unit²**

	2014			2015	
	Q2	Q3	Q4	Q1	Q2
Rice	127.4	125.4	130.6	137.0	137.3
Wheat	151.5	153.6	150.5	153.0	150.3
Bread	3.9	3.9	3.8	3.8	3.9
Beef meat	47.4	48.0	47.8	49.1	53.3
Chicken meat	15.4	16.4	15.4	14.6	16.9
Powder Milk (Nido)	94.8	96.7	94.8	96.1	96.3
Yogurt (local)	4.7	5.0	5.0	5.0	5.1
Chicken Eggs	15.1	17.1	17.5	19.0	15.8
Tomatoes	2.4	4.2	3.7	2.4	2.9
Sugar	146.4	146.2	143.4	141.6	135.6
Gas	69.6	71.0	68.9	65.0	63.7
Diesel	6.6	6.6	6.4	5.6	5.8
Gasoline 95	7.3	7.3	7.0	6.1	6.4

Source: PCBS

Labor force and wages

Labor force participation rate³ in Palestine declined during 2015Q1, reaching 45.6% compared with 45.8% in the previous quarter, and 46.3% in the corresponding quarter of 2014. Meanwhile, the unemployment rate has declined in the same period to 25.6%, compared to 26.5% in the previous quarter (figure 9). It is noteworthy that unemployment in GS reached its highest level

² Unit for Wheat: 60 Kg sack; Bread: 1 Kg; Rice: 25 Kg sack; Chicken and Beef meet: 1 Kg, Powder Milk: 2.5 Kg can; Yogurt: 500 g can; 2 Kg box; Tomatoes: 1 Kg; Sugar: 50 Kg sack; Gas: 12 Kg cylinder, Diesel and Gasoline: 1 Liter.

³ The total number of persons aged 15 years and over in Palestine reached 2,800,800 in 2015Q1.

(47.4%) in 2014Q3 due to the Israeli aggression; however, it declined after that reaching 41.6% in 2015Q1. Similarly, the unemployment rate in the WB declined in the same period to 16.3%.

During 2015Q1, nominal wages have increased for workers in both the WB, and Israel and settlements to NIS 94.2 and NIS 196.4, respectively. But they declined for GS workers to NIS 61.4. As a result, the nominal wage in Palestine has increased to NIS 103 during 2015Q1, compared with NIS 101.9 in the previous quarter, and NIS 99.3 in 2014Q1.

However, one should not consider wage changes in isolation from changes in prices;

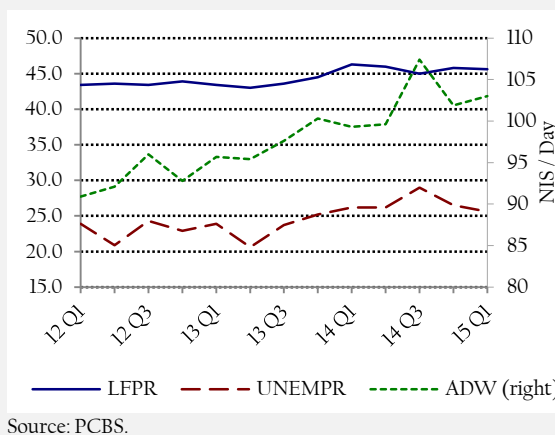
the increase in prices by more than the increase in nominal wages led to a decline in real wages and in purchasing power. During 2015Q1, the rise in GS prices by 1.2% on annual basis resulted in an erosion in real wages by around 1.7%. In contrast, the decline of prices by 0.5% in the WB led to an annual increase in workers' real wages in both the WB and Israel and settlements by 4.9% and 8.1%, respectively.

Exchange rates

Figure (10) shows the nominal and real effective exchange rates (NEER and REER) in Palestine⁴. The discrepancy between the NEER and REER indicates that changes in inflation in Palestine relative to its trading partners contributed to the appreciation of the real exchange rate during this period. The appreciation of the NEER indicates that the NIS appreciated against Palestine's trading partners' currencies, while the appreciation of the REER indicates that Palestine lost competitiveness against its trading partners⁵.

Data show that the NEER has decreased again by 1.0% during 2015Q2, compared with 2014Q2, which indicates that the NIS depreciated against Palestine trading partners' currencies. Conversely, the REER increased further by 2.9% during the comparison period, which indicates that Palestine lost some competitiveness against its trading partners. It is worth mentioning that Palestinian foreign trade is substantially affected by the Israeli imposed restrictions and other obstacles, and these effects are much stronger than the effects of changes in NEER and REER.

Figure 9: Labor force main indicators in Palestine



⁴ The NEER provides a weighted average of a country's nominal bilateral exchange rates, indexed on a chosen base year; The REER corrects the NEER for relative price developments.

⁵ NIS is the currency used in the calculation of the CPI and thus NEER and REER.

II. Recent Financial Developments

Interest Rates

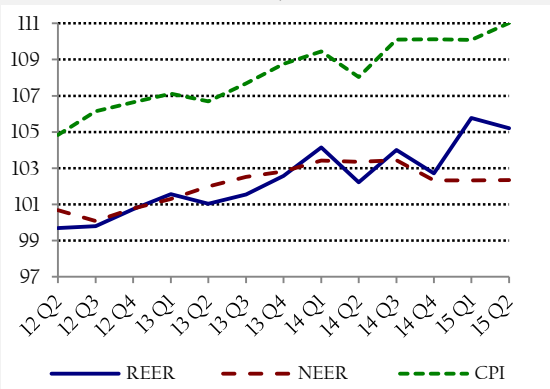
The lending and deposit rates in Palestine frequently move over time according to changes in economic and political conditions. However, tracking these moves reveals that deposit rates in Palestine, except for the NIS, are lower than the rates in the issuing countries. On the other hand, lending rates on these currencies in Palestine are higher than their counterparts in the countries of origin.

Average lending and deposit rates have witnessed various developments during the first quarter of 2015. The average lending rate on the USD and the JD has increased during the quarter, while it declined on the NIS. On the other hand, the average deposit rate on the JD and the NIS increased during the quarter, while it declined on the USD.

The average lending rate on the USD in Palestine has marginally increased by one basis point reaching 6.88% during 2015Q1. However, IMF data indicate that the lending rate on the USD in the US remained relatively stable at 3.25% during the same period.

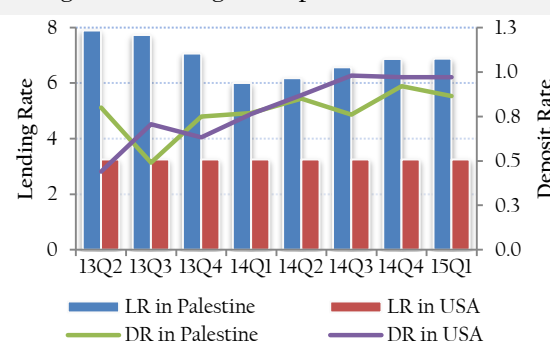
At the same time, the average lending rate on the JD loans in Palestine has increased during 2015Q1 by 10 basis points to 8.79%. In contrast, it declined in Jordan in the same

Figure 10: Effective exchange rates and CPI in Palestine, 2010=100



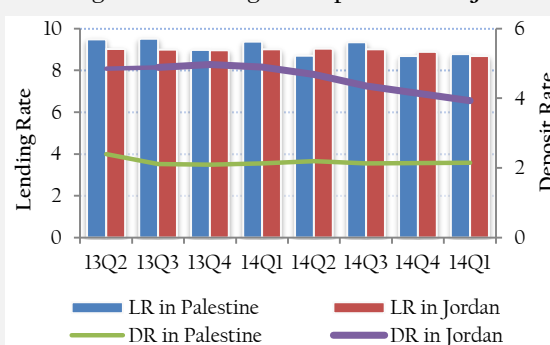
Source: PMA and PCBS.

Figure 11: Lending and deposit rates of the USD



Source: PMA and IFS.

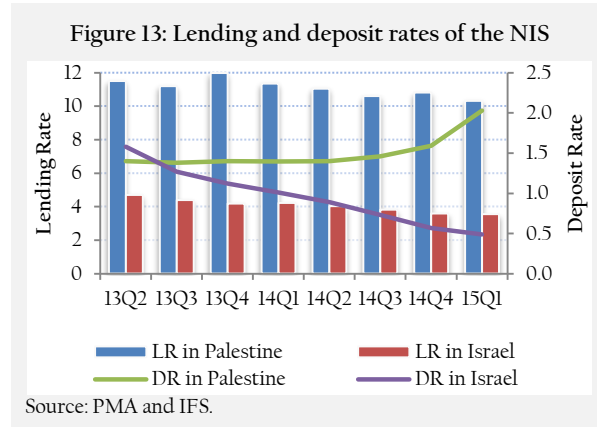
Figure 12: Lending and deposit rates of JD



Source: PMA and IFS.

period from 8.89% to around 8.7%. It is worth to mention that credit facilities of JD currency in Palestine is the lowest compared with credit facilities in the other two currencies, accounting for about 13.0% of the total in 2015Q1.

Lastly, the average lending rate on the NIS in Palestine has decreased again, reaching 10.32%, compared with 10.81% in the previous quarter. Similarly, the lending rate in Israel continued to decrease over the year, declining by 5 basis points to 3.54% during 2015Q1, as the Bank of Israel lowered its key interest rate to its lowest level (0.1%) during last March.



It is worth mentioning that the high lending rate on the NIS in Palestine is mainly due to: (i) the intensive use of the NIS in daily transactions, which increases demand for NIS; and (ii) the high cost of transferring the NIS between Israeli corresponding banks and banks operating in Palestine, due to obstacles imposed by the Israeli side.

Similarly, the average deposit rates in Palestine during 2015Q1 varied and moved according to currency. The average deposit rate on the JD has marginally increased (2.15%) in Palestine, while it declined in Jordan for the first time in more than two years, reaching 3.93%.

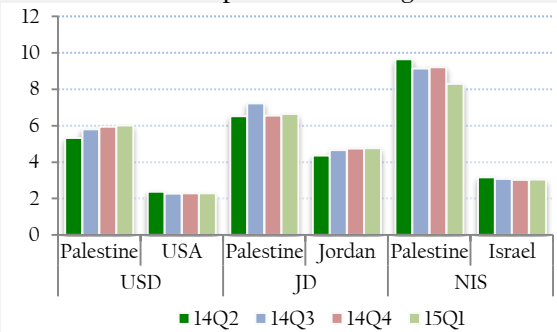
In comparison, the average deposit rate on the NIS has increased notably (2.03%), but it dropped slightly (0.49%) in Israel during the same period. It is worth to note that the deposit rate on the NIS in Palestine is usually less than its counterpart in Israel, but sometimes it's slightly higher. Anyhow, it is the first time that the rate in Palestine is substantially (around 1.5 percentage points) higher than in Israel, the highest rate registered in Palestine during the past few years. This may reflect some shortages in the NIS liquidity available to banks operating in Palestine.

In contrast, the average deposit rate on the USD in Palestine has declined to 0.86% from around 0.92%, while the USD deposit rate in the US⁶ remained stable at 0.97%. Obviously, those rates reflected the very low deposit rates in issuing countries, namely, the US and Israel. More recently, expansionary monetary policies (low interest rates) in these countries continued to depress the deposit rates in Palestine.

⁶ Interest rates on government securities and government bonds in the short-term were used as a proxy for the deposit rate in the U.S.

Consequently, the margins between the average lending and deposit rates are remarkably higher and more volatile in Palestine than in the issuing countries (see figure 14). Moreover, these margins in Palestine widened on the USD and the JD during 2015Q1 to about double the margin in the US, and around 1.4 times the margin in Jordan. In comparison, the margin on the NIS was about 2.7 times the margin in Israel during 2015Q1.

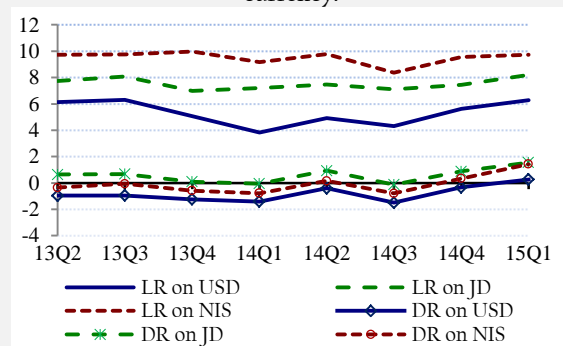
Figure 14: Margins between lending and deposit rates in Palestine compared with issuing countries



Source: PMA and IFS.

As for real interest rates⁷, data indicate that the real deposit rates in Palestine have remarkably improved during 2015Q1, benefiting from the decline in inflation. Thus they increased on the NIS and the JD to 1.43% and 1.55%, respectively. Furthermore, a positive real interest rate (0.26%) on the USD was registered for the first time in so many years.

Figure 15: Real lending and deposit rates in Palestine by currency.



Source: PMA and PCBS.

At the same time, the decline in inflation rates in Palestine led to an increase in the average real lending rates to 9.72%, and 8.19% and 6.28% on the NIS, the JD, and the USD, respectively.

On the whole, average real interest rates witnessed the following developments during 2015Q1:

- Average real deposit rates on the three currencies circulating in Palestine have improved compared to the fourth quarter of 2014, which implies that the real value or the purchasing power of deposits in these currencies has increased.
- The average real lending rates remained positive and increased for all currencies circulating in Palestine, implying that the real value of banks' credit facilities has steadily increased.

⁷ Fisher's equation: $(1 + \text{real interest rate}) = (1 + \text{real interest rate}) * (1 + \text{expected inflation rate})$.

Stock market

The Palestinian stock market, “Palestine Exchange”, witnessed a stable performance during 2015Q2, characterized by routine transactions; institutional transactions which usually enhance the stock exchange trading value were virtually absent. Besides, high expectations prevailed among investors, as the mid-year financial data disclosures due in September approached.

Overall, the Al-Quds index's performance proved poor during 2015Q2, as all sectors' indices have declined, except for the services index which grew by 3.6% from the previous quarter. Nonetheless, the investment sector declined notably (5.1%), followed by a decline in insurance and industry sectors, by 3.7% and 2.7%, respectively. The banking sector witnessed the least decline as its index decreased marginally (by 0.2%). Overall, these developments resulted in a slight increase (less than 1.0% to 478.4 points) in Al-Quds index, compared with the previous quarter, (table 3).

The performance of stock markets in some selected Arab countries continued to be affected by the political turmoil in the Gulf region for the second consecutive quarter.

The majority of markets in the region witnessed weak performance during 2015Q2, while others have notably deteriorated. This deterioration was more evident on annual basis: the Kuwait stock market index registered the sharpest decline (11.0%), followed by the drop in the Muscat index, (8.3%). The declines in the indices of Saudi Arabia and Bahrain stock markets were about 4.5% and 4.2%, respectively. In contrast, the markets of Dubai, Abu Dhabi and Qatar seemed to be less influenced by the turmoil, with their indices growing on both annual and quarterly bases (see figure 16).

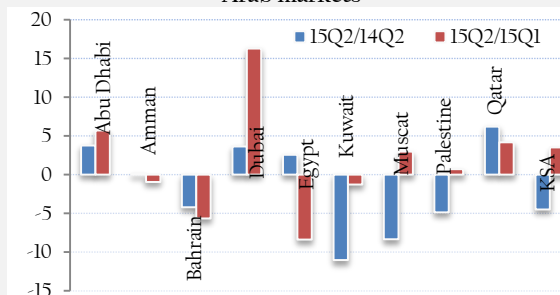
As to the relation between the Palestinian stock market and the financial markets in the region, data revealed that the Palestinian stock market was significantly affected mainly by the Jordanian stock market, and to a lesser extent, by the Egyptian stock market (see figure 17). The

Table 3: Palestine stock exchange index (Al-Quds index)

	2014			2015	
	Q2	Q3	Q4	Q1	Q2
Banking	117.5	119.2	119.7	119.8	119.6
Industry	66.9	68.4	67.7	68.1	66.2
Insurance	44.9	45.7	46.8	46.3	44.6
Investment	26.7	28.2	25.5	24.1	22.8
Service	47.3	47.3	49.2	43.3	44.9
Al-Quds	502.8	511.1	511.8	474.9	478.4

Source: www.pex.ps

Figure 16: Stock markets performance, some selected Arab markets



Source: <http://www.gulfbase.com>, <http://www.ase.com.jo> and <http://www.ex.com.eg>.

effects of other Arab stock markets were tested and shown to be virtually insignificant. This implies that the local financial market continues to be relatively shielded from the influence of factors affecting the region's financial markets.

III. Model Based Inflation Forecast

Inflation model and estimation technique

Analysis shows that the CPI in Palestine is co-integrated with (i) the CIM, which is a weighted average cost of imports, expressed in NIS, and calculated regularly by the PMA, and (ii) the world food price index. The importance of WFP reflects the high weight food occupies in the CPI basket in Palestine⁸.

Considering this relationship and the CPI, the question arises as to how this long-run relationship is best estimated, and how to model the short-term dynamics that explain

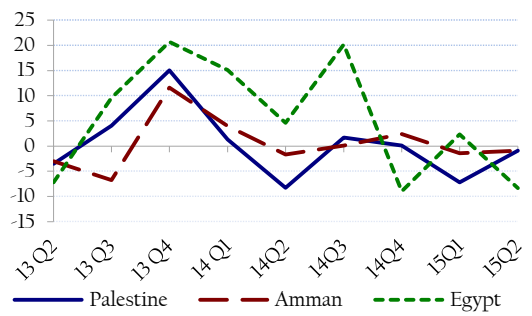
how fast shocks to the relationship are corrected over time in order to bring the CPI back to its long-run equilibrium value.

In this respect, long-run and short-run relationships are estimated using three different approaches. The first is the Johansen's (1991, 1995) system-based reduced rank approach. The second is the ARDL test which is based on Pesaran, Shin (1999) and Pesaran, Shin, Smith (2001). The third is the semi-parametric Fully Modified OLS (FMOLS) approach of Phillips and Hansen (1990).

Baseline inflation forecast

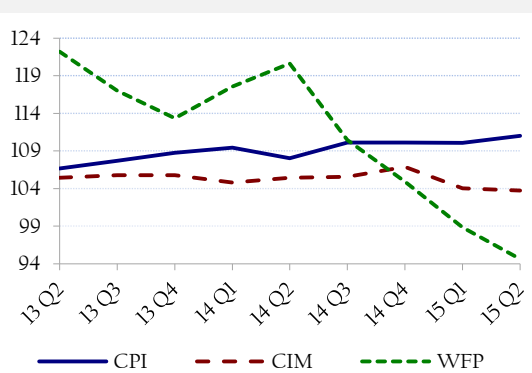
The objective of this section is to use the basic inflation model to generate a quantitative CPI outlook for the current and following years on a quarterly basis, i.e. for the period 2015Q3-

Figure 17: Stock markets performance in Palestine, Amman, and Egypt during 2012Q2 – 2014Q4



Source: <http://www.ase.com.jo>, <http://www.egx.com.eg>.

Figure 18: CPI, CIM, and WFP



⁸ For more details about inflation determinants in Palestine, see Palestine Monetary Authority (PMA), 2011. Inflation Report, April 2010.

2016Q4. To that end, a baseline scenario for the exogenous variables, CIM and WFP, is needed. The CIM is basically the denominator of the REER index calculated by the PMA. The baseline scenario for the CIM was derived from the VECM. Thus, CIM is assumed to increase by 1.3% in 2015 and by around 2.0% in 2016.

The most recent IMF forecasts indicate that food prices will decline in 2015 compared with 2014 and will continue falling in 2016, albeit at a slower pace. Accordingly, world food prices will decrease by around 16.3% in 2015, and by around 2.7% in 2016.

Inflation will be forecasted according to the above-mentioned three estimation techniques⁹, combined with the common baseline growth rates for the CIM, and the WFP, as explained in table (4).

As is well known, the use of econometrically estimated models to forecast future inflation is subject to model and coefficient uncertainty. To reduce this uncertainty, we will take the simple average of the three models. Accordingly the average inflation

forecast for 2015Q3 will be 1.1%, as compared to 2014Q3. Also, we expect the average inflation rate to slip to 1.6% in 2015, and rise to 2.0% in 2016.

Table 4: Inflation outlook of the three models

	Assumptions		Inflation Forecasts			
	CIM	WFP	VECM	ARDL	FMOLS	Aveg.
2014*	-0.35	-4.14	1.73	1.73	1.73	1.73
15Q1*	-0.74	-15.95	0.57	0.57	0.57	0.57
15Q2*	-1.63	-21.56	2.77	2.77	2.77	2.77
15Q3	2.21	-15.44	1.09	1.12	1.09	1.10
15Q4	5.45	-11.58	2.04	2.11	2.01	2.06
2015	1.34	-16.31	1.62	1.64	1.61	1.62
16Q1	6.38	-4.91	2.70	2.49	2.36	2.52
16Q2	5.44	-1.84	2.03	2.06	2.03	2.04
16Q3	0.41	-2.00	1.72	1.75	1.75	1.74
16Q4	-3.60	-1.98	1.92	1.80	1.72	1.82
2016	2.02	-2.71	2.09	2.02	1.97	2.03

* Actual data.

IV. The Balance of Inflation Risk

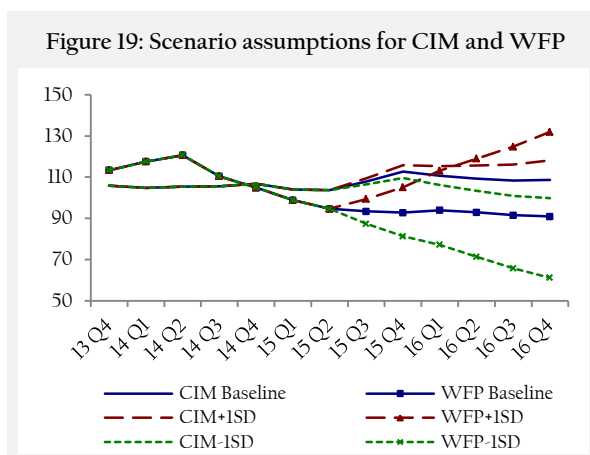
Apart from the abovementioned risks of model uncertainty, the CPI outlook also crucially depends on the assumptions regarding the course of the model's exogenous variable's forecasts; these exclusively refer to external conditions reflecting foreign inflation trends, NIS bilateral exchange rates, and world food market prices.

We evaluate the risks for the CPI outlook stemming from potential shocks to these external conditions by setting up four alternative scenarios, resulting from all possible combinations of

⁹ VECM, ARDL, and the FMOLS.

positive and negative one-standard deviation shocks in the baseline growth rates of CIM and WFP.

These results demonstrate that taking a one-Standard Deviation (1SD) shock may not fully reflect the implied risk. Because of the existence of excess kurtosis¹⁰, the probability distributions are leptokurtic, implying that the occurrence of extreme shocks has a probability that is higher than one would expect on basis of a normal distribution.



The results of these scenarios are mentioned in table (5). They indicate that, given the assumptions, the average inflation forecasts during 2015 range between 1.1% and 2.1%, with 1.6% as the central baseline outlook. In 2016, the average inflation forecasts are expected to range between 2.1% and 6.2%, with 2.0% as the central baseline outlook.

Table 5: Baseline and risk analysis of the CPI in Palestine for 2015 and 2016
(Percentage point)

Scenario	Shock	Implied annual growth rate CIM		Implied annual growth rate WFP		Implied inflation forecast	
		2015	2016	2015	2016	2015	2016
1	Baseline	1.3	2.0	-16.3	-2.7	1.6	2.0
2	+1SD CIM +1SD WFP	2.4	7.5	-12.3	22.8	2.1	6.2
3	+1SD CIM -1SD WFP	2.4	7.5	-20.2	-23.9	1.7	1.6
4	-1SD CIM +1SD WFP	0.3	-3.2	-12.3	22.8	1.5	2.3
5	-1SD CIM -1SD WFP	0.3	-3.2	-20.2	-23.9	1.1	-2.1

* Actual data.

Figure (20) shows the risk analysis of inflation in Palestine during 2015 compared with the risk analysis predicted in the previous Inflation Report, 2015. The figure shows that scenarios 3 and 4 give results

close to the baseline forecast; but scenarios 2 and 5 involve upside and downside outliers, respectively. The figure shows that the risk declined compared with our risk estimate presented in the previous issue.

The upside risk to the inflation forecast is clearly related to a higher expected risk in world food prices, combined with a higher inflation in Palestine’s main trading partners, compared to what is assumed in the baseline. Conversely, inflation in Palestine may turn out to be considerably

¹⁰ Kurtosis measures the peakedness or flatness of the distribution of the series.

lower than predicted in the baseline, in case world food prices, together with inflation in the main trading partners, turn out to be lower than expected.

Apart from model uncertainty and uncertainty related to external conditions, the inflation outlook for Palestine also hinges on potential specific shocks that may perturb the economic and political conditions in Palestine itself, which are independent of shocks occurring in the rest of the world. An example of such shocks was the last Israeli attack on Gaza Strip, which led to further rises in prices. Another example is if Israel continues to withhold clearance revenues and therefor delays and/or disrupts payment of government employees' salaries, which depresses demand and causes a fall in prices.

Figure 20: Web chart of the balance of Palestine's inflation risk

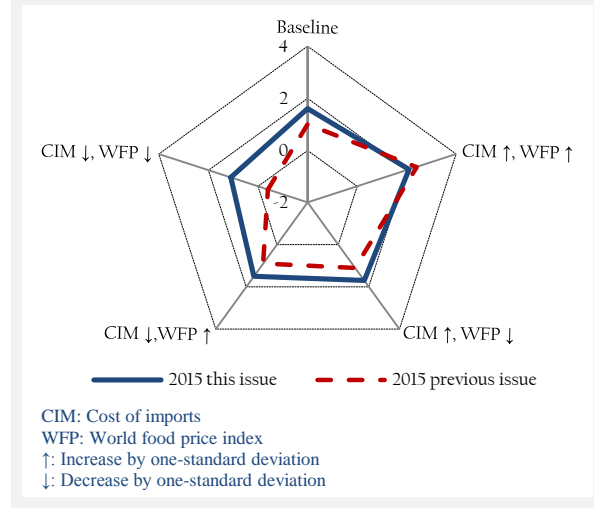


Figure (21) shows the fan chart of the balance of Palestine's inflation risk during 2015Q3 – 2016Q4. This chart contains the quarterly profile of the baseline inflation forecast mentioned above. The risk parameters start from a standard deviation equal to 0.3 for the third quarter of 2015, which is based on the inflation volatility observed during the most recent years. It then rises up to 2.8 for the fourth quarter of 2016, reflecting the fact that uncertainty rises with the forecasting horizon.

It should be mentioned that the range of the potential outcomes is fairly broad, reflecting the uncertainty of the forecast which is the consequence of all risk factors mentioned above, including the country-specific ones. It should also be mentioned that the most likely outcomes for the predicted inflation are situated in the darkest shaded regions of the chart. The weaker the shading in the chart, the smaller the perceived probabilities of these potential outcomes.

Figure 21: Fan chart of the balance of Palestine inflation risk during 2015Q3 – 2016Q4

