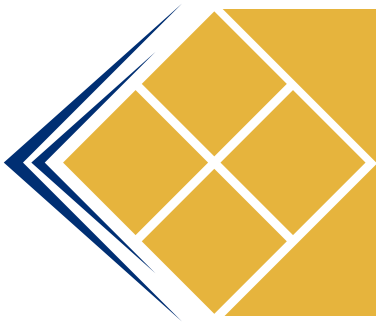




PALESTINE MONETARY AUTHORITY




# Inflation Report

Fourth Quarter 2014

Volume 13

Research & Monetary Policy Department

February, 2015



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## Executive Summary

The inflation rate in Palestine slowed down in 2014Q4 compared to both the previous and corresponding quarters; it declined to its lowest level for the last few years. It dropped to 1.3% in 2014Q4 compared with 2.3% in previous quarter, and 2.0% in the corresponding quarter 2013. This slowdown consisted with the dwindling inflation rates in most countries during 2014Q4, as the world commodity prices, particularly food and oil, started to diminish since September. However, inflation in Palestine was much lower than that registered in the MENA region, and in Jordan, but still exceeded that in Israel. Also, looking at prices in 2014 as a whole, inflation in Palestine stabilized compared to last year at a level of 1.7%.

The approach followed in this report for inflation analysis and forecasting purposes depends on two 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 in the consumer price index (35%) in Palestine.

Inflation forecasts show that consumer prices in Palestine are expected to increase by around 1.2% during 2015, on average. Moreover, prices are also expected to rise by around 0.9% during the first quarter of 2015 on a yearly 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 foreign 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 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 2.7 points to nearly 3.9% on average, during 2015. On the other hand, a negative one-standard deviation shock may bring prices in Palestine down by 2.8 points to -1.6% during the same period.

As for the financial developments in Palestine, 2014Q3 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 rates on the USD and the JD has decreased, while it increased on the NIS for the first time in the last three quarters. 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 9.15 percentage point, whereas it increased on the JD and the USD to 7.22 and 5.81 percentage points, respectively, during 2014Q3.

The performance of the Palestinian stock market index (Al-Quds Index) stabilized during 2014Q4 compared with 2014Q3; it has increased by about 0.1%, reaching 511.8 points. This slight increment could be attributed to the volatile performance of different sectors; for while services and insurance indices have improved, industry and investment indices deteriorated, and banking index stabilized.



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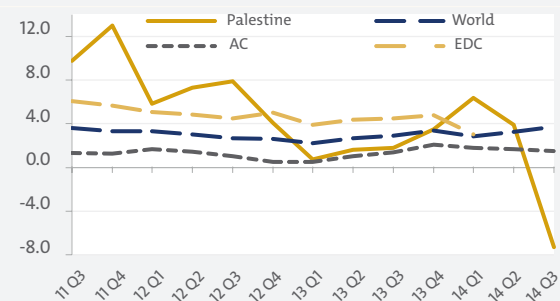
## I. Recent Economic Developments

### Real GDP

Global economy has improved during the second half of the year compared with the first half, thanks to United States economy (US) which recovered by stronger than in earlier expectations. However, the US recovery has led to larger divergences among major advanced countries (AC). Except for the US, growth in major AC fell short of expectations and slowed down notably, meanwhile Japanese economy fell into a technical recession. Also, the slowdown remained dominant among the emerging and developing countries (EDC), especially in China which failed to accelerate its growth rates. IMF expects that the global economy is going to maintain its previous annual growth rate at around 3% in 2014. Based on that, the IMF downgraded its projections<sup>[1]</sup> for the global economic growth in both 2015 and 2016 by 0.3 percentage point<sup>[2]</sup>, to 3.5% and 3.7%, respectively.

Data for 2014Q3 show that AC has grown by around 1.5%, less than its growth in the previous quarter (1.7%), but still higher than its level in corresponding quarter 2013 (1.4%). Despite this weaker performance, the strong prospects of US economy prompted IMF to upgrade its projections for AC in 2015 by 0.1 percentage point to become 2.4%. However, it kept the previous projections for growth in 2016 at 2.4%.

Figure 1: Real growth rates in the World and Palestine



Source: IFS and PCBS.

As a result of the increase in domestic demand, the US economy has recovered stronger than expected in 2014Q3 by around 2.7% compared with 2.3% in corresponding quarter. Based on this, the IMF expects the US economy to grow by 3.6% in 2015 (0.5 percentage point higher than what was projected in October report) and 3.3% in 2016 (0.3 percentage point higher).

[1] IMF, World Economic Outlook Update, January 2015.

[2] Previous projections published in October 2014.

The Euro area's (EA) economy stabilized at 1.0% for the second consecutive quarter as a result of weak investment levels. Economic activity is projected to benefit from the decline in oil prices and the depreciation of the Euro against the USD. However, these benefits were offset by the weak investment prospects. The IMF revised down its growth expectations for the EA's economy to 1.2% in 2015 and to 1.3 percent in 2016.

As for the Japanese economy, data show that it fell into a technical recession as a result of economic contraction for the second consecutive quarter. Domestic demand became weaker due to the new rise of consumption tax in April 2014. The economy shrank by around 1.2% in 2014Q3 compared to a contraction of 0.3% in the previous quarter. As a result, IMF revised down its growth expectations for the Japanese economy in 2015 and 2016 to 0.6% and 0.8%, respectively.

EDC's growth slowed down during the past quarters as a result of a weaker activity in most of EDC like China, Latin America, Russia, and MENA region. Accordingly, the IMF expects EDC to grow by 4.4% and 5.0% in 2014 and 2015 respectively, which are lower than the July expectations.

The Chinese economy resumed slowing down during 2014Q3 due to weaker investment levels. The economy grew during the quarter by around 7.3% comparing with 7.5% in 2014Q2. The IMF expects that the Chinese economy will continue slowing down, 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. According to October's IMF report, MENA economies are expected to grow by 3.8% in 2015, and to accelerate to 4.6% in 2016.

Looking at the region, the Israeli economy slowed down in 2014Q3 as a result of Israeli war on Gaza Strip (GS). Israeli Central Bureau of Statistics (CBS) stated that the annual growth rate in 2014Q3 was around 2.1% compared to 2.6% in the previous quarter. While no new projections about Israeli growth are available yet, IMF previous projections (October 2014) estimated the growth in 2015 to be 2.8%, to accelerate to 3.2% in 2016. It should be noted that the impact of the Israeli attack on GS on the Israeli economy played an important role in these expectations.

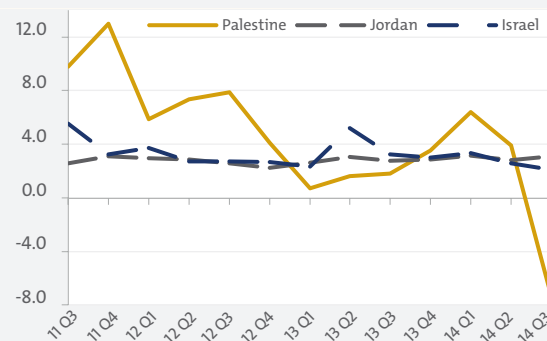
The Jordanian economy has experienced relative recovery during 2014Q3 as the construction activity has expanded. Growth rate during the quarter increased to around 3.1% compared to around 2.8% in 2014Q2. According to its October report, IMF estimated the growth rate in Jordan to be 4.0% in 2015, with expectations of a better performance in 2016 (4.5%).

Locally, the Palestinian economy experienced a severe contraction during 2014Q3, where GDP declined by around 7.4% on annual basis, due to the deep contraction in GS as a result of the Israeli war, which lasted for more than 50 days during the



quarter. This war caused broad deconstruction of infrastructure and economic establishments. Moreover, crossing borders were completely closed, which affected trade activities. Also, all economic activities incurred losses, especially the construction sector which shrank by around 90% on annual basis, as Israel hindered entry into GS of needed building materials.

Figure 2: Real growth rates in Palestine, Jordan, and Israel



Source: PCBS, CBS, and the Central Bank of Jordan.

Other activities like transportation, agriculture, manufacturing, and trade also contracted, by 79.3%, 77.4%, 61.2%, and 59.6%, respectively. Also, services sector, which forms around one quarter of Gazan economy, declined by 21.3% on annual basis. As a result, Gazan economy sharply shrunk by 31.9% during 2014Q3.

Similarly, the West Bank economy was influenced by the war on Gaza and continued uncertainty. Also some of the WB's activities were affected by the economic situation in Israel, especially those that are directly related to the Israeli economy, such as exports and Palestinian workers in Israel. Both manufacturing and transport have slumped by 9.6% for each, while trade has declined by around 5.0%. Moreover, growth in agriculture and construction were subdued (1.1% and 0.5% respectively). On the other hand, services activities accelerated, growing by 13.5% during 2014Q3 compared to a growth of 11.3% in the previous quarter. However, this improvement in services sector was not sufficient to compensate for the losses in other sectors; thus growth in the West Bank (WB) during 2014Q3 weakened to 1.5%, a large drop from growth in the previous quarter (4.4%).

## Inflation and Prices

Global prices declined notably in 2014Q4, resulting in slowing down inflations rates in most countries. Two reasons stood behind this decline: the fall in oil prices driven by a well-supplied oil market; and the decline in food prices, thanks to the favorable weather conditions which continued to boost supply. As a result, the global inflation rate declined in 2014Q3 to around 2.8%, compared to around 3.3% in the previous quarter.

Looking at inflation by country groups, the decline in AC was greater than the decline in EDC. AC suffered from deflationary pressures as weak private demand affected prices in the EA as well as in Japan. During 2014Q4, inflation in AC declined to around

1.0% compared with 1.5% in the previous quarter. In the same period, inflation declined from 1.8% to 1.2% in the US, and from 0.4% to around zero (0.02%) in the EA. It is worth mentioning that the EA inflation rate has continued to fall below its target (2%) since the end of 2010.

In EDC, inflation witnessed its biggest drop during this year, when it receded from 5.3% in 2014Q3 to 4.9% in 2014Q4. It is worth mentioning that EDC has experienced persistent price hikes during the past few years, when inflation reached its peak in 2011 before it started to decline after that. In the MENA region, which registered one of the highest inflation rates in the world, inflation reached 7.6% during 2014Q3, as the most recent data indicate.

Figure (4) compares the average annual inflation rate in Palestine with its neighboring countries (Jordan, Egypt, and Israel). It shows that the movement of inflation rates in Palestine is highly consistent with those in Israel and to a lower degree in Jordan and Egypt. The decline in major commodity prices in global markets in 2014Q4 has pulled inflation in Palestine and its neighboring countries down, but to varying degrees. Palestine's inflation rate declined to about 1.3% percent in 2014Q4 compared with 2.3% in the previous quarter. Also, inflation rate in Jordan has dropped from 2.8% to 2.0%, whereas it has slowed down from 11.7% to around 10.3% in Egypt, during the same period.

Meanwhile in Israel, the contraction in imported commodity prices, especially oil and food, has stimulated deflation for the first time in Israel since 2003Q3 on a quarterly level. Israeli consumer prices declined on annual basis by around 0.2% in 2014Q4

Figure 3: Inflation rates in Palestine and other World regions

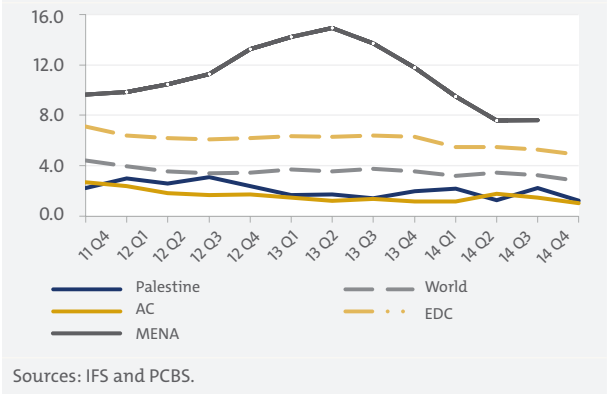
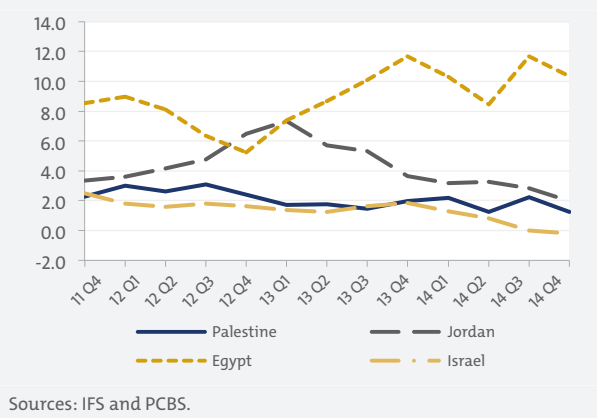


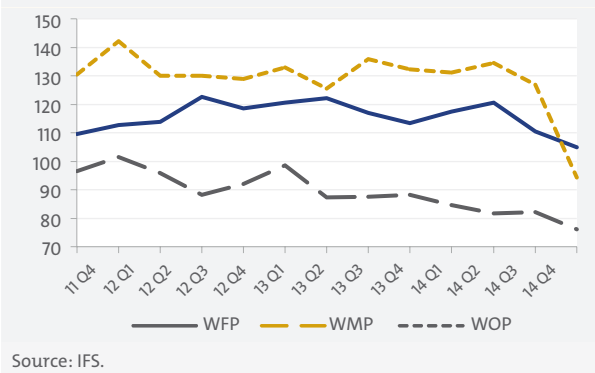
Figure 4: Inflation rates in Palestine, Jordan, Egypt, and Israel



compared with nearly zero inflation in the previous quarter, and with 1.9% in the corresponding quarter of 2013. This rate is lower than the target level (1%-3%) set by Bank of Israel, but however, it isn't a sign of weakened domestic demand, as the Bank of Israel has emphasized.

As mentioned above, 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, particularly in 2014Q4, which experienced broad declines on both quarterly and annual bases. The world food price (WFP) declined by 5.0% in 2014Q4 from its levels in the

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



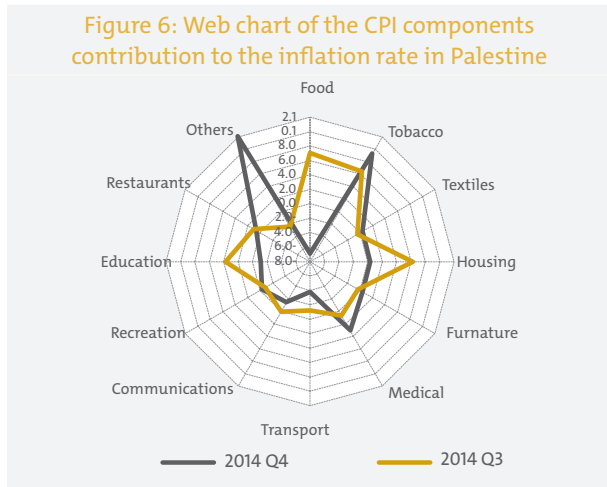
previous quarter, and declined by 7.4% from the corresponding quarter of 2013, due to a boosted supply under the favorable weather conditions, and given the decline in oil prices.

World oil price (WOP) witnessed an unprecedented decline, when it slipped by more than a quarter from its level in the previous quarter, and by around 28.7% on annual basis. The weak demand from major economies, especially EDC and without any response on the supply side stood behind this decline. Also, world metal price (WMP) has notably dropped by around 7.3% compared with the previous quarter, and by around 13.8% compared with the corresponding quarter of 2013.

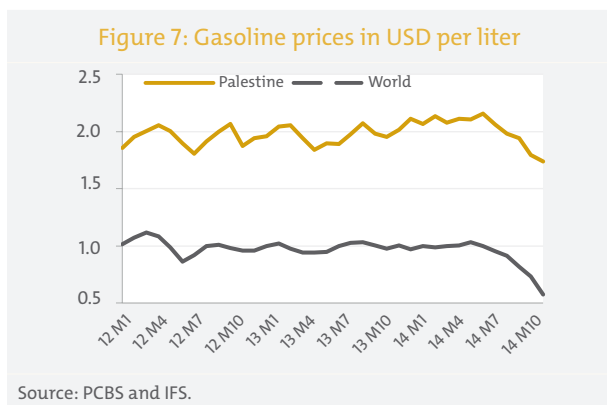
As for quarter-on-quarter inflation in Palestine, price levels have been relatively stable compared to the previous quarter, and thus the inflation was about zero (0.01%), while it was 1.9% in 2014Q3. However, inflation varied among regions in Palestine; it declined in GS, but slightly grew in both the WB and Jerusalem. Prices in GS have slipped during 2014Q4 by 1.6% compared to the previous quarter, which witnessed a jump in prices due to the blockade and Israeli assault on Gaza (3.9%). At the same time, prices in the WB and Jerusalem increased slightly by 0.3% and 0.4%, respectively, during the same period.

Looking at the changes in the CPI components, data show that alcoholic beverages and tobacco prices have experienced the highest increase on annual basis by around 17.7%, followed by an increase in miscellaneous goods and services prices by 11.2%, and in medical care prices by 8.3%. However, food and soft drinks prices have declined by 1.6%, along with a decline in communications and transport prices by 4.0% and 2.4%, respectively.

Figure (6) shows the contribution of different broad CPI components to the inflation rate in 2014Q4 compared with the corresponding quarter of 2013. The decline in prices of food and soft drinks, and of transports have contributed in lowering the 2014Q4 inflation rate by 0.69 percentage point and 0.37 percentage point, respectively. But when ignoring the above mentioned decline, inflation would exceed the threshold of 2%, particularly with the increase in prices of alcoholic beverages and tobacco, and miscellaneous goods and services prices. Their contributions to inflation amounted to 0.92 percentage point and 1.2 percentage point, respectively. Except for changes in former mentioned prices, rest of CPI components didn't change significantly during 2014Q4.



Commodity prices in Palestine hit much higher levels than in the world market. Moreover, local prices are less sensitive to the reduction in global ones. Thus, recent reduction in global prices has contributed in widening the gap between prices in the local and global markets. Tracking price movements during 2014Q4 reveals that the drop in global

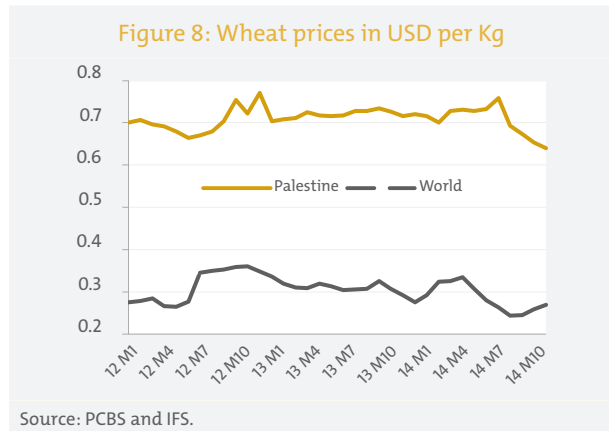


gasoline prices was about 28.7% compared with the corresponding quarter of 2013. Meanwhile, retail price of gasoline in Palestine declined by only 8.1%. Consequently, gasoline price in Palestine has become 2.6 times those in global market, compared to around 2.2 times the price in the previous quarter.

However, it is important to note that the decline in local gasoline prices was only in USD currency, but they didn't change in NIS currency during the same period due to the exchange rate effect. The Israeli government maintained a high price of gasoline to compensate for the depreciation of the NIS against the USD. Consequently, and

according to Paris Protocol, gasoline prices in Palestine didn't change as they should. As a result, one liter of gasoline in Palestine stabilized at NIS 7.0 (around USD 1.8) in 2014Q4, while the world's average price dropped to NIS 2.7 (around USD 0.7) during the same quarter.

As it is the case in gasoline prices, other commodity prices like for wheat, rice, and sugar are much higher than the world prices. During 2014Q4, wheat prices in Palestine were around 2.5 times the world prices, rice prices were around 3.2 times the world prices, while sugar prices were around 1.3 times the world prices. Decline in



global prices of the formerly mentioned commodities ranged, on annual basis, from 2% to 16%, during 2014Q4. However, local prices moved differently during the same period; while wheat and sugar prices declined, rice prices picked up. It is worth noting that there are several factors, which stand behind the discrepancy between the world prices and local prices of these products. Among those are: taxes imposed on these products, the high cost of transportation and storage, in addition to the fact that there are few traders who control the market of these products and thus control their prices locally.

Also important are 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 the high cost of production. Fresh chicken meat prices in Palestine were around 1.6 times the world price and beef meat prices were more than 2.2 times the world prices during 2014Q4.

Table 1: Prices of selected commodities in Palestine NIS per unit<sup>[3]</sup>

	2013	2014			
	Q4	Q1	Q2	Q3	Q4
Rice	103.5	109.6	127.4	125.4	130.6
Wheat	153.6	149.6	151.5	153.6	150.5
Bread	3.8	3.8	3.9	3.9	3.8
Beef meat	50.1	47.7	47.4	48.0	47.8
Chicken meat	16.0	16.7	15.4	16.4	15.4
Powder Milk (Nido)	95.5	95.3	94.8	96.7	94.8
Yogurt (local)	4.8	4.8	4.7	5.0	5.0
Chicken Eggs	17.4	17.8	15.1	17.1	17.5
Tomatoes	3.8	3.1	2.4	4.2	3.7
Sugar	172.8	141.2	146.4	146.2	143.4
Gas	68.7	73.0	69.6	71.0	68.9
Diesel	6.4	6.7	6.6	6.6	6.4
Gasoline 95	7.0	7.4	7.3	7.3	7.0

Source: PCBS

## Aggregate demand

Gross domestic product in Palestine has dropped to USD 1,758.3 million in 2014Q3, declining by around 7.4% on annual basis, as a result of a decrease in investment and an increase of trade deficit, accompanied with a slowdown in final consumption, specially private consumption (see table 2). Private consumption has slowed down, growing by around 0.5% on annual basis, compared to 5.1% in the previous quarter. Moreover, private consumption has declined by 4.2% on a quarterly basis. Private consumption has been weakened in GS particularly, as a result of the Israeli assault. Conversely, government expenditure grew in the same period in both the WB and GS as a result of increase in current transfers to civilians affected by Israeli war. As a result, government expenditure grew rapidly by 9.8% during 2014Q3 on annual basis, compared to 5.0% in the previous quarter.

[3] 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.

Table 2: Aggregate demand at constant prices (2004=100)

(USD million)

	2013		2014		
	Q3	Q4	Q1	Q2	Q3
Private consumption	1,604.5	1,588.0	1,601.2	1,684.4	1,612.9
Government expenditure	523.0	468.3	444.9	510.8	583.0
Investment	398.4	423.8	352.6	397.0	271.2
Exports	317.3	364.0	344.6	359.2	346.2
Imports	1,037.0	1,001.6	1,020.0	1,138.0	1,093.0
GDP	1,897.8	1,900.5	1,877.2	1,934.9	1,758.3

Source: PCBS.

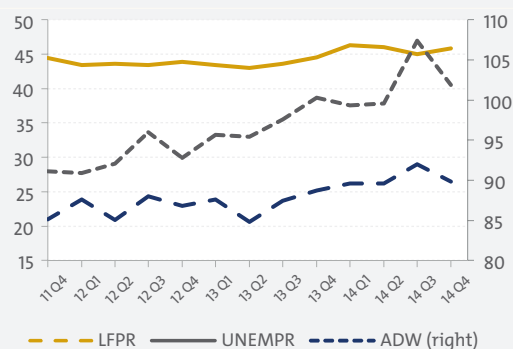
Also, investment in Palestine has declined by around 31.9% compared with 2013Q3; it slipped by 540% in GS as a result of a wide destruction of buildings during the Israeli attack. Meanwhile, investment in the WB slowed down, growing by 4.3% on annual basis, compared to growth of 7.9% in the previous quarter.

On the other hand, exports have recovered during 2014Q3; they picked up by 9.1% on an annual basis, compared to 5.8% in 2014Q2. Conversely, imports slowed down, growing by 5.4% in the same period, compared to 6.4% in the previous quarter. However, the increase in exports was not high enough to compensate for the increase in imports, thus trade deficit grew by about 3.8% on an annual basis.

## Labor force and wages

Labor force participation rate in Palestine<sup>[4]</sup> returned to increase during 2014Q4 and reached 45.8% compared with 45.0% in the previous quarter, and 44.5% in the corresponding quarter of 2013. On the contrary, unemployment rate has slightly declined in the same period to 26.5%, compared

Figure 9: Labor force main indicators in Palestine



Source: PCBS.

[4] The total number of persons aged 15 years and over in Palestine reached 2,777,400 in 2014 Q4.

to 29% in the previous quarter. It is noteworthy that unemployment rate in 2014Q3 reached its highest level since 2003 as a result of the Israeli attack on GS.

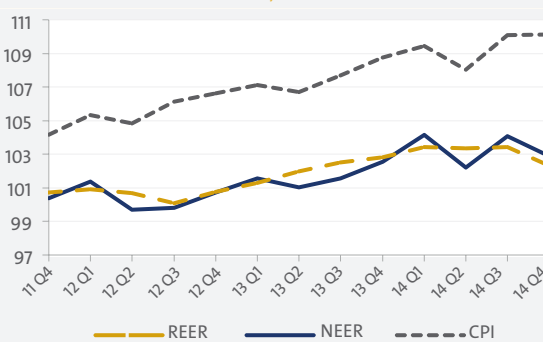
Regionally, unemployment rate hit 47.4% in GS during 2014Q3 before it declined in the subsequent quarter to 42.8%. Also in the WB, it reached 19.2% and then declined to 17.4%, during the same comparative period.

During 2014Q4, nominal wages have increased for workers in both the WB, and Israel and settlements to NIS 91.4 and NIS 194.2, respectively, while it declined for workers in GS to NIS 66.1. As a result, the nominal wage in Palestine has declined to NIS 101.9 during 2014Q4, compared with NIS 107.4 in the previous quarter, but increased compared with the corresponding quarter of 2013 when it reached NIS 100.3. However, we shouldn't tolerate wages far away from changes in prices; the increase in prices by more than the increase in nominal wages leads to a decline in real wages and in purchasing power. During 2014Q4, the rise in prices by 1.3% on annual basis led to further erosion in real wages. Consequently, average real daily wages in Palestine diminished by around 6.4% in the 2014Q4, especially in GS which experienced higher inflation rate and a decline in nominal wages during that period.

## Exchange rates

Figure (10) shows the nominal and real effective exchange rates (NEER and REER) in Palestine<sup>[5]</sup>. 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, and the appreciation of the REER indicates that Palestine lost competitiveness against its trading partners<sup>[6]</sup>.

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



Source: PMA and PCBS.

[5] 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.

[6] NIS is the currency used in the calculation of the CPI and thus NEER and REER.



Data show that the NEER has slightly decreased by 0.5% in 2014Q4, compared with 2013Q4, which indicates that the NIS depreciated against Palestine trading partners' currencies. Conversely, the REER slightly increased by 0.3% in 2014Q4, compared with the 2014Q3, which indicates that Palestine lost some competitiveness against its trading partners. It is worth mentioning that Palestinian foreign trade is substantially affected by restrictions and other obstacles imposed by the Israeli occupation, and its effects on trade is much stronger than the effect of changes in NEER and REER.

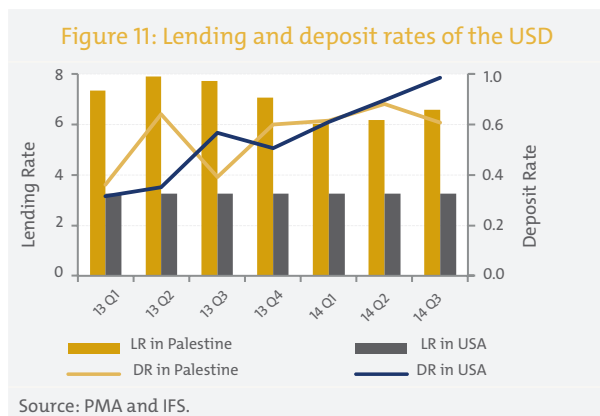
## II. Recent Financial Developments

### Interest Rates

The volatile and vulnerable economic and political conditions in Palestine have a direct impact on interest rate levels. On one hand, deposit rates in Palestine, except for the NIS, are lower than the rates in the issuing countries. On the other hand, lending rates on the NIS and the USD in Palestine are significantly higher compared to countries of origin of respective currencies; they are more than double their counterparts in the countries of origin.

Average lending and deposit rates have witnessed various developments during the third quarter of 2014. The average lending rate on the USD and the JD has increased during 2014Q3, whereas it declined on the NIS. On the other hand, the average deposit rate on the USD and the JD has decreased, while it increased on the NIS.

The average lending rate on the USD has increased to reach 6.57% during 2014Q3, compared with 6.18% during the previous quarter. IMF data indicate that lending rate on the USD in the US was relatively stable at 3.25% during the same period.



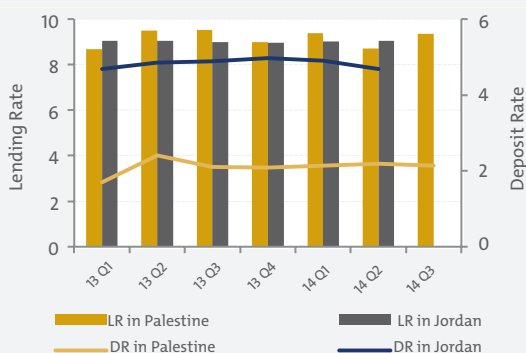
The average lending rate on the JD loans in Palestine has increased to 9.35% during 2014Q3, compared with 8.71% during 2014Q2.

On the contrary, the average lending rate on the NIS in Palestine has decreased, for the third consecutive quarter, to 10.61% in 2014Q3 compared with 11.05% in 2014Q2. Notwithstanding, the NIS average interest rate in Palestine amounts to around threefold its counterpart in Israel, which recorded an average of 3.81% during 2014Q3.

It is worth mentioning that the weak economic performance in Israel forced Bank of Israel to cut the interest rate to a historical low rate, and reached its lowest in 2014Q3 with 3.81%. Despite this decline, the NIS lending rate is still relatively high in Palestine. This is mainly due to the intensive use of the NIS in daily transactions, which increases the demand for it. In addition to the high cost of transferring the NIS between Israeli corresponding banks and banks operating in Palestine, due to obstacles imposed by the Israeli side.

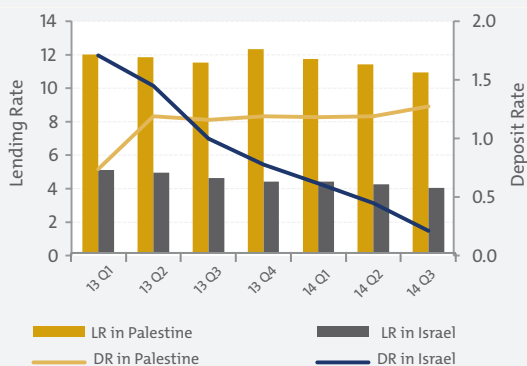
The average deposit rate for the USD in Palestine has declined to 0.76% during 2014Q3, compared to 0.85% in 2014Q2. While in the US<sup>[7]</sup>, it declined from 0.87% to around 0.98% during the same period. In addition, the average deposit rate on the JD in Palestine declined from 2.19% in 2014Q2 to reach 2.13% during 2014Q3. However, it was around 4.68% in Jordan during 2014Q2, as the most recent data indicate.

Figure 12: Lending and deposit rates of the JD



Source: PMA and IFS.

Figure 13: Lending and deposit rates of NIS



Source: PMA and IFS.

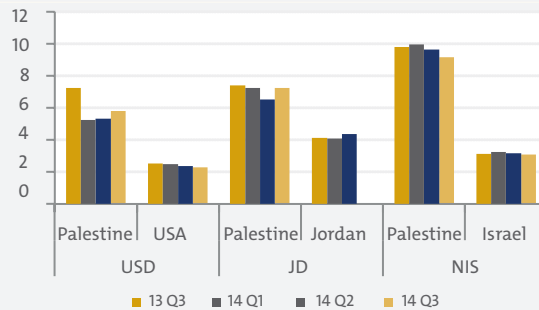
[7] Interest rates on government securities, and government bonds in the short-term, were used as a proxy for the deposit rate in the U.S.

The average deposit rate for the NIS has increased from 1.4% in 2014Q2 to 1.46% during 2014Q3. On the contrary, the deposit rate in Israel has declined from 0.89% to 0.73% during the same period.

Figure 14 show that the margins between the average lending and deposit rates are remarkably higher and more volatile in Palestine than its counterpart in the issuing countries. During 2014Q3, it was about double the margins in the US, and about triple the margin in Israel.

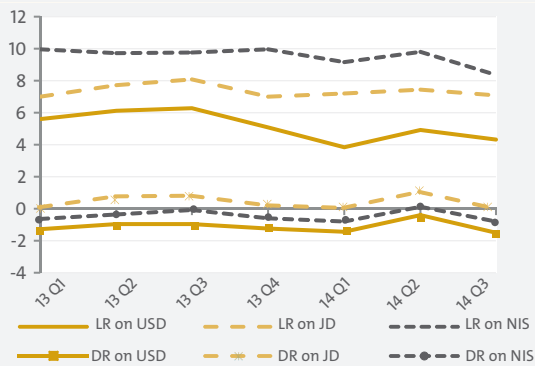
As for real interest rates<sup>[8]</sup>, data indicate that the real deposit rates in Palestine, during 2014Q3, reached an average of -1.49% on the USD, -0.79% on the NIS, and -0.12% on the JD, respectively. On the other hand, the average real lending rates in Palestine reached about 8.36% on the NIS, 7.10% on the JD, and 4.32% on the USD.

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



Source: PMA and IFS.

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



Source: PMA and PCBS.

One can notice the following developments on the average real rates:

- ❖ Average real deposit rates have declined on all of the currencies circulated in Palestine during 2014Q3, to become negative. This implies that the real value or the purchasing power of deposits in Palestine has deteriorated during 2014Q3.
- ❖ The average real lending rates have declined during 2014Q3, but remained positive. This implies that the real value of banks' lending has declined during the short term, but it is increasing overtime (long term).
- ❖ Finally, average real deposit rates are convergent, while average real lending rates are divergent.

[8] Fisher's equation:  $(1+\text{real interest rate}) = (1+\text{nominal interest rate}) / (1+\text{expected inflation rate})$ .

The performance of the Palestinian stock market “Palestine Exchange” during 2014Q4 was similar to the previous quarter. Al-Quds index witnessed a slight increase by about 0.1% in 2014Q4 compared with the previous quarter, while it declined by about 5.5% compared with 2013Q4, reaching 511.8 points.

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

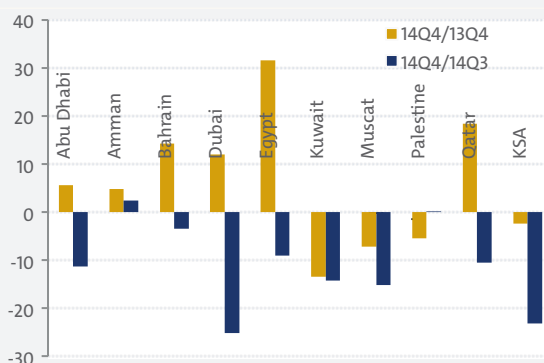
	2013	2014			
	Q4	Q1	Q2	Q3	Q4
Banking	124.9	122.7	117.5	119.2	119.7
Industry	68.3	69.3	66.9	68.4	67.7
Insurance	45.5	46.2	44.9	45.7	46.8
Investment	25.6	30.5	26.7	28.2	25.5
Service	52.2	50.6	47.3	47.3	49.2
Al-Quds	541.5	548.4	502.8	511.1	511.8

Source: www.pex.ps

Various sectors’ performances varied substantially during 2014Q4 compared with the previous and corresponding quarter. The indices of banking, insurance, and services have increased by 0.4%, 2.5%, and 4.0% compared with the previous quarter, respectively. On the contrary, the indices of industry and investment have deteriorated by 1.1% and 9.6%, respectively, during the same period. On the other hand, the performance of all sectors has deteriorated compared with the corresponding quarter, except for the insurance sector which increased by 2.8%.

The performance of stock markets in some selected Arab countries has deteriorated during 2014Q4 compared with the previous quarter. The fall back of these indices ranged from 3.4% as in Bahrain, to 23.2% as in Saudi Arabia index. The Amman stock exchange index has increased by 2.4% during the same period. On the contrary, compared with

Figure 16: Stock markets performance, some selected Arab markets

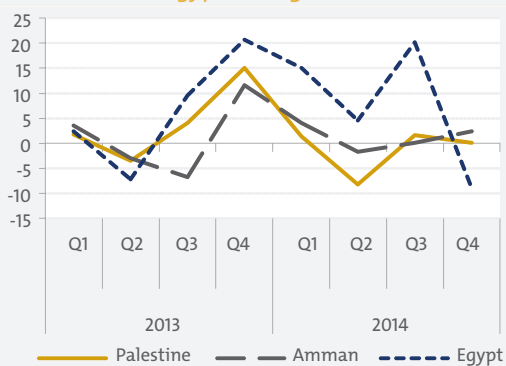


Source: <http://www.gulfbase.com>, <http://www.ase.com.jo> and <http://www.egx.com.eg>

the corresponding quarter of 2013, most of Arab countries stock exchanges have made profits, except for Kuwait, Oman, and Saudi Arabia.

Data revealed that Palestinian stock market is significantly affected by both Amman and Egypt stock markets. The effects of other Arab stock markets were tested and turned out to be insignificant. Figure (17) shows the quarter on quarter growth rate of the general index.

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



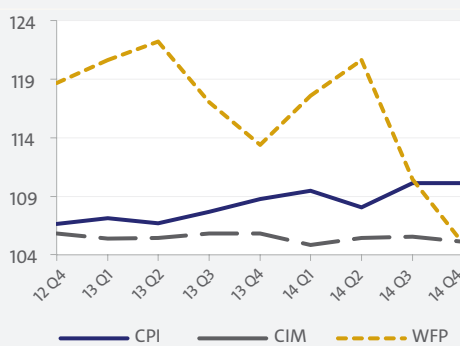
Source: <http://www.ase.com.jo>, <http://www.egx.com.eg>.

### 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 is related to the high weight food occupies in the CPI basket in Palestine<sup>[9]</sup>.

Figure 18: CPI, CIM, and WFP



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

Given the existence of a co-integrating vector between these variables 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 this long-run relationship are corrected over time 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 approach (FMOLS) of Phillips and Hansen (1990).

### **Baseline inflation forecast**

The objective is to use the basic inflation model to generate a quantitative CPI outlook for the current and next years on a quarterly basis, that is over the period 2015Q1 till 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 0.5% in 2015 and by around 1.3% in 2016.

The most recent forecasts coming from the IMF estimate that food prices will decline in 2015 compared with 2014 and will continue, with a weaker pace, declining in 2016. Accordingly, world food prices will decline by around 8.4% in 2015, and by around 0.7% in 2016.

The estimation of the inflation will be done according to the three mentioned estimation techniques<sup>[10]</sup>, 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 specific uncertainty, we will take the simple average of the three models. Accordingly, inflation forecast for 2015Q1 as compared to 2014Q1 is 0.9% on average. Also, we expect a slipping in inflation rate in 2015 to 1.2% on average as compared to 2014, but it will grow again to 1.4% on average in 2016.

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[10] VECM, ARDL, and the FMOLS.

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	0.24	-11.21	0.30	1.09	1.15	0.85
15Q2	0.06	-13.76	1.00	1.01	1.07	1.03
15Q3	0.37	-6.23	0.84	0.77	0.82	0.81
15Q4	1.11	-1.52	1.50	2.15	2.14	1.93
2015	0.45	-8.43	0.91	1.26	1.30	1.15
16Q1	1.29	-0.72	1.29	1.60	1.53	1.47
16Q2	1.22	-0.88	1.32	1.30	1.22	1.28
16Q3	1.22	-0.60	1.31	1.26	1.20	1.26
16Q4	1.31	-0.57	1.50	1.58	1.53	1.54
2016	1.26	-0.69	1.35	1.44	1.37	1.39

\* Actual data.

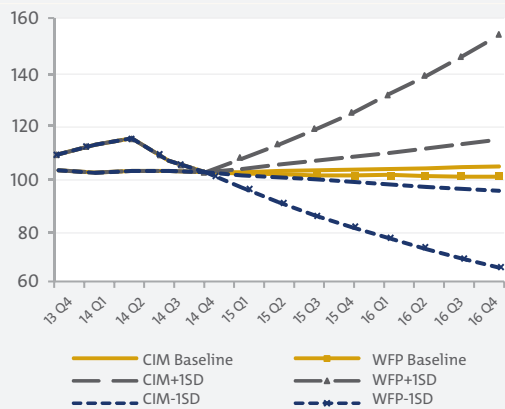
## IV. The Balance of Inflation Risk

Apart from the abovementioned risks of model uncertainty, the CPI outlook also crucially depends on the assumptions concerning the course of the exogenous variables used in the model forecast, which exclusively refer to external conditions as implied by foreign inflation trends, bilateral exchange rates of the NIS and the world food market prices.

We evaluate the risks for the CPI outlook stemming from potential shocks in these external conditions, by setting up 4 alternative scenarios, resulting from all possible combinations of 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 kurtosis<sup>[11]</sup>, the probability

Figure 19: Scenario assumptions for CIM and WFP



[11] Kurtosis measures the peakedness or flatness of the distribution of the series.

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 -1.6 percent and 3.9 percent with 1.2 percent as the central baseline outlook. In 2016, the average inflation forecasts are expected to range between -5.4 percent and 8.4 percent with 1.4 percent as the central baseline outlook.

**Table 5: Baseline and risk analysis of the CPI in Palestine for 2015 and 2016**

(Percentage point)

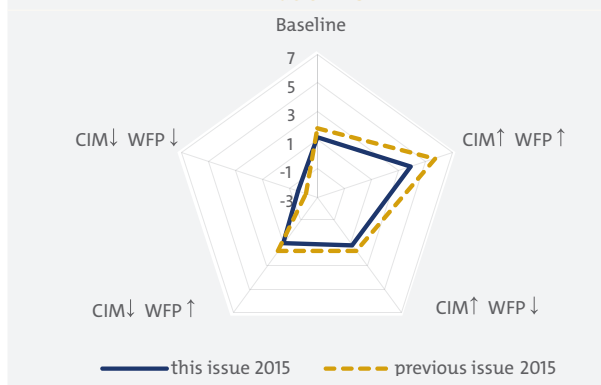
Scenario	Shock	Implied annual growth rate CIM		Implied annual growth rate WFP		Implied inflation forecast	
		2015	2016	2015	2016	2015	2016
1	Baseline	0.5	1.3	-8.4	-0.8	1.2	1.4
2	+1SD CIM +1SD WFP	4.0	7.0	7.2	27.2	3.9	8.4
3	+1SD CIM -1SD WFP	4.0	7.0	-22.2	-23.7	1.2	0.1
4	-1SD CIM +1SD WFP	-3.0	-4.2	7.2	27.2	1.0	2.4
5	-1SD CIM -1SD WFP	-3.0	-4.2	-22.2	-23.7	-1.6	-5.4

\* Actual data.

Figure (20) shows the risk analysis of inflation in Palestine during 2015 compared with the risk analysis predicted in the previous issue for 2015. As can be seen from the figure, scenarios 3 and 4 give close results to the baseline forecast. Scenarios 2 and 5 entail upside and downside outliers respectively. The figure shows that the risk declined compared with our risk analysis presented in the previous issue.

The upside risk to the inflation forecast is clearly related to a higher

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

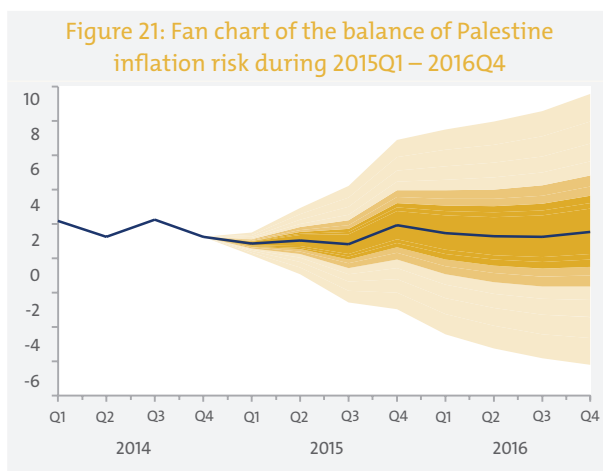




expected risk in world food prices, combined with a higher inflation in Palestine’s main trading partners compared to what is assumed in the baseline. Conversely, inflation in Palestine may turn out to be considerably lower than predicted in the baseline in case world food prices, together with inflation 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 that Israel continues to withhold clearance revenues and therefor delays and/or disrupts payment of government employees’ salaries, which affects demand on the downside, and may cause a fall in prices.

Figure (21) shows the fan chart of the balance of Palestine inflation risk during 2015Q1 – 2016Q4. This fan 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 first quarter of 2015, which is based on the inflation volatility observed



during the most recent years. It then rises up to 4.2 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.