2015

BANK OF JAMAICA

Quarterly Monetary Policy Report

October to December 2015 • Volume 16 • Number 3

Overview

Macroeconomic conditions in the domestic economy improved in the December 2015 quarter in the context of an easing of the monetary policy stance since the start of the fiscal year. In particular, the economy continued to grow, private sector credit increased and the NIR remained adequate. In addition, the fiscal performance remained on track, stock market indices increased significantly and the annual pace of depreciation in the exchange rate slowed. Notably, inflation remained among the lowest level in decades.

The Bank of Jamaica (BOJ) held the signal interest rate, the rate on the 30-day Certificate of Deposit, at 5.25 per cent during the review quarter. This unchanged policy stance reflected the Bank's assessment of the outlook for continued low domestic inflation over the near- to medium-term and the generally positive overall macroeconomic environment. In addition, the Bank maintained the spread between its overnight lending facilities and its signal rate. Further, the Bank replaced the bi-monthly price allocation of its 14 day repurchase operations with a weekly fixed volume competitive bid auction.

Headline inflation at end-2015 was 3.7 per cent. This was lower than the Bank's forecast but higher than the outturn of 1.8 per cent at end-September 2015. The higher rate of inflation primarily reflected a rise in agricultural commodity prices due to the lingering impact of the drought. For the March 2016 quarter, inflation is projected to increase but is likely to end FY2015/16 below the lower end of the 5.5 per cent to 7.5 per cent target range. Notably, over the next four quarters, the Bank is projecting inflation to be within the range of 4.5 per cent to 6.5 per cent. This outlook is largely predicated on a moderate increase in international commodity prices as well as continued improvement in domestic demand.

The Jamaican economy is estimated to have recorded a fourth consecutive quarter of expansion in real GDP for the December 2015 quarter. This performance primarily reflected relatively strong growth in Manufacture and Electricity & Water Supply and to a lesser extent Hotels & Restaurants. There were, however, adverse developments in Mining & Quarrying while the performance of Agriculture, Forestry & Fishing is assessed to have been weaker than earlier anticipated. Overall, the economy is projected to grow within the range of 0.5 per cent to 1.5 per cent for FY2015/16 with growth accelerating above this range in FY2016/17. The economy should continue to benefit from further improvements in the business environment, consumer and business confidence and gains in external competitiveness. Notably, for 2015, Jamaica was ranked as the top country in the Caribbean for doing business by the World Bank. The JSE Main Index was also ranked as the top performing stock index globally by a leading international investment house. The performance of the domestic stock market was partly attributed to improved confidence in the economy.

The Bank is aware of emerging downside risks to inflation arising from the continued slowdown of China's economy, which has had a downward pull on global stock markets, commodity prices and global growth. In addition, an assessment of the recent increase in the Fed Funds rate was evaluated to potentially have a mixed impact on the Jamaican economy. Jamaica is however, in a much better position to deal with the impact of adverse shocks given the structural reforms implemented under the EFF programme. In light of the foregoing, the Bank remains adequately resourced to implement policies to support the anchoring of inflation expectations.

Brian Wynter
Governor

CONTENTS

ABBREVIATIONS

ARMI	Agricultural Raw Materials Index
BOC	Bank of Canada
BOJ	Bank of Jamaica
BoJ	Bank of Japan
BPO	Business Process Outsourcing
BRO	Bi-monthly repurchase operations
bps	Basis points
CDs	Certificate of Deposits
CDI	Credit Demand Index
CIS	Collective Investment Scheme
CSI	Credit Supply Index
ECB	European Central Bank
EFF	Extended Fund Facility
EFR	Excess funds rate
EMBI+	JP Morgan Emerging Market Bond Index
EPI	Export Price Index
ETF	Exchange-trading funds
Fed	Federal Reserve Bank
FOMC	Federal Open Market Committee
FY	Fiscal Year
GDP	Gross Domestic Product
GOJ	Government of Jamaica
GOJGBs	Government of Jamaica Global Bonds
IES	Inflation Expeactations Survey
IMF	International Monetary Fund
IPI	Import Price Index
ITES	Information Technology Enabled Services
JCC	Jamaica Chamber of Commerce
JSE	Jamaica Stock Exchange
LME	London Metal Exchange
MonMod	BOJ's Macroeconomic Model
NAIRU	Non-Accerlerating Inflation Rate of Unemployment
NDA	Net Domestic Assets
NIR	Net International Reserve
OMO	Open Market Operations

PBOC	People's Bank of China
PMI	Purchasing Managers Index
QCCS	Quarterly Credit Condition Survey
QPC	Quantitative Performance Criteria
REITS	Real Estate Investment Trusts
SCT	Special Consumption Tax
SDRs	Special Drawing Rights
SEZ	Special economic zones
SLF	Standing Liquidity Facility
SMEs	Small and Medium-sized Enterprises
TAJ	Tax Administration of Jamaica
TOT	Terms of Trade
USA	United States of America
USDA	United States Department of Agriculture
USTBs	US Treasury bonds
VR-CDs	Variable Rate Certificate of Deposits
WTI	West Texas Intermediate

1.0 Inflation

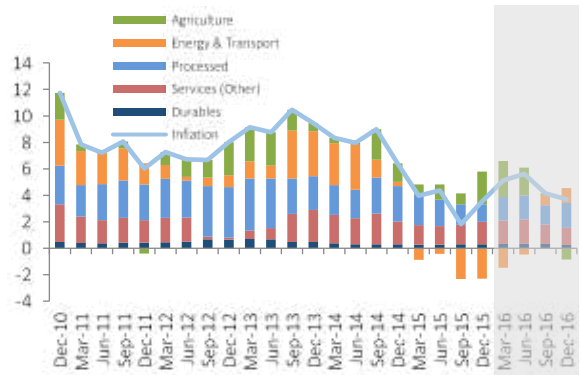
Inflation increased for the December 2015 quarter relative to the September 2015 quarter, consistent with the Bank's forecast. This outturn was primarily due to a rise in domestic agricultural commodity prices which remained high in contrast to reversals in these prices for the comparable period of 2014. For the FY2015/16, inflation is anticipated to fall below the lower end of the 5.5 per cent to 7.5 per cent target range. Over the next four quarters, the Bank is projecting inflation to be within the range of 4.5 per cent to 6.5 per cent. This outlook is largely predicated on international commodity prices remaining at low but gradually increasing levels as well as continued improvement in domestic demand conditions. The main upside risks to inflation over the next four quarters emanate from the possibility of adverse weather conditions and greater than anticipated domestic demand. The downside risks largely relate to lower than anticipated international commodity prices and lower than expected domestic economic activity. Given these factors the near-term risks to the forecast are considered to be balanced.

Inflation Developments

At end-2015 headline inflation increased to 3.7 per cent relative to 1.8 per cent at the end of the preceding quarter. The outturn to date is below the target range of 5.5 per cent to 7.5 per cent for the current fiscal year (see **Table 1** and **Box 1**). The rise in inflation largely reflected increases in the prices of domestic agricultural commodities which remained high in contrast to reversals in these prices for the comparable period of 2014. Upward pressure for the quarter also stemmed from a marginal uptick in the cost of other services relative to the preceding quarter (see **Figure 1**). The impact of these increases was moderated by a fall in the cost of energy and transport services, which declined for the fourth successive quarter. With regard to core inflation, the outturn of 3.5 per cent represents the fifth consecutive quarter of deceleration. Most categories of core inflation decelerated over the quarter. This deceleration was particularly evident amongst processed foods.

Domestic agriculture inflation accelerated relative to the September 2015 quarter, primarily reflecting the seasonal increase in demand coupled with the lagged impact of the prolonged drought conditions (see **Figure 2**). This uptick in domestic agriculture inflation occurred in spite of an improvement in the supplies of most vegetables and starches.

Figure 1 Component Contributions to Inflation
(Annual point-to-point per cent change)



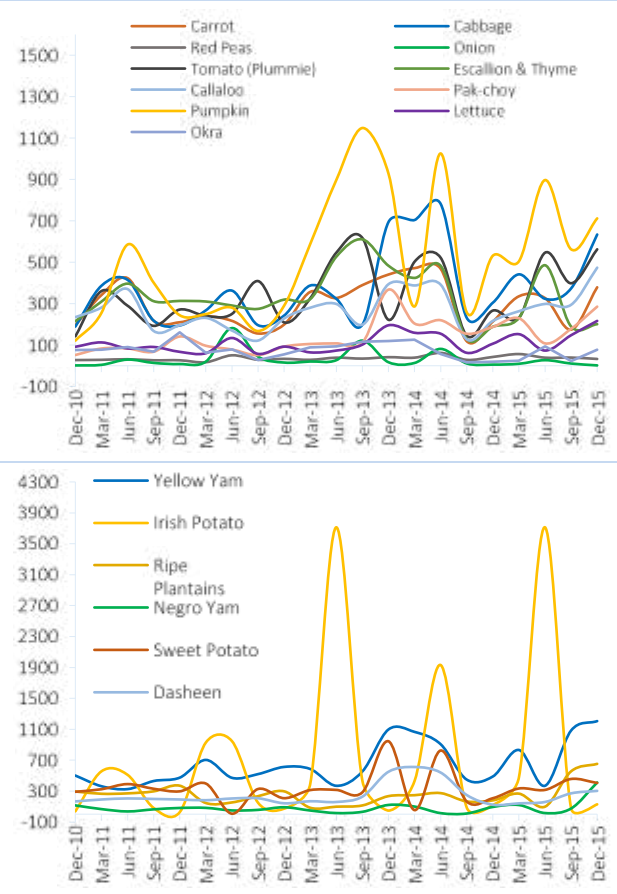
Source: STATIN & BOJ

Table 1 Inflation and Major Components
(Annual point-to-point per cent change)

	Headline	Core*	FNB**	HWEG**
Dec-14	6.4	*6.0*	*10.1*	*-2.0*
Mar-15	4.0	*5.5*	*7.9*	*-9.5*
Jun-15	4.4	*4.8*	*7.8*	*-7.5*
Sep-15	1.8	*4.0*	*5.5*	*-10.9*
Dec-15	3.7	*3.5*	*8.7*	*-8.3*
FY15/16	*5.5-7.5*			

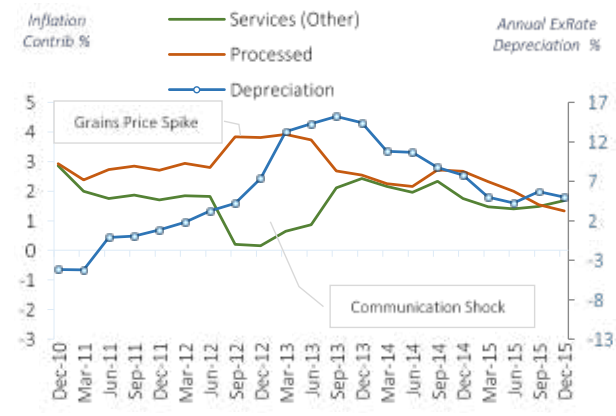
Source: STATIN & BOJ
Notes: [*] Core inflation represents that portion of headline inflation that excludes the influence of agriculture and energy related services such as electricity and transport. [**] FNB (*Food & Non-Alcoholic Beverages)* and HWEG *(Housing, Water, Electricity Gas & Other Fuels)* are major components of the Consumer Price Index (CPI) basket.

Figure 2 Estimated Vegetable & Starchy Foods Supplies (Tonnes)



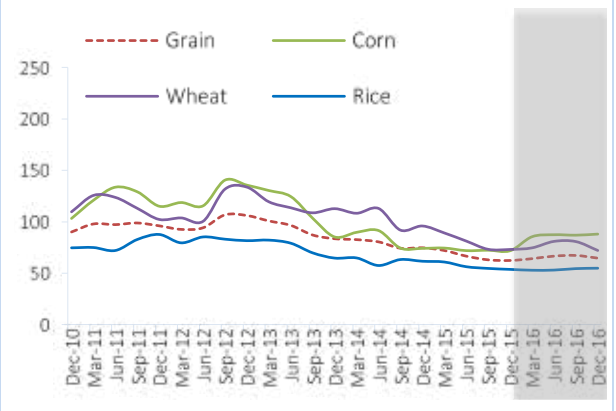
Source: RADA

Figure 3 Inflation from Processed Foods and Non-Energy Services relative to annual depreciation (per cent)



Source: Bank of Jamaica
Exchange rate depreciation up to one year (4 quarters) in the past has displayed a positive correlation with processed food inflation and other services inflation (non-energy related). With respect to non-energy related services there was a correlation of 0.72 at a lag of four quarters. When matched against inflation from processed foods, exchange rate depreciation reflects its largest correlation of 0.56 which occurred within three months.

Figure 4 Imported Agriculture Price Indices (Base year = March 2008)



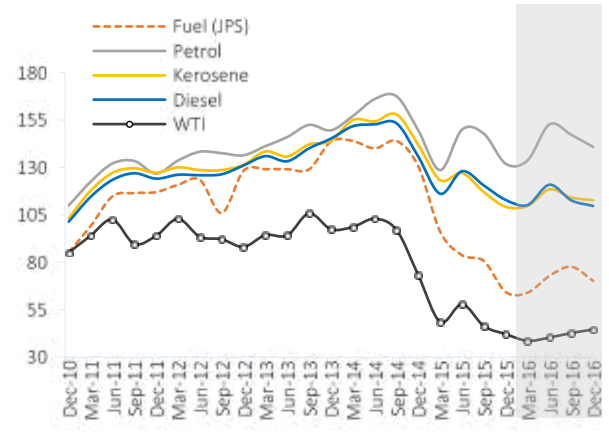
Source: Bloomberg & BOJ Calculations
Grain prices represent a weighted average of wheat, corn and rice.

Inflation among processed food items decelerated for the fifth consecutive quarter due primarily to the continued decline in the prices of international grains and lower energy costs. The fall in the prices of grains was largely due to an increase in crop yield in major harvesting regions in light of favourable weather conditions. In addition, weakness in global demand for grains persisted given the slowdown in economic expansion of a number of economies, notably China a major consumer of grains (see **Figures 1** and **4**).

In relation to the marginal increase in inflation arising from other services, this outturn reflected some pass-through from exchange rate depreciation (see **Figure 3**).

For the December 2015 quarter there was deflation related to energy and transport mirroring the continued declines in electricity and fuel rates (see **Figure 5**). This was largely due to the impact of the reduction in international crude oil prices (See **International Economy**).

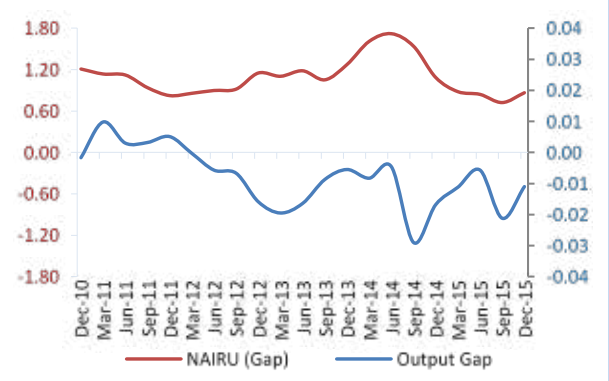
Figure 5 Energy Price Indices
(Base year = March 2008)



Source: Bank of Jamaica

Minimal inflationary pressure stemmed from capacity utilization or the labour market during the quarter (see **Figure 6**). This was inferred from the output gap remaining negative for the December 2015 quarter relative to the previous quarter. The unemployment rate continued to exceed the Non-Accelerating Inflation Rate of Unemployment (NAIRU), indicating no inflationary pressures from the labour market. In light of the foregoing, there were no inflationary pressures from factor prices during the review quarter.

Figure 6 Output Gap and Gap between Unemployment and NAIRU



Source: Bank of Jamaica
The above chart presents the output gap, the gap between actual output and potential, and the NAIRU gap, the gap between Unemployment and the Non-Accelerating Inflation Rate of Unemployment (NAIRU). When output is below potential (negative output gap) inflationary pressures are negative due to economic slack. When unemployment exceeds the NAIRU (positive NAIRU gap), there is also slack in the labour market contributing to low wages and by extension, low inflationary pressures.

Inflation Outlook & Forecasts

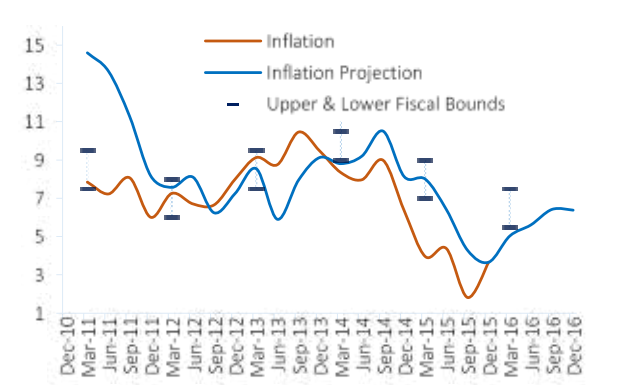
Inflation is expected to fall below the lower end of the target range of 5.5 per cent to 7.5 per cent despite a pick-up in the March 2016 quarter. The uptick in the quarter is largely predicated on prices of agricultural commodities being higher than the corresponding period of 2015 given that the level of price reversal is not expected to be as strong as it was in the previous year. The expected price reversal occurs in the context of the Island recovering from the drought conditions that occurred in the first half of the fiscal year.

Over the next four quarters the prices of international commodities, particularly crude oil, are expected to reflect some marginal increases, contributing to domestic inflation. This forecast is based on an anticipated moderate improvement in global demand conditions.

The output gap is expected to narrow over the near-term. In this regard, some inflationary pressures could emanate from domestic demand conditions. Further, growth in the monetary aggregates suggests that the monetary developments pose minimal risks to inflation over the next two quarters. However, there are increasing upside risks for FY2016/17 (see **Monetary Developments**). Continued low inflation expectations, as reflected in the Bank's most recent Inflation Expectations Survey (IES) of businesses should, however, assist in moderating price increases over the next four quarters (see **Box 1.1**).

In light of the aforementioned, inflation is expected to increase at a moderate pace over the next four quarters within the range of 4.5 per cent to 6.5 per cent. This projection reflects moderate increases in international commodity prices and a strengthening in domestic economic growth. Continued efforts at fiscal consolidation and low

Figure 7 Inflation Forecast Performance
(Annual point-to-point forecast for each fiscal year)



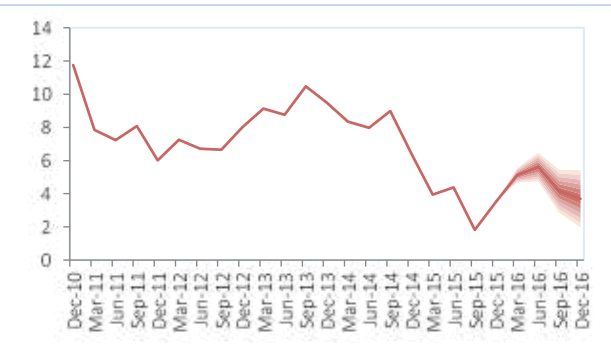
Source: Bank of Jamaica
The graph reflects how well the Bank's forecasts of inflation compare to the actual inflation outturn for each quarter ahead. Fiscal year targets are also provided to indicate what the targets were at any given point in time.

inflation expectations should serve to temper the pace of price increases.

Inflation Risks

The upside risks to inflation over the subsequent four quarters comprise of the impact of adverse weather conditions and stronger than anticipated domestic demand. The downside risks largely relate to lower than anticipated international commodity prices and lower than expected domestic economic activity. In light of these factors, the near-term risks to this forecast are considered to be balanced (see **Figure 8**).

Figure 8 Inflation Fan
(Annual point-to-point forecast)



Source: Bank of Jamaica

Box 1.0: BOJ's Macroeconomic Model (MonMod) Component contribution to Inflation implied by the Phillips Curve

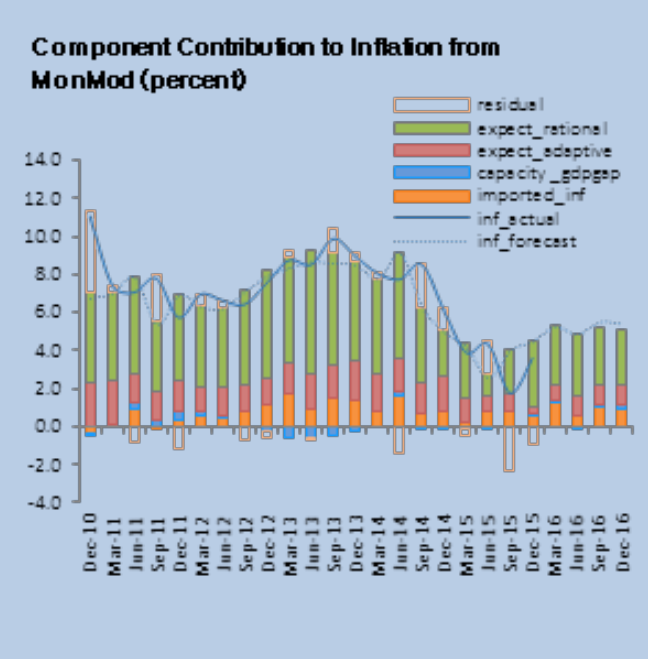
The Bank's Macroeconomic Model (MonMod) evaluates the determination of inflation in the economy using the theoretical underpinnings of a forward looking open economy Phillips Curve. In that regard, the key determinants include (1) the surplus or shortage of aggregate supply (output GAP); (2) the impact of imported inflation and (3) expectations among consumers and businesses. Notably, expectations are modeled as both adaptive (backward looking) and rational (forward looking) (see **Phillips Curve equation** below).

$$\boldsymbol{\pi_t = \alpha\pi_{t-1} + (1-\alpha)\pi_{t+1} + \beta_1 GAP_t + \beta_2 S_t + \epsilon_t}$$

Where π_t is the Inflation rate at a given point in time, GAP_t is the corresponding output gap and S_t is a composite of the exchange rate change and US inflation. Unexplained inflation is captured in ϵ_t.

The Bank's MonMod was reestimated in December 2015 taking into account the inflation outturn of 1.7 per cent for the September 2015 quarter (see **Figure below**). The results from the model suggest inflation accelerated in the December 2015 quarter primarily due to a near term increase in expected inflation. In addition, following five consecutive quarters of a negative output gap, it is estimated that there were some pressures from improved domestic demand conditions, albeit small. This was partly offset by a moderation in imported inflation.

Inflation for the March 2016 quarter is projected to increase further due to an uptick in imported inflation. In addition domestic capacity conditions are expected to exert some inflationary pressure evidenced by the slightly positive output gap.



Box 1.1: BOJ's Inflation Expectations Survey (IES)

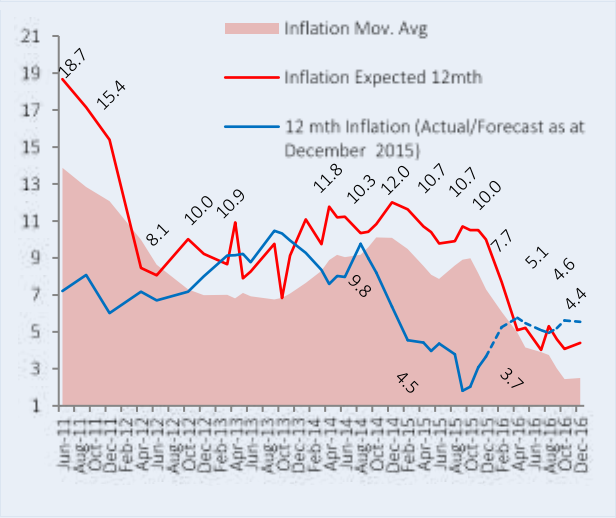
Overview

In December 2015, the results from the IES showed a decline in expected inflation 12 months ahead relative to the September 2015 survey. Consistent with this view, the perception of inflation control increased. With regard to the exchange rate, respondents expected a slower pace of depreciation over the 3-month and 6-month horizon. For the 12-month horizon, however, respondents expected a similar pace of depreciation to the September 2015 survey. The majority of businesses surveyed believed that the Bank's OMO rate will remain the same over the next three months. Relative to September 2015, the perception of both present and future business conditions improved.

Inflation Expectations

IIn the December 2015 survey, there was a decline in the expected inflation for CY2015 to 6.9 per cent from the 7.3 per cent that was recorded in the September 2015 survey. Expected inflation for the calendar year was above the BOJ's forecast and the actual outturn of 3.7 per cent. Respondents' expectation of inflation 12 months ahead, however, declined to 4.1 per cent in the December 2015 survey from the 4.6 per cent indicated in September 2015 (see **Figure 1**). In particular respondents' expectation of inflation for September 2016 was below the Bank's forecast for that period.

Figure 1: Expected 12-Month Ahead Inflation



Source: Bank of Jamaica's Inflation Expectations Survey

Perception of Inflation Control

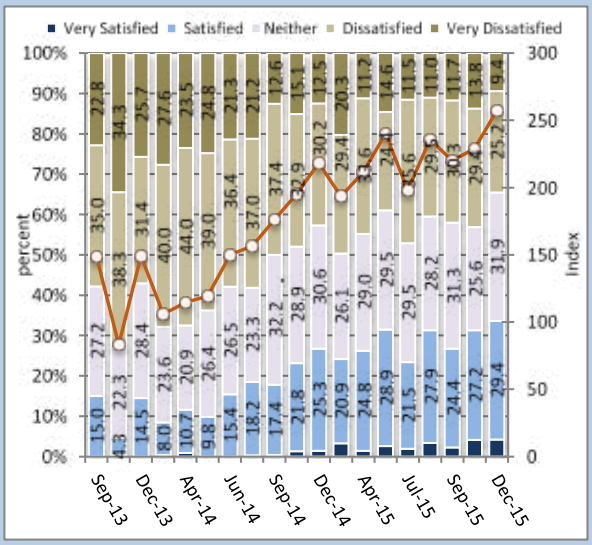
The index of inflation control increased to 257.1 from 220.0 in the September 2015 survey (see **Figure 2**). This result mainly reflected a decline in the number of respondents who were neither 'satisfied' nor 'dissatisfied' with the authorities' control of inflation, while there was an increase in the number of respondents who were 'satisfied'.

Exchange Rate Expectations

Relative to the September 2015 survey, respondents expected a slower pace of depreciation in the domestic currency for the 3-month and 6-month time horizons. However, a similar pace of depreciation was expected for the 12-month period beyond the survey date (see **Table 1**).

Figure 2: Perception of Inflation Control

Question: How satisfied are you with the way inflation is being controlled by the Government?



Source: Bank of Jamaica's Inflation Expectations Survey
Notes: The Index of inflation control is calculated as the number of satisfied respondents minus the number of dissatisfied respondents plus 100

Table 1: Exchange Rate Expectations

Question: In November 2015 the exchange rate was J$120.79=US$1.00. What do you think the rate will be for the following time periods ahead, 3 months, 6 months and 12 months?

Periods Ahead	Expected Depreciation			
	Sep-14	Dec-14	Sep-15	Dec-15
3 Months	1.3	1.4	1.7	1.5
6 Months	2.2	2.1	2.7	2.5
12 Months	3.2	3.0	3.5	3.5

Source: Bank of Jamaica's Inflation Expectations Survey.
Note: the survey responses to question have been converted to per cent change.

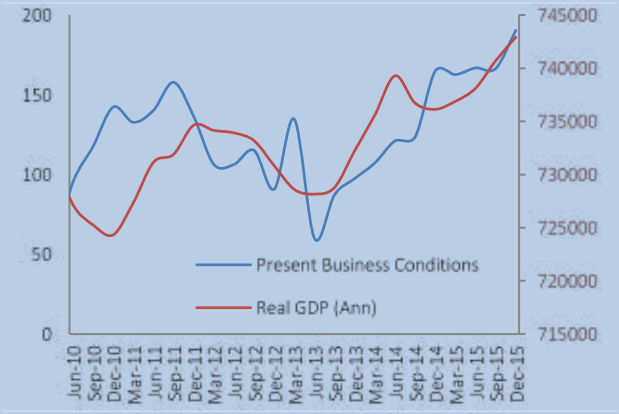
Interest Rate Expectations

The expectation was for the Bank's OMO rate to be unchanged. The expected 180-day Treasury Bill (T-Bill) rate, three months hence was 6.3 per cent relative to the 6.5 per cent anticipated in the September 2015 survey. This expected rate was above the actual 180-day T-Bill rate for December 2015.

Perception of Present and Future Business Conditions

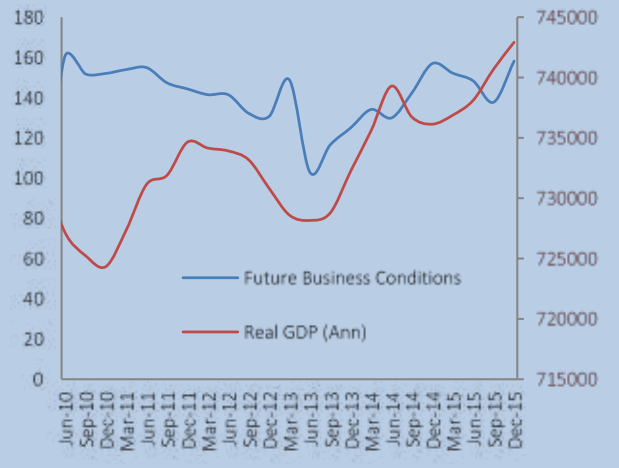
In the most recent survey the perceptions of both present and future business conditions improved relative to the September 2015 survey. Since the June 2013 quarter, perceptions of both present and future business conditions have generally trended upwards (see **Figures 3** and **4**).

Figure 3: Present Business Conditions and Real GDP (Index– LHS and GDP – RHS)



Source: Bank of Jamaica's Inflation Expectations

Figure 4: Future Business Conditions and Real GDP (Index)



Source: Bank of Jamaica's Inflation Expectations Survey
Note: Rates on foreign currency personal loans were not collected.

Expected Increase in Operating Expenses

Respondents indicated that they expect the largest increase in production costs over the next 12 months to emanate from the cost of stock replacement. Higher costs for utilities was expected to be the second largest contributor to production costs over the next 12 months. The expected contribution of the cost of wages and salaries ranked marginally below the cost of raw materials. Fuel and transport was the input cost least expected to increase over the next 12 months.

2.0 International Economy

Global economic growth is estimated to have decelerated during the December 2015 quarter when compared to the September 2015 quarter. This weaker growth outturn was largely underpinned by the continued slowdown of the Chinese economy, which has adversely impacted economic activity in most of the advanced and emerging market economies, notably the USA, Euro area and Brazil. In light of the adverse impact on economic activity across the globe, the November 2015 terrorist attacks on France and an increase in the US Fed Funds rate, the demand for safe haven assets such as US Treasury bonds increased during the quarter as some investors shifted funds away from emerging market bonds and equities. As a result, the US dollar strengthened further, leading to a greater than expected decline in the prices of US dollar-denominated commodities. Additional downward pressure on commodity prices also arose from a continued increase in global supplies and signs of persistent weakness in global demand. Consequently, the central banks of most major economies maintained an accommodative monetary policy stance with some implementing further measures to stimulate growth.

Trends in the Global Economy

Global economic expansion in 2015 is estimated to be less robust than previously anticipated. Current estimates suggest a weaker growth rate of 3.0 per cent relative to the previous forecast of 3.2 per cent (see **Table 2** and **Figure 9**). This also reflects deceleration relative to estimated growth of 3.1 per cent for the September quarter. This revised estimate for 2015 comes against the background of the weaker than forecast September 2015 quarter economic growth performance for a number of economies, coupled with indications of continued weakness in the expansion of real output during the December 2015 quarter. Notably, the persistent fragility of the Chinese economy continued to weigh down the pace of expansion of a number of economies, in particular the USA. In addition, growth in a number of commodity exporting countries is estimated to remain weak in light of the strengthening of the US dollar, which has kept commodity prices depressed.

Against the background of the more tempered pace of expansion of the global economy, the 12-month point-to-point inflation for a number of Jamaica's major trading partners was lower than anticipated during the quarter and remained below the respective countries inflation targets. The outturn was primarily associated with the impact of lower energy and commodity prices, with offsetting

Table 2: Overview of Selected Variables (Per Cent)

	2014	2015	
	Actual	Current Forecast	Previous Forecast as at 23 Oct.15*
GDP			
World	**3.4**	**3.0**	**3.2**
USA	2.4	2.4	2.5
Canada*	2.5	1.2	1.2
Japan*	-0.1	0.6	0.6
UK	2.9	2.2	2.4
Euro*	0.9	1.5	1.5
China	7.3	6.9	6.8
Inflation			
USA	0.8	0.7	-1.9
Canada	1.5	1.6	-0.6
Japan	2.4	0.2	0.6
UK	0.5	0.2	-0.3
Euro	-0.2	0.2	-1.7
China	1.5	1.6	2.1

Source: Bank of Jamaica (BOJ) and Bloomberg
* BOJ's estimates for 2015

impulses from higher cost for apparel, education and communication.

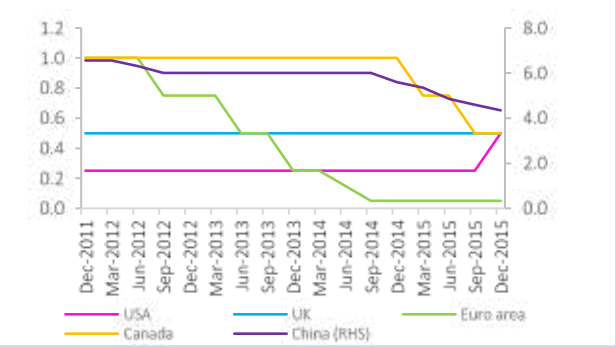
In the context of the foregoing, the monetary policy stance of most major central banks remained accommodative during the review quarter. Notably, the People's Bank of China (PBOC) lowered its benchmark interest rate by 25 basis points (bps) in October 2015, the sixth rate cut in a year, as it sought to combat deflationary pressures and boost domestic consumption. In recognition of the need to boost the growth momentum and spur inflation growth in the Euro area, the European Central Bank (ECB) extended its quantitative easing via its asset-purchase programme by six months to March 2017. It also effected a 10 bps reduction of the interest rate on the central bank's deposit facility to -0.30 per cent, while keeping unchanged the 0.05 per cent and the 0.30 per cent offered on its main refinancing operations and marginal lending facility, respectively.

Figure 9: Global Economic Growth

Source: Bank of Jamaica

While deciding to maintain its monetary stimulus target, the Bank of Japan (BoJ), in an effort to facilitate a seamless decline in interest rates across the entire yield curve, instituted operational changes to its purchases of government bonds, exchange-traded funds (ETFs) and real estate investment trusts (REITS).[1] In contrast, the US Federal Reserve increased interest rates for the first time since the global financial crisis. This was against the background of continued improvements in a number of macroeconomic variables, particularly in the labour market (see **Table 3**). Notwithstanding the rate increase, the Federall Open Market Committee (FOMC) highlighted that monetary policy remained accommodative (see **Figure 3** and **Box 2**). The Bank of Jamaica (BOJ) anticipates that the accommodative posture of the respective central banks should continue to foster further expansion of the global economy over the forthcoming quarters of 2016, albeit at a slower than previously envisioned pace.

Figure 10: Policy Interest Rates, monthly data (Per Cent)



Source: Bloomberg

Table 3: Unemployment Rate for Selected Economies (Quarterly Average Per Cent)

	USA	Canada	Euro
Dec-2014	5.6	6.7	11.4
Mar-2015	5.5	6.8	11.2
Jun-2015	5.3	6.8	11.0
Sep-2015	5.1	7.1	10.7
Dec-2015	5.0	7.1*	10.5*

Source: Official statistics offices, * Bloomberg forecast

Advanced Economies

United States of America (USA)

Economic conditions in the USA remained generally favourable. However, the first estimate of GDP for the December 2015 quarter reflected a

1 These changes include the BoJ's purchase of government bonds with a seven to 12 years maturity from the usual bonds with seven to 10 years to maturity. Also, the BoJ established a new program to buy 300 billion yen in ETFs in addition to its annual purchase of ETFs valuing 3 trillion yen.

deceleration in the annualized growth rate to 0.7 per cent. This outturn reflects a contraction in private inventory investment, exports, nonresidential fixed investment as well as state and local government spending. Growth in net exports remained weak, mainly due to a stronger US dollar. Against this background, the first estimate of US GDP growth for 2015 was smaller, 2.4 per cent, than the Bank's previous estimate of 2.5 per cent.

Further, the Bank is projecting quarterly annualized growth to be within the range of 2.4 per cent to 3.1 per cent over the next four quarters. This should translate to GDP growth of 2.5 per cent for 2016. This forecast is predicated on the expectation of continued improvement in the labour market and its likely translation into higher consumption and investment spending.

Notwithstanding the lower than projected commodity prices, the 12-month change in the US consumer price index increased to 0.7 per cent at end-2015 relative to the 0.0 per cent at end-September 2015. The outturn reflected higher prices for food, shelter, healthcare and other services, the impact of which was partly offset by continued declines in energy costs. The BOJ is forecasting that inflation in the USA over the next four quarters will increase within the range 0.6 per cent to 0.9 per cent, supported by a gradual increase in commodity prices. This compares to the FOMC's projected range of 1.2 per cent to 1.7 per cent.

Euro Area

The economic environment within the Euro area continued to improve, fostered by the accommodative monetary policy stance of the ECB and a depreciating currency. Notwithstanding, the real economy is estimated to have grown at an annualized rate of 1.6 per cent for the December 2015 quarter, a similar rate to the September 2015 quarter. Against this background, the BOJ anticipates that real GDP in the region will increase to 1.5 per cent in 2015, a significant improvement from the 0.9 per cent recorded for 2014. In light of the extension of the ECB's quantitative easing program to March 2017, and the expected improvement in domestic and external demand conditions, growth in the Euro area is expected to strengthen further over the next four quarters.

At end 2015 headline inflation in the Euro area was 0.2 per cent in contrast to the deflation of -0.1 per cent as at end-September 2015. This increase was largely reflected in the higher prices for food, alcohol & tobacco as well as services, the impact of which was partly offset by lower energy prices. The Bank expects inflation to remain below the ECB's target rate of 2.0 per cent for the next four quarters, falling within the range of 0.2 per cent to 0.9 per cent.

China

With regard to China, real GDP growth for the December 2015 quarter was 6.8 per cent, reflecting a further deceleration in growth from the 6.9 per cent recorded for the September 2015 quarter. This slowdown in economic activity occurred against the background of the structural economic transformation being pursued by the Chinese government to place the economy on a steadier and sustainable growth path driven by expansion in domestic consumption spending rather than exports. Notably, manufacturing activity, as measured by the Purchasing Managers' Index (PMI) recorded three consecutive months of contraction during the quarter. It is against this background that the PBOC is forecasting GDP growth for 2016 to be 6.9 per cent unchanged from the outturn for 2015. Growth should be supported by additional expansionary monetary policy measures implemented by the PBOC. Notably, on the 24 October 2015, the PBOC cut its benchmark loan and deposit interest rates applicable to financial institutions to augment previous efforts to stimulate economic growth. In this regard, the one-year lending rate and the one-year deposit rate were lowered by 25 bps to 4.35 per cent and 1.50 per cent, respectively. In addition, the PBOC

also reduced the required reserve ratio by 50 bps to 17.50 per cent.

In light of the foregoing, the Bank projects that economic growth in China for the next four quarters will be within the range of 6.5 per cent to 6.7 per cent while inflation is forecast to be within the range of 1.3 per cent to 1.9 per cent.

International Financial Markets

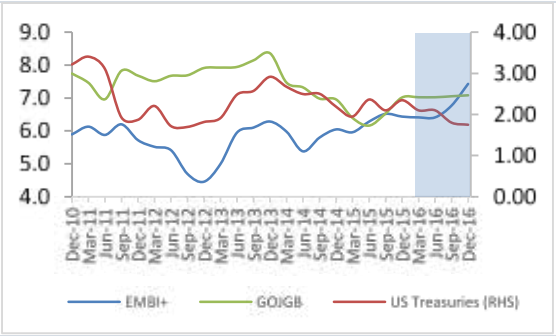
The performance of global financial markets during the December 2015 quarter was largely reflective of heightened risk aversion among investors and reflected the strong anticipation of a US Federal Reserve's interest rate increase in December 2015. In addition, financial markets were impacted by the continued improvement in the US macroeconomic environment, the destabilizing impact of the terrorist attacks in France on 13 November 2015 and the fragility of economic expansion in a number of advanced and emerging market economies, particularly China and Brazil. Consequently, there was a widespread increase in the demand for US Treasury bonds (USTBs), with strong preference for the longer tenors. As a result, the average yield on USTBs at the end of the review quarter was 0.87 per cent, reflecting declines of 18 basis points (bps) and 1 bp when compared to the corresponding quarter of 2014 and the September 2015 quarter, respectively (see **Figure 11**). Further, the spread between the 3-month USD LIBOR and the 3-month USTB (TED spread) increased by 12.8 bps to average 45.3 bps (see **Table 4**).

Table 4: Average spread between the 3-month USD LIBOR and the 3-month USTB (TED spread)

Dec - 14	21.6
Mar - 15	23.3
Jun - 15	26.1
Sep - 15	32.5
Dec - 15	45.3

Source: Bloomberg

Figure 11: Selected Average Sovereign Bond Yields
(Per Cent)



Source: Bloomberg

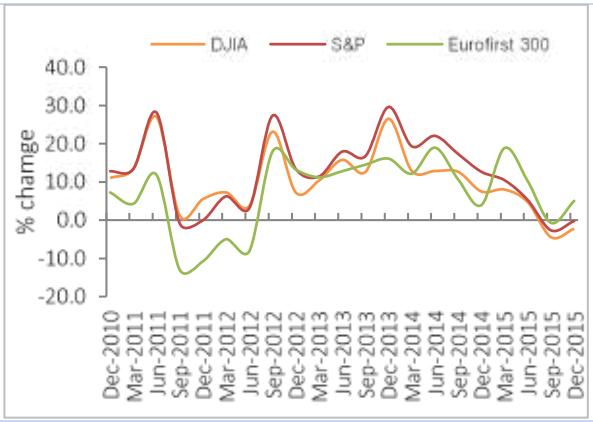
Most selected stock market indices fell over the December 2015 quarter when compared to the corresponding period of 2014. This was influenced by investor concern about the state of the global economy, particularly China. On an annual basis, the Dow Jones Industrial Average and the S&P 500 indices fell by 1.7 per cent and 0.2 per cent, respectively, while the Eurofirst 300 increased by 5.0 per cent. The improved performance of the Eurofirst 300 index was largely attributed to the continued growth in the Euro area's net exports, facilitated by the depreciated euro against the US dollar and the economic stimulus provided by the ECB (see **Figure 12**). From a quarterly perspective, all equity indices increased when compared to the September 2015 quarter, indicative of the increased optimism among investors in the context of continued positive growth in the USA and the Euro area. The performance was partially offset by the impact of continued high volatility in the Chinese equity markets.

The trading of select currencies during the review quarter resulted in a general depreciation of most major currencies against the US dollar, both on an annual and quarterly basis. For the December 2015 quarter, the US dollar index increased by 2.4 per cent and 9.3 per cent when compared to the September 2015 quarter and the December 2014 quarter, respectively.[2] The stronger index

2 The US Dollar Index (USDX) is computed by the Intercontinental Exchange Futures, U.S., which uses the euro, Japanese yen, Canadian dollar, British pound, Swedish krona and Swiss franc

was largely attributed to the sharp depreciation of the euro and the yen against the background of expansionary monetary policy measures implemented by the respective central banks of these countries. The Trinidad and Tobago dollar also weakened against the US dollar as the lower crude oil prices resulted in further deterioration of the country's macroeconomic environment.[3]

Figure 12: Selected Stock Market Indices
(Year-over-Year Per Cent)



Source: Bloomberg

Commodity Prices

For the December 2015 quarter the prices of select commodities declined when compared to the previous quarter and the corresponding period of 2014. The widespread fall-off in prices during the review quarter represents the continuation of the downward trend observed across all commodities since the June 2015 quarter. This downward trend has been sustained by the relatively soft global economic environment, the continued buoyancy in the supplies of commodities and favourable weather conditions in a number of grains producing countries. In addition, the fall in commodity prices was supported by the appreciation of the US dollar, which increased the cost of investments in US dollar denominated commodities, thus making them less attractive.

Against this background, the price of the benchmark West Texas Intermediate (WTI) crude oil, fell to an average price of US$42.18 per barrel, a slower annual decline of 42.4 per cent when compared to 52.2 per cent recorded for the September 2015 quarter.[4] Notably, the lower crude oil price obtained for the review quarter occurred in the context of OPEC's decision at the 05 December 2015 meeting to abandon its production ceiling until June 2016 as well as Saudi Arabia's reduction of its official selling price on all grades of crude oil sold to the USA as well as the expectation of Iran's return to the international crude oil export market in January 2016. These developments serve to heighten investors' concern about an already oversupplied market notwithstanding a fall in rig counts in the USA.[5]

Similarly, all categories of grains captured by the Bank's Agricultural Raw Material Index (ARMI) declined during the December 2015 quarter. Reports published by the United States Department of Agriculture (USDA) during the quarter cited increased grains production and higher beginning stocks as reasons supporting the price declines observed during the review quarter. The USDA revised estimates for global supply of wheat for the crop year 2015/16 to reflect an increase of 2.3 million tonnes, on account of higher beginning stocks and production levels. The organization highlighted that wheat production across the globe remains at record highs and is expected to increase to 734.9 million tonnes for the year given higher production from Canada. Further downward pressure on grains prices towards the end of the

exchange rates relative to the US dollar, supplied by approximately 500 banks.

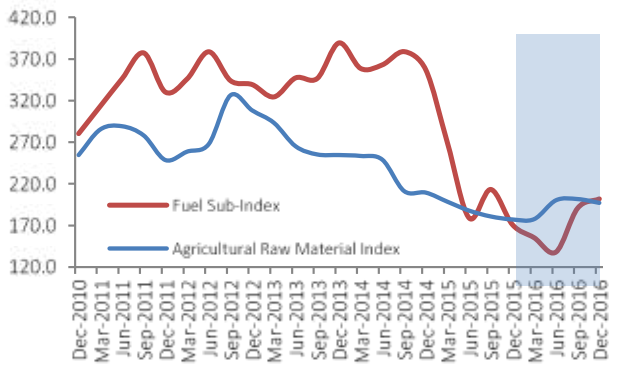
3 Notwithstanding the general preference for the US dollar during the review quarter, the Canadian dollar and the Mexican peso appreciated against the US dollar in light of continued improvement in the respective economies.

4 The quarterly decline when compared to September 2015 was 9.2 per cent..

5 On an annual basis, rig count for the world, USA, OPEC and Non-OPEC declined by 44.9 per cent, 64.1 per cent, 6.64 per cent and 22.1 per cent, respectively.

quarter, notably wheat and corn, emanated from the abolition of restrictions on Argentinian grains exports. Lower prices were also evidenced in the corn and soybean markets for the quarter.

Figure 13: The Bank's Commodity Price Indices



Sources: Bloomberg, World Bank and BOJ

The price of aluminium on the London Metal Exchange (LME) for the December 2015 quarter was 23.7 per cent lower than the corresponding quarter of 2014 and reflected a stronger decline of 19.4 per cent than the annual decline recorded for the September 2015 quarter. This decline was largely underpinned by the continued glut in the market, exacerbated by persistent weakness in the global economy and increased supplies fostered by lower production costs.

For the next four quarters, prices across global commodities markets are expected to remain subdued with a forecast pick-up in prices, albeit at a moderate pace. In particular, crude oil prices are expected to rise slowly associated with a pick-up in global growth and a reduction in shale oil production. However, this outlook reflects more moderate prices relative to the Bank's previous forecast.

Over the next four quarters the prices for agricultural commodities are expected to remain relatively low in the context of the current over-supply of grains, subdued demand and the prospect of further buoyant yields. The expectation of a further strengthening of the US dollar should also contribute to a more sluggish upward trajectory in the prices for commodities. However, as the global economy strengthens, improved demand conditions should place some upward pressure on prices to facilitate a slight upward trend in the average price of grains by mid-2016. The impact of El Niño weather conditions on grains production remains a significant risk factor that may cause prices to increase at a stronger than forecast pace.

The trajectory for aluminium prices over the next four quarters is similar to that of grains and crude oil prices. The forecast is for aluminium prices to gradually increase, albeit at a slower pace than previously projected. This increase is informed by the expectation of growth in global demand for aluminum as economic expansion in a number of advanced economies continues to strengthen. A further boost in the demand for aluminium is expected to arise as Brazil prepares to host the 2016 Olympic summer games. Notwithstanding, the oversupply of aluminum is anticipated to persist over the ensuing quarters.

The Implications for the Jamaican Economy

Jamaica's terms of trade (TOT) index continued to improve during the December 2015 quarter but at a slower pace than the previous two quarters. The index increased by an annual rate of 20.2 per cent for the December 2015 quarter relative to 36.9 percent for the September 2015 quarter. The annual rate for the December quarter reflected a 22.7 per cent decline in the Import Price Index (IPI) and a contraction of 7.1 per cent in the Export Price Index (EPI).

The decline in the IPI, when compared to the previous quarter, was largely influenced by lower prices for fuel, raw materials, consumer goods and capital goods (transport and equipment). The fall-off in the EPI mainly occurred as a result of lower alumina and sugar prices, the impact of which was partly offset by higher coffee and cocoa prices.[6]

6 The price of aluminium is used as a proxy for alumina prices.

The TOT is projected to increase over most of the next four quarters, albeit at a more tempered pace, with a noticeable decline in the December 2016 quarter. The forecast reflects continued decline in the IPI in the first two quarters, offset by an increase in the final two quarters of the year. This outlook is informed by the Bank's forecast for fuel and grains prices. The impact of the IPI on the TOT is expected to be offset by growth in the EPI, largely predicated on an improved outlook for tourism prices.

Against this background, domestic inflation is expected to trend upwards over the next four quarters but at a slower than previously forecast pace. The Jamaican economy is expected to further strengthen from the continued improvement of the US economy resulting in stronger tourism and remittance flows.

Box 2: Impact of Increases in the Federal Funds Rate on the Jamaican Economy

Overview

On 16 December 2015, the Federal Reserve Open Market Committee (FOMC) raised interest rates by 25 bps, the first such increase since April 2006. The increase occurred against the background where underutilization of labour resources had diminished appreciably since the start of 2015 and consumer price inflation was expected to move towards the Feds medium-term target of 2.0 per cent. The Chairman highlighted that future adjustments to interest rates would be done at a gradual pace. Notably, the projections of the Committee members showed a median rate of 1.375 per cent at end 2016, suggesting four rate increases for the year.

The FOMC also outlined a more optimistic view of US GDP growth and unemployment for 2016 relative to its previous projections. In addition, the projection for inflation was lowered in 2016 (See **Table 1**). Against this background, this box highlights the possible implications of the normalization in interest rates by the FOMC for the Jamaican economy.

Table 1

Economic Projections of the Federal Reserve Board						
Variable		**2015**	**2016**	**2017**	**2018**	**Longer run**
GDP	**Dec**	2.1	2.4	2.2	2.0	2.0
	Sept	2.1	2.3	2.2	2.0	2.0
Unemployment	**Dec**	5.0	4.7	4.7	4.7	4.9
	Sept	5.0	4.8	4.8	4.8	4.9
PCE Inflation	**Dec**	1.3	1.6	1.9	2.0	
	Sept	1.4	1.7	1.9	2.0	

Initial Response of Global Financial Markets

The stock and bond markets have generally not exhibited any signs of panic attributable to the rate increase. On the first day of the announcement, the Treasury yield curve flattened slightly, equity markets rallied and the US dollar appreciated by approximately 1.0 per cent against currencies such as the Euro. By day two, there was a reversal of some of these developments in the financial markets as investors took on a cautious approach about the implications of a stronger dollar for the world economy, given other market developments. Notably, stock and bond markets have been relatively volatile but this has had less to do with the Fed's policy action. Instead, this volatility has been mainly attributed to fears of a slowdown in the global economy arising from the impact of relatively weak commodity prices and slower GDP growth in China.

Liquidity conditions have been supportive of the target rate. The effective Fed funds rate, the average of daily trades in the market, has generally been within the FOMCs new target range of 0.25 per cent to 0.50 per cent since the rate increase compared to an average of 0.14 per cent on the first sixteen days of the month, prior to the announcement.

A few central banks in the emerging markets raised interest rates to protect their respective currencies. However, for the most part, central bank rates were unchanged. Countries which tightened monetary policy included Saudi Arabia, Kuwait, the United Arab Emirates, Mexico and Chile. Notably, some of the countries that raised rates had benefited significantly from capital inflows during the period of rate reduction while others maintained a peg with the US dollar. Those that did not react mainly had concerns that inflation was significantly below their respective targets.

The prices of oil and other commodities fell consequent on the continued appreciation of the US dollar. This exacerbated the impact on prices of an oversupplied market for oil and other dollar denominated commodities.

BOJ's Expectation of subsequent US and International Market Developments

Bank of Jamaica expects that US money market and loan rates will inch up gradually. However, rates will not be sufficiently high to cause a fall in US consumer spending or investments in 2016. However, spending should grow at a slower pace than would have obtained prior to the rate increase, while net exports are expected to remain weak on account of the appreciation of the US dollar.

There is likely to be flight to safety in 2016, manifested in increased demand for US Treasuries. This is particularly in a context where investors may be uncertain about how the policy change will be transmitted throughout the global economy. Additionally, there could be some volatility in financial markets, particularly the stock market, as some investors reconsider the appropriateness of the timing for the rate increase. This scenario is likely to be compounded by fears associated with the implications of falling oil prices and the impact on global growth arising from emerging weaknesses in China's economy. Overall, the demand for US Treasuries is expected to rise which in turn should cause bond yields for some countries to increase while others fall at a slower pace than would have obtained prior to the rate increase.

BOJ expects that central banks that are facing low inflation and GDP challenges will continue to reduce interest rates and/or implement other expansionary policy measures. In particular, this is the expectation for the Euro Area, Japan, Canada and China. In this regard, the currencies of these countries could continue to depreciate until the benefits of the depreciation begin to benefit export growth and hence GDP. In the interim, the appreciation of the US dollar relative to these currencies will continue to depress commodity prices.

Implications of the rate increases for the Jamaican Economy

The BOJ expects that the impact on the domestic economy will be mixed. With respect to GDP, the Bank is of the view that the contribution of the US economy to domestic GDP in 2016 will be slightly lower relative to what would have obtained prior to the rate increase. However, in a context of continued expansion in the USA, the outlook for tourism and remittances remains positive. Specifically, growth in travel is projected within a range of 2.0 per cent to 5.0 per cent for FY2015/16 and FY2016/17. Concurrently, growth in private transfers is expected within a range of 3.0 per cent to 4.0 per cent for each year.

The impact of the rate increase could lead to lower international commodity prices than previously anticipated which should translate to lower domestic inflation. In this regard, the inflation target is not expected to be threatened on account of the developments in the USA.

The overall impact on the current account is expected to be positive, emanating largely from lower oil prices. In this context, lower foreign currency demand for imports is expected to contribute positively to the foreign currency cash flow position in the short term.

Spreads on domestic USD CDs over Treasuries will narrow, but these instruments are anticipated to remain relatively attractive. The Bank is not ruling out the possibility of some portfolio outflows from Jamaica to money market funds in the US. However, the Bank is of the view that the reserves will remain adequate.

The rate increase in the USA could result in a lower than expected gain in Jamaica's external price competitiveness over the ensuing year. This is in a context where the currencies of Jamaica's trading partners could depreciate against the US dollar at a faster pace than earlier anticipated consequent on the rate increase in the USA. This impact could be reinforced by the expansionary policy measures being implemented by these countries.

Summary

The lift off and expected slow pace of rate normalization in the USA is expected to have mixed impact on the Jamaican economy. Notably, the Bank still expects that the US economy will grow over the short- and medium-term hence tourism and remittances inflows are still expected to grow. The most likely adverse impact on the domestic economy is expected to be via the capital market, possibly in higher bond yields than earlier anticipated. Portfolio outflows are not expected to be significant in light of the moderate pace of rate increase by the FOMC. Against this background, the NIR is expected to remain adequate.

The Bank views the risk to the Jamaican economy arising from the rate increase as balanced. However, the Bank notes the significant downside risk emerging to global growth and stock markets from the slowdown in China's GDP and the weakness in commodity prices. In particular, a further sharp fall in oil prices could have an adverse impact on investments and employment, jeopardizing the stock prices and consumer wealth in the global economy. The materialization of these risks, particularly in the USA, would have adverse consequences for Jamaica.

Against this background, Jamaica will continue to pursue polices that will put the country in a better position to deal with adverse impacts emanating from the global economy. This will be supported by continued prudent fiscal management aimed at reducing the debt to GDP ratio as well as the implementation of other structural reforms. The Bank will also continue to build the NIR to reduce the vulnerability of Jamaica to external shocks.

3.0 Jamaican Economy

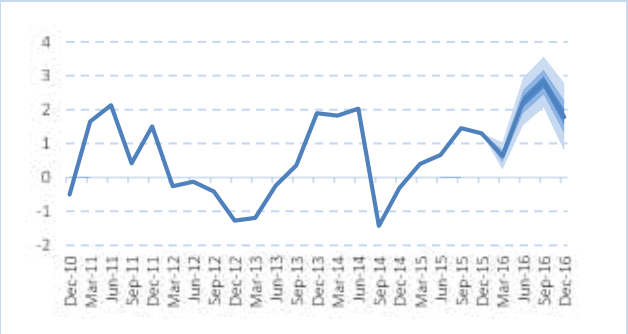
For the December 2015 quarter, the Jamaican economy is estimated to have recorded a fourth consecutive quarter of expansion in real GDP, although this pace of growth has weakened relative to the September 2015 quarter. This performance primarily reflected the continued recovery from production disruptions experienced a year earlier, particularly in the Manufacture and Electricity & Water Supply Industries. Economic activity was also supported by the performance of Hotels & Restaurants in the context of continued growth in the economies of Jamaica's major trading partners. Domestic demand improved during the review quarter evidenced by growth in Private and Public Consumption as well as a continued improvement in Net External Demand. The impact of these factors was, however, partially offset by an estimated contraction in Gross Capital Formation. For the FY2015/16, economic activity is projected to grow within the range of 0.5 per cent to 1.5 per cent reflecting the impact of infrastructural and hotel projects as well as recovery in Agriculture, Forestry & Fishing, Manufacturing and the Electricity & Water Supply industries. Beyond this, growth in the economy is expected to be within the range of 1.0 per cent to 2.0 per cent over the next four quarters.

Real Sector Developments

Aggregate Supply

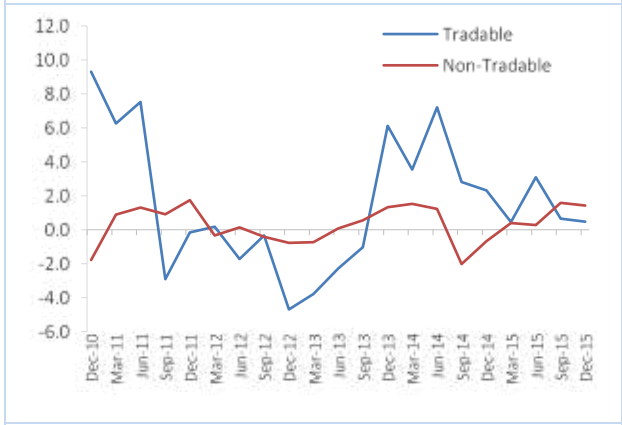
Against the background of continued recovery and growth in the external economy, real domestic activity is estimated to have grown for the December 2015 quarter. The expansion for the review period was assessed to have occurred across most industries, with the exception of Mining & Quarrying, Agriculture, Forestry & Fishing and Producers of Government Services. Consequently, real GDP growth for the December 2015 quarter was adjudged within the range of 1.0 per cent to 2.0 per cent, following an expansion of 1.5 per cent for the September 2015 quarter (see **Figure 14** and **Table 5**).

Figure 14: Real GDP Growth
(12-Month Per cent Change)



Source: STATIN and Bank of Jamaica

Figure 15: GDP Growth: Tradable vs. Non-Tradable Industries. (12-Month Per cent Change)



Source: Bank of Jamaica

The uptick in economic activity reflected growth in both tradable and non-tradable industries for the December 2015 quarter (see **Figure 15**). Additionally, the pace of expansion in the non-tradable industries was faster than the increase in tradable industries. The non-tradable industries, recorded its fourth consecutive quarter of growth, primarily driven by expansions in Other Agricultural Crops, Refined Petroleum products as well as an increase in *Electricity & Water Supply*.

Tradable industries recorded its ninth consecutive quarter of expansion, albeit at a marginally slower

Table 5.0: Industry Contribution to Growth (December 2015 Quarter)

	Contribution	Estimated Impact on Growth
GOODS	54.0	1.5 to 2.5
Agriculture, Forestry & Fishing	11.4	1.5 to 2.5
Mining & Quarrying	-0.4	-0.5 to 0.5
Manufacture	36.8	4.5 to 5.5
Construction	6.1	0.5 to 1.5
SERVICES	45.4	-0.5 to 0.5
Electricity & Water Supply	1.4	-0.5 to 0.5
Wholesale & Retail Trade, Repairs & Installation of Machinery & Equipment	7.5	-0.5 to 0.5
Hotels & Restaurants	7.3	0.5 to 1.5
Transport Storage & Communication	1.7	-0.5 to 0.5
Financing & Insurance Services	6.8	-0.5 to 0.5
Real Estate, Renting & Business Activities	12.1	0.5 to 1.5
Producers of Government Services	-1.0	-0.5 to 0.5
Other Services	9.6	0.5 to 1.5
Financial Intermediation Services Indirectly Measured	-0.6	-0.5 to 0.5
TOTAL GDP	100.0	0.5 to 1.5

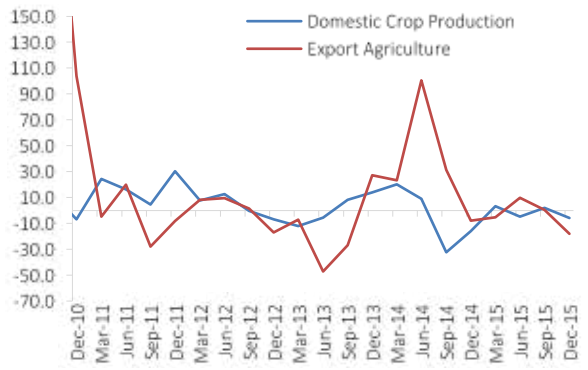
Source: Bank of Jamaica

pace. Growth for these industries was consistent with estimated expansions in *Hotels & Restaurants* and *Transport, Storage & Communications*.

Value added in *Agriculture, Forestry & Fishing* is adjudged to have contracted for the review period. This performance was largely due to the contraction in domestic production, the impact of which was augmented by the decline in export agriculture (see **Figure 16**). The decrease in domestic production reflected the estimated fall in output of vegetables and root crops. Estimated contractions in traditional export crops mainly stemmed from lower production of citrus and coffee, the impact of which was partly offset by estimated increases in the output of banana and cocoa.

Value added in *Manufacture* is assessed to have recorded a third consecutive quarter of expansion. This growth was as a result of improved

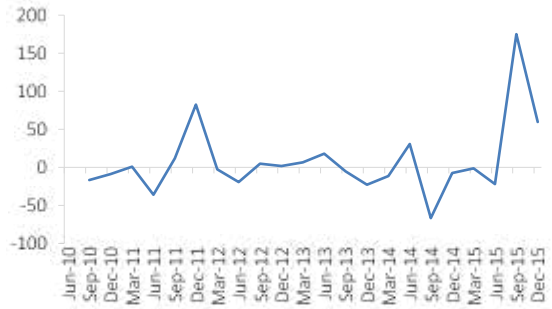
Figure 16: Domestic & Export Crop Production. (12-Month Per cent Change)



Source: Bank of Jamaica & Ministry of Agriculture

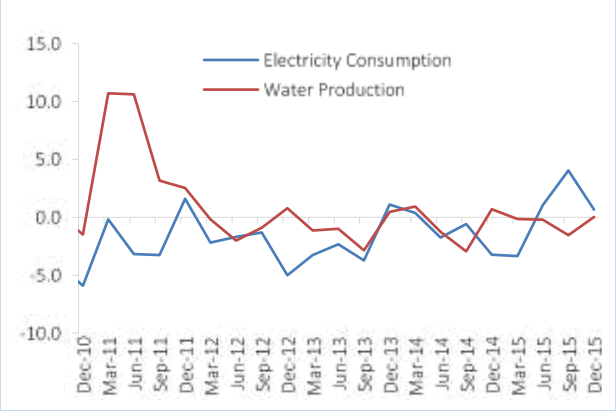
performances in both Other Manufacturing as well as Food & Beverages. Notably, value added in *Manufacture* was mainly buoyed by an expansion in Other Manufacturing which was influenced by an increase in petroleum refining. This estimated outturn mainly reflected recovery from the prolonged shutdown which occurred in the corresponding period of 2014 (see **Figure 17**). In relation to Food & Beverages, growth was primarily driven by a rise in the production of meat and meat products as well as an increase in the manufacture of beverages. In particular, meat and meat products registered an expansion in the production of eggs and poultry whereas a sustained rise in

Figure 17: Petroleum refining. (12-Month Per cent Change)



Source: Petrojam Ltd.

Figure 18: Electricity Consumption & Water Production. (12-Month Per cent Change)



Source: Jamaica Public Service and National Water Commission

investment initiatives by major manufacturing industries continued to boost beverage production.

Electricity & Water Supply was estimated to have expanded for the December 2015 quarter (see **Figure 18**). This assessment was primarily informed by higher electricity consumption mainly reflecting continued growth in electricity sales as businesses and households continued to increase their usage. Additionally, the industry has recovered from the drought impact experienced during the second half of the year 2014. Following three consecutive quarters of contraction, water production is estimated to have expanded marginally for the December 2015 quarter. This performance chiefly reflected an improvement in weather conditions in contrast to the prolonged dry conditions experienced in the second half of the year 2014.

Hotels & Restaurants is assessed to have expanded in the December 2015 quarter at a slower pace than average growth of 3.1 per cent for the previous four quarters. Despite the weaker performance in the industry, this growth represents the eleventh consecutive quarter of expansion since the first quarter of 2013. Growth in the industry was primarily impacted by continued expansion in stop-over visitor arrivals and visitor expenditure,

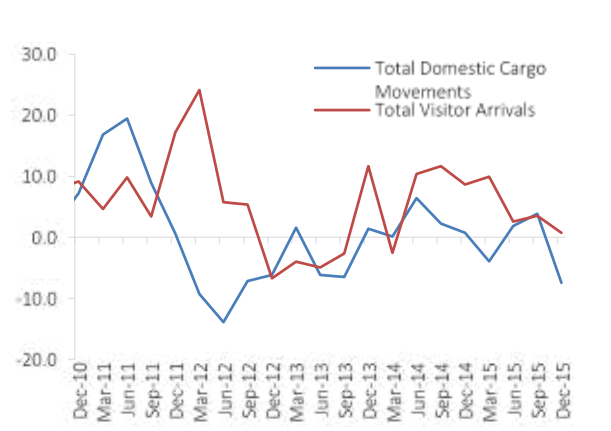
Figure 19: Total Stop-over Visitor Arrivals & Visitor Expenditure. (12-Month Per cent Change)

Source: Jamaica Tourist Board

albeit at a slower pace (see **Figure 19**). The performance relating to stop-over arrivals and visitor expenditure was mainly influenced by the weaker than anticipated economic conditions of Jamaica's major source markets. Additionally, the Restaurant sub-industry, was projected to improve given a rise in real disposable income due to the persistent fall in oil prices and slower increases in the general price level for the December 2015 quarter.

Value added for the *Transport, Storage & Communication* industry was adjudged to have grown marginally, reflecting the tenth consecutive quarter of expansion. This positive performance mainly stemmed from growth in the Communication sub-industry, this impact was however tempered by an estimated contraction in Transport. More specifically, the expansion in Communication was chiefly reflective of an increase in the provision of telecommunication services, particularly relating to new product offerings by existing market players and increased mobile data subscriptions. The projected decline in Transport was mainly driven by a contraction in the volume of domestic cargo movement which stemmed from an estimated fall in trade at the Island's ports when compared to the corresponding period of 2014. Despite the deceleration in the pace of growth in the Transport, the impact was partly offset by a projected rise in

Figure 20: Visitor Arrivals & Domestic Cargo Movement. (12-Month Per cent change)



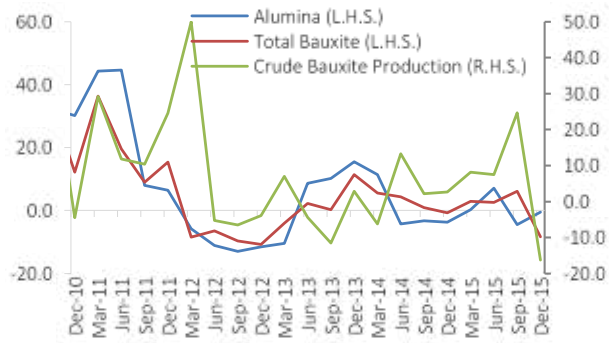
Source: The Port Authority of Jamaica & Jamaica Tourist Board

visitor arrivals (see **Figure 20**).

Construction is estimated to have expanded in the December 2015 quarter, the twelfth consecutive quarter of growth. This assessed expansion was mainly driven by a rise in commercial projects, the impact of which was offset by contractions in residential construction. The sustained increase in commercial projects was influenced by ongoing hotel infrastructural developments as well as continued construction activities by the Government and private investors. These include Jamaica Water Supply Improvement, Government's Major Infrastructural Development Programme, Highway 2000 as well as energy sector projects and Information Technology Enabled Services (ITES) such as Business Process Outsourcing (BPO). Despite this positive performance, growth in the industry was tempered by a contraction in housing starts by the National Housing Trust.

The value added for *Wholesale & Retail Trade, Repairs, Installation of Machinery & Equipment* industry was assessed to have expanded for the December 2015 quarter. This projected growth was mainly informed by expansions in agriculture, manufacturing and construction related activities supported by the estimated expansion in raw

Figure 21: Trends in Crude Bauxite, Alumina & Total Bauxite Production. (12-Month Per cent Change)



Source: Jamaica Bauxite Institute

materials imports.

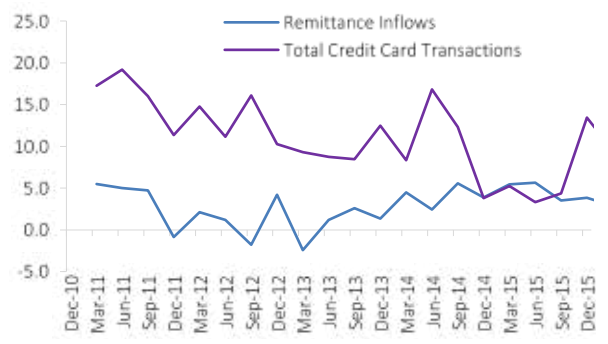
Value added in *Mining & Quarrying* is adjudged to have contracted for the December 2015 quarter. The negative performance was primarily influenced by the estimated decline in both crude bauxite and alumina production (see **Figure 21**). The contraction in crude bauxite was indicative of operational issues at the bauxite plant. In a broader context, the mining industry has been negatively impacted by developments in the global commodity markets. These developments have led to a contraction in capacity utilization within the industry.

Aggregate Demand

Aggregate Demand is assessed to continue to grow at a moderate pace for the December 2015 quarter. This assessment is primarily based on the estimated expansion in *Private and Public Consumption* as well as *Net External Demand.* However, the impact is assessed to be partially offset by a decline in *Gross Capital Formation*.

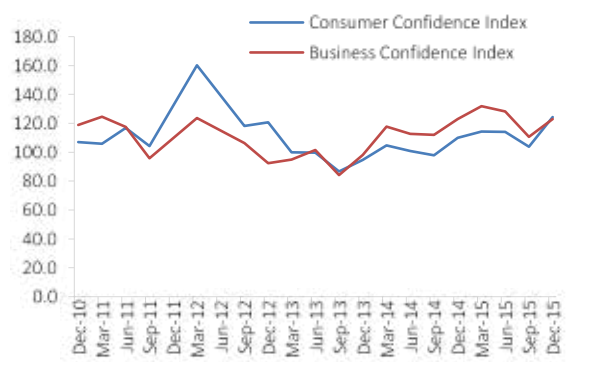
For the review period, Private Consumption is estimated to have registered a sixth consecutive quarter of expansion. This growth in household spending is consistent with continued increases in

Figure 22: Total Credit Card Transactions and Remittances Inflows: Effects on Domestic Demand (Real Values). (12-Month Per cent Change)



Source: Bank of Jamaica and STATIN

Figure 23: Business and Consumer Confidence Index. (Indices)



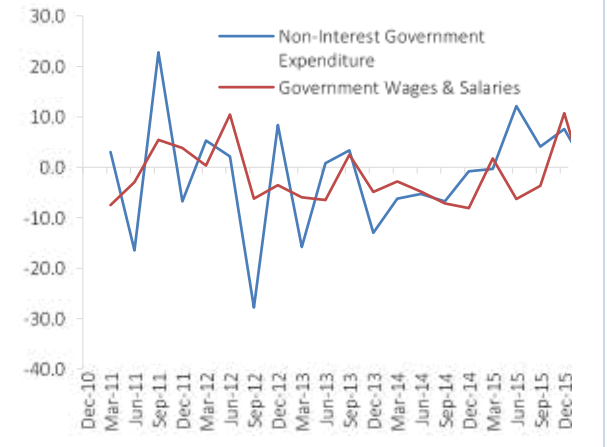
Source: Bank of Jamaica and Jamaica Chamber of Commerce

remittances and total credit card transactions

(see **Figure 22**). Similarly, results from the JCC Survey of Consumer Confidence corroborated this adjudged expansion in private spending as consumers anticipated an improvement in employment opportunities for the review period (see **Figure 23**). In relation to Public Consumption, the estimated growth was chiefly informed by the rise in non-interest government spending, mainly reflecting a marginal growth in programmes and wages & salaries expenditures (see **Figure 24**).

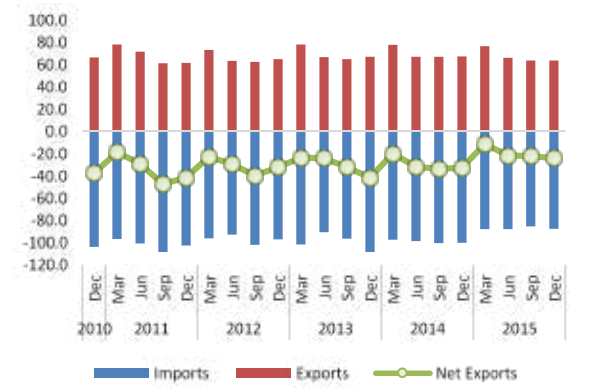
Net External Demand is estimated to have contributed positively to aggregate spending in

Figure 24: Non-interest Government Expenditure and Wages and Salaries (Real Values). (12-Month Per cent Change)



Source: Bank of Jamaica and MOF

Figure 25: Trends in Exports & Imports of Goods and Services. (US$ Millions)



Source: Bank of Jamaica and STATIN

the economy for the December 2015 quarter. The improvement

was supported by the faster pace of contraction in imports of goods and services compared to the decline in export goods and services (see **Figure 25**). More specifically, the contraction in imported commodities was attributed to an estimated decline in the volumes of capital goods imports, the impact of which was partly offset by an increase in the volumes of consumer goods imports and non-

fuel raw materials. The performance of exports was largely driven by estimated declines in the volumes of bauxite, coffee and citrus, partly offset by an increase in the volumes of cocoa, rum and mineral fuel exports.

The assessed contraction in *Gross Capital Formation* emanated from the decline in capital goods imports. This impact was, however, partly offset by an expansion in foreign direct investment (FDI). Notably, investment spending continues to be moderated by the impact of fiscal tightening on capital expenditure.

Real Sector Outlook

Real economic activity for FY2015/16 is expected to be within the range of 0.5 per cent to 1.5 per cent while average quarterly growth is adjudged to be in the range of 1.0 to 2.0 per cent over the next four quarters. Additionally, economic conditions are expected to continue to improve over the medium-term. Growth for FY2015/16 is predicated on the continued recovery in the economies of Jamaica's major trading partners, progressive improvements in the business environment to stimulate competitiveness as well as a sustained rise in *Net External Demand*.

The Jamaican economy over the near- to medium-term will stand to benefit from various investment initiatives which should continue to strengthen domestic demand and serve to improve labour market conditions. These initiatives include the Kingston Container Terminal Expansion, infrastructural development such as the May Pen to Williamsfield leg of Highway 2000, including the Southern Coastal Highway from Harbour View, St. Andrew to Morant Bay, St. Thomas. Further, it is anticipated that for the first half of 2016, construction activities pertaining to energy and special economic zones (SEZ) will commence. Additionally, the domestic economy is projected to benefit from the ongoing reforms under the IMF-EFF programme which are expected to create the conditions which should enhance growth and development of the economy. In addition to these anticipated growth inducing activities, economic conditions is expected to be bolstered by improved private sector credit as well as recent stock market reforms. The impressive performance of the Jamaica Stock Exchange Market (JSE) during the year which is anticipated to continue, will augur well for private spending as well as foster increased financial intermediation for domestic companies.

In the context of the aforementioned, the distribution of risks relating to near-term growth has become less skewed to downside. The downside risk to low growth is grounded in uncertainty regarding continued weak global trade and potential contagion between persistent low commodity prices and heightened financial market volatility within the economies of Jamaica's major trading partners. Additionally, there is also uncertainty surrounding weather conditions over the near-term.

Monetary Policy, Money and Financial Markets

Monetary Policy

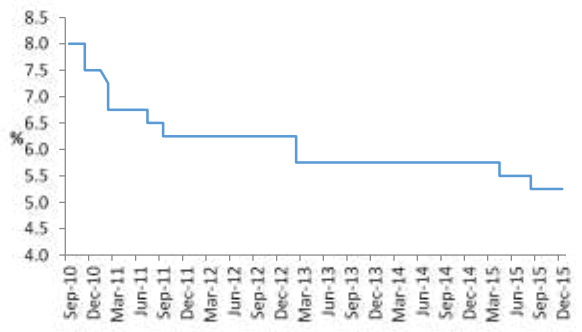
The Bank of Jamaica (BOJ) maintained its policy rate, the interest rate on the 30-day Certificate of Deposit (CD) at 5.25 per cent during the December 2015 quarter (see **Figure 26**).[5] The monetary policy stance was supported by the outlook for continued low domestic inflation over the near- to medium-term, the prevailing positive macroeconomic environment as well as the assessed favourable impact of the policy adjustments for the fiscal year to date. Notably, there was an uptick in private sector credit growth while the current account position of the balance of payments continued to strengthen and the level of the net international reserves remained strong.

In addition to maintaining the signal rate, the

5 The Bank maintained the domestic currency cash reserve and liquid assets requirements at 12.0 per cent and 26.0 per cent, respectively.

width of the interest rate corridor, the spread between its lending facilities and its signal rate, was unchanged. Specifically, the rates on both the standing liquidity facility (SLF) and the excess funds rate (EFR) were maintained at 7.50 per cent and 9.55 per cent, respectively. However, with regard to the bi-monthly repurchase operations (BRO), the Bank, in October 2015, transitioned to a weekly fixed volume competitive bid auction allocation instead of the two weekly fixed price allocation mechanism. There was increased uncertainty following the transition leading BRO rates to peak at 9.55 per cent from 7.00 per cent at end-September 2015 before declining to 7.05 at end-2015. In addition to its regular overnight and two week lending facilities, the Bank offered 3 and 4 month occasional term Repos (OTRO's) at 6.00 per cent. These facilities were aimed at increasing the availability of liquidity for credit expansion as well as to smooth the anticipated injection of $62 billion, which will emanate from a maturing NDX bond in February 2016.

Figure 26: Interest rate on BOJ's 30-day Certificate of Deposit



Source: Bank of Jamaica

The Bank's operations facilitated a further easing of liquidity conditions relative to the September 2015 quarter. The overall Jamaica Dollar liquidity impact of the Bank's operations for the quarter was a net injection of $25.3 billion relative to $20.7 billion in the September 2015 quarter. During the quarter, liquidity was injected through net foreign currency purchases via the Surrender facility, maturing Variable Rate Certificates of Deposit (VR-CD's) and to a lesser degree, issues via BOJ repurchase operations (see **Table 6**). While the Bank's repurchase operations resulted in a net injection of $1.8 billion for the review quarter, this was much lower than the $6.9 billion realized in the September 2015 quarter. The reduction in the use of Repo lending facilities reflected the improved JMD liquidity conditions. The injection by the BOJ's operations for the December 2015 quarter was partially offset by an absorption of $16.4 billion from Government's operations, primarily due to tax receipts.

Table 6: BOJ Liquidity Operations

	July - September 2015 *				October - December 2015			
	Injection	Absorption	Net	Avg. Rate	Injection	Absorption	Net	Avg. Rate
	(J$BN)	(J$BN)	(J$BN)	(%)	(J$BN)	(J$BN)	(J$BN)	(%)
30-day	43.4	45.4	-2.0	5.38	34.2	38.8	-4.6	5.25
365-day VR CD	6.7	1.9	4.8	6.58	12.8	1.1	11.7	6.14
548-day VR CD	0.5	0.0	0.5		0.6	0.0	0.6	
729-day VR CD	0.3	1.5	-1.3	7.25	0.0	1.5	-1.4	7.25
365-day FR CD	0.0	0.0	0.0		0.0	2.0	-2.0	6.30
365-day FR USD IB	0.1	0.0	0.1		0.1	0.0	0.1	
Repos (net)	150.5	143.6	6.9		143.8	142.3	1.5	
FX (Trading Room &PSE)	59.6	47.9	11.6		60.2	40.7	19.5	
Net Injection			**20.7**				**25.3**	
Other'	0.0		0.0		0.0		0.0	
GOJ operations	97.9	112.0	-14.1		98.1	114.4	-16.4	
Net Injection (All Operations)			**6.6**				**8.9**	

Source: Bank of Jamaica
* Revisions were made to the September 2015 quarter results.
Notes: (i) FR USD IB denotes Fixed Rate US dollar Indexed Bond (ii) Injections reflect maturities of instruments while absorptions reflect new issues of these instruments in each time period, and (iii) Average rates on VR CDs reflect average initial coupons.

For the December 2015 quarter, the Bank was able to offer longer dated CDs at lower coupons ranging between 20 to 25 bps. In spite of the lower coupons, there were increased placements on the 2-, 3- and 7-year instruments, which were significantly higher than the previous quarter (see **Table 7**).

Table 7: Placements & Maturities of BOJ USD Instruments

	July - September 2015			October - December 2015		
	Placements (US$MN)	Maturities (US$MN)	Average Yield (%)	Placements (US$MN)	Maturities (US$MN)	Average Yield (%)
1-year	0	19.12	-	0	10.25	-
2-year	0	0	-	85.00	0	2.38
3-year	0.04	0	2.60	10.62	0	2.40
4-year	0	0	-	0	0	-
4.5-year	0	0	-	0	0	-
5-year	0.13	0	3.65	0.03	0	3.40
7-year	0.01	0	4.30	0.79	0	4.10
TOTAL	0.18	19.12		96.44	10.25	

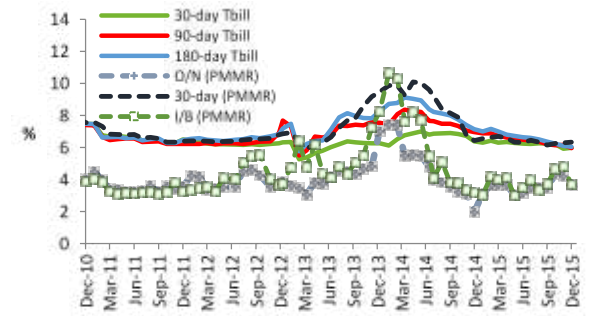
Source: Bank of Jamaica

Financial Markets

Despite the Bank's provision of additional liquidity through OTROs during the December quarter, there was an uptick in private money market rates early in the quarter. This was evident in the overnight and 30-day segments particularly in October in the context of increased uncertainty following the Bank's transition to the new auctioning mechanism. However, rates generally stabilized over the last two months of the quarter. Notwithstanding, both the average overnight and 30-day private money market rates rose by 18 bps relative to the outturn for the September 2015 quarter (see **Figure 27**). In contrast, the average inter-bank private money market rate fell by 3 bps to 3.67 per cent.

Consistent with the general improvement in Jamaica Dollar liquidity for the December 2015 quarter, there were reductions in the rates on all tenors of Treasury bills. Specifically, the 30-, 90- and 180-day Treasury bill rates fell by 26 bps, 24 bps, and 31 bps to 5.97 per cent, 5.96 per cent and 6.04 per cent, respectively (see **Figure 27**). The performance of these instruments also reflected the continued positive outlook for inflation, market participants' expectations for a significant improvement in liquidity conditions in the near-term as well as a moderation in the pace of depreciation in the exchange rate over the quarter. Notably, excluding Treasury bills, there were no offers or maturities of GOJ domestic debt instruments during the review quarter.

Figure 27: Average Selected Market Interest Rates



Source: Bank of Jamaica
Notes: (i) PMMR is the private money market rate (ii) O/N is the overnight rate in the market accessible by all financial institutions while the interbank rate (I/B) is the overnight rate accessible only by banks.

Foreign Exchange Market

The weighted average selling rate of the Jamaica Dollar vis-á-vis the US dollar closed the December 2015 quarter at J$120.42 = US$1.00 reflecting a slowing of the annual pace of depreciation to 5.02 per cent from 5.67 per cent at the end of the previous quarter and 7.79 per cent for 2014 (see **Figures 28** and **29**).[6]

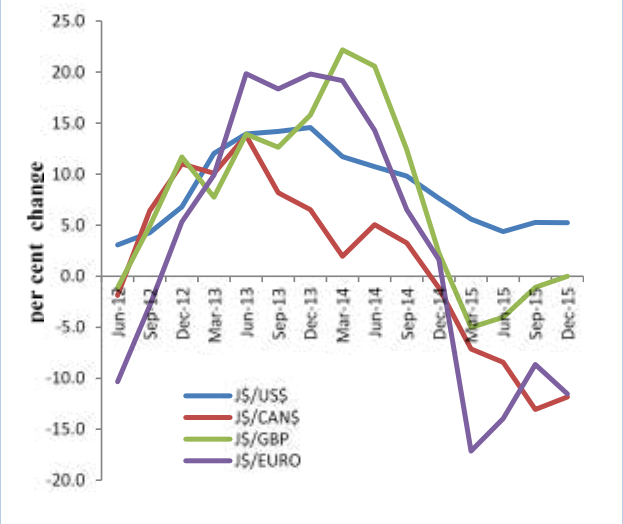
The depreciation against the US dollar for the December 2015 quarter occurred in the context of net sales of foreign currency by Authorised Dealers and Cambios in the foreign exchange market, notwithstanding a decline in the net demand to satisfy Balance of Payments current account transactions (see **Figure 29**).[7] The decline in net demand for current account transactions reflected lower payments and higher receipts. Lower payments were underpinned by declines in fuel and transportation charges, the impact of

6 There was an increase in the pace of appreciation for the Jamaica dollar vis-à-vis the Euro and a decline in the pace of appreciation against the Canadian dollar. The Pound Sterling remained unchanged at the end of the quarter. The trade weighted exchange rate index registered a depreciation of 2.8 per cent against the Jamaica Dollar.

7 Net flows to the foreign exchange market are measured by market purchases by dealers and cambios (inflows) versus market sales by dealers and cambios (outflows). These flows exclude the inter-dealer market as well as transactions with the Central Bank.

Figure 28: WASR of Select Major Currencies (e.o.p.)

(twelve – month point-to-point)



Source: Bank of Jamaica

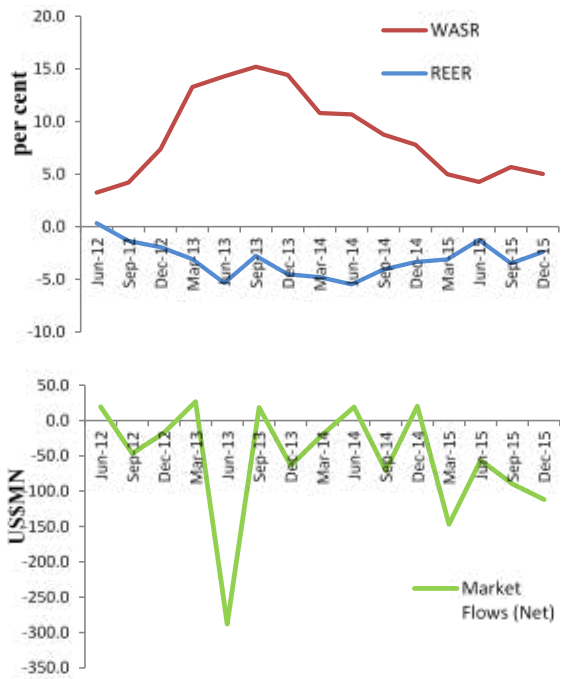
Notes: + = depreciation and – = appreciation

which was partly offset by higher payments for non-fuel imports while higher receipts reflected the impact of improved earnings from tourism and remittances. The market was also characterized by an estimated decline in net private capital inflows. In this context, demand pressures in the foreign exchange market were tempered by BOJ net sales of US$224.3 million.

There was an estimated gain of 2.4 per cent in Jamaica's external price competitiveness, as measured by the real effective exchange rate (REER) at end-2015, compared to the estimated gain of 3.5 per cent at the end of the previous quarter and 3.3 per cent for 2014 (see **Figure 29**). The gain in competitiveness reflected the faster pace of depreciation of the domestic currency relative to Jamaica's major trading partners.

Figure 29:The Real Effective Exchange Rate (REER), WASR and Net Demand*

(twelve – month point-to-point percentage change)



Source: Bank of Jamaica

Notes: (i) A decline in the level of the REER

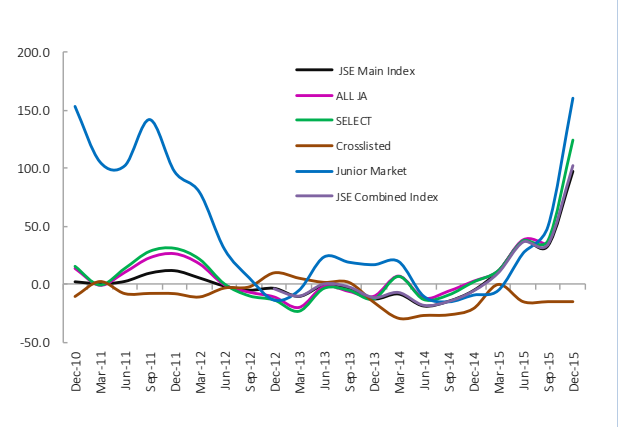
(a negative change) implies an improvement

in Jamaica's external price competitiveness

Equities Market

For the year ended December 2015, all the Jamaica Stock Exchange (JSE) indices, with the exception of the Cross Listed Index, rose relative to end-September 2015. Notably, both the JSE Main Index and the Junior Market Index grew by 97.4 per cent and 160.3 per cent, respectively, for 2015. The outturn for the JSE Main Index was in sharp contrast to an average decline of 1.4 per cent for the last five years (see **Figure 30**).

Figure 30: Annual Growth of the JSE Indices
(12-Month Per cent Change)



Source: Jamaica Stock Exchange

The performance of the equities market during the review period reflected improved investor sentiment. This improved investor sentiment occurred in the context of positive macroeconomic developments including continued growth in GDP, low inflation, enhanced liquidity conditions and an accommodative monetary policy stance.[8] These positive developments were complemented by Jamaica's continued favourable performance under the IMF's EFF Program, including the transition of securities dealers' "retail repos" to a Trust arrangement and the phased increased in the minimum retail repo transaction size as well as legal and regulatory enhancements for collective investment schemes (CIS).[9] Further, higher company profits earned by large corporates listed on the Exchange also contributed to the favourable performance of equities.[10] Key developments in the equities market for the review period include the announcements of the favourable terms related to the planned acquisition of Desnoes & Geddes Limited by Heineken Sweden (AB), Dolphin Cove Jamaica Limited by the Dolphin Discovery Group of Mexico as well as the merger of Radio Jamaica Limited and the media arm of Gleaner Jamaica Limited.

Investments in equities continued to provide greater return relative to foreign currency and domestic money market investments for the review period.[11] More specifically, equities offered an average return of 91.1 per cent while the Jamaica Dollar vis-a-vis the US dollar depreciated on average by 5.3 per cent on an annualized basis. In addition, the average interest rate in the 30-day private money market was 6.3 per cent at end-2015 (see **Figure 31**).

Market activity indicators improved for 2015. Of note the growth the number of transactions as well as the growth in volumes traded was consistent with increased investor interest in the equities market. In particular, the value of transactions, volume of stocks traded and number of transactions for the main JSE Index recorded respective growth rates of 18.8 per cent, 13.6 per cent and 27.1 per cent (see **Figure 32**).

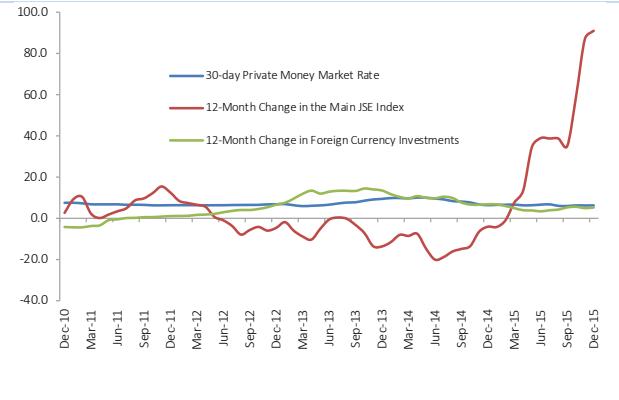
8 Notably, there were three consecutive quarters of GDP growth with further expansion estimated to occur for the December 2015 quarter. In particular, the manufacturing sector recorded a significant increase for the September 2015 quarter and is estimated to have grown further in the December 2015 quarter, hence mirroring growth in manufacturing stocks for the review period.

9 The retail repo Trust Arrangement involves the establishment of a functional Segregated Trust to safeguard the beneficial interest of retail repo clients. The Segregated Trust is managed by the Jamaica Central Securities Depository (JCSD) through JCSD Trustee Service. In addition to the Trust Arrangement, a minimum transaction size for retail repos has been implemented and increased on a phased basis. At end-December 2015, the minimum transaction size for retail repo contracts increased to J$1 000 000 and US$10 000, respectively from J$750 000 and US$7 500 at end-October 2015. Similarly, the foreign currency investment cap for securities dealers and collective investment schemes was lifted to 25.0 per cent at end- 2015 from 15.0 per cent at end-August 2015

10 As at 31 December 2015, the top 5 companies accounted for approximately 63.5 per cent of the total market capitalisation of the JSE Main Index.

11 Returns per asset class are calculated as the 12-month point-to-point change. The return on equities is computed based on the JSE Main Index..

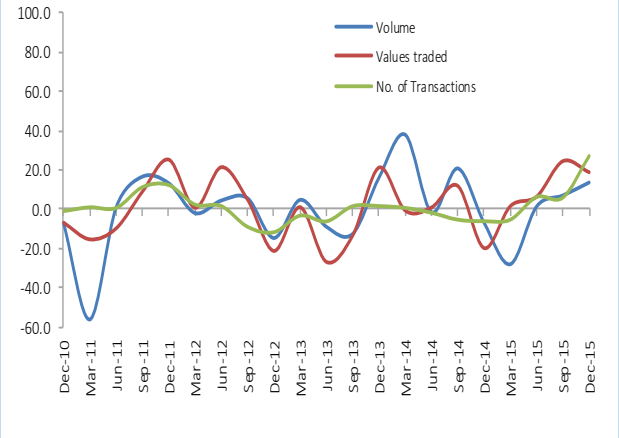
Figure 31: Returns from Private Money Market and Gains from JSE Main Index and Foreign Exchange Movements (Per cent)



Source: Jamaica Stock Exchange and Bank of Jamaica

The advance to decline ratio for the review period was 27:5 reflecting increase concentration in the progressive performance of the stock market when compared to the advance to decline ratio of 11:18 for the year ended December 2014. Price appreciation was broad-based and reflected the performance of stocks within all seven sectors. Notably, six of the seven sectors contributed to the top ten performing stocks for the review period

Figure 32: Quarterly Change in the 12-Month Volumes, Values Traded & Number of Transactions (Main JSE Index)



Source: Jamaica Stock Exchange

(see **Table 8**). Manufacturing and Financial sectors accounted for five of the top ten advancing stocks based on the recorded average price appreciations of 111.8 per cent and 40.8 per cent, respectively. With the exception of the Manufacturing sector, price appreciation across the top six sectors of the market occurred against positive earnings per share (EPS) reported for 2014 as well as for the last five year average.

Table 8: Stock Price Appreciation

Advancing	Per cent (2015)	EPS (2014)	5 year average EPS (2009 - 2014)
Manufacturing	**111.8**	**-0.1**	**-0.1**
Caribbean Cement Company	689.6	0.2	-1.5
Desnoes & Geddes	506.1	1.1	0.5
Jamaica Broilers Group	154.0	0.8	0.8
Financial	**40.8**	**1.9**	**2.3**
Jamaica Stock Exchange Ltd*	1084.7	0.02	-
Mayberry Investment Ltd	186.2	0.6	0.3
Communication	**5.1**	**0.0**	**0.0**
Radio Jamaica	223.9	0.17	0.2
LIME	187.5	-0.1	-0.4
Tourism	**0.0**	**0.0**	**0.0**
Ciboney Group	200.0	-0.2	-0.0
Other	**7.0**	**0.04**	**0.01**
Pulse Investments	757.1	0.6	0.6
Retail	**4.2**	**0.6**	**0.4**
Hardware & Lumber	133.3	2.7	1.3

Notes:

1- Ten largest price appreciations.
2- EPS refers to earnings per share.
3- Industry price appreciation and EPS are weighted on market capitalisation.
*4- * Company listed on JSE for less than 5 years.*

Source: Jamaica Stock Exchange, selected companies' financials and Bank of Jamaica calculations.

Table 9: Stock Price Depreciation

Declining	Per cent (2015)	EPS (2014)	5 year average EPS (2009 - 2014)
Financial			
Sterling Investments Ltd*	-90.3	15.1	-
Other			
Kingston Properties Ltd	-6.7	-0.02	0.7
Manufacturing			
Trinidad Cement Limited	-14.8	-15.7	-7.6
Mobay Ice Company	-17.0	1.3	-0.1
Salada Foods	-2.1	1.0	1.0

Notes:

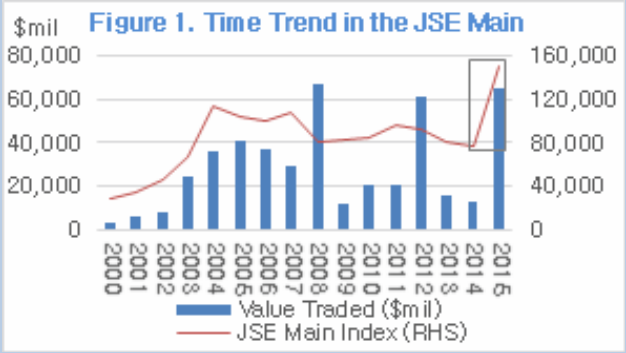
5- Five largest price depreciations.
6- EPS refers to earnings per share.
*7- * Company listed on JSE for less than 5 years.*

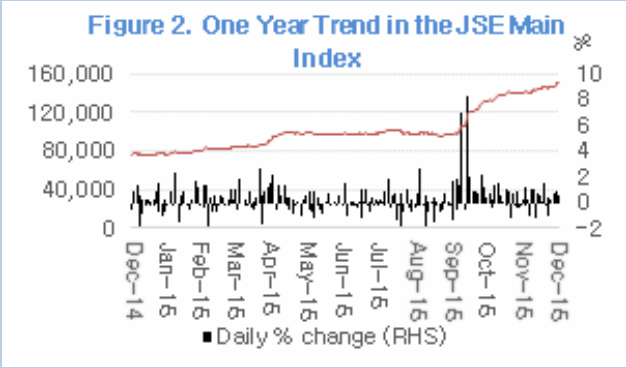
Source: Jamaica Stock Exchange selected companies' financials and Bank of Jamaica calculation.

Box 3.0: A technical examination of the recent stock market appreciation

Overview

During 2015, the JSE Main Index increased by 97.4 per cent to an unprecedented level while the value of stocks traded increased by 400.0 per cent to $64.6 billion from $12.8 billion (see **Figure 1**). The majority of this value change in the index, 71.0 per cent, occurred in the last three months of the year (see **Figure 2**).[12]





The aforementioned trends in stock market prices for the calendar year, rasies the question as to whether the upswing has been predominantly driven by sound economic fundamentals or fueled by speculation.

Asset Prices and Bubbles

The prices of financial assets influence the allocation of economic resources over time and across markets, which underscores the importance of asset price movements in the financial system and for economic activity. Beyond this, policy makers are interested in understanding the developments in price behaviour and asset valuation as these inform monetary policy formulation and have implications for the preservation of financial system stability.

In this regard in their assessment of price developments, policy makers would be interested in asset price bubbles. A stock market bubble can be defined as significant growth in asset price that is unrelated to changes to its fundamental value.[13] A number of factors could create a stock price bubble but two common causes often prevail. These are a sudden influx of funds in the financial system and herding behaviour based on market speculation on future price increases.

Bubble-driven stock price growth creates undesirable consequences for the economic system. When this bubble "bursts" there will be a reversal of any initial wealth effect, lowering consumption spending and reducing the ability to repay debt. This will weaken economic activity oftentimes to worse levels than what existed prior to the formation of the bubble. The magnitude of any negative spillover effects from this reversal will largely depend on the degree of leverage and debt used to fuel previous asset purchases.

Statistical Test for Stock Price Bubbles

Many statistical tests exist to assess the existence of asset bubbles. However, these tests have had varying levels of success in terms of predicting asset price busts. One recent advancement which

12 Source: Jamaica Stock Exchange

13 The value of a financial asset can be functionally described below: $\boldsymbol{P_t = E_t[\beta_{t+1} r_{t+1}]}$. Today's asset price, P_t, is determined by today's expectation, E_t, of the discounted return $(\beta_{t+1} r_{t+1})$ provided by the asset in the future. In the case of the stock market, prices should broadly reflect the future profitability and, as a result, potential dividends offered by the participating businesses. Stock prices should also be influenced by the discount factor (β_{t+1}) which itself is determined by, among other things, the inflation rate, the risk premium, level of liquidity, and investors' time preference of consumption.

has yielded promising results is the implementation of the Generalized Sup Augmented Dickey-Fuller (GSADF) test proposed by Philips et al. (2011)[14] [15] The test when applied to stock market data, indicates the existence of a bubble if there is a significant measurable divergence between stock prices and dividend payments.

Data on end of quarter prices and dividends paid within each quarter by firms on the JSE Main are used to calculate price to dividend ratios for each quarter from the December 2007 quarter to the December 2015 quarter. The GSADF tests on this sample provide no evidence that the recent stock appreciation in 2015 reflects an asset price bubble.

Table 1. Right Tailed GSADF Tests
Sample : 2007Q4 to 2015Q4
Included observations: 33
Null hypothesis: PRICE TO DIVIDEND has a unit root
Lag length: Automatic - based on SIC, maxlag=2
Window size: 8

GSADF Test Statistic		*-0.91*
Critical values:	99% level	3.33
	95% level	2.24
	90% level	1.80

These findings are consistent with observed price growth that has been mirrored by growth in dividends (see **Figure 3**).[16]

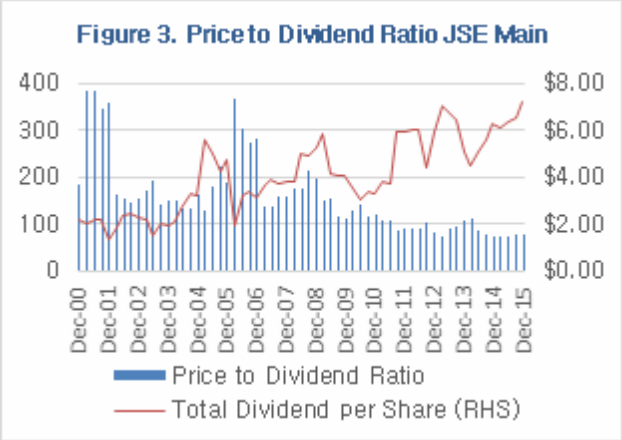
14 Phillips, Peter CB, Shu-Ping Shi, and Jun Yu. "Testing for multiple bubbles: Historical episodes of exuberance and collapse in the S&P 500." (2013).

15 Philips et al. (2011) recursively estimates over a rolling sample window:

$$\left(\frac{p}{d}\right)_t = \mu + \delta\left(\frac{p}{d}\right)_{t-1} + \sum_i^p \varphi_i \Delta\left(\frac{p}{d}\right)_{t-1} + \varepsilon_t \quad \text{and}$$

tests H_0: δ=1 versus H_a: δ>1. Where $\left(\frac{p}{d}\right)_t$ is the market price to dividend ratio at time t. Rejection of the null hypothesis provides evidence that the price to dividend ratio is demonstrating explosive behaviour.

16 The price to dividend ratio in each quarter is calculated as the sum of end of quarter stock prices as a share of the sum of dividend paid per share during the quarter. The diagram plots the



Caveats and Conclusions

To complete the discussion of the abovementioned finding it is appropriate to provide some caveats. Firstly, stock markets are generally characterised by stochastic volatility, therefore even though movements in stock prices are shown to have been driven by fundamentals there is still some probability of a large unforeseen negative price movement. Secondly, stock price movement, particularly in developing markets such as Jamaica, can be easily influenced by non-domestic market factors. In this case, international forces can influence future price developments. Finally, it has been demonstrated in economic literature that the statistical identification of stock price bubbles has not been achieved with great certainty. In light of these facts market participants should continue to heavily monitor developments in both domestic and international asset markets.

Developments in the stock market over 2015 could create capital "crowding in" and wealth effects supported by improvements in macroeocnomic conditions. These developments should enable firms to borrow or obtain credit, particularly for financially constrained firms, and create a supporting environment for continued economic expansion.

4 quarter moving average of both series.

Private Sector Credit and Lending Rates

The annual growth in the stock of private sector credit accelerated to 9.6 per cent as at end-2015 from 7.8 per cent at end-September 2015 (see **Table 10**).[17] Notably, the expansion in credit at end-2015 was two times the rate recorded at end- 2014. The stronger growth in credit for the review quarter was facilitated by the Bank's accommodative policy stance since the start of FY2015/16 and was consistent with lenders' expectations for an increase in both the demand and supply of credit as indicated by the Bank's survey of credit conditions for the September 2015 quarter (see Box: **BOJ's Quarterly Credit Conditions Survey**).

The expansion in private sector credit for the review period reflected an acceleration in loans and advances. This acceleration reflected increases in both local and foreign currency denominated loans (see **Figure 33**). Notably, foreign currency denominated loans reflected the second consecutive quarter of annual increase largely due to a pickup in investment-related activities in the context of a slower pace of depreciation in the exchange rate (see **Foreign Exchange Market**). Additionally, growth in loans and advances was reflected in lending to both businesses and households, with personal loans accounting for the sharper pace of increase (see **Table 11**).

Table 10: Credit to the Private Sector by Commercial Banks

Annual Flows (J$ mn)	Dec-14	Sep-15	Dec-15
Private Sector Credit	**15 518.8**	**26 159.1**	**32 697.8**
Percentage Change	**4.8%**	**7.8%**	**9.6%**
Loans & Advances	18 074.5	29 009.9	34 489.5
Less Overseas Residents	2 182.8	2 700.9	989.4
Add Corporate Securities	(372.9)	(246.7)	(802.3)

Source: Bank of Jamaica

For the December 2015 quarter, growth in business lending continued to be impacted by increased activities in the Professional & Other Services, Manufacturing and the Electricity, Gas & Water sectors. However, the impact of growth in business lending was moderated by net repayments in the Transport, Storage & Communication and Entertainment sectors. With respect to households, there was an increase across all loan categories,

Table 11: Distribution of Total Loans & Advances to the Private Sector by Commercial Banks (J$ MN)

Annual Flows	Sep-14	Dec-14	Sep-15	Dec-15
Business Lending	**5 003.9**	**7 321.5**	**13 552.4**	**15 951.5**
Agriculture & Fishing	1 138.2	1 127.4	86.6	572.5
Mining & Quarrying	36.8	(18.6)	152.7	64.2
Manufacturing	1 812.0	70.1	3 091.3	3 716.7
Construction & Land Development	1 099.2	1 153.2	687.3	1 319.7
Transport, Storage & Communication	1.0	(801.5)	(2 070.2)	(1 767.9)
Tourism	253.1	2 183.1	2 008.2	3 384.6
Distribution	3 260.5	5 134.3	2 619.7	1 951.9
Electricity, Gas & Water	(2 842.4)	(3 369.5)	3 116.1	3 479.9
Entertainment	283.1	85.1	(811.6)	(551.6)
Professional & Other Services	(37.6)	1 757.9	4 672.3	3 781.4
Household & Other Lending	**14 905.3**	**10 752.9**	**15 457.5**	**16 490.0**
Personal	11 106.4	8 570.1	12 756.6	15 268.8
o/w Demand loans	3 280.5	1 882.2	2 695.2	4 780.7
o/w Term loans	3 603.6	2 250.9	4 352.4	1 424.1
o/w Mortgage	2 315.4	1 968.9	2 179.5	2 650.7
o/w Installment	4 658.6	5 379.7	5 612.2	6 399.0
o/w Overdraft loans	10.4	14.8	110.6	71.0
o/w Insurance premiums	(15.7)	(26.4)	(2.8)	0.2
Overseas Residents	3 799.0	2 182.8	2 700.9	1 221.2
Net Lending	**19 909.3**	**18 074.5**	**29 009.9**	**32 441.5**
Annual Growth	**6.2**	**5.5**	**8.5**	**9.3**

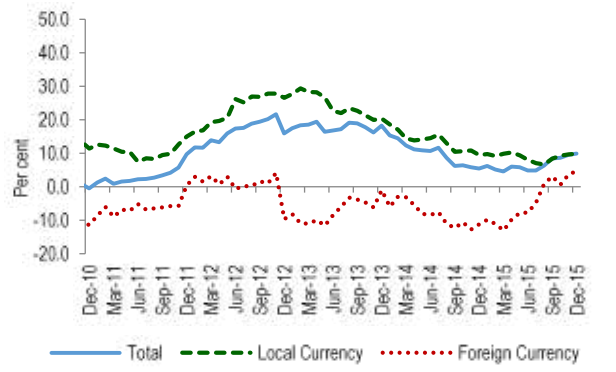
Source: Bank of Jamaica
Notes: (i) Loans & Advances include local and foreign currency loans extended to businesses and individuals.

despite the slightly higher lending rate applied to this segment.

Real growth in private sector credit at end-2015 continued the trend improvement evident since March 2015 (see **Figure 34**). More specifically, at end-2015, real growth in private sector credit recorded an annual expansion of 6.5 per cent relative to 6.0 per cent at end-September 2015, tempered by an uptick in annual inflation (see **Inflation**).

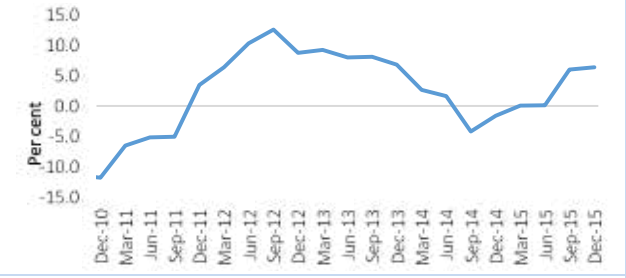
17 Private sector credit includes total loans & advances and corporate securities less loans to overseas residents.

Figure 33: Growth in Private Sector Loans and Advances (12-month percentage changes)



Source: Bank of Jamaica

Figure 34: Real Growth in Private Sector Credit (12-month percentage changes)



Source: Bank of Jamaica

Regarding commercial banks' lending rates, there was a slight uptick in the overall weighted average rate relative to end-September 2015. However, relative to end- 2014, there was a decrease of 15 bps reflective of the Bank's accommodative monetary policy stance and the generally lower interest rate environment (see **Table 12**). The decline was reflected across all loan types with the exception of loans to the local government and other public entities as well as personal loans. Notably, lending rates on instalment loans recorded the sharpest decline.

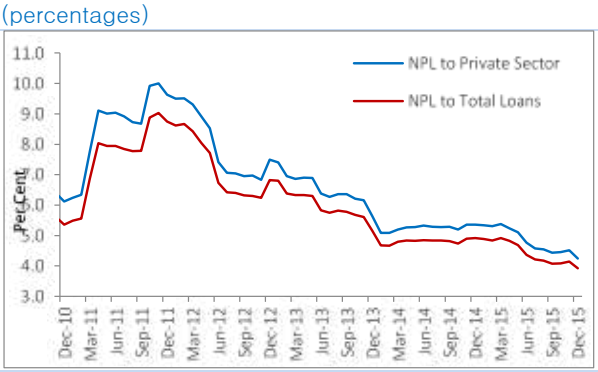
Against this background, the quality of the loan portfolio continued to improve in the December 2015 quarter. In particular, the ratios of non-performing loans (NPL) to private sector loans and total loans at end-2015 declined by 112 bps and 99 bps to 4.24 per cent and 3.93 per cent, respectively, relative to end-2014 (see **Figure 35**). The declines in the NPL ratios reflected reductions in total past due loans relative to the growth in private sector loans and total loans. This was attributable to an increase in loan recoveries relative to the decline in gross loans charged off.

Table 12: Commercial Bank Domestic Currency Lending Rates by Loan Type

	Sep-14	Dec-14	Sep-15	Dec-15
OVERALL	**16.71**	**17.18**	**16.99**	**17.03**
Public Sector	**10.28**	**9.83**	**8.85**	**9.62**
Local Govt. & O.P.E	11.35	10.16	8.14	10.68
Central Government	10.10	9.76	9.17	9.13
Private Sector	**16.82**	**17.32**	**17.15**	**17.18**
Instalment	16.41	16.11	15.55	15.31
Mortgage	9.76	9.73	9.66	9.61
Personal	23.48	25.56	25.85	26.49
Commercial	12.85	12.93	12.79	12.69
	Annual Change (Basis Points)			
	Sep-14	**Dec-14**	**Sep-15**	**Dec-15**
OVERALL	**-74**	**-31**	**28**	**-15**
Public Sector	**8**	**-26**	**-143**	**-21**
Local Govt. & O.P.E	78	-83	-321	53
Central Government	-4	-20	-93	-63
Private Sector	**-78**	**-30**	**33**	**-14**
Instalment	-45	-70	-86	-80
Mortgage	-17	-15	-10	-12
Personal	-154	79	237	93
Commercial	19	17	-6	-23

Source: Bank of Jamaica

Figure 35: Commercial Bank Loan Quality (percentages)



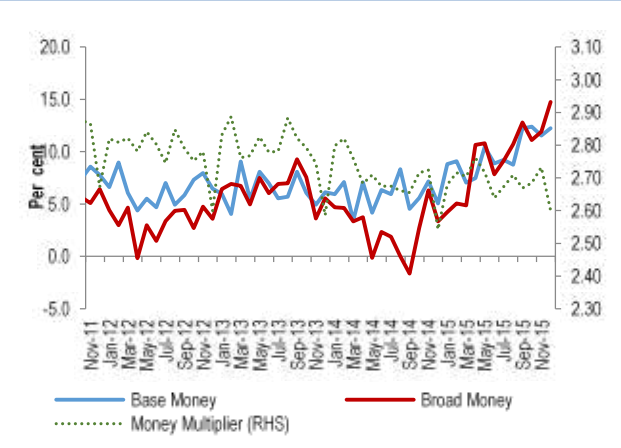
Source: Bank of Jamaica

Money

The monetary base grew by 12.2 per cent on an annualized basis at end-2015 relative to 12.2 per cent and 5.1 per cent as at end-September 2015 and end-2014, respectively. The annual growth at end-2015, mainly reflected an increase of the currency stock of 12.5 per cent, which was higher than the 7.4 per cent recorded at end- 2014 (see **Table 13** and **Figure 36**).

The primary source of increase in the monetary base for the December 2015 quarter was an expansion of $14.7 billion in net domestic assets (NDA), the impact of which was partially offset by a contraction of $529.2 million (US$4.6 million) in the NIR stock relative to end-September 2015 (see **Table 13**). The expansion in the NDA mainly reflected a decline in OMO liabilities as well as a net draw down in the Government deposits at the Bank.

Figure 36: Money Multiplier vs Growth in Base and Broad Money
(Annual percentage changes)



Source: Bank of Jamaica

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Table 13: Bank of Jamaica Operating Targets

	Stock			Flow	
	Dec-14	Sep-15	Dec-15	Q –o- Q	Y-o-Y
NIR (US$MN)	**2 001.6**	**2 441.9**	**2 437.3**	**-4.6**	**436.2**
NIR(J$MN)	**229 445.0**	**279 986.1**	**279 456.9**	**-529.2**	**50 011.9**
- Assets	283 555.3	331 419.2	334 129.3	2 710.1	50 574.0
- Liabilities	-54 110.3	-51 433.1	-54 672.4	-3 239.3	-562.1
Net Domestic Assets	**-120 562.4**	**-171 987.5**	**-157 245.2**	**14 742.3**	**-36 682.7**
- Net Claims on Public Sector	129 477.5	101 215.6	108 796.2	7 580.6	-20 681.3
- Net Credit to Banks	-23 210.1	-24 897.5	-26 163.1	-1 265.6	-2 953.1
- Open Market Operations	-25 480.8	-48 743.7	-39 459.0	9 284.7	-13 978.2
- Other	-201 349.1	-199 561.8	-200 419.2	-857.4	929.8
-o/w USD FR CDs	-97 304.0	-95 937.5	-95 716.8	220.7	1 587.1
Monetary Base	**108 882.5**	**107 998.6**	**122 211.7**	**14 213.1**	**13 329.2**
- Currency Issue	74 937.1	70 635.1	84 294.7	13 659.6	9 357.6
- Cash Reserve	33 685.0	36 680.4	37 597.9	917.5	3 912.9
- Current Account	260.5	683.2	319.1	-364.1	58.7

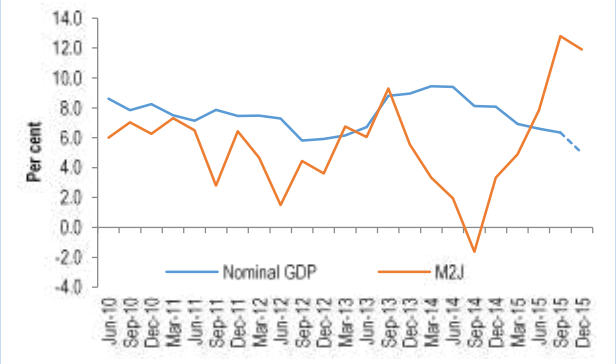
Source: Bank of Jamaica

At end- 2015, the money multiplier, as measured by the ratio of broad money (M2J) to base money, was 2.60 per cent relative to 2.67 per cent at end-September 2015. The relative stability in the money multiplier resulted from annual growth of 14.8 per cent in broad money relative to the expansion of a similarly strong magnitude in the monetary base. Notably, the pace of expansion in M2J for the December 2015 quarter was 10.2 per cent, more than double the 4.6 per cent growth in the September 2015 quarter and the average annual growth of 5.0 per cent for the last five Decembers. The growth in broad money was reflected in faster expansion in all categories of deposits and currency in circulation relative to a year earlier. Against this

background, growth in broad money outpaced the estimated expansion in nominal Gross Domestic Product (GDP), which is indicative of possible emerging upside risks to inflation (see **Figure 37**). Nonetheless, the moderation in the annual pace of expansion during the December 2015 quarter may facilitate a tempering of these emerging risks.

With respect to the measure of broad money supply that includes the Jamaica Dollar value of foreign currency deposits, M2*, there was annual growth of 16.0 per cent at end-2015. This compares with annual growth of 14.1 per cent and 6.7 per cent at end-September 2015 and end-2014, respectively. The growth in M2* at end- 2015 was mainly influenced by a significant increase of 17.9 per cent in the US dollar stock of private sector deposits as well as depreciation of 5.02 per cent in the WASR of the Jamaica Dollar vis-à-vis the US dollar. Nevertheless, during the December 2015 quarter, the pace of local currency deposits grew at a faster pace than foreign currency deposits resulting in a dollarization ratio of 45.0 per cent, generally in line with the 45.3 per cent at end-September 2015.

Figure 37: Broad Money and Nominal GDP Growth
(12-month percentage changes)



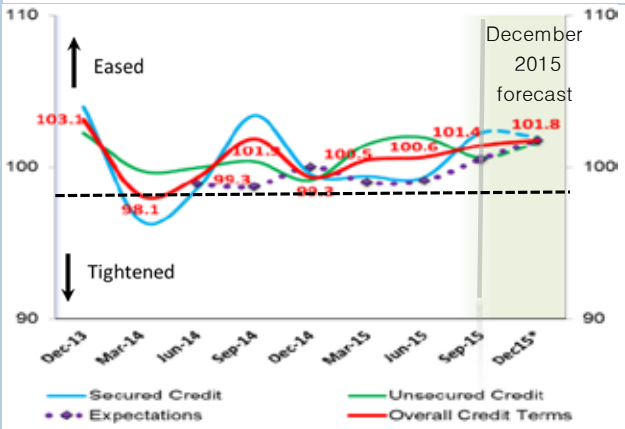
Source: Bank of Jamaica

Box 3.2: Credit Conditions Survey

Overview

The BOJ's QCCS, for the September 2015 quarter suggests that credit terms eased, continuing the trend observed since March 2015 (see **Figure 1**). This easing was largely underpinned by improvements in lending policies applied to secured loans. Notably, the improvement recorded for secured credit terms was the first since the September 2014 quarter and respondents indicated that this was reflective of the generally lower domestic interest rate environment. In fact, lenders reported that the recent consecutive policy rate reductions by the BOJ have improved their ability to expand their loan portfolio by allowing them to offer lower interest rates, increasing the maximum loan-to-value ratio and extending the maximum size of credit lines.

Figure 1: Index of Credit Market Conditions



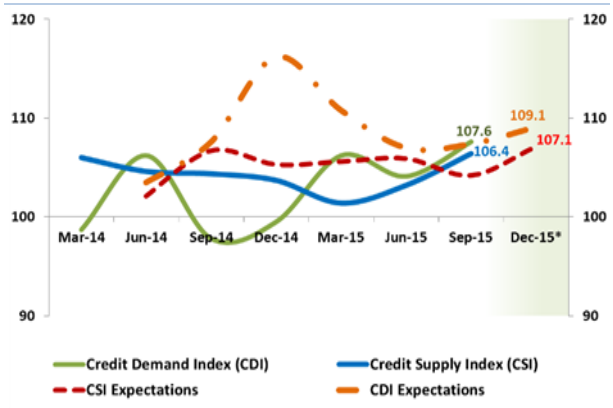
Source: Bank of Jamaica's Quarterly Credit Conditions Survey
Notes: (i) The asterisk (*) represents forward looking expectations provided by the respondents for the June quarter. (ii) The index is the average response for changes in eight credit terms reported in the Credit Conditions Survey. (iii) An index greater than 100 indicates an easing of credit market conditions while an index below 100 indicates a tightening of market conditions.

For the December 2015 quarter, lenders anticipate that credit market conditions will continue to improve, reflecting less stringent policies for secured and unsecured loans. However, policies associated with secured loans are expected to ease at a slower pace than in the September quarter due to an increase in loan monitoring requirements.

Credit Supply

Lenders reported an improvement in credit availability for the September 2015 quarter, reflected in the Credit Supply Index (CSI) of 106.4 (see **Figure 2**). This improvement was reflected in both local and foreign currency lending facilities. Of the amounts made available, a greater proportion of lending was made accessible to households (see **Figure 3**). With regard to the credit allocated to businesses, there was a notable increase in the distribution of credit to large enterprises. Lenders associated the increased borrowing by large corporates to the low interest rate environment as this business segment was very sensitive to interest rate adjustments. Consequently, there was heightened competition among creditors for this business segment during the quarter.

Figure 2: Credit Supply and Demand Indices

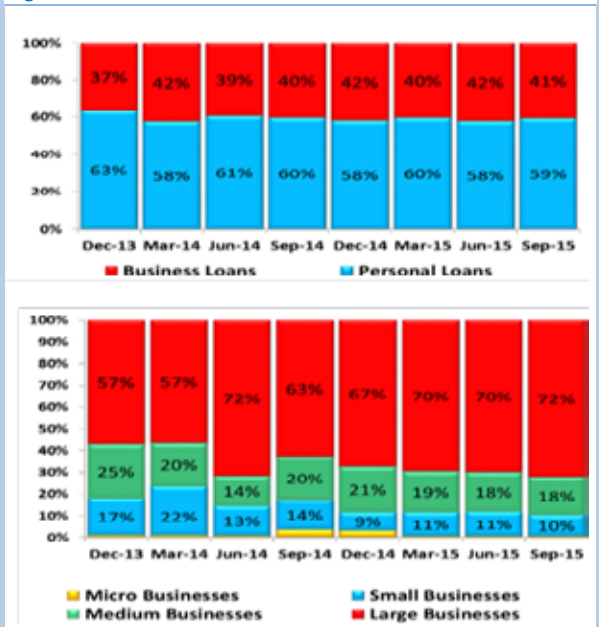


Source: Bank of Jamaica's Credit Conditions Survey
Notes: (i) *-Expectations for the upcoming quarter indicated by respondents in the previous survey and (ii) Indices greater than 100 indicate an increase in the variable while an index less than 100 indicates a decline.

Lenders highlighted that September quarters were typically the highest period of demand for credit. Therefore, the increased credit supply for the review quarter was largely influenced by aggressive loan promotion activities in targeted areas, namely unsecured loans, mortgages, credit cards and motor vehicle loans. In addition, lenders cited that the strengthening of the macroeconomic factors in the economy had boosted investor confidence and their loan demand.

For the December 2015 quarter, lenders anticipate a further increase in overall credit availability, reflecting expansions in all loan categories. This expansion should be underpinned by an improvement in economic outlook as well as positive changes in sector-specific risks.

Figure 3: Distribution of Private Sector Loans



Source: Bank of Jamaica's Quarterly Credit Conditions Survey
Notes: (i) Figure 2 shows the distribution of credit between households and businesses. Credit to businesses was further disaggregated to show to total business loans distributed firms of various sizes.

Credit Demand

For the September 2015 quarter, demand for credit continued to rise, recording a Credit Demand Index (CDI) of 107.6, the highest level since the survey's inception in the December 2013 quarter (see **Figure 2**). The increased demand for local currency business loans was reflected across all business segments, especially among medium and small enterprises in Professional & Other Services, Distribution and Manufacturing sectors. It was reported that the uptick in demand from these sectors emanated from significant requests for loans for *inventory & other working capital financing*. With regard to personal loans, there were strong demand for unsecured, *motor vehicle* and *other secured personal loans*. Lenders indicated that the uptick in this demand may have

resulted from their promotional activities.

The increased demand for foreign currency business loans was only reflected in large and medium enterprises, particularly those in the Manufacturing and Distribution sectors. Lenders attributed this increased demand to perceived improvements in macroeconomic conditions.

For the December 2015 quarter, it is anticipated that the demand for credit will further intensify as reflected in the CDI of 109.1 (see **Figure 2**). This will emanate from households' demand for local currency credit as well as businesses' demand for both local and foreign currency credit, similar to the September 2015 quarter.

Price of Credit

The survey results indicated that the average interest rates on local and foreign currency loans declined for the September 2015 quarter, following a decline in the June 2015 quarter (see **Table 1**). The lower interest rates could reflect the impact of the BOJ's consecutive reduction in its policy rate and the rates on its lending facilities in the June and September 2015 quarters.

Table 1: Interest Rates on Local and Foreign Currency Loans

	September 2014 Survey		June 2015 Survey		September 2015 Survey	
	Sep-14	Dec-14*	Jun-15	Sept-15*	Sep-15	Dec-15*
Local Currency (LC) Loans						
Business loans	14.93	15.20	15.74	15.83	15.86	15.22
Personal loans	20.01	19.91	18.96	18.86	18.23	18.07
Prime rate	18.15	18.29	16.46	18.20	14.63	15.71
Average LC rates	**17.47**	**17.55**	**17.35**	**17.35**	**17.05**	**16.65**
Foreign Currency (FC) Loans						
Business loans	5.82	8.87	13.60	8.70	8.69	8.41
Prime Rate	9.36	10.28	9.39	8.84	8.19	8.66

Source: Bank of Jamaica's Credit Conditions Survey
Notes: * Expectations for interest rates indicated by respondents of the survey.
Revised figures for June 2015 Survey.

The decline in local currency lending rates could also reflect the impact of improved Jamaica Dollar liquidity conditions during the quarter.

Regarding interest rates on foreign currency loans, the decline emanated from a sharp fall in interest rates on business loans. This decline could be attributed to improved U.S. liquidity during the quarter as a result of higher intervention sales by the BOJ.

For the December 2015 quarter, lenders' anticipate a further decline in lending rates as some liquidity challenges are anticipated (see **Table 1**). However, the prime rates on local and foreign currency loans are expected to increase by 1.08 percentage points (pps) and 0.47 pps, respectively.

For more detailed analysis of the survey see *BOJ Credit Conditions Survey Report*.

Fiscal Developments

Central Government operations in the December 2015 quarter resulted in a fiscal deficit of $11.0 billion, relative to the budgeted deficit of $2.5 billion (see **Table 14**). During the quarter, while Revenue & Grants was above budget it was insufficient to offset the above budget spending. For the overall balance there was a deficit of $10.7 billion, $9.3 billion lower than the budgeted deficit. Despite the December 2015 outturn, Central Government activities resulted in a primary surplus of approximately $66.0 billion for the fiscal year to date, $5.3 billion above the revised Quantitative Performance Criteria under the EFF programme (See **Box 3.3**). Similarly, tax revenue for the fiscal period was $11.7 billion above the IMF indicative target.

For the review quarter, Revenue & Grants was $2.0 billion above budget reflecting higher Tax and Non-Tax Revenue receipts. Lower than budgeted grant inflows largely reflected delayed funding due to the slower than expected execution of some capital projects as well as administrative delays. The higher than budgeted Tax Revenue

was largely attributable to the over-performances of *Income & Profits* and *International Trade as Production & Consumption* was lower than budget. In this regard, there were higher than budgeted receipts from 'tax on interest', corporate tax, SCT (Imports) and PAYE. The over-performance of 'tax on interest' continues to reflect the lower than expected payment of refunds as well as higher than anticipated collections from the private sector. Higher corporate tax receipts were largely attributable to buoyant arrears collection as well as higher compliance due to administrative efforts by the Tax Administration of Jamaica (TAJ). With regard to PAYE, the outturn was primarily due to the newly agreed wage increase in the public sector.

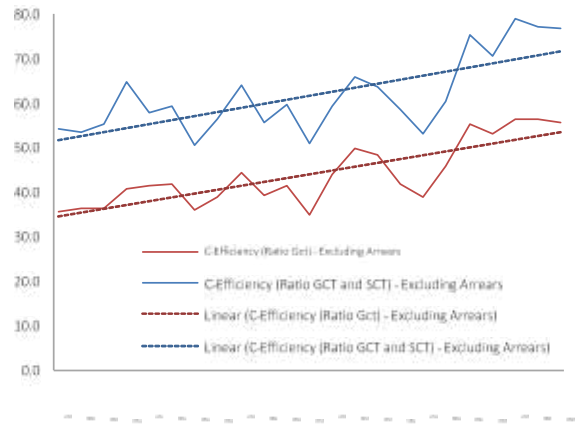
Table 14: Summary of Fiscal Operations
($J billions)

	December 2015 Quarter			FY15/16
	Prov.	Budget	Diff	Budget
Revenue & Grants	106.2	104.2	2.0	458.1
o/w Tax Revenues	96.5	94.9	1.7	411.9
Non- Tax Revenue	8.3	6.6	1.7	31.0
Grants	0.8	1.0	-0.2	9.5
Expenditure	117.2	106.7	10.5	463.0
Programmes	31.5	32.3	-0.8	135.7
Wages & Salaries	46.3	39.8	6.5	165.2
Interest Payment	26.1	27.5	-1.4	131.6
Capital Investment	13.3	7.1	6.2	30.4
Budget Surplus/Deficit	-11.0	-2.5	-8.4	-4.9
Primary Balance	15.1	25.0	-9.9	126.7
Current Balance	1.4	3.4	-2.0	15.0
Total Financing	13.5	17.1	-3.5	128.9
Foreign Loans	10.0	2.2	7.8	72.6
Domestic Loans	3.5	14.8	-11.4	56.3
Amortisation	13.3	15.9	-2.6	178.6
Foreign	9.3	10.2	-0.9	178.6
Domestic	4.0	5.7	-1.7	95.1
Overall Balance	-10.7	-1.3	-9.3	-54.5

Source: Ministry of Finance and Planning

For the December 2015 quarter, there was an improvement in the efficiency of tax collection as reflected in a C-Efficiency (GCT & SCT) ratio of 76.8 per cent, relative to an implicit budget target of 68.9 per cent.[5] Notably, the efficiency outturn was also 10.6 percentage points above the average ratio for the previous three December quarters driven largely by increased compliance and administrative efforts by the TAJ (see **Figure 38**).

Figure 38: C-Efficiency Ratio
(Per cent)



Source: Ministry of Finance and Planning

Expenditure for the quarter was $10.5 billion above budget reflecting higher than planned wages & salaries and capital spending (see Table 14). Notably, the deviation in wages & salaries reflected the implementation of the new wage rate in October 2015, which was higher than budgeted as well as the payment of retroactive amounts given the later than anticipated wage settlement. In addition, the Government brought forward the payment of outstanding travel allowances to December 2015 rather than April 2016 as originally planned. Higher capital spending in the review period was

5 The C-Efficiency ratio captures the efficiency of Government's tax collection and is defined as the ratio of the share of value-added tax (VAT) revenue to consumption divided by the standard VAT rate. The generally accepted benchmark for the C-efficiency for small countries is 83.0 percent. Factors linked to a high C-efficiency are a relatively high ratio of trade to GDP (presumably because it is relatively easier to collect the VAT at the point of import tan domestically); high literacy rates and the age of the VAT.

attributable to the relaxation of the EFF primary surplus target, which allowed the Government to spend more in an attempt to facilitate growth-inducing projects.

In terms of financing, loan inflows for the December 2015 quarter amounted to $13.5 billion of which $7.0 billion and $3.0 billion represented project loans and the receipt of US$25.0 million from the Inter-American Development Bank. Domestic loans of $3.5 billion reflected the monthly issue of Treasury Bills. Amortization for the quarter was $13.3 billion comprising foreign and domestic payments of $9.3 billion and $4.0 billion, respectively. Against this background and including the fiscal deficit for the quarter, the Government's net financing requirement of $10.7 billion was met from a draw down of bank balances.

Box 3.3: Jamaica's Macroeconomic Programme under the EFF

Overview

Jamaica's medium-term macroeconomic programme is supported by a four-year Extended Fund Facility (EFF) from the International Monetary Fund (IMF). The performance criteria are based on quarterly quantitative targets (QPCs) and structural benchmarks over the period of the EFF. The achievement of these targets unlocks financing from multilateral financial institutions including the IMF.[6] [7] This programme is aimed at creating the conditions for sustained growth through a significant improvement in the fiscal sustainability as well as price and non-price competitiveness.

6 The Executive Board of the IMF approved the four-year EFF arrangement for Jamaica on 01 May 2013.

7 The EFF was established to provide assistance to countries: (i) experiencing serious payments imbalances because of structural impediments; or (ii) characterized by slow growth and an inherently weak balance of payments position. This facility has a longer engagement and repayment period compared to the previous Stand-by Arrangement (SBA) with the IMF. https://www.imf.org/external/np/exr/facts/eff.htm

Since the start of the programme, both the fiscal and monetary authorities have met the agreed benchmarks and targets. In this regard, on 16 December 2015, the Executive Board of the IMF concluded the tenth review of the programme and confirmed the country's successful performance. This enabled the disbursement of SDR 28.32 million (approximately US$39.3 million). Total disbursements under the EFF to end-December 2015 amounted to SDR477.76 million (approximately US$663.0 million).[8]

At end-2015, Jamaica completed the eleventh quarter of its macroeconomic programme. All structural benchmarks were met. With regards to the fiscal and monetary performance, it is anticipated that Jamaica would have met all the QPCs for the quarter (See **Table 2**).

Table 1: Structural Benchmarks

	Benchmark	Deadline	Status
1	SEZ legislation will be tabled by end-October 2015.	Oct-15	Met
2	Full implementation of the key performance indicators (as outlined in TAJs National Compliance Plan) that measure the effectiveness and the efficiency of the tax system, building on TA provided by the IMF	Nov-15	Met
3	The BOJ will, commencing Nov. 1, 2015 (structural benchmark) have overall responsibility for financial stability.	Nov-15	Met
4	Pension Reform – the changes in legislation are expected to be tabled by end-November 2015 (structural benchmark)	Nov-15	Met
5	Implement Phase 2 of the RAiS (GENTAX) integrated tax software package, for all major tax types by end-December 2015 (structural benchmark).	Dec-15	Met

Source: Bank of Jamaica

8 Total disbursement agreed under the EFF is SDR 615.38 million (225 percent of quota).

Table 1: Quantitative Performance Targets (In billions of Jamaica dollars)

		Dec-14		Mar-15		Jun-15		Sep-15		Dec-15		Mar-16
	Fiscal targets	Criteria	Actual	Criteria	Actual	Criteria	Actual	Criteria	Actual	Criteria	Actual	Criteria
1.	Primary balance of the central government (floor)	66.0	66.8	121.0	117.2	17.0	20.4	40.0	50.8	60.8		120.7
2.	Tax Revenues (floor)	260.0	258.6	384.0	370.9	88.0	95.4	185.0	195.1	280.0		393.0
3.	Overall balance of the public sector (floor)	-37.0	-17.0	-11.6	1.7	-33.0	7.9	-34.0	9.2	-40.3		-14.3
4.	Central government direct debt (ceiling)	92.4	67.9	90.6	77.8	4.5	-37.9	40.0	-11.0	47.0		77.0
5.	Central government guaranteed debt (ceiling)	0.1	0.1	-1.8	-1.8	2.0	n.a	2.0	0.0	0.0		0.0
6.	Central government accumulation of domestic expenditure arrears (ceiling)	0.0	-0.1	0.0		0.0	n.a	0.0	-1.3	0.0		0.0
7.	Central government accumulation of tax refund arrears (ceiling)	0.0	-2.9	0.0	-1.4	0.0	-2.4	0.0	n.a	0.0		0.0
8.	Consolidated government accumulation of external arrears (ceiling)	0.0	0.0	0.0		0.0	0.0	0.0	-4.3	0.0		0.0
9.	Social spending (floor)	14.8	18.2	21.7		4.5	n.a	9.2	14.1	15.6		23.2
	Monetary targets											
10.	Cumulative change in NIR (floor)	217.2	970.4	-582.6	312.7	-652.5	125.7	-555.3	468.1	-356.9		-414.7
11.	NIR stock floor	1262.2	1997.7	1415.1	2310.4	1345.2	2123.4	1442.4	2465.8	1640.8		1583.0
12.	Cumulative change in NDA (ceiling)	-12.7	-120.2	-18.0	-156.3	73.9	-22.2	67.3	-54.6	64.0		47.8

Source: Bank of Jamaica

Note: The NIR/NDA criteria reflect adjusted targets to account for any surplus or shortfall in programme loan disbursements from multilateral institutions (the IBRD, IDB, and CDB) relative to the baseline projection.

4.0 Implications for Monetary Policy

For the March 2016 quarter, the Bank projects that headline inflation will gradually increase but end FY2015/16 below its target range of 5.5 per cent to 7.5 per cent. This forecast primarily reflects the impact of a slower pace of price reversals for domestic agricultural commodity prices relative to the corresponding quarter of 2015. Inflation is projected to gradually moderate over the next four quarters, within the range of 4.5 per cent to 6.5 per cent in the context of relatively moderate increases in international commodity prices and the impact of improving domestic demand conditions. Output growth for FY2015/16, is projected to be stronger than for FY2014/15 as the country is forecasted to record its fifth consecutive quarter of expansion in March 2016. The expansion in the review quarter should continue to reflect improvements in net external demand and domestic competitiveness. Over the next four quarters, the Bank is projecting a steady improvement in domestic real GDP growth. In the context of this environment, Bank will continue to make policy adjustments to concretize low and stable inflation.

Main Policy Considerations

Prices and Output

Headline inflation is projected to gradually increase from 3.7 per cent at end-2015 to end FY2015/16 below the target range of 5.5 per cent to 7.5 per cent. Of note, domestic agricultural commodity prices are expected to record some price reversals in the March 2016 quarter as the Island recovers from the drought conditions. Consequently, this projection primarily reflects the impact of the slower pace of price reversals for domestic agricultural commodity prices relative to the March 2015 quarter. Over the next four quarters, inflation is forecasted to moderate within a range of 4.5 per cent to 6.5 per cent. This outlook reflects the anticipated impact of relatively moderate increases in international commodity prices and improving domestic demand conditions.

Real GDP is forecasted to expand within the range of 1.5 per cent to 2.5 per cent for the March 2016 quarter. This expansion would result in growth within the range of 0.5 per cent to 1.5 per cent for FY2015/16, reflecting an improvement relative to FY2014/15. This outlook for FY2015/16 is predicated on the continued recovery in the economies of Jamaica's major trading partners. In addition, there has been significant improvements in the domestic business environment, which has stimulated investor and business confidence. Over the next four quarters, output growth is projected to benefit from various investments, which should continue to improve domestic demand. In this regard, GDP growth for FY2016/17 is expected to exceed the outturn for FY2015/16.

The Bank's assessment continues to suggest that the recovery in output poses little upside risk to the inflation outlook. Excess capacity conditions remain for factors of production like labour and capital. Therefore, there should be little upward price impulses from this source over the near term.[9]

Expectations

For December 2015, private sector expectations for inflation 12 months ahead fell relative to the previous quarter and remained below the Bank's projection.[10] Survey respondents expect some uptick in exchange rate depreciation in the upcoming quarter. However, given the continued evidence of reduced exchange rate pass-through to inflation since the beginning of the economic programme, it is anticipated that the expected depreciation should have a negligible impact on domestic prices.[11] Respondents also indicated

9 See **Inflation Section** and **Figures 1** and **6** for a more detailed discussion on capacity conditions and inflation.

10 See BOX 1.1 BOJ's Inflation Expectations Survey (IES).

11 The exchange rate pass-through refers to the proportion of changes to the exchange rate that result in changes in domestic prices. Studies by the BOJ have shown this to be close to 100.0 per cent in one year, prior to 1995. However, this level declined to

expectations for interest rates to remain stable or decline further. These expectations for interest rates, coupled with the adjustments in inflation expectations should continue to support a stable and attractive environment for Jamaica Dollar-denominated assets over the near- to medium-term (see **Box 4: Monetary Policy Transmission Mechanism**).

Financial Markets

Movements in money market rates continue to reflect the relatively accommodative monetary policy stance during the quarter. Real rates in the private money market decreased marginally in the December 2015 quarter reflecting an uptick in domestic inflation and marginal declines in nominal market interest rates. Given the continued stability of inflation expectations, nominal interest rates are expected to remain relatively low over the near- to medium-term. Notably, the expected improvement in Jamaica Dollar liquidity in the March quarter that should result from the maturing NDX bonds should exert downward pressure on domestic interest rates (see **Monetary Policy and Financial Markets**). The confluence of these factors should create a low interest rate environment which will bolster the prospects for new investments and overall output expansion.

Monetary Targets

The September 2015 quarter marked the tenth consecutive review where the Bank comfortably met the NIR and NDA targets under the EFF supported Programme.[12] It is the Bank's assessment that these targets were again comfortably met for the December 2015 quarter. Further, the current projections for the monetary base suggest that the NIR and NDA targets will be met over the next four quarters. The continued attainment of the NIR targets continues to be supported by the projected improvements in the current account balance and in net private capital inflows.

Box 4: Monetary Policy Transmission Mechanism

The monetary policy transmission mechanism is the process through which adjustments in the central bank's policy rate induces changes in the price and allocation of goods and services. For most central banks the ultimate goal of the transmission process is a desired level of inflation.

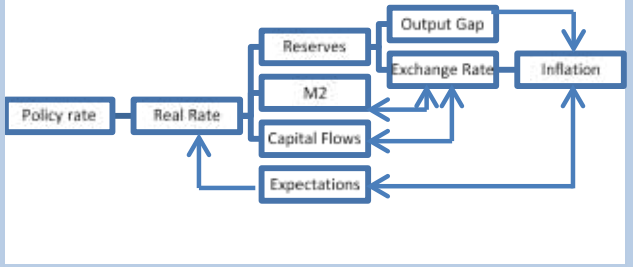
Studies on the transmission mechanism in Jamaica have shown that the credit and the exchange rate channels are the main conduits through which policy affects inflation (see **Figure 1**). The credit channel impacts inflation through aggregate demand and the output gap. With respect to the exchange rate, the impact has been through imported inflation and changes in expectations given the country's openness.

Consistent with the findings for other countries, the transmission process in Jamaica is long lived. Allen and Robinson (2005) suggested that changes in the policy rate have the largest impact approximately three to four quarters after a rate adjustment and that it could take three to four years before the full impact dissipates. Given the inherent lag in the transmission process, monetary policy must be forward-looking to influence short-term interest rates to deliver a desirable long-term inflation outcome.

approximately 49.0 per cent by 2001. See McFarlane, L., (2002), "Consumer Price Inflation and Exchange Rate Pass-Through in Jamaica". BOJ's recent assessment suggests that the pass-through has fallen below 30.0 per cent.

12 The NDA is calculated as the difference between the stock of base money and the NIR.

Figure 1: Monetary Transmission Process



Source: Allen, C and W. Robinson, 2005, *"Monetary Policy Rules and the Transmission Mechanism in Jamaica"*, Money Affairs, Volume XVIII

Monetary Policy Outlook

The Bank maintained the policy interest rate in the December 2015 quarter, following two downward adjustments for the fiscal year. This unchanged policy stance reflects the Bank's assessment of the outlook for continued low domestic inflation over the near- to medium-term as well as the adjudged impact of the previous policy rate adjustments (see **Box 4: Monetary Policy Transmission Mechanism**). For the March 2016 quarter, the Bank's primary focus will be managing the liquidity impact of the maturing NDX bonds. The Bank has already implemented policies aimed at smoothing the impact of these maturities, which should result in a downward pressure on domestic interest rates. As the liquidity impact of these maturities should be short lived, the Bank will continue to make policy adjustments to concretize low and stable inflation expectations over the near- to medium-term. In addition, the Bank remains adequately resourced and poised to react to any undesirable changes in the domestic money and financial markets.

Additional Tables (These table are being updated)

1: INFLATION RATES

		CPI (End of Point)	Headline Inflation	Core Inflation*
FY04/05	Jun-04	77.21	13.38	10.97
	Sep-04	80.58	12.59	10.58
	Dec-04	85.77	14.84	13.11
	Mar-05	85.49	12.58	11.70
FY05/06	Jun-05	88.95	15.20	12.90
	Sep-05	93.60	16.15	12.30
	Dec-05	94.79	10.52	9.68
	Mar-06	95.40	11.59	10.95
FY06/07	Jun-06	97.68	9.81	10.42
	Sep-06	99.76	6.59	9.71
	Dec-06	100.00	5.49	8.13
	Mar-07	102.50	7.44	9.49
FY07/08	Jun-07	105.10	7.60	9.65
	Sep-07	108.90	9.16	10.39
	Dec-07	116.82	16.82	15.62
	Mar-08	122.94	19.94	17.32
FY08/09	Jun-08	130.29	23.97	20.27
	Sep-08	136.45	25.30	20.99
	Dec-08	136.50	16.84	16.61
	Mar-09	42507.00	12.43	12.98
FY09/10	Jun-09	141.95	8.95	10.29
	Sep-09	146.30	7.22	9.77
	Dec-09	150.44	10.21	10.28
	Mar-10	156.64	13.33	11.60
FY10/11	Jun-10	160.70	13.21	10.99
	Sep-10	162.77	11.26	9.40
	Dec-10	168.10	11.74	8.65
	Mar-11	168.92	7.84	6.57
FY11/12	Jun-11	172.28	7.20	6.67
	Sep-11	175.91	8.07	6.99
	Dec-11	178.21	6.01	6.86
	Mar-12	42550.00	7.26	6.97
FY12/13	Jun-12	183.83	6.71	6.91
	Sep-12	187.61	6.65	5.59
	Dec-12	192.47	8.00	5.44
	Mar-13	197.72	9.13	6.30
FY13/14	Jun-13	199.93	8.76	6.26
	Sep-13	207.24	10.46	6.95
	Dec-13	210.70	9.47	7.38
	Mar-14	214.21	8.34	6.54
FY14/15	Jun-14	215.86	7.97	6.10
	Sep-14	225.86	8.99	6.72
	Dec-14	224.09	6.36	5.97
	Mar-15	42591.00	3.96	5.51
FY15/16	Jun-15	225.30	4.37	4.81
	Sep-15	229.97	1.82	4.00
	Dec-15	232.30	3.66	3.51

* Core inflation is measured as headline inflation excluding agriculture and fuel related components of the CPI Basket (CPI-AF)

2: ALL JAMAICA INFLATION – Point–to–Point (December 2015)

Divisions, Classes and Groups	Weight (%)	Inflation (%)	Weighted Inflation	Contribution
FOOD & NON-ALCOHOLIC BEVERAGES	37.45	8.70	3.26	88.97
Food	35.10	8.98	3.15	86.13
Bread and Cereals	6.10	2.26	0.14	3.77
Meat	7.66	2.53	0.19	5.30
Fish and Seafood	5.33	4.45	0.24	6.47
Milk, Cheese and Eggs	3.11	3.23	0.10	2.74
Oils and Fats	1.64	3.89	0.06	1.74
Fruit	1.14	8.03	0.09	2.50
Vegetables and Starchy Foods	6.85	26.99	1.85	50.50
Sugar, Jam, Honey, Chocolate and Confectionery	1.72	3.23	0.06	1.52
Food Products n.e.c.	1.55	6.25	0.10	2.65
Non-Alcoholic Beverages	2.35	3.63	0.09	2.33
Coffee, Tea and Cocoa	0.66	3.26	0.02	0.59
Mineral Waters, Soft Drinks, Fruit and Vegetable Juices	1.69	3.79	0.06	1.75
ALCOHOLIC BEVERAGES AND TOBACCO	1.38	5.36	0.07	2.02
CLOTHING AND FOOTWEAR	3.33	4.40	0.15	4.00
Clothing	2.12	5.06	0.11	2.93
Footwear	1.22	3.38	0.04	1.13
HOUSING, WATER, ELECTRICITY, GAS AND OTHER FUELS	12.76	-8.34	-1.06	-29.05
Rentals for Housing	3.52	1.08	0.04	1.04
Maintenance and Repair of Dwelling	0.80	9.88	0.08	2.16
Water Supply and Miscellaneous Services Related to the Dwelling	1.32	-0.69	-0.01	-0.25
Electricity, Gas and Other Fuels	7.12	-16.53	-1.18	-32.15
FURNISHINGS, HOUSEHOLD EQUIPMENT AND ROUTINE HOUSEHOLD MAINTENANCE	4.93	3.07	0.15	4.13
Furniture and Furnishings	0.69	2.90	0.02	0.55
Household Textiles	0.32	2.85	0.01	0.25
Household Appliances	0.56	4.47	0.03	0.68
Glassware, Tableware and Household Utensils	0.05	2.90	0.00	0.04
Tools and Equipment for House and Garden	0.15	4.11	0.01	0.17
Goods and Services for Routine Household Maintenance	3.16	2.83	0.09	2.44
HEALTH	3.29	2.04	0.07	1.84
Medical Products, Appliances and Equipment	1.22	2.56	0.03	0.85
Health Services	2.07	1.71	0.04	0.97
TRANSPORT	12.82	-4.05	-0.52	-14.17
COMMUNICATION	3.99	0.01	0.00	0.01
RECREATION AND CULTURE	3.36	2.63	0.09	2.41
EDUCATION	2.14	5.48	0.12	3.20
RESTAURANTS & ACCOMMODATION SERVICES	6.19	4.66	0.29	7.89
MISCELLANEOUS GOODS AND SERVICES	8.37	6.21	0.52	14.19
ALL DIVISIONS	100.00	3.66	3.66	100.00

3: BANK OF JAMAICA OPERATING TARGETS

	Actual Dec-13	Actual Mar-14	Actual Jun-14	Actual Sept-14	Actual Dec-14	Actual Mar-15	Actual Jun-15	Actual Sept-15	Actual Dec-15
Net International Reserves (US$)	**1,047.8**	**1,303.6**	**1,376.1**	**2,200.6**	**2,002.0**	**2,293.7**	**2,116.5**	**2,441.9**	**2,437.3**
NET INT'L RESERVES (J$)	**111,468.2**	**138,679.5**	**146,393.0**	**234,096.3**	**212,969.6**	**244,001.7**	**225,154.3**	**279,986.1**	**279,456.9**
Assets	193,351.8	217,929.9	214,518.3	288,848.3	263,172.4	286,134.5	269,914.9	331,967.0	334,129.3
Liabilities	-81,883.6	-79,250.3	-68,125.3	-54,752.0	-50,202.8	-42,132.9	-44,760.6	-51,433.1	-54,672.4
NET DOMESTIC ASSETS	**-7,834.8**	**-44,251.5**	**-50,448.6**	**-137,846.8**	**-104,087.0**	**-142,920.4**	**-120,678.7**	**-171,987.5**	**-157,245.2**
-Net Claims on Public Sector	157,750.3	158,974.9	192,366.7	110,474.8	142,209.3	95,157.1	140,317.0	101,215.6	108,893.4
-Net Credit to Banks	-21,500.4	-21,390.8	-22,702.7	-22,606.0	-23,210.1	-23,886.3	-24,229.3	-24,897.5	-26,163.1
-Open Market Operations	-49,948.2	-30,533.2	-40,570.1	-35,206.8	-25,480.8	-38,871.7	-51,609.4	-48,743.7	-39,459.0
-Other	-94,136.5	-151,302.5	-179,542.5	-190,508.7	-197,605.5	-194,311.1	-202,681.7	-199,561.8	-200,516.4
MONETARY BASE	**103,633.4**	**94,428.0**	**95,944.4**	**96,249.6**	**108,882.5**	**101,081.3**	**104,475.6**	**107,998.6**	**122,211.7**
- Currency Issue	69,801.7	61,110.2	62,025.3	61,573.4	74,937.1	66,356.3	67,916.9	70,635.1	84,294.7
- Cash Reserve	33,593.3	32,275.6	32,914.5	34,271.2	33,385.0	34,566.9	35,852.7	36,680.4	37,597.9
- Current Account	238.4	1,042.2	1,004.6	405.0	260.5	158.0	706.1	683.2	319.1
GROWTH IN MONETARY BASE [F-Y-T-D]	**13.5**	**3.4**	**1.6**	**1.9**	**15.3**	**7.0**	**3.4**	**6.8**	**20.9**

4: MONETARY AGGREGATES

		BASE	M1J	M1*	M2J	M2*	M3J	M3*
FY11/12	Jun-11	80560.55	102219.91	102219.91	232910.73	341652.12	329909.45	438650.84
	Sep-11	80479.50	97967.02	97967.02	227561.92	332330.13	325013.24	429781.45
	Dec-11	91710.12	112757.18	112757.18	245020.02	351418.54	355367.82	461766.34
	Mar-12	83696.70	103826.70	103826.70	236177.27	349882.92	348301.96	462007.61
FY12/13	Jun-12	84337.37	104266.47	104266.47	236397.42	351510.21	338191.88	453304.66
	Sep-12	85193.86	105164.94	105164.94	237685.09	351396.29	340031.63	453742.83
	Dec-12	97648.46	117908.77	117908.77	253848.71	383195.99	357503.67	486850.96
	Mar-13	91294.45	113240.38	113240.38	252128.71	396423.90	355217.29	499512.48
FY13/14	Jun-13	90221.88	110381.42	110381.42	250702.54	397899.09	354684.76	501881.32
	Sep-13	92083.29	113684.42	113684.42	259771.42	409003.99	369324.33	518556.90
	Dec-13	103633.38	122884.67	122884.67	267936.36	418628.15	374695.17	525386.96
	Mar-14*	94428.02	119019.10	119019.10	262328.5	422293.20	373800.60	533765.30
FY14/15	Jun-14*	95944.45	114410.60	114410.60	256212.30	418589.90	369666.90	532044.50
	Sept-14	96249.59	114321.90	114321.90	255533.40	417063.70	371626.90	533157.20
	Dec-14	108882.53	132667.25	132667.25	276864.33	446540.66	396051.52	565727.85
	Mar-15	101081.30	127331.43	127331.43	273286.91	444356.87	398263.53	569333.49
FY15/16	Jun-15	104475.63	142761.90	142761.90	292242.71	471576.37	422968.84	602302.50
	Sept-15	107998.61	137336.80	137336.80	288215.89	475790.09	421278.58	608852.79
	Dec-15	122211.75	160268.64	160268.64	317745.81	517788.53	453436.26	653478.99

5: COMMERCIAL BANKS' SELECTED INTEREST RATES (%)

		Fixed Deposits *		Savings Deposits	Lending Rate	Fixed Deposits Rate	Loan Rate	Inter-bank Lending Rate
		3-6 months	6-12 months	(Average)	(Average)	(Wgt. Average)	(Wgt. Average)	(Average)
FY10/11	Jun-10	4.75 – 8.50	4.75 – 10.00	3.90	20.72	6.29	22.11	5.20
	Sep-10	2.25 – 7.90	2.25 - 8.15	3.12	19.24	5.40	21.52	5.25
	Dec-10	2.25 – 7.90	2.25 – 7.70	2.47	18.95	4.89	20.43	4.14
	Mar-11	2.25 – 6.00	2.25- 6.75	2.34	18.52	4.52	20.33	3.70
FY11/12	Jun-11	2.25 – 6.00	2.25 – 6.50	2.24	17.98	4.20	20.10	3.43
	Sep-11	2.25 – 5.72	2.25 – 6.25	2.27	18.54	4.12	18.34	3.29
	Dec-11	2.25 – 5.72	2.25 – 6.00	2.13	18.30	4.16	18.03	3.34
	Mar-12	2.25 – 6.40	2.00 – 6.75	2.10	18.12	3.70	17.70	3.73
FY12/13	Jun-12	2.00 – 5.25	2.00 – 6.00	2.10	17.46	3.59	17.36	4.95
	Sep-12	2.25 – 5.25	2.00 – 6.00	2.07	17.55	3.82	17.40	6.71
	Dec-12	2.25 – 6.10	2.25 – 6.40	2.07	17.23	3.92	18.44	4.02
	Mar-13	0.90 – 5.00	0.90 – 5.25	1.94	17.23	3.55	17.97	4.77
FY13/14	Jun-13	0.90 – 5.30	0.90 - 6.10	1.51	16.72	3.21	17.66	3.89
	Sep-13	0.90 – 5.70	0.90 – 5.90	1.62	16.47	3.88	17.45	5.23
	Dec-13	1.00 – 7.10	1.25 – 7.20	1.23	14.56	4.26	17.49	7.59
	Mar-14	1.00 – 7.10	1.25 – 7.20	1.40	14.74	4.50	17.57	9.42
FY14/15	Jun-14	1.00 – 7.10	1.25 – 7.20	1.40	14.76	5.03	17.50	8.08
	Sep-14	1.00 – 6.88	1.25 – 7.00	1.18	14.99	4.47	16.91	4.19
	Dec-14	1.00 – 6.88	1.25 – 7.00	1.44	14.99	3.98	17.18	3.9
	Mar-15	1.00 –6.88	1.25 – 7.00	1.44	14.99	3.80	17.10	3.94
	Jun-15	1.00 –6.88	1.25 – 7.00	1.44	14.99	3.80	17.10	3.94
	Dec-15	1.00 –6.88	1.25 – 7.00	1.44	14.99	3.80	17.10	3.94

6: GOJ TREASURY BILL YIELDS
(End of Period)

		1-month	3-month	6-month	9-month	12-month
FY11/12	Jun-11	6.67	6.56	6.61	…	…
	Sep-11	6.47	6.37	6.56	…	…
	Dec-11	6.49	6.21	6.46	…	…
	Mar-12	6.24	6.27	6.47	…	…
FY12/13	Jun-12	6.18	6.26	6.47	…	…
	Sep-12	6.16	6.36	6.57	…	…
	Dec-12	6.31	7.67	7.18	…	…
	Mar-13	5.37	5.82	6.22	…	…
FY13/14	Jun-13	6.02	6.76	7.12	…	…
	Sep-13	6.32	7.42	7.95	…	…
	Dec-13	6.25	7.53	8.25	…	…
	Mar-14	6.76	8.35	9.11	…	…
FY14/15	Jun-14	6.80	7.66	8.37	…	…
	Sep-14	6.89	7.47	8.00	…	…
	Dec-14	6.38	6.96	7.14	…	…
FY15/16	Mar-15	6.30	6.73	7.00	…	…
	Jun-15	6.23	6.48	6.63	…	…
	Sep-15	6.23	6.20	6.35	…	…
	Dec-15	5.97	5.96	6.04	…	…

7: BANK OF JAMAICA OPEN MARKET INTEREST RATES
(End of Period)

		30 days	60 days	90 days	120 days	180 days	270 days	365 days
FY09/10	Jun-09	17.00	17.50	20.00	20.20	21.50	...	22.67
	Sep-09	12.50	13.00	15.50	15.70	17.00	...	...
	Dec-09	10.50	11.00	13.50	13.70	15.00	...	...
	Mar-10	10.00	...	...	...	...	...	...
FY10/11	Jun-10	9.00	...	...	...	...	...	...
	Sep-10	8.00	...	...	...	...	...	...
	Dec-10	7.50	...	...	...	...	...	...
	Mar-11	6.75	...	...	...	...	...	...
FY11/12	Jun-11	6.75	...	...	...	...	...	...
	Sep-11	6.25	...	...	...	...	...	...
	Dec-11	6.25	...	...	...	...	...	...
	Mar-12	6.25	...	...	...	...	...	...
FY12/13	Jun-12	6.25	...	...	...	...	...	...
	Sep-12	6.25	...	...	...	...	...	...
	Dec-12	6.25	...	...	...	...	...	...
	Mar-13	5.75	...	...	...	...	...	...
FY13/14	Jun-13	5.75	...	...	...	...	...	...
	Sep-13	5.75	...	...	...	...	...	...
	Dec-13	5.75	...	...	...	...	...	...
	Mar-14	5.75	...	...	...	...	...	...
FY14/15	Jun-14	5.75	...	...	...	...	...	...
	Sep-14	5.75						
	Dec-14	5.75	...	...	...	...	...	...
	Mar-15	5.75	...	...	...	...	...	...
FY15/16	Jun-15	5.50	...	...	...	...	...	...
	Sep-15	5.25	...	...	...	...	...	...
	Dec-15	5.25						

8: Placements and Maturities* in BOJ OMO Instruments

	July – September 2015			October – December 2015		
	Maturities (J$MN)	Placements (J$MN)	Average Yield (%)	Maturities (J$MN)	Placements (J$MN)	Average Yield (%)
30-day	43.4	45.4	5.38	34.2	38.8	5.25
365-day VR CD	6.7	1.9	6.58	12.8	1.1	6.14
548-day VR CD	0.5	0.0		0.6	0.0	
729-day VR CD	0.3	3.8	7.25	0.0	1.5	7.25
365-day FR USD CD	0.0	0.0		0.0	2.0	6.30
365-day FR USD IB	0.1	0.0		0.1	0.2	
Repos	150.5	143.6		143.8	142.3	
FX (Trading Room)	59.6	47.9		60.3	40.7	

	Maturities (US$MN)	Placements (US$MN)	Average Yield (%)	Maturities (US$MN)	Placements (US$MN)	Average Yield (%)
1-year FR USD CD	0.0	19.12	-	0.0	10.25	-
2-year FR USD CD	0.0	0.0	-	85.0	0.0	2.38
3-year FR USD CD	0.04	0.0	2.60	10.6	0.0	2.40
5-year FR USD CD	0.13	0.0	3.65	0.03	0.0	3.40
7-year FR USD CD	0.01	0.0	4.30	0.79	0.0	4.10
TOTAL	0.18	19.12		96.44	10.25	

9: EXTERNAL TRADE – GOODS EXPORTS (f.o.b)

(Flows – US$MN)

	Bauxite	Alumina	Sugar	Bananas	Other Traditional	Non-Traditional	Other	Total Goods Exports
FY09/10	95.7	334.5	57.8	0.0	90.9	578.8	238.7	1396.5
Jun-09	14.4	81.6	26.7	0.0	26.7	153.3	55.8	358.6
Sep-09	23.9	84.5	7.8	0.0	26.0	168.8	60.3	371.3
Dec-09	26.9	82.4	0.0	0.0	17.5	114.7	66.7	308.2
Mar-10	30.5	86.0	23.3	0.0	20.6	142.0	55.9	358.3
FY10/11	133.2	446.7	47.9	0.0	76.6	448.2	227.5	1380.1
Jun-10	31.6	83.6	13.3	0.0	22.4	109.5	49.1	309.4
Sep-10	37.0	87.1	7.7	0.0	22.4	110.7	54.7	319.7
Dec-10	29.6	146.0	0.0	0.0	13.5	101.0	53.3	343.4
Mar-11	34.9	130.0	26.9	0.0	18.3	127.0	70.4	407.6
FY11/12	138.3	578.8	91.5	0.1	76.5	509.3	275.3	1669.7
Jun-11	33.5	163.2	28.9	0.0	22.7	134.2	66.9	449.4
Sep-11	38.7	141.8	6.4	0.0	19.9	117.1	73.9	397.8
Dec-11	34.8	145.8	0.0	0.0	14.7	111.0	62.7	368.9
Mar-12	31.3	128.0	56.2	0.0	19.2	147.0	71.8	453.6
FY12/13	131.8	516.7	54.7	0.1	80.8	707.1	252.9	1744.1
Jun-12	31.8	132.4	37.5	0.0	22.3	126.8	66.7	417.5
Sep-12	34.7	130.7	0.5	0.0	20.4	162.3	58.6	407.1
Dec-12	32.4	117.2	0.0	0.0	19.3	223.5	57.9	450.3
Mar-13	33.0	136.4	16.8	0.0	18.8	194.5	69.7	469.2
FY13/14	125.0	526.1	53.7	0.1	70.9	455.8	260.3	1491.9
Jun-13	31.6	127.0	36.3	0.0	23.5	104.0	62.4	384.8
Sep-13	30.6	117.6	0.0	0.0	18.5	120.3	75.8	362.8
Dec-13	32.8	142.7	0.0	0.0	13.8	118.7	55.4	363.4
Mar-14	30.0	138.7	17.4	0.0	15.1	112.9	66.8	381.0
FY14/15								
Jun-14	34.4	108.6	26.5	0.0	21.0	98.9	67.9	355.7
Sep-14	33.4	151.6	11.9	0.0	16.4	101.0	70.8	385.1
Dec-14	33.4	130.4	0.0	0.0	12.3	108.8	58.7	343.8
Mar-15	35.3	132.3	17.1	0.1	6.8	101.4	45.1	338.1
FY15/16								
Jun-15	33.8	139.5	18.3	0.1	4.8	76.5	44.5	317.4
Sep-15	35.6	126.6	13.0	0.1	19.2	62.5	30.5	287.5

10: BALANCE OF PAYMENTS QUARTERLY SUMMARY
(US$MN)

	Sep-13	Dec-13	Mar-14	Jun-14	Sep-14	Dec-14	Mar-15	Jun-15	Sep-15
1. Current Account	**-327.1**	**-494.1**	**-127.1**	**-270.8**	**-337.3**	**-343.0**	**40.7**	**-85.5**	**-108.1**
A. Goods Balance	**-921.9**	**-1108.8**	**-873.1**	**-912.0**	**-949.6**	**-968.2**	**-772.4**	**-832.0**	**-773.6**
Exports (f.o.b)	362.8	363.5	396.0	370.3	385.1	343.8	336.5	317.4	287.5
Imports (f.o.b)	1284.7	1472.2	1269.1	1282.3	1334.7	1312.0	1108.9	1149.4	1067.2
B. Services Balance	**94.9**	**98.6**	**230.8**	**158.9**	**114.0**	**136.6**	**309.2**	**224.1**	**168.2**
Transportation	-167.6	-185.5	-200.8	-163.0	-169.1	-163.3	-140.4	-146.5	-154.9
Travel	418.7	437.7	595.5	504.9	458.8	500.6	640.5	524.7	512.3
Other Services	-156.2	-153.6	-163.9	-183.1	-175.7	-200.7	-190.8	-154.1	-189.1
Goods & Services Balance	**-827.0**	**-1010.2**	**-642.3**	**-753.1**	**-835.6**	**-831.6**	**-463.2**	**-608.0**	**-611.4**
C. Income	**-43.4**	**-98.1**	**-40.7**	**-79.0**	**-85.7**	**-101.5**	**-40.2**	**-79.2**	**-87.7**
Compensation of employees	15.3	15.9	7.3	5.3	19.9	35.3	12.2	4.9	18.2
Investment Income	-58.8	-114.0	-47.9	-84.3	-105.5	-136.8	-52.4	-84.1	-106.0
D. Current Transfers	**543.3**	**614.2**	**555.9**	**561.3**	**584.0**	**590.1**	**544.1**	**601.7**	**591.0**
General Government	57.9	98.1	63.3	45.5	59.4	52.8	42.8	54.2	54.6
Other Sectors	485.4	516.1	492.6	515.8	524.5	537.3	501.3	547.5	536.4
2. Capital & Financial Account	**339.8**	**330.5**	**403.9**	**375.1**	**-32.8**	**326.5**	**311.1**	**137.9**	**298.2**
A. Capital Account	**-7.2**	**-5.6**	**-7.9**	**-6.9**	**-6.1**	**-6.7**	**0.8**	**-5.5**	**1442.0**
Capital Transfers	-7.2	-5.6	-7.9	-6.9	-6.1	-6.7	0.8	-5.5	1442.0
General Government	0.5	1.7	0.6	1.4	1.5	0.6	9.3	2.8	1449.7
Other Sectors	-7.6	-7.2	-8.5	-8.3	-7.6	-7.2	-8.5	-8.3	-7.6
Acq/disp of non-produced non- fin assets	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
B. Financial Account	**347.0**	**336.0**	**411.8**	**382.0**	**-26.7**	**333.2**	**310.3**	**143.4**	**-1143.8**
Direct Investment	147.0	138.2	112.5	154.7	120.9	127.4	146.0	107.8	114.9
Portfolio Investment	50.1	32.2	51.6	12.1	15.3	15.7	51.6	12.1	-129.7
Other official investment	67.8	208.4	147.9	170.9	787.5	-222.7	23.7	-255.9	-957.3
Other private Investment	-11.0	94.9	355.6	116.8	-125.9	213.4	381.6	102.1	153.6
Reserves	93.1	-137.7	-255.8	-72.5	-824.4	199.5	-292.6	177.2	-325.4
Errors & Omissions	-12.7	163.6	-276.7	-104.4	370.1	16.5	-351.8	-52.4	-190.1

11: FOREIGN EXCHANGE SELLING RATES
(J$ per unit of foreign currency – end of period)

		US$	Can$	GBP £
FY10/11	Jun-10	89.5100	88.0600	135.0700
	Sep-10	86.0200	82.2600	128.5800
	Dec-10	86.2500	83.8400	135.8700
	Mar-11	85.8600	85.3400	133.7400
FY11/12	Jun-11	85.9100	88.6100	137.7700
	Sep-11	86.3000	83.3100	134.6900
	Dec-11	86.6000	84.2000	134.4400
	Mar-12	87.3000	87.6500	139.2800
FY12/13	Jun-12	88.7000	86.7100	138.6600
	Sep-12	89.9300	91.4200	145.3900
	Dec-12	92.9800	93.3100	152.6400
	Mar-13	98.8900	97.9900	151.9000
FY13/14	Jun-13	101.3800	96.7000	154.4800
	Sep-13	103.6000	100.7100	167.1600
	Dec-13	106.3800	99.7200	175.8400
	Mar-14	109.5700	98.9300	181.7700
FY14/15	Jun-14	112.2022	103.1802	191.8988
	Sep-14	112.6662	101.0142	180.2393
	Dec-14	114.6607	97.6896	177.6759
	Mar-15	115.0435	90.6202	169.9738
FY15/16	Jun-15	116.9832	93.8399	183.7774
	Sep-15	119.0553	88.6177	180.1478
	Dec-15	120.4150	84.9062	177.1179

12: BANK OF JAMAICA: NET INTERNATIONAL RESERVES
(End-of-Point)

		(US$MN) Gross Foreign Assets	(US$MN) Gross Foreign Liabilities	(US$MN) International Reserves (Net)	Weeks of Imports	
					Goods	Goods & Services
FY10/11	Jun-10	2,526.70	730.90	1,795.80	25.40	18.60
	Sep-10	2,789.70	816.00	1,973.70	29.60	21.50
	Dec-10	2,979.20	807.80	2,171.40	31.90	23.20
	Mar-11	3,434.70	881.50	2,553.20	37.20	26.70
FY11/12	Jun-11	3,156.70	889.60	2,267.10	28.50	21.40
	Sep-11	2,949.20	868.60	2,080.60	27.80	20.70
	Dec-11	2,820.40	854.30	1,966.10	25.50	19.20
	Mar-12	2,638.90	861.80	1,777.10	23.20	17.50
FY12/13	Jun-12	2,385.10	844.70	1,540.40	21.10	15.90
	Sep-12	2,115.90	858.10	1,257.80	18.90	14.10
	Dec-12	1,980.80	855.20	1,125.60	17.70	13.20
	Mar-13	1,718.40	834.10	884.30	15.40	11.50
FY13/14	Jun-13	1,881.10	877.90	1,003.20	16.70	12.60
	Sep-13	1,713.50	803.40	910.10	15.80	11.90
	Dec-13	1,817.60	769.70	1,047.90	17.30	12.80
	Mar-14	2,048.60	745.00	1,303.60	19.10	14.40
FY14/15	Jun-14	2,016.53	640.40	1,376.13	20.19	14.57
	Sep-14	2,715.25	514.68	2,200.57	27.79	19.66
	Dec-14	2,473.01	471.92	2,001.09	26.31	18.41
	Mar-15	2,689.74	396.06	2,293.68	28.61	20.02
FY15/16	Jun-15	2,537.27	420.76	2,116.51	29.00	19.83
	Sep-15	2,890.45	448.57	2441.88	32.34	22.39
	Dec-15	2913.83	476.82	2437.01	34.61	23.45

13: VALUE ADDED BY INDUSTRY AT CONSTANT (2007) PRICES (% CHANGE)

December 2012 – December 2014 (Seasonally Unadjusted)

(Percentage Change (%) Over the Corresponding Quarter of Previous Year)

	Sep-13	Dec-13	Mar-14	Jun-14	Sep-14	Dec-14	Mar-15	Jun-15	Sep-15
Total Value Added at Basic Prices	0.4	1.9	1.8	2.0	-1.4	-0.3	0.4	0.7	1.5
Agriculture, Forestry & Fishing	5.4	13.1	18.1	16.9	-23.3	-13.3	-0.6	0.3	4.2
Mining & Quarrying	5.0	11.5	8.4	-0.3	-2.0	-1.9	0.7	5.0	-0.9
Manufacturing	-0.6	-0.9	0.0	5.0	-6.5	-1.4	-2.0	0.3	7.9
Food, Beverages & Tobacco	-0.7	2.9	0.6	4.8	2.1	-0.2	-2.1	1.7	3.3
Other Manufacturing	-0.6	-4.5	-1.0	5.5	-17.0	-2.6	-1.7	-1.7	14.8
Construction & Installation	2.2	2.9	1.3	1.7	2.2	1.6	1.4	1.0	0.7
Electricity & Water	-3.6	1.0	0.5	-1.6	-1.1	-2.4	-2.8	0.7	3.1
Wholesale & Retail Trade; Repairs; Installation Of Machinery	-0.1	0.1	0.3	0.2	0.5	0.4	0.3	0.5	0.5
Hotels and Restaurants	0.9	5.9	0.3	2.4	4.2	5.6	4.1	1.4	1.3
Transport, Storage & Communication	0.4	1.0	0.5	0.6	0.8	1.3	1.1	1.3	1.5
Finance & Insurance Services	0.2	1.0	0.4	0.6	0.2	0.8	0.2	0.4	0.6
Real Estate & Business Services	0.3	0.3	0.5	0.5	0.3	0.4	0.4	0.5	0.5
Government Services	-0.3	-0.1	-0.1	-0.2	-0.2	-0.1	-0.1	-0.2	-0.1
Other Services	-0.8	1.4	0.8	1.2	2.0	1.6	1.5	0.4	0.5
Less Financial Intermediation Services Indirectly Measured (FISIM)	0.2	0.1	-0.6	-1.4	-1.2	0.0	-0.5	0.1	0.3

14: PRIME LENDING RATES (End-of-Period)

		EURO-ZONE	UNITED STATES			UNITED KINGDOM
		Repo rate	Fed Funds Rate	Discount Rate	Prime Rate	Repo rate
FY10/11	Jun-10	1.00	0 – 0.25	0.75	3.25	0.50
	Sep-10	1.00	0 – 0.25	0.75	3.25	0.50
	Dec-10	1.00	0 – 0.25	0.75	3.25	0.50
	Mar-11	1.00	0 - 0.25	0.75	3.25	0.50
FY11/12	Jun-11	1.25	0 – 0.25	0.75	3.25	0.50
	Sep-11	1.50	0 – 0.25	0.75	3.25	0.50
	Dec-11	1.00	0 – 0.25	0.75	3.25	0.50
	Mar-12	1.00	0 - 0.25	0.75	3.25	0.50
FY12/13	Jun-12	1.00	0 - 0.25	0.75	3.25	0.50
	Sep-12	0.75	0 - 0.25	0.75	3.25	0.50
	Dec-12	0.75	0 - 0.25	0.75	3.25	0.50
	Mar-13	0.75	0 - 0.25	0.75	3.25	0.50
FY13/14	Jun-13	0.50	0 - 0.25	0.75	3.25	0.50
	Sep-13	0.50	0 - 0.25	0.75	3.25	0.50
	Dec-13	0.25	0 - 0.25	0.75	3.25	0.50
	Mar-14	0.25	0 - 0.25	0.75	3.25	0.50
FY14/15	Jun-14	0.15	0 - 0.25	0.75	3.25	0.50
	Sep-14	0.05	0 - 0.25	0.75	3.25	0.50
	Dec-14	0.05	0 - 0.25	0.75	3.25	0.50
	Mar-15	0.05	0 - 0.25	0.75	3.25	0.50
FY15/16	Jun-15	0.05	0 - 0.25	0.75	3.25	0.50
	Sep-15	0.05	0 - 0.25	0.75	3.25	0.50
	Dec-15	0.05	0 - 0.50	1.00	3.50	0.50

15: USD LONDON INTERBANK OFFER RATE-LIBOR (End- of-Period)

		1-month	3-month	6-month	12-month
FY10/11	Jun-10	0.3484	0.5339	0.7525	1.1731
	Sep-10	0.2563	0.2900	0.4625	0.7778
	Dec-10	0.2606	0.3028	0.4559	0.7809
	Mar-11	0.2435	0.3030	0.4595	0.7825
FY11/12	Jun-11	0.1856	0.2458	0.3978	0.7335
	Sep-11	0.2394	0.3743	0.5578	0.8649
	Dec-11	0.2953	4.9075	0.8085	1.1281
	Mar-12	0.2413	0.4682	0.7334	1.0485
FY12/13	Jun-12	0.2458	0.4606	0.7344	1.0680
	Sep-12	0.2143	0.3585	0.6359	0.9730
	Dec-12	0.2087	0.3060	0.5083	0.8435
	Mar-13	0.2037	0.2826	0.4449	0.7315
FY13/14	Jun-13	0.1958	0.2731	0.4144	0.6902
	Sep-13	0.1789	0.2489	0.3685	0.6294
	Dec-13	0.1677	0.2461	0.3480	0.5831
	Mar-14	0.1520	0.2306	0.3289	0.5581
FY14/15	Jun-14	0.1552	0.2307	0.3268	0.5451
	Sep-14	0.1565	0.2351	0.3304	0.5786
	Dec-14	0.1713	0.2556	0.3628	0.6288
	Mar-15	0.1763	0.2708	0.4007	0.6942
FY15/16	Jun-15	0.1865	0.2832	0.4449	0.7715
	Sep-15	0.1930	0.325	0.534	0.8511
	Dec-15	0.4300	0.613	0.846	1.1780

16: INTERNATIONAL EXCHANGE RATES

		Sterling vs. US$	Canadian $ vs. US$	Yen vs. US$	Euro vs. US$
FY10/11	Jun-10	0.6691	1.0606	88.5310	0.8137
	Sep-10	0.6358	1.0298	83.5200	0.7353
	Dec-10	0.6411	0.9946	81.1260	0.7468
	Mar-11	0.6232	0.9718	82.7770	0.7051
FY11/12	Jun-11	0.6230	0.9634	80.5600	0.6896
	Sep-11	0.6417	1.0503	77.0600	0.7468
	Dec-11	0.6435	1.0213	76.9100	0.7714
	Mar-12	0.6256	0.9991	82.4340	0.7500
FY12/13	Jun-12	0.6376	1.0191	79.8040	0.7894
	Sep-12	0.6199	0.9837	77.9480	0.7779
	Dec-12	0.6150	0.9949	86.6630	0.7584
	Mar-13	0.6588	1.0156	94.0370	0.7787
FY13/14	Jun-13	0.6575	1.0512	99.1700	0.7687
	Sep-13	0.6181	1.0285	98.3270	0.7389
	Dec-13	0.6034	1.0636	105.2030	0.7258
	Mar-14	0.6012	1.1053	103.0100	0.7259
FY14/15	Jun-14	0.5846	1.0676	101.2900	0.7305
	Sep-14	0.6168	1.1196	109.6491	0.7917
	Dec-14	0.6418	1.1614	119.8035	0.8264
	Mar-15	0.6737	1.2679	119.9472	0.9321
FY15/16	Jun-15	0.6737	1.2483	122.1001	0.8966
	Sep-15	0.6609	1.3394	119.6745	0.8943
	Dec-15	0.6786	1.3837	120.2501	0.9206

17: WORLD COMMODITY PRICES (Period Averages)

		CRUDE OIL PRICES		FOOD	
		North Sea Brent (US$/barrel – f.o.b.)	West Texas Intermediate (US$/barrel – f.o.b.)	Wheat (US$/mt, Average Winter)	Coffee (USc/kg, Arabica brand)
FY10/11	Jun-10	78.69	78.03	182.14	392.00
	Sep-10	76.41	76.20	245.66	468.49
	Dec-10	86.80	85.17	284.25	513.85
	Mar-11	104.90	94.10	325.63	620.03
FY11/12	Jun-11	117.10	102.56	320.60	636.54
	Sep-11	112.48	89.76	293.06	597.37
	Dec-11	109.29	94.06	265.07	536.18
	Mar-12	118.60	102.94	268.88	486.95
FY12/13	Jun-12	108.86	93.50	260.39	400.35
	Sep-12	109.95	92.22	341.46	399.96
	Dec-12	110.45	88.19	346.48	357.12
	Mar-13	112.91	94.40	309.51	335.49
FY13/14	Jun-13	103.01	94.23	294.50	319.86
	Sep-13	110.10	105.83	281.76	298.23
	Dec-13	109.41	97.48	292.20	276.82
	Mar-14	107.88	98.67	280.67	382.67
FY14/15	Jun-14	109.78	102.98	292.86	467.06
	Sep-14	102.08	97.07	238.17	455.92
	Dec-14	76.01	73.16	248.61	464.59
	Mar-15	53.93	48.63	231.09	389.21
FY15/16	Jun-15	62.10	57.97	210.64	354.39
	Sep-15	47.24	51.52	189.86	336.22
	Dec-15	43.41	42.18	187.51	330.62

Glossary

Amortization: The repayment of a loan in installments over an agreed period of time.

Base Money: The sum of notes and coins held by the public and the cash reserves of commercial banks (including both their holding of cash and their deposits at the central bank). The monetary base is the operating target used in the BOJ monetary policy framework and can be controlled through open market operations. Changes in the monetary base emanate from sources within the net domestic assets (NDA) as well as the net international reserves (NIR).

Basis Point (bp): This is a unit of percentage measure which is equal to one hundredth of one percent (0.01% = 1bp). Basis points is commonly used when discussing interest rates and fixed income securities.

Bond Market: The domestic bond market primarily captures debt instruments offered by the Central Government to fund its budgetary needs.

Cash Reserve Requirement: The requirement by law that a percentage of deposit liabilities of deposit-taking institutions must be held as interest free deposits at the Central Bank.

Core Inflation: Also called Underlying Inflation. It is that part of overall inflation that can be attributed to changes in base money. Central Banks typically try to control core inflation because there are some parts of inflation that are outside of their control. One example of this is the effect of changes in oil prices.

Credit: Loans extended by banks, building societies and other financial institutions.

Currency Issue: refers to Jamaican notes and coins in the hands of the public (currency in circulation) in addition to notes and coins held by financial institutions in their vaults (vault cash). Bank of Jamaica redeems (buys) or issues (sells) notes and coins to financial institutions when institutions have a demand for cash. The difference between currency issued and that which is redeemed during a period of time is referred to as net currency issue.

Exchange rate (nominal): The number of units of one currency offered in exchange for another. For example a Jamaica dollar/ United States dollar exchange rate of 'forty two dollars to one' indicates that forty-two Jamaican dollars are needed to obtain one United States dollar.

Exchange rate pass-through: The effect of exchange rate changes on one or more of the following: import and export prices, consumer prices, investments and trade volumes.

Export Price Index: The export price index (EPI) is a weighted index of the prices of goods and services sold by residents of a country to foreign buyers.

Foreign exchange cash demand/supply: The amount of foreign exchange purchased by market participants from the authorized dealers and cambios, while cash supply/inflows is the amount sold to the Bank of Jamaica, authorized dealers and cambios by market participants, private institutions and multilateral agencies.

Financial Programme: An integrated system of macroeconomic accounts and behavioural relationships defining the set of monetary, fiscal and exchange rate policy measures designed to achieve specified macroeconomic targets.

Financial Asset: An instrument issued by an institution (e.g. BOJ) that provides economic benefits, by (1) generating interest income or net profits and (2) acting as a store of value. These benefits are created through a formal/informal borrowing/lending relationship. Most common types of financial assets are money and credit.

Fiscal deficit: The excess of the Government's expenditure over its revenue for a given period of time.

Fiscal Year: The twelve months beginning in April. Thus fiscal year 2000/2001 refers to the period April 2000 to March 2001.

Government Securities: Debt instruments issued by the Ministry of Finance either to bridge timing gaps between revenue and expenditure or to cover any excess of expenditure over revenue. These securities include short-term instruments such as Treasury Bills and more long-term ones like Local Registered Stock, or Debentures.

Gross Domestic Product (GDP): This is the total value of all goods and services produced within an economy over a particular time period –either a year or three month.

Import Price Index: The import price index (IPI) is a weighted index of the prices of goods and services purchased by residents of a country from foreign sellers.

Inflation: refers to the change in the general price level. In Jamaica, this is derived as the change in the Consumer Price Index (CPI) calculated and published by the Statistical Institute of Jamaica.

Intermediate Target: An intermediate target of policy. e.g. the money supply or the exchange rate, has three main characteristics.
It is not directly determined by the Central Bank,
It responds, however, to a stimulus that the Central Bank can vary, and
Its behaviour should to be closely related to the ultimate target-inflation.

Jamaica Central Securities Depository (JCSD): The Principal function of the JCSD is to provide for relatively risk-free settlement of share transactions. It accomplishes this by employing an electronic, book-entry system for registering changes of ownership of securities which eliminates the need for physical certificates. The JCSD also provides vaulting facilities for the safekeeping of certificates.

JSE Indices: The JSE Index comprises all Ordinary Companies on the Main Market. The JSE Combined Index comprises all Ordinary Companies on the Main Market and Junior Market. The JSE All Jamaican Composite Index comprises of only Jamaican Companies on the Main Market. The JSE Select Index comprises the JSE's 15 most liquid Securities on the Main Market. The JSE Cross Listed Index is comprised of only foreign companies on the Main Market. The Junior Index comprises all Ordinary Companies on the Junior Stock Market.

Liquid Asset: An asset is considered liquid if it can be easily and with little or no loss converted to cash. The liquid assets of commercial banks in Jamaica include notes and coins, short-term deposits at the Bank of Jamaica, GOJ Treasury Bills, Local Registered Stock maturing within 270 days and any GOJ security designated by the Ministry of Finance.

Money: Anything that is generally accepted in exchange for goods and services and for the payment of debt. (e.g. example, notes and coins.). Hence money is said to be a medium of exchange. Money also serves as a means of storing wealth as well as a standard of and unit of accounting for financial values and flows.

Money Multiplier: This defines the relationship between the monetary base (M0) and the money supply and is usually calculated as the ratio of M3 to M0. It measures the maximum amount of money that can be created by the banking system given the provision of an additional dollar to the system by the central bank. The money multiplier implies that when the central bank conducts monetary policy in such a way as to increase the monetary base, the overall expansion in the money supply is a multiple of this initial increase. This is also true if the central bank reduces the monetary base.

Money Supply: This is the stock of instruments or assets formally designated as money in a particular economy. There are alternative measures of money supply both within and between countries. In Jamaica, the measurements of money that are

calculated and published are:

M1: Notes and coins in circulation + Demand Deposits
M2: M1+ Time and savings deposits
M3: M2 + Other Deposits.

A 'J' indicates that the components are Jamaican dollar liabilities only and an '*' indicates that the components also include foreign currency liabilities of the banking system.

Monetary Base: See Base Money

Monetary policy framework: This defines the transmission process through which policy actions taken by the Central Bank make an impact on the final target – inflation. The components of a monetary policy framework are policy instruments, operating targets, intermediate targets, and the ultimate goal/objective.

Monetary Policy Instruments: These are instruments used by the Central Bank to influence the money supply and credit. They include open market operations and the reserve requirement ratio.

Net Domestic Assets: The difference between the monetary base and the NIR. It is comprised of the Bank's net claims on the public sector, mainly Central Government, open market operations liabilities and net claims on commercial banks and other financial institutions.

Open Market Operations (OMO): Money market trading between the Bank of Jamaica and authorized dealers with the intention of influencing money and credit in the financial system. OMO involves outright sale or purchase of GOJ securities from the stock of securities held by BOJ, and/or repurchase and reverse repurchase transactions.

Operating Rate: The percentage of total production capacity of some entity, such as a country or a company that is being utilized at a given time.

Operating Target: An operating target of policy e.g. the monetary base and interest rates, is influenced directly by the Central Bank and is adjusted by the Bank in order to bring about the desired impact on its policy target.

Primary Dealer (PD): The set of intermediaries through which BOJ conducts open market operations. In developed country markets, PD's underwrite government issues as well as participate in block transactions with the central bank.

Public Sector Entities (PSE) Foreign Exchange Facility: A foreign exchange surrender facility for public sector entities which seeks to centralize foreign currency demand. Under this facility Commercial Banks, Authorized Dealers and Cambios agreed to surrender amounts in addition to the pre-existing requirements.

Quasi-Fiscal Costs: The cost to the central bank of sterilizing the liquidity effects of capital inflows.

Quasi-money: Savings Deposits plus Time Deposit.

Real Appreciation: An increase in the volume of foreign goods that can be bought with a unit of domestic currency; alternatively it is a decrease in the volume of domestic goods that can be purchased with a unit of foreign currency. Thus, a real appreciation makes exports less attractive and imports relatively cheaper. This may ensue from a nominal appreciation, which is the rise in the unit price of the currency, or a greater increase in domestic prices relative to foreign prices, or both.

Real Exchange Rate: The price of one country's currency in terms of another, adjusted for the inflation differential between the countries.

Real interest rate: This represents the rate of return on assets after accounting for the effects of inflation on the purchasing power of the return. It is calculated by adjusting the nominal interest rate by the inflation rate.

Repurchase Agreement (repo): The purchase of a security from a primary dealer who agrees to repurchase the same at a specified rate and an agreed future date.

Reserve Requirement: refers to the portion of deposit liabilities that financial institutions may not lend and have to retain either as liquid assets or on deposit at the Bank of Jamaica.

Reverse Repurchase Agreements: An agreement whereby the Central Bank sells a security that it owns and agrees to buy back same at a specified rate at an agreed future date.

Securities: Legal documents giving title to property, or claim on income e.g. bonds and stocks.

Signal Rate: Interest rate on Bank of Jamaica's thirty-day reverse repurchase agreements. This rate provides a benchmark for the pricing of all open market instruments negotiated between the BOJ and Primary Dealers.

Special Drawing Right: The SDR is an interest-bearing international reserve asset created by the IMF to supplement the official reserves of member countries.

Statutory Cash Reserves: That portion of deposit liabilities of deposit-taking institution, which by a statutorily based stipulation, must be held as interest free deposits at the Central Bank.

Sterilization: The use of open market operations to prevent intervention in the foreign exchange market from changing the monetary base. With sterilization, any purchase of foreign exchange is accompanied by an equal-value sale of domestic bonds and vice versa.

Time deposit: A bank account based on a contractual arrangement between the deposit taking institution and the depositor where both parties agree to a pre-determined interest rate and maturity date, on which deposits earn interest and premature withdrawals from which require advance notice.

Terms of Trade: An index of the ratio of export prices to the index of import prices. An improvement in the terms of trade follows if export prices rise more quickly than import prices.

Tourism Implicit Price Index: a measure of prices in the tourism industry as reflected by average daily expenditure per tourist.

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