SBM INSIGHTS

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FOREWORD BY SBM GROUP CHAIRMAN

Kee Chong LI KWONG WING,
G.O.S.K. CHAIRMAN

Dear Reader,
It is a privilege for me to write the foreword for this inaugural edition of SBM Insights®. SBM Group is currently in the midst of a major transformation. Since last year, the organization has embarked on a new five year strategy to become a leading regional financial institution by further developing its banking and non-banking activities. This strategy is focused around five pillars, namely consolidation, diversification, regionalization, modernization and capacity building.

In this context, SBM Group has been granted for a banking license in Seychelles and we will soon make our entry in the market. While we will continue to pursue our overseas expansion, we shall position our diversification strategy towards developing the cross border and international banking activities as well as the non-banking segment, including asset management, capital markets, securities and private wealth management. Furthermore, we are presently working to streamline and simplify our business processes for more user-friendly and faster services to enable clients to run their businesses with greater efficiency. We are developing highly customized solutions to suit the payment cycles, risk profiles and balance sheet structures of our corporate clients and SMEs.

Indeed, in response to our customers' changing needs, our non-banking arm took initiatives to generate more fee-based revenue and recently launched the Maharajah Fund in January 2016 while the banking cluster came up with the SBM Eco-loan- an innovative product to facilitate the acquisition of equipment for the production of electricity by households and small businesses, with connection to a smart grid. Similarly, keeping in mind our clients' unique financial needs and the recent disintermediation trend, our Group has started proposing structured finance products. A project finance team has also been put in place with specialist knowledge in project development. The aim is to tap into local and overseas project financing with focus on both the public and private sectors. SBM Group remains committed to its stakeholders and will continuously innovate to satisfy their needs.

On the modernization front, our IT Transformation project, though delayed, should go live this year, thereby allowing us to provide enhanced online integrated services to our clients. Further, to enhance customer experience, delivery channels are being upgraded to digitize the customer journey and extend 24X7 services.

The fifth strategy pillar- capacity building- is progressing well with the SBM Group taking on board more skills and empowering its employees. The Group expanded its Strategy, Research & Innovation team last year and the results of the team's work are clearly seen today in the form of the document you are currently reading – SBM Insights®. This publication, spearheaded by this revamped Division with inputs from Treasury and other teams across the bank, is in line with the vision of SBM Group to provide value to its customers and other stakeholders.

The fact that we have chosen to release SBM Insights® at this moment in time is no coincidence. The global economy is going through tough times, with only few exceptions, while the Mauritian economy is in the midst of an important change. Through this document, we provide our views on the current economic situation and aim to contribute to the economic debate in Mauritius and beyond. We hope that this document will bring a "nouveau souffle" to the ongoing discussion about achieving the Second Economic Miracle.

Through SBM Insights®, we will be using our research, analyses and models to articulate the macroeconomic outlook and provide industry perspectives on the Mauritian economy, giving due consideration to events and projections on the international scene. We will also help readers to gain greater insights on selected countries of interest, as well as topical technical issues. For this first edition, we have chosen to do country insights on Seychelles and China. China is of systemic importance to the global economy and has recently been in the news while we feel that Seychelles holds interesting business potential for our Group and clients. The document ends with a special report on a key project for the country – Smart Cities. We will continue to research this area as well as other relevant topics which we will share with you in future issues. In forthcoming editions, we would also cover other countries of interest whether in the region or of global significance.

I trust that you will enjoy reading this first edition of SBM Insights and find it to be a valuable tool to use.

Kee Chong LI KWONG WING, G.O.S.K.
Chairman,
SBM Holdings Ltd

CHIEF EDITOR'S NOTE

Shailen SREEKEESSOON
Head of Strategy, Research & Innovation

I am pleased to welcome you to the first edition of SBM Insights®, a publication of the SBM Group that aims to bring fresh perspectives to the economic debate in Mauritius and other geographies of interest on economic outlook as well as other topical issues.

On the international front, whereas the baseline projections generally point to an upturn in activity in 2016 after another disappointing year in 2015, a confluence of risk factors is clouding the outlook in various parts of the world. Recent episodes of unfavorable data releases, accompanied by forecast downgrades by international institutions, have compounded the concerns of financial markets. China, commodity prices, Brexit and other geopolitical concerns, to name a few, would thus continue to take center stage in 2016.

The repercussions of persisting uncertainty on the global stage, notably in respect of key markets for Mauritius, have been most prominently felt in the area of private sector investment, with a number of large scale projects being shelved. This has, in turn, impacted adversely on manufacturing, real estate and the construction sector in particular. Unfortunately, signs of a strong pickup are not yet visible, in spite of efforts of the authorities to develop new poles of growth. The sugar sector should also continue to face important challenges. On the other hand, the tourism sector has achieved a strong turnaround thanks to successful market diversification, increased air access and industry restructuring, and is set to maintain a strong momentum. Business and financial services, as well as ICT, are also expected to remain resilient, in spite of mounting challenges.

In our extended coverage of China, we discuss the reasons underlying the current slowdown in the second largest economy in the world, after impressive growth rates in the previous three decades. We argue that the risks of a hard landing are low, and that the current deceleration rather marks a shift to a new normal, with a rebalancing from manufacturing and exports towards a higher share of services and consumption, which could, in fact, strengthen the country's economic base in the long run.

We also take the opportunity to shed some light on the Seychelles economy. After embarking upon a series of reforms, under an IMF program, the economic performance of this small archipelago has taken a turn for the better. Despite its small size, Seychelles has the opportunity to build on its vibrant tourism sector to consolidate its economy through spill-over effects on other industries such as financial services.

Our special report for the inaugural issue focuses on smart cities in the Mauritius context. Tagged as one of the pillars of the country's next phase of growth and development, the smart city concept indeed offers interesting potential for shifting the economy to a high income status level and improving the quality of life of citizens, as gauged by success stories in other countries. However, important challenges subsist, not least in respect of property demand and skills availability. Our report thus highlights some of the avenues that can be considered in the implementation of the smart city vision, to maximize the chances of success.

We wish you good reading, and do share your views at research@sbmgroup.mu.

Shailen Sreekeessoon
Head of Strategy, Research & Innovation
March 23, 2016

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ABBREVIATIONS

BMIO	Bank of Muscat International Offshore
BOI	Board of Investment
CPI	Consumer Price Index
EU	European Union
EUR	Euro
FDI	Foreign Direct Investment
FSDIP	Financial Sector Development Implementation Plan
GBL	Global Business License
GBP	Great Britain Pound
GDFCF	Gross Domestic Fixed Capital Formation
GDP	Gross Domestic Product
GDS	Gross Domestic Saving
ICT	Information and Communications Technology
IMF	International Monetary Fund
IoT	Internet of Things
MUR	Mauritius Rupee
NBFIs	Non-Bank Financial Institutions
OPEC	Organization of Petroleum Exporting Countries
PMI	Purchasing Managers' Index
PMO	Public Management Office
PPP	Public- Private Partnership
SCR	Seychelles Rupee
SDR	Special Drawing Rights
SME	Small and Medium Enterprise
UK	United Kingdom
US	United States of America
USD	United States Dollar
VUCA	Volatility, Uncertainty, Complexity and Ambiguity
WTI	West Texas Intermediate

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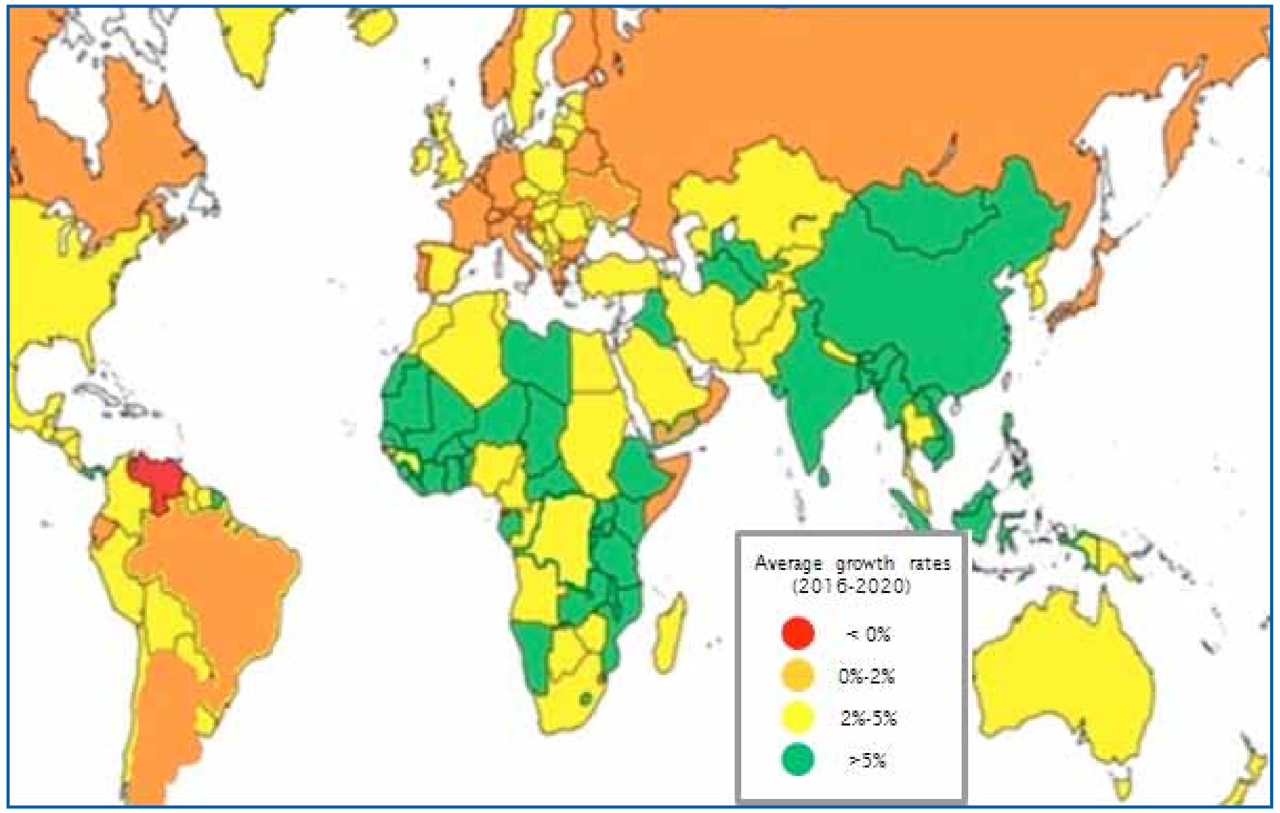
GLOBAL MACROECONOMIC ENVIRONMENT

Highlights

- In 2015, the global economy remained in a fragile state with growth slowing to an estimated 3.1%.
- Among advanced economies, the US has been performing relatively well, triggering a start of the normalization phase in US interest rates. However, despite a recovery last year, the euro area's economy remains subject to major challenges.
- As regards emerging markets performance, the slowdown in China has been a major cause for concern, with knock-on effects on commodity prices and, by ricochet, resource-rich countries.
- On the other hand, growth in India – a net oil importer – has accelerated buoyed by favorable terms of trade and economic reforms.
- Looking ahead, the US is expected to continue to drive economic recovery among major advanced economies, and should pursue normalization of monetary policy, albeit at a slower pace than earlier anticipated.
- As a result, the USD, which had gained significant value in 2015, should be relatively more stable this year.
- Despite persisting challenges, the euro area should also register an upturn amidst policy accommodation and low energy prices.
- Whilst China would continue to slow down in line with the rebalancing of its economy, growth therein should remain solid, and the risk of a hard landing is deemed remote, considering large scope for supportive policies, among others.
- India, for its part, should maintain a strong momentum and remain one of the bright spots in the global economy.
- Across Sub-Saharan Africa, the Eastern region is expected to post a healthy outturn, whereas growth in Southern and Western Africa would be moderate, on account of higher commodity dependence, on balance.
- The outlook for the global economy is subject to significant risk factors, namely linked to: a higher than expected rise in US interest rates; hard landing in China; volatility in commodity markets and financial markets; and heightened geopolitical concerns, including risks surrounding Brexit and Grexit.



Tepid economic conditions persisted in 2015, with occasional bright spots

More than seven years after the onset of the Global Financial Crisis, the world economy is still not out of the woods, with vulnerabilities sprouting from country to country. The latest major economy to be giving shudders to economic observers is China, which is stuttering, after being a key driver of global activity in the past decade (see Country Insights on China at pages 22 to 28).

A marked slowdown in the Chinese economy was indeed one of the main factors contributing to a lower global growth rate of 3.1% in 2015 (2014: 3.4%) as per the January 2016 IMF World Economic Outlook update. Perceived weakness in China, particularly in respect of its manufacturing and construction sectors, together with excess supply, has also been linked to a slump in commodity prices, particularly oil and industrial metals which, in turn, has negatively impacted on resource-rich countries. In sub-Saharan Africa, for instance, growth has slowed considerably particularly in oil-exporting countries while currency rates have been subject to significant volatility.

On the other hand, net commodity importers with low dependence on exports to China, such as India and the euro area, have benefited from a favorable evolution in their terms of trade as well as a relative improvement in consumers' purchasing power, which has helped nurture an upturn in activity. While India has been one of the bright spots in terms of growth in 2015, the recovery in the Eurozone remains fragile – with an estimated growth rate of 1.5% last year - in view of persisting structural difficulties, high unemployment and deflation concerns. The UK has been faring relatively better, with growth being supported by improving labor market conditions, a decline in the budget deficit and a more resilient financial sector.

The US has also been performing comparatively well, with an expansion rate of some 2.56% in 2015. The Federal Reserve even lifted the policy rate by 25 basis points to a target range of 0.25%-0.50% on 15 December 2015.

The beginning of the normalization cycle in relation to US interest rates had long been anticipated by financial markets and, together with soft commodity prices, had triggered an appreciation of the USD since Q2 2014. Between July 1, 2014 and December 31, 2015, the greenback gained almost 25% on a trade-weighted basis.

Supportive conditions should underpin a global recovery, albeit weak and disparate in 2016 and 2017, but the projections remain subject to considerable uncertainty.

Among major advanced economies, the US is expected to again lead the recovery in 2016 and 2017 on the back of still accommodative policy and improved labor and housing markets. However, a strong dollar and continued low commodity prices on average would affect manufacturing and extractive sectors in particular, the more so that activity in other key global economies, not least China, is not expected to accelerate in a significant manner.

In Europe, growth is expected to maintain momentum in 2016, aided by resilient domestic demand, tailwinds from low oil prices and continued accommodative monetary policy. Financial markets should also remain relatively calm, aided by stabilization policies implemented in recent years, but risks to financial stability persist. As per the IMF's January forecasts, the common-currency area is projected to clock an expansion of 1.7% in 2016 and 2017, slightly up from 1.5% in 2015, while the UK is forecast to maintain a growth rate of 2.2% amidst improved labor market conditions.

Despite an expected positive outturn, important challenges remain, notably for the Eurozone, where growth is unlikely to be strong enough to materially reduce unemployment. Besides, deflation risks, high fiscal and public debt, the impact of slower economic growth in key emerging economies, and a challenging political landscape amidst the migration crisis, instability in the Middle East and fears of Brexit (exit of the UK from the European Union) would also represent clouds on the horizon for the region.

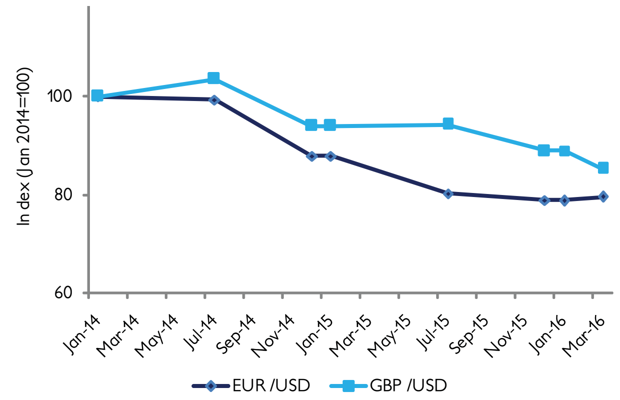
Table 1.1: Real GDP Growth Forecast

(Figures in annual percentage change)	2014	2015	2016	2017
World	3.4	3.1	3.4	3.6
Advanced economies	1.8	1.9	2.1	2.1
US	2.4	2.5	2.6	2.6
UK	2.9	2.2	2.2	2.2
Euro area	0.9	1.5	1.7	1.7
Emerging market and developing economies	4.6	4	4.3	4.7
China	7.3	6.9	6.3	6
India	7.3	7.3	7.5	7.5
Emerging and developing Europe	2.8	3.4	3.1	3.4
Middle East, North Africa, Afghanistan, and Pakistan	2.8	2.5	3.6	3.6
Sub-Saharan Africa	5	3.5	4	4.7

Source: IMF World Economic Outlook January 2016 Update

Despite a modest recovery in high-income countries, global growth slowed in 2015, as can be observed from Table 1.1, and the upturn in 2016 and 2017 is projected to be shallower than previously anticipated by the IMF at 3.4% and 3.6% respectively. There are indications that the IMF global growth forecasts will be further brought down in April 2016.

Figure 1.1: Selected Exchange Rates



Source: Bloomberg/SBM Staff estimates

The USD has been gaining strength against major currencies, amidst expectations of an earlier start of policy normalization.

Emerging markets projected to gradually pick up, despite prolonged China slowdown.

The prognosis for emerging market and developing countries is diverse but, in several cases, challenging. As per the IMF, these economies, taken as a whole, are projected to grow at 4.3% and 4.7% in 2016 and 2017 respectively, up from 4.0% in 2015, the lowest rate since the 2008–09 financial crisis. On the bright side, India is projected to sustain growth rates of above 7% into 2016 and 2017, buoyed by low oil prices and improved investor confidence in line with enhancements in the business and policy environments. However, the recovery would not be broad-based as some sectors such as agriculture, mining, construction and communications are expected to post relatively weak expansion rates, as opposed to a strong pickup in manufacturing, utilities and public services. Moreover, if policy actions are not consolidated, the projected recovery might lose steam given that the impact of the oil dividend is expected to lessen and may even reverse depending on how the commodity markets evolve. This would be all the more challenging given pressures on the fiscal space emanating, among others, from a proposed increase in the salaries of state employees and pensioners. High credit impairment levels in the banking sector are also a cause for concern.

As regards China, the deceleration in growth is expected to continue as the economy pursues its rebalancing from manufacturing and export-driven activities to services and consumption-led sectors, at least until global demand picks up strongly. However, the expansion rate would remain appreciable at some 6.3% and 6.0% in 2016 and 2017 respectively.

In Sub-Saharan Africa, large commodity exporters should continue to feel the pinch of soft prices, and volatile currencies, highlighting the need for a move up the value chain, whilst those countries less dependent on primary products are expected to fare relatively better. Hence, it is projected that the East Africa region should continue to post healthy growth rates, while the performance of Western and Southern Africa would be moderate.

Commodity markets should remain benign, albeit subject to high uncertainty.

After falling below USD 27 per barrel as at mid-January, oil spot prices recovered to around USD 40 per barrel recently. In line with futures markets, a gradual recovery in oil prices is expected during 2016, as the sharp oil price drop early in the year does not appear fully warranted by fundamental drivers of oil demand and supply, while production cuts are expected from higher-cost oil producers that are experiencing huge losses. Besides, demand is expected to strengthen somewhat with a modest pickup in global growth (Table 1.2). However, oil prices are expected to remain on the low side, against the background of increasing inflows from Iran and Iraq, as well as the upholding of OPEC's market share strategy. The inflection point is thus likely to occur later rather than sooner, as it could require much stronger global economic growth to lift crude oil prices higher on a more sustained basis.

Table 1.2: Annual Average Crude Oil Prices

	Crude oil, Brent	Crude oil, Dubai	Crude oil, WTI	Crude oil, average	Change in average oil prices
	(USD per barrel)	(USD per barrel)	(USD per barrel)	(USD per barrel)	%
2006	65.39	61.43	66.04	64.29	20.4
2007	72.7	68.37	72.28	71.12	10.6
2008	97.64	93.78	99.56	96.99	36.4
2009	61.86	61.75	61.65	61.76	-36.3
2010	79.64	78.06	79.43	79.04	28
2011	110.94	106.03	95.05	104.01	31.6
2012	111.97	108.9	94.16	105.01	1
2013	108.86	105.43	97.94	104.08	-0.9
2014	98.94	96.66	93.11	96.24	-7.5
2015	52.37	51.18	48.71	50.75	-47.3

Source: IMF October 2015 data

Other main commodity price indices have been forecast to remain soft in 2016 due to persistently elevated supplies and weak investment prospects in emerging market economies, particularly China. Indeed, metal prices are expected to remain broadly unchanged on the back of slowing investment growth in China and generally ample supply. Agricultural prices are projected to modestly increase over the next twelve months due to weather concerns partly related to the El Nino event. As can be observed from Table 1.3, commodity prices are expected to remain soft over the medium term across all major categories. However, in view of significant uncertainty in respect of commodity markets, large deviations from these forecasts cannot be excluded (see also Table 1.4 for a discussion of risk factors).

Table 1.3: Commodity Price Indices

Commodity Price IndicesRebased (2012 =100)	Export Weights in %	2012	2013	2014	2015	2016	2017	2018
All commodities and Energy	100	100	98.4	92.3	57.9	44.3	47.5	49.6
Non-fuel Commodities	36.9	100	98.8	95.4	79.1	69.9	69.9	69.9
Food	16.7	100	100.7	96.5	80	73.8	72.4	72.9
Beverages	1.8	100	88.1	106.4	103.1	87.9	89.1	89.4
Agricultural raw materials	7.7	100	101.6	103.5	89.7	81.8	84.5	82.6
Metals	10.7	100	95.7	85.9	66	52.3	51.9	52.5
Energy	63.1	100	98.3	91.1	50.2	31.7	36.6	39.8

Source: IMF World Economic Outlookdatabase, October 2015; SBM staff estimates

In view of the still difficult economic conditions, central banks around the world are expected to maintain broadly supportive policies. China, in particular, is foreseen to bring down policy rates to support its economy given some scope for maneuver there. The UK and the euro area are unlikely to raise rates anytime soon. Besides, while the Chairman of the Federal Reserve has communicated that the US is unlikely to reverse its cycle of unwinding monetary policy accommodation, the consensus view is that interest rate hikes would be less rapid than was anticipated in December last. In this context, the USD is expected to shed some of the gains achieved since mid-2014. A significant risk factor would, however, be the evolution of events around Brexit. An eventual inclination towards Britain's exit from the EU is expected to weaken the GBP and EUR and strengthen the USD, at least temporarily.

All in all, whereas the global economy is expected to recover slightly in 2016 and 2017, it would still be characterized by significant volatility, uncertainty, complexity and ambiguity (VUCA), amidst important risk factors. Indeed, risks to the outlook are mostly tilted on the downside, as discussed in Table 1.4.

Table 1.4: Some Key Risks to the Outlook

Risk Drivers	Implications
A rapid rise in the US policy interest rate (Fed Funds Rate)	• Policy normalization in the US is expected to follow a very gradual course, particularly with a string of adverse events recently. • However, a faster than expected series of increases cannot be excluded, notably if growth surprises on the upside and inflation pressures start to pick up in the US. • This hike might have a negative impact on exporters and affect the manufacturing sector in the US. • Higher US interest rates might also instigate foreign capital to pull back from developing markets to the US. • Moreover, the debt repayment burden for governments and businesses with dollar denominated debt would increase, potentially endangering financial stability in some regions.
Hard landing in China	• The continued slower growth of China will have an impact on other economies; directly through trade and investment, and indirectly through global value chain channels. • A hard landing in China could put further pressure on global commodity prices, thus negatively impacting resource-rich countries. Pressures for depreciating the Yuan would accentuate, which would put competitor countries at a disadvantage.
Volatility in commodity prices	• Lower than expected commodity prices would heighten pressures on resource-rich countries, and increase the risk of corporate and sovereign defaults, which could increase financial instability. • On the other hand, idiosyncratic shocks, such as the impact of El Nino on agriculture and mounting geopolitical tensions, could trigger a rise in commodity prices which would put pressure on the external balances of commodity-dependent countries.
Increased geopolitical instability, including risks of Brexit and Grexit	• Low commodity prices could exacerbate tensions and conflict in the Middle East, increase public protest in Latin America, and worsen industrial action in Africa's resource-rich countries, putting further pressures on growth therein. • In Europe, the migration crisis could intensify putting short term pressures on already stretched public finances and labor markets and potentially triggering anti-immigration policies that may hurt growth over the long term. Further terrorist attacks could also exacerbate this impact. • Regarding Brexit, both the break from the EU and the uncertainty associated with it could be damaging in terms of growth prospects to the UK economy, as well as to the euro area, and lead their currencies to weaken. Significant volatility is thus expected in respect of the EUR and the GDP in particular in response to polls and events connected with Brexit. • While the focus in recent months has shifted away from Greece, the possibility of the country being forced out of the EU (Grexit) is yet to be ruled out. Such an eventuality would, in all probability, be accompanied by large defaults and associated knock-on effects, triggering volatility in financial markets, downward pressures on growth, particularly in respect of the euro zone, and growing political instability within the EU.

ECONOMIC OUTLOOK MAURITIUS

Highlights

- The Mauritian economy has demonstrated some level of resilience in recent years, prompting the international rating agency Moody's Investors Service to maintain its sovereign rating of «Baa1» (stable) for Mauritius.
- However, economic expansion is subject to significant challenges, both on the external front and in terms of intrinsic structural factors.
- In 2015, the growth rate of the economy was moderate, at 3.4%, while the unemployment rate stood at an estimated 7.8%.
- Growth was driven by a strong upturn in tourism as well as continued momentum in ICT, financial services and business activities.
- On the other hand, construction, sugar and manufacturing were drags on economic activity.
- Services sectors are expected to uphold growth in 2016, whereas manufacturing and construction could continue to struggle, warranting a speedy implementation of planned infrastructure projects and productivity-enhancing initiatives.
- The overall economy is expected to pick up in 2016, with a projected expansion rate of 3.7%, but stronger and more sustained growth would be required to materially reduce unemployment.
- Despite a depreciation of the MUR on a trade-weighted basis, headline inflation reached a low 1.3% in 2015 and the current account deficit narrowed to 4.8% of GDP, reflecting the pass-through, albeit partial, of soft global commodity prices on the domestic market.
- In view of current projections of global commodity prices and international exchange rates, a low inflation environment should persist in Mauritius in 2016, and the current account deficit could narrow further.
- The exchange rate of the MUR could be subject to volatility and uncertainty, with sensitivity to events happening on the global stage.
- Monetary and fiscal policies should remain broadly supportive, although the scope for further accommodation is restrained.
- The budget deficit is expected to narrow to 2.8% of GDP for the fiscal year ending June 2016, and public sector debt should decline to 62.5% of GDP by December 2016 (54.5% of GDP for the purpose of debt ceiling).

Background

Mauritius has established itself as one of the leading economic reformers in Africa, successfully transitioning from a low income into an upper middle-income country. It is encouraging to note that the international rating agency Moody's Investors Service maintained its sovereign rating of «Baa1» (stable) for Mauritius, following its latest country assessment released in November 2015. Moody's believes that the Mauritian economy has demonstrated resilience to the adverse external environment in recent years. Mauritius continues to assert its position and reputation as an easy place to do business, as gauged by its top spot among Sub-Saharan Africa economies and 32nd position worldwide on Overall Ease of Doing Business, according to the World Bank group's report.

However, the Mauritian economy remained in a generally difficult territory in recent years, pinned down by vulnerabilities in the global economy and the stickiness of domestic productivity and other competitiveness-hindering factors. Such dynamics continue to warrant the country's attention, the more so given the progressive erosion of preferential access to international markets and prospects of exacerbated competitive pressures therein. Against this challenging background, it is creditable to take cognizance of policy measures pronounced in the National Budget 2015/16 and reaffirmed in the Economic Mission Statement of the Government. The speed and depth of project implementation with respect to these undertakings, at both public and private sector levels, would be significant in shaping up the extent to which Mauritius will manage to meaningfully rekindle growth and employment creation over time.

Growth held back by tepid private sector investment amidst VUCA environment

Real GDP growth at basic prices is estimated at 3.4% in 2015, similar as in 2014, mainly driven by service sectors such as business activities, financial services, ICT and food and accommodation services. While the first three sectors have been maintaining momentum over time amidst a growing sophistication of the country's business environment, the fourth has notably benefited from an upturn in tourist arrivals, buoyed by market diversification – particularly effective with respect to China – and by a strong recovery in the European market in line with improvements in the air access policy.

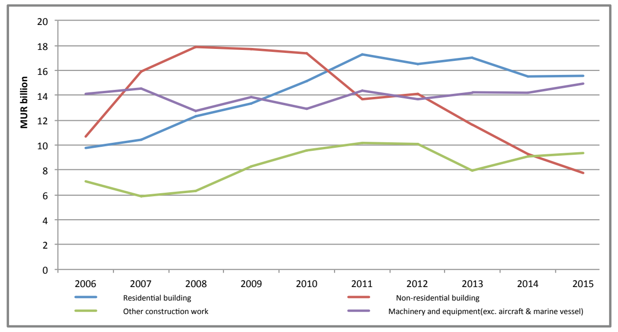
The trade and utilities sectors posted resilient, albeit moderate, growth rates in tune with growth in overall economic activity and a low inflation environment. On the other hand, manufacturing growth slowed down, particularly in respect of export-oriented enterprises, reflecting competitiveness concerns. Worryingly, the sugar and construction industries recorded yet another contraction in 2015 and continued to be major drags on overall activity. Indeed, sugar output (growing and milling) declined by around 8.1% last year as atypically low extraction rates amidst adverse weather conditions compounded ongoing concerns relating to low and volatile prices on international commodity markets. The construction sector, for its part, continued to suffer from dampened investment, particularly with respect to the business sector [see Figure 2.1], within the context of low investor confidence amidst a VUCA environment, and concerns around oversupply in some sectors.

Looking ahead, a number of challenges loom. Primarily, the prolonged downturn in construction is starting to take its toll on a number of operators, and ramping up activity in the sector is proving to be laborious. Whereas announced projects, such as port and road infrastructure development, the Heritage City project and the setting up of smart cities, among others, should, if successfully implemented, help boost construction activity over the medium to long term, more urgent action may be required to keep the sector afloat in the transition to solid and sustainable growth, which is not expected to occur before the latter part of 2016. This could, among others, take the form of incentive schemes such as preferential credit lines to support cash flows of companies, for instance, where payments are outstanding for works already completed. In the absence of strong measures to alleviate the difficulties of construction operators, the sector could be set for another rough ride in 2016 and even beyond. For the longer term, it would be imperative to address the demand conundrum. (See also our Special Report on Smart Cities at pages 29 to 40).

The manufacturing sector is another area warranting attention. Considering cost disadvantages linked, among others, to generally low economies of scale, the growth path of manufacturing will be dependent upon a deep understanding of manufacturing value chains and global supply chains, accompanied by a judicious positioning in areas where the country could have competitive advantages and could rapidly move up the value added ladder. This could encompass downstream manufacturing activities from the "Blue" Economy, which involves harnessing the oceanic resources in areas such as deep-sea water exploitation, bio-pharmacy and renewable energy, in line with the Government's stated objectives. To make visible progress in this direction, a revamp of the research and innovation capabilities and institutional framework would be required. In the short term, though, growth is not expected to ramp up significantly, as the performance of the manufacturing sector would continue to rely upon market development, demand conditions and the relative strength of competition.

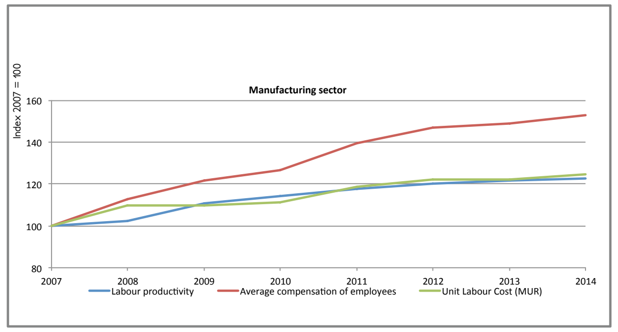
Figures 2.1 – 2.4: Multiple Challenges in Sugar, Manufacturing and Construction

Figure 2.1: GDFCF at Constant 2006 Prices



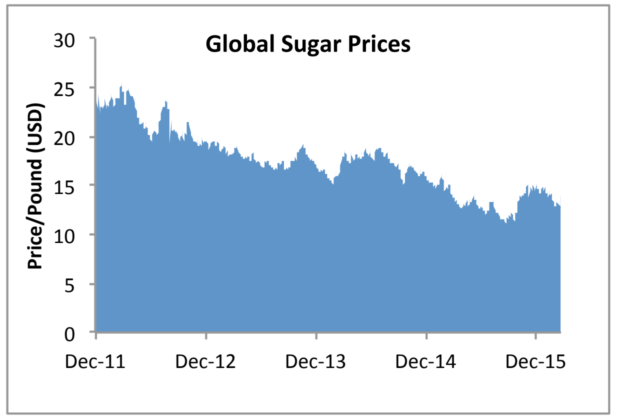
Source: Statistics Mauritius

Figure 2.2: Manufacturing Productivity



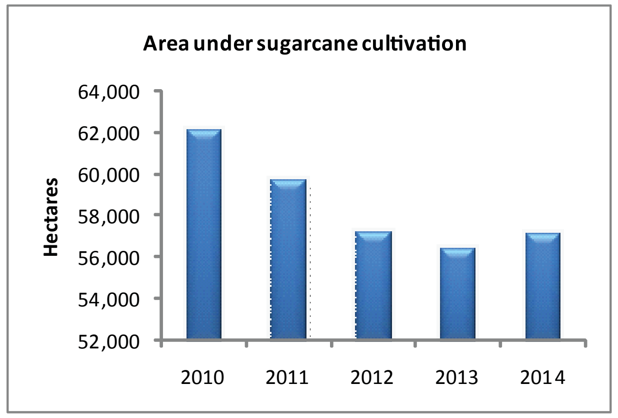
Source: Statistics Mauritius

Figure 2.3: Global Sugar Prices



Source: Bloomberg

Figure 2.4: Area under Sugarcane Cultivation



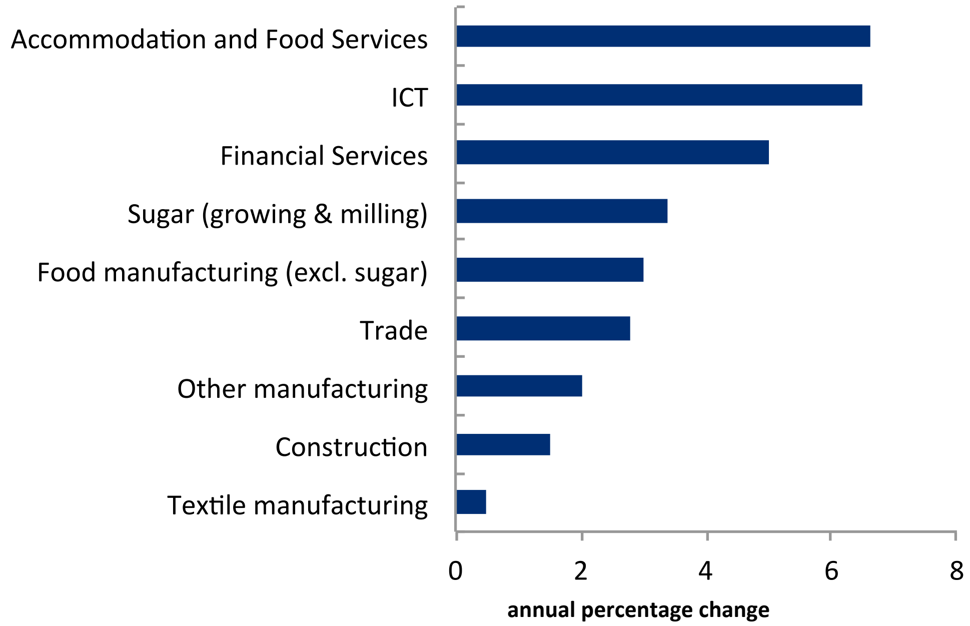
Source: Statistics Mauritius

Figure 2.1 illustrates declining investment in the non-residential buildings segment in particular, driven by the business sector. Figure 2.2 shows how labor productivity has lagged behind average compensation of employees in the manufacturing sector has outpaced, leading to rising unit labor cost. Figures 2.3 and 2.4 depict some of the challenges faced by the sugar sector, with declining prices on global markets and a declining trend in area under sugarcane cultivation.

As for the sugar sector, a rebound is projected this year on account of base effects as well as the planned import of raw sugar for refining by one operator, with the objective of optimizing factory efficiency. Nonetheless, market developments require close monitoring, especially in view of the intensified competitive environment, namely in the context of the abolition of the EU sugar quota regime anticipated in 2017. Building on the experience of sugar companies that have been diversifying operations outside Mauritius, and in line with the authorities' ambition to further penetrate the African market, the onus going forward could be to export the country's expertise in the sector in Africa while continuing to leverage past investments aimed at enhancing the sector's value addition.

On a positive note, tourism-related activities such as accommodation and food services have continued to show buoyancy at the start of the year and are projected to clock an appreciable growth rate of around 6% in 2016, following improved air access and projected growth in outbound tourism in some of the country's key markets. The implementation of the air corridor between Mauritius and Singapore should also support the hospitality sector, as well as transportation and logistics. Consequently, hotel development activities, which have been tepid in recent years, could start to gain pace as from the second half of the year, providing some relief to the construction sector. In line with the drive to improve connectivity and modernize the financial services sector, the ICT and the business and financial services industries should maintain their growth momentum in 2016, backed by further sector deepening and expansion of services outside Mauritius. However, continued vigilance should be laid upon the need to safeguard the reputation of the jurisdiction and to increase substance, notably by broadening the range of services offered and through up-skilling. In the banking sector, a careful management of asset quality concerns would also be warranted, particularly within struggling sectors and their linked activities, in view of the challenging economic environment.

Figure 2.5 Projected Real Growth Rates of Keys Sectors of the Mauritian Economy - 2016



Source: SBM Staff Forecasts

Overall, the growth rate of the Mauritian economy is projected at 3.7% in 2016 in our baseline scenario, which assumes a weak recovery in the sugar and construction sectors, modest growth in manufacturing, another solid performance in tourism-related activities, and other services sectors generally maintaining momentum. However, risk factors abound, but are fairly balanced. Challenges in the global economy, threats to relative preferences notably in the seafood and the Global Business sectors, a low domestic savings ratio which could restrain a pickup in investment, and the threat of deteriorating asset quality in the banking sector represent important downside risks. On the other hand, a rapid implementation of projects would prop up the construction sector while tourism could surprise on the upside.

Sticky unemployment calls for profound structural changes in the labor market

Against the background of subdued economic expansion, particularly in a number of labor-intensive industries, unemployment has remained high, although our estimate for 2015 is some 20 basis points below the official estimates, at 7.8%. Considering that difficult market are expected to persist in these sectors, a meaningful decline in the joblessness ratio is not anticipated, in 2016 at least, although the planned recruitment drive in the public sector would help to somewhat alleviate the labor market. A sustainable evolution towards low unemployment would certainly hinge on the development of new productive sectors, coupled with the up-skilling and multi-skilling of the labor force to reduce competency gaps, and create an agile workforce.

Table 2.1 Selected Economic Indicators – Mauritius

	Unit	2011	2012	2013	2014	2015(e)	2016(f)
REAL SECTOR							
GDP at market prices	MUR bn	323	344	366	387	407	**428**
GDP per capita	USD	8,811	8,932	9,477	9,999	9,187	**9,643**
Real GDP growth rate at basic prices	%	3.6	3.4	3.2	3.4	3.4	**3.7**
Gross domestic saving (GDS)	% GDP	13.0	12.7	11.8	11.6	11.9	**12.5**
Investment (GDFCF)	% GDP	24.0	23.0	21.2	19.1	17.8	**17.2**
Private sector investment	% GDP	18.5	17.5	16.2	14.2	13.0	**12.1**
Public sector investment	% GDP	5.5	5.5	5.0	4.9	4.8	**5.1**
Headline inflation	%	6.5	3.9	3.5	3.2	1.3	**1.5**
Unemployment	%	7.8	8.0	8.0	7.8	7.8	**7.8**
FINANCIAL SECTOR							
Credit to the private sector (excl. GBL) †	% GDP	70.3	74.4	74.0	71.0	70.4	**70.2**
Deposits (segment A) †	% GDP	89.1	91.1	87.8	89.4	93.3	**95.3**
Key Repo Rate†	%	5.40	4.90	4.65	4.65	4.40	**4.40**
Average rupee lending rate*	%	9.36	8.65	8.25	8.01	7.60	**7.13**
Average rupee deposit rate*	%	4.12	3.76	3.32	3.25	2.90	**2.54**
Average Treasury bills rate*	%	3.96	3.63	2.86	2.37	2.14	**2.59**
GOVT SECTOR							
Budget balance‡	% GDP	(3.2)	(1.8)	(3.5)	(3.2)	(3.3)	**(2.8)**
Public sector debt†	% GDP	58.7	57.9	60.1	61.6	63.8	**62.5**
Public sector debt (for debt ceiling) †	% GDP	53.0	52.1	53.9	54.1	56.0	**54.5**
EXTERNAL SECTOR							
Balance of visible trade	% GDP	(23.0)	(23.6)	(21.2)	(20.0)	(18.2)	**(17.5)**
Foreign direct investment (FDI)	% GDP	4.0	5.9	3.8	3.7	1.8	**2.5**
Current account balance	% GDP	(13.8)	(7.3)	(6.3)	(5.6)	(4.8)	**(4.3)**
Balance of Payments	% GDP	1.6	1.8	4.5	5.9	4.9	**5.5**

† end of period (e) revised estimates (f) SBM staff forecasts
* mean of monthly weighted averages
‡ due to the change in fiscal year from calendar year to a July-June cycle in 2015, 2011 to 2014 figures relate to calendar year, the 2015 figure relates to the Jan-Jun 2015 period, and the 2016 figure relates to Jul15-Jun16 fiscal year
Figures in brackets refer to negative numbers

Source: Statistics Mauritius, Bank of Mauritius, Ministry of Finance and Economic Development, and SBM staff estimates and forecasts

Globally low commodity prices and tepid demand reduce external imbalances and tame inflation, providing some room for policy accommodation

Notwithstanding USD strength on international markets – which is generally detrimental to the country's terms of trade, ceteris paribus, given the currency mix of external trade – the current account deficit is estimated to have narrowed from 5.6% of GDP in 2014 to 4.8% of GDP in 2015. The improved performance resulted from an uptick in domestic exports as well as a drop in imports on account of soft commodity prices on international markets, andlackluster domestic demand.

With strong net financial inflows, the balance of payments maintained a strong surplus at around 4.9% of GDP in 2015 (2014: 5.9% of GDP). Despite this surplus, the exchange rate of the rupee declined by some 7% on an annual average basis in 2015, based on the MERI2 index.

While global commodity prices, particularly oil, are projected to gradually rise on a point-to-point basis in 2016, they would, on an annual average basis, remain below the 2015 level. In that context, the current account deficit is expected to narrow further to around 4.3% of GDP this year. Foreign direct investment is also expected to pick up, prompting a strengthening of the balance of payments surplus. One risk factor relates to uncertainty in the Global Business segment, which could lead to lower than expected net financial inflows.

Against this background, the trade-weighted exchange rate of the MUR should, on a point-to-point basis, display some degree of stability, although the performance against individual currencies could be highly volatile, depending on international currency dynamics. Box 1,at the end of the chapter, discusses some potential paths for the MUR against the USD, EUR and GBP based on specific scenarios.

Soft commodity prices on global markets and lackluster demand also subdued the effect of a strong USD on domestic prices, even though the pass-through was only partial, contributing to a fall in the inflation rate from 3.2% in 2014 to 1.3% in 2015. With a lower expected depreciation of the MUR rate on a trade-weighted basis in 2016, and under the assumption that global commodity prices remain, on average, below last year's level, inflation expectations would be contained as gauged, for instance, by year-on-year inflation standing at -0.5% as at February 2016. Barring the impact of large exogenous shocks, headline inflation for 2016 is thus forecast to remain in the low single digits, at around 1.5%.

This should provide support for continued monetary policy accommodation. For recall, the Key Repo Rate was brought down by 25 basis points on 9 November 2015 from 4.65% to 4.40% after remaining unchanged since June 2013. Within the current economic context of subdued growth and inflation, the rate is expected to remain low, around the current level, for the rest of the year.

On the fiscal policy front, a lower than planned budget deficit of 2.8% of GDP is forecast in fiscal year 2015/16 in line with delays in the implementation of some infrastructure projects. The public sector debt level is thus expected to decline to 62.5% of GDP (54.5% of GDP for the purpose of debt ceiling). The requirement to bring down the latter rate to 50% of GDP by January 1, 2018 would severely constrain fiscal space going forward, the more so considering additional recruitment and increase in wages expected in the public sector. In that respect, it is commendable that the authorities are envisaging new financing structures to facilitate the implementation of planned large-scale public infrastructure projects, without unduly adding to the public debt burden.

Exchange rate scenarios

The world markets this quarter witnessed events which have market importance and which may have signigicant impact going forward . The events that made headlines were as below:

Draghi Delivers - The ECB cut rates and made more assets available for investments in the Eurozone. This would trigger interest from global investors to diversify their basket of portfolios and in turn spur some revival of demand for EUR. However, we expect this to be short lived as the fundamentals of EUR are expected to remain fragile.

The Oil Story - With OPEC acknowledging the oversupply situation, it is probable that oil may start its climb for the comfort territory of USD 55 per barrel by the year end.

The Interest Rate Scenario – The global interest rate scenario remains soft with too much money chasing too few assets. With emerging markets getting expensive every day, investors are now increasingly looking towards frontier markets for yields. However, only time will tell whether these investments would be viable, particularly that some of these countries' currencies are prone to depreciation.

Brexit - This is perhaps making more noise in the global markets than any of the above. The probability of the UK exiting from the European Union cannot be discarded, considering the increasing immigration problem into the UK and the soaring cost levels in London. The referendum on June 23 is thus going to decide the fate of the second safe haven currency for the world.

The Brexit factor would, in our opinion, have the largest impact on the movement of the currencies. Table 3.1 summarizes the views of some of the major banks in respect of the EUR and the GBP.

Table 3.1: International Currency Forecasts by Global Banks

	EUR/USD				GBP/USD			
	Mar-16	Jun-16	Sep-16	Dec-16	Mar-16	Jun-16	Sep-16	Dec-16
Spot as on 15th March, 2016	1.11				1.42			
BNP Paribas	1.1091	1.16	1.15	1.14	1.4159	1.51	1.55	1.58
Barclays	1.1091	1.03	0.98	0.95	1.4159	1.43	1.4	1.42
UBS	1.1091	1.05	1.09	1.16	1.4159	1.55	1.4	1.59
Standard Chartered	1.1091	1.03	1.08	1.05	1.4159	1.45	1.49	1.48
Citigroup	1.1091	1.12	1.11	1.11	1.4159	1.36	1.38	1.39
Bank of America Merrill Lynch	1.1091	1.08	1.05	1	1.4159	1.42	1.36	1.39
HSBC Holdings	1.1091	1.16	1.18	1.2	1.4159	1.4	1.55	1.6
JPMorgan Chase	1.1091	1.12	1.13	1.15	1.4159	1.44	1.53	1.56
Morgan Stanley	1.1091	1.03	1.01	1	1.4159	1.41	1.4	1.4
Societe Generale	1.1091	1.01	0.99	1	1.4159	1.49	1.41	1.45
Brexit Supporters (average)	1.1091	1.065	1.0375	1.015	1.4159	1.405	1.385	1.4
Brexit Opponents(average)	1.1091	1.088	1.103	1.117	1.4159	1.473	1.488	1.543
Global Consensus		1.03	1.08	1.1		1.4	1.42	1.48

The banks highlighted in yellow generally feel that Brexit would happen while the others presume it to be a non-occurrence. Global consensus is based on a survey of around top 80 banks worldwide and mentions the levels that a majority of them project will occur.
At SBM Treasury, we take a conditional view and provide you with two distinct scenarios:

Scenario 1
If Brexit happens and Europe gets into a deflation mode.

Scenario 2
If Brexit does not happen, leading to a stronger GBP than in Scenario 1 and Eurozone continues with monetary policy easing, leading to EUR depreciation, but to a lower extent than in Scenario 1.

In both scenarios, the stance of the Federal Reserve for 2016 is deemed to be unchanged. We base our estimates on EUR/USD and GBP/USD as below:

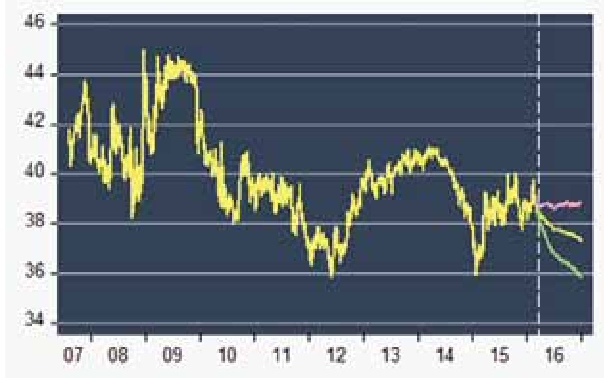
Table 3.2: Alternative International Currency Scenarios

	EUR/USD			GBP/USD		
	Jun-16	Sep-16	Dec-16	Jun-16	Sep-16	Dec-16
Scenario 1	1.045	1.035	1.02	1.39	1.38	1.395
Scenario 2	1.13	1.125	1.1	1.47	1.49	1.525

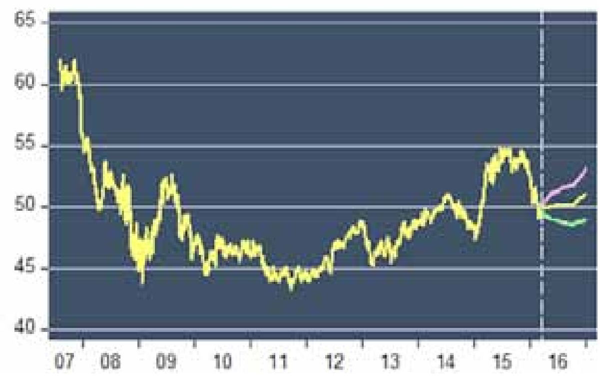
The econometric analysis leads us to the assessment of these global scenarios on MUR. Under scenario 1, we have the below projections to December 30, 2016

Figure 3.1: Forecasts under Scenario 1 (December 30, 2016)

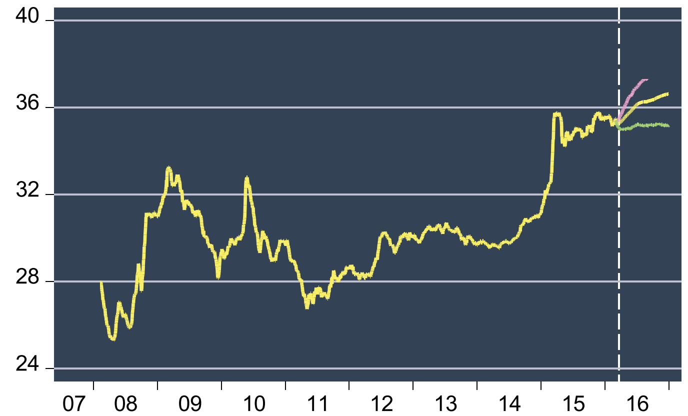
3.1a: EUR/MUR



3.1b: GBP/MUR



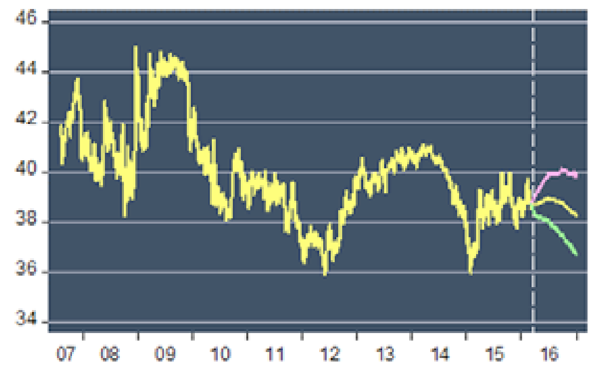
3.1c: USD/MUR



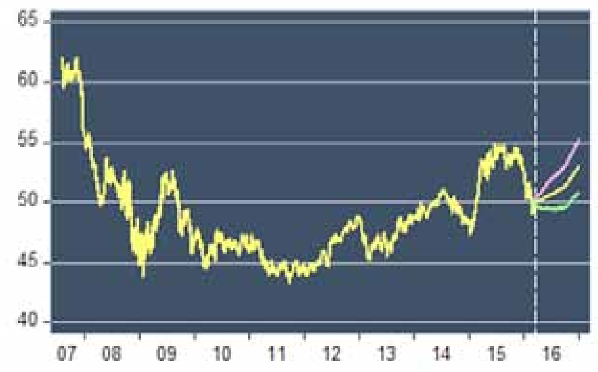
However, if we consider scenario 2, things may look very different for MUR and our projections are as below:

Figure 3.2: Forecasts under Scenario 2 (December 30, 2016)

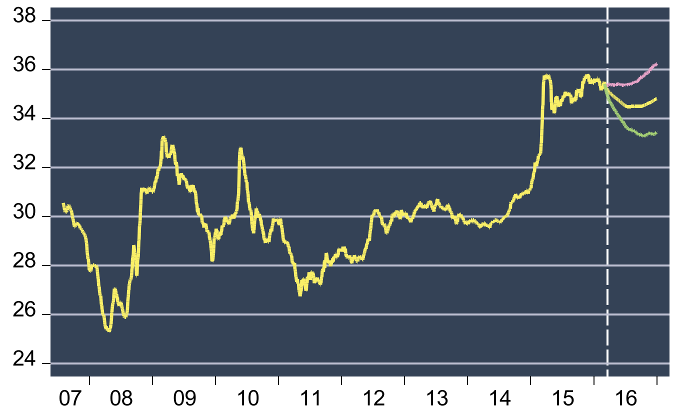
3.2a: EUR/MUR



3.2b: GBP/MUR



3.2c: USD/MUR



We hence have the snapshot of the forecast for the consolidated average buying mid-rate for the major pairs of USD/MUR, EUR/MUR, and GBP/MUR:

Table 3.3: MUR Forecasts under Alternative Scenarios (Consolidated Average Buying Rates)

Forecast for Consolidated average buying rate				
CURRENCY		30.06.16	30.09.2016	30.12.2016
USD/MUR	Scenario 1	36.12	36.35	36.63
	Scenario 2	34.51	34.49	34.79
EUR/MUR	Scenario 1	37.75	37.61	37.35
	Scenario 2	38.95	38.78	38.26
GBP/MUR	Scenario 1	50.19	50.15	51.07
	Scenario 2	50.68	51.35	53

To sum things up, the situations are very divergent under the two scenarios considered, keeping Brexit as the fulcrum. The MUR could be subject to significant volatility and may face extremes under abovementioned circumstances.

OVERVIEW OF SEYCHELLES ECONOMY AND BANKING SECTOR

Highlights

- Seychelles is a democratic republic consisting of 115 islands located in western Indian Ocean with a total land area of 455 square kilometers.
- Seychelles economy registered economic growth of 4.3% in 2015, supported by a strong year-on-year growth of 21% in the number of tourist arrivals.
- Seychelles economic growth is projected to be modest at 3.3% in 2016 due to the soft and challenging global economic conditions.
- Seychelles 2016 budget surplus is projected to be equivalent to 3.8% of GDP.
- Supported by low international food and fuel prices throughout 2015, falling local production costs (as measured by producer price index) and anchored inflation expectations, the annual inflation rate is predicted to decline to 3% by end-2016.
- The Seychelles authorities have been aiming to diversify and consolidate the economic base.
- One initiative in this sense is the financial sector development implementation plan (FSDIP) which aims to facilitate reforms in the financial sector through the adoption of a coherent vision and strategy for financial sector development.
- The banking sector in Seychelles is well capitalized and profitable, with an average return on equity of above 30%.

OVERVIEW OF SEYCHELLES ECONOMY AND BANKING SECTOR

Background

Seychelles is a democratic republic consisting of 115 islands located in the western Indian Ocean basin with a total land area of 455 square kilometers. Since independence in 1976, per capita output in Seychelles has expanded significantly, moving the country from near subsistence levels to an upper middle income economy. As a small, open island developing state with limited scope for diversification and heavy reliance on external development, Seychelles remains highly vulnerable to exogenous shocks. The archipelago is highly dependent on the good performance of the European tourism market. Indeed, growth has been led by the tourism sector, which employs about 30% of the labor force and provides more than 70% of hard currency earnings, and by tuna fishing and processing. In recent years, the government has encouraged foreign investment with a view to upgrading hotels and other services. At the same time, the government endeavors to reduce the dependence on tourism by promoting the development of farming, fishing and small-scale manufacturing. In 2008, having depleted its foreign exchange reserves, Seychelles defaulted on interest payments due on a USD 230 million Eurobond, and had recourse to IMF assistance.Under the program, the country immediately enacted a number of significant structural reforms, including liberalization of the exchange rate, Paris Club debt restructuring, reform of the public sector to include layoffs, and the sale of some Government-owned assets.

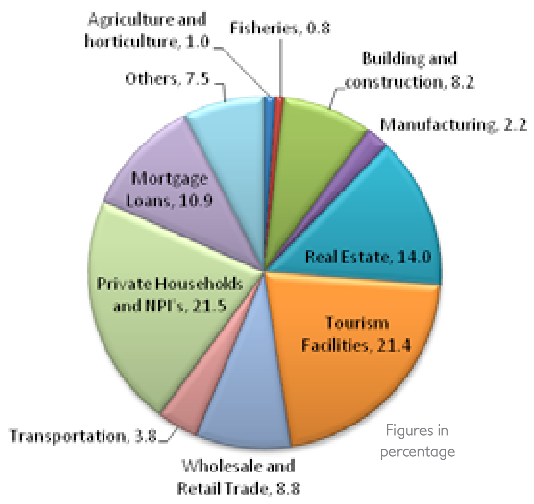
In December 2013, the IMF declared that Seychelles had successfully transitioned to a market-based economy with full employment and a fiscal surplus. The authorities have set a medium term goal of reducing public debt to below 50% of GDP by end-2018, which would provide a strong anchor for macroeconomic policy. According to the World Bank group's report, Seychelles Ease of Doing Business ranking improved from 104th in 2015 to 95th in 2016.

2015 Economic review

In 2015, the Seychelles economy registered economic growth of 4.3%, supported by a strong year-on-year growth of 21% in the number of tourist arrivals. India was the fastest growing market, reflecting the introduction of direct flights to Mumbai while China delivered 12% growth. However, arrivals from Russia were down by 20% compared to 2014. While European arrivals were strong, the weak euro led to a fall in yields. Nonetheless, with low commodity prices, the current account deficit is estimated to have narrowed to 14.4% of GDP in 2015. At the same time, the exchange rate has reversed part of the depreciation experienced in 2014, appreciating by 3% against the USD for 2015. After a spike in annual inflation to 5.8% in March, inflation started to decline. Supported by low international energy and food prices, appreciation of the Seychelles Rupee against the USD, and a tight monetary policy stance throughout the year, inflation ended at 4% as at December 2015. Private sector credit growth has decelerated to 7.4% over the 12 months of 2015, from 25.7% as at the end of 2014. Although the overall pace of credit growth was brought down to more sustainable levels, commercial banks' lending remained concentrated in a few sectors, reflecting the economy's low level of diversification, while a rise was noted in unsecured credit. In response to these concerns, the Central Bank of Seychelles strengthened some macro-prudential tools such as risk weights to enhance the capital buffers and limits on debt service-to-income ratio.

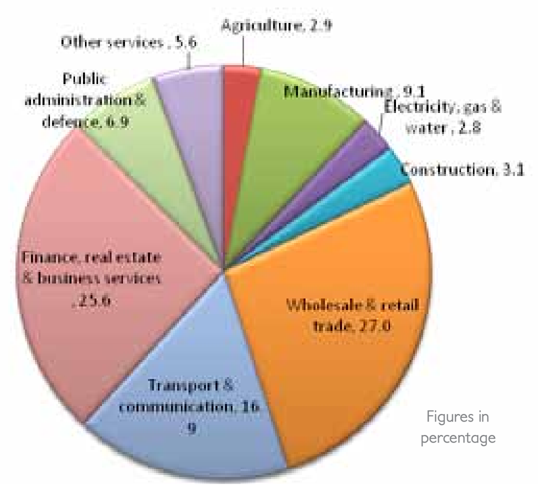
The charts below exhibit the sector-wise credit contribution to the economy as at December 2015 as well as the GDP breakdown by sector.

Figure 4.1: Credit to the Economy by Sector - December 2015



Source: Central Bank of Seychelles Monthly Statistical Bulletin, December 2015 issue

Figure 4.2: GDP by Sector - 2013



Source: African Economic Outlook Seychelles Report 2015

2016 Economic Outlook

Economic growth in Seychelles is projected to be modest at 3.3% in 2016 due to the soft and challenging global economic conditions. The efforts to enhance value-added in the tourism and fisheries sectors should support exports which, together with favorable terms of trade, should be beneficial to the balance of payments. Moreover, the government intends to boost tourism revenue by encouraging tourists to increase their expenditure. The 2016 budget surplus is projected to be around 3.8% of GDP. Of note, the Seychelles authorities have also committed to reducing the public debt level to below 50% of GDP by 2018. One of the priorities of the Seychelles government will be to reconsider the fiscal policy. The Seychelles authorities thus plan to introduce more flexibility in the income tax structure, as opposed to the current uniform rate of 15%.

Supported by low international food and fuel prices throughout 2015, falling local production costs (as measured by the producer price index) and anchored inflation expectations, the annual inflation rate is projected to decline further to some 3% by the end of 2016. With well-anchored inflation expectations, output near potential and an unchanged fiscal stance, monetary policy could be normalized in the year ahead, with cuts expected in the policy rate. This would help to reduce portfolio inflows and ease pressures on the interest rates. Private sector credit growth is expected to recede to just over 10% in 2016, on the back of the adoption of macro-prudential policies. Wage policies are not expected to add to inflation pressures. Despite a planned 13th month salary, the increase in the public sector wage bill would be relatively limited and many private sector firms would be unaffected as they already provide such a bonus. Besides, a financial sector development implementation plan (FSDIP) was approved in late 2014. Its primary objective is to facilitate reforms in the financial sector through the adoption of a coherent vision and strategy for financial sector development. The FSDIP will focus on access to finance, financial markets, financial infrastructure, banks and non-bank financial institutions (NBFIs) supervision and regulations. This plan should develop and strengthen the financial sector for coming years.

Table 4.1: SWOT Analysis for the Seychelles Economy

Strengths	Weaknesses
Skilled workforce	Lack of scale, implying efficiency challenges
Successful structural reforms	Competency gaps, given small population size
Good quality of life, underpinned by one of the highest income per capita in Africa	Narrow economic base, with high dependence on tourism
High-end tourism market	Market concentration
	High external imbalances
Opportunities	**Threats**
Diversification of economic base, namely in the financial sector, and markets	Slowdown in global economy
Possibility to introduce new products and services	Competition for tourism from other countries
SME development	Pressure on margins

Table 4.2: Selected Macroeconomic Indicators - Seychelles

	2012	2013	2014	2015	2016
National income and prices					
Nominal GDP (SCR million)	15,544	17,015	18,133	19,168	20,434
GDP per capita (USD)	12,352	15,187	15,141	14,466	15,302
Real GDP growth (%)	6.6	6.0	3.3	3.5	3.7
CPI (annual average)	7.1	4.3	1.4	4.3	2.9
GDP Deflator average	10.5	3.2	3.1	2.1	2.8
Savings-Investment balance (% of GDP)					
External savings	19.9	11.5	21	15.2	14.6
Gross national savings	17.5	26.5	16.3	18.6	19.4
of which government savings	8.6	5.2	6.6	5.4	7.5
Gross investment	37.4	37.9	37.3	33.7	34.1
of which public investment	10.4	8.9	6.3	6.7	6.8
Government budget (% of GDP)					
Total revenue, excluding grants	34.2	31.9	32.4	31.6	31.4
Expenditure and net lending	36.1	36.0	32.7	33.6	32.0
Current expenditure	25.7	26.7	26.5	26.8	25.3
Capital expenditure	10.4	9.3	6.3	6.7	6.8
Overall balance, including grants	2.2	0.3	2.0	0.3	1.2
Total public debt	77.1	64.1	65.3	63.7	59.5
Domestic	32.0	27.2	29.9	25.1	23.0
External	45.1	36.9	35.5	38.6	36.5

Source: Central Bank of Seychelles, Ministry of Finance of Seychelles and IMF

Risks

As a small, extremely open, tourism-dependent economy, Seychelles remains highly sensitive to exogenous factors such as falling fuel prices, the appreciation of the USD against the EUR, and weak growth in Europe and some emerging markets. Margins in the tourism sector have come under pressure due to the fall, on an annual average basis, in the EUR/USD rate, given that most hotels sell their rooms through international tourism operators, fixing prices in EUR for the year ahead, while the bulk of costs for the hotels are in USD and Seychelles Rupees. Tourist arrivals are closely linked to economic performance in Europe and, increasingly, certain emerging markets.

Banking sector

The Seychelles banking sector is regulated by the Central Bank of Seychelles, which supervises 9 banks, two of which mainly started operations in 2014, namely Bank of Ceylon and Bank Al Habib. In general, the commercial banks in Seychelles focus mainly on deposit-taking and lending.

Structure of the banking industry

At the end of 2015, there were 9 commercial banks operating in Seychelles, as highlighted in Table 4.3.

Table 4.3: Banks operating in Seychelles

Bank name		Shareholding
Local Bank		
NVB	Nouvobanq	Government of Seychelles 78% + Standard Chartered Bank 22%
SCB	Seychelles Commercial Bank	Government of Seychelles 77% + Public 23%
Branch of foreign banks		
BoB	Bank of Baroda	Government of India 56% + Public 44%
HBL	Habib Bank Limited	Aga Khan Foundation for Development 51% + Government of Pakistan 42% + Others 7%
BoC	Bank of Ceylon	Government of Sri Lanka 100%
BAH	Bank Al Habib	Individuals 56% + Others 44%
Subsidiary of foreign banks		
BBS	Barclays Bank (Seychelles) Limited	Barclays Africa Limited 99.8% + Staff 0.2%
BMIO	BMI Offshore Bank	Bank Muscat International 50% + NVB 50%
MCB	Mauritius Commercial Bank (Seychelles) Limited	Mauritius Commercial Bank Ltd 99% + Director 1%

Source: Central Bank of Seychelles

The Government has a majority shareholding in two of the banks in Seychelles, namely Nouvobanq and Seychelles Commercial Bank. In turn, Nouvobanq has a 50% stake in BMIO. The other banks are all foreign-owned.

The Government, which formerly owned 99% of shares in Seychelles Commercial Bank, made available 40% of its shares to account holders who subscribed to a total of 23.45% during the first phase of sale in 2011. A second round of sale is planned in the future.

Key financial highlights

The banking sector continued to be adequately capitalized with a capital adequacy ratio of ratio of 19.51% at December 2014 (minimum requirement: 12%). The industry's ratio of non-performing advances to total advances rose to 7.96% in 2014.

Its return on assets decreased slightly by 5 basis points to 2.55% in 2014 whilst a rise in the return on equity to 30.2% was noted.

Table 4.4: Selected Profit and Loss Figures

	2012	2013	2014
	Figures in SCR 000		
Interest income	732,447	708,625	626,226
Interest expenses	115,204	139,290	103,715
Net interest income	617,243	569,335	522,510
Non-Interest income	397,364	365,449	429,235
Non-Interest expenses	415,373	451,714	453,466
Total income	1,129,811	1,074,074	1,055,460
Total expenses	530,577	591,004	557,182
Profit before tax	547,865	475,339	476,864

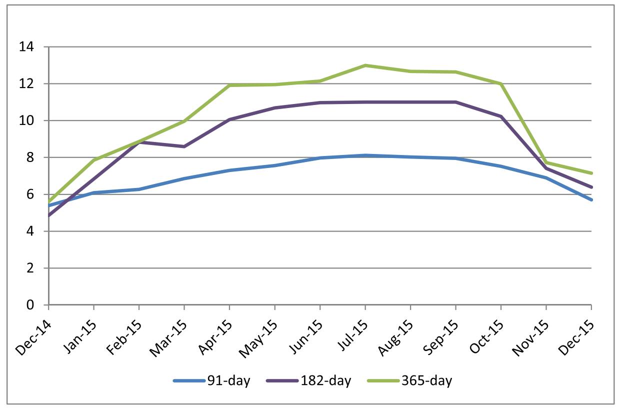
Source: Financial Services Supervision Report 2014

Table 4.5: Selected Banking Sector Ratios

	2012	2013	2014
	%		
Return on assets [ROA]	3.89	2.6	2.55
Return on equity [ROE]	38.37	28.21	30.2
Average yield on loans	9.27	9.49	8.07
Average cost of deposits	0.88	0.87	0.59
Average yield on Treasury Bills	7.47	7.1	2.83
Average yield on CBS instruments	15.05	0.76	0.96

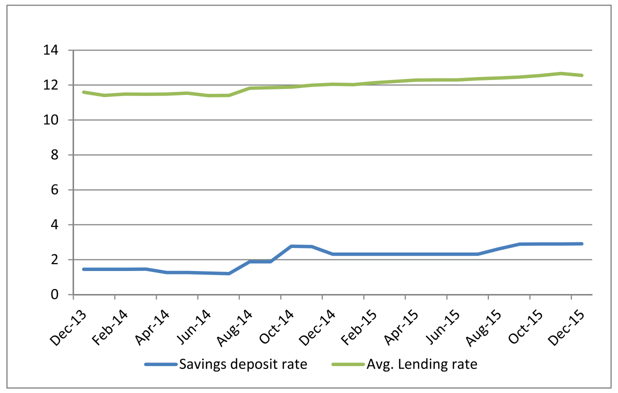
Source: Financial Services Supervision Report 2014

Figure 4.3: Rates on Treasury Bills



Source: Monthly statistical bulletin December 2015

Figure 4.4: Average Savings and Lending Rates



Source: Monthly statistical bulletin

SBM interests in Seychelles

SBM Group is focusing on its international expansion strategy, whereby it is about to have a subsidiary entity in Seychelles. SBM has been granted a banking license in Seychelles subject to conditions, which it has undertaken to fulfill. Despite the country's small size, returns are deemed to be relatively attractive. SBM's expansion project in Seychelles is in line with the policy of regional integration that the Mauritian government advocates. The beginning of SBM operations will be an important step in the project of economic integration between the countries, with opportunities in ocean economy, financial services, tourism, information technology, higher education and commerce.

CHINA – HARD LANDING, SOFT LANDING OR NEW NORMAL

Highlights

- Following years of double digit growth resulting in significant economic and political weight in global affairs, China had a tough year in 2015.
- It is in the midst of an economic slowdown as it shifts from manufacturing heavy to consumption-led activity.
- The rise of China occurred through rapid industrialization supported by a large pool of cheap labor and increase in productivity through technology.
- GDP growth averaged more than 10% from 1980 to 2007 while GDFCF remained above 30% of GDP.
- With the onset of the Global Financial Crisis, the economy slowed down.
- The Chinese Government responded with a massive stimulus program amounting to USD 586 billion.
- A credit boom followed. Whole cities were built from scratch and buildings sprung at a rapid pace. China became a systematically important country second only to the US.
- However, the stimulus had a short term effect, given that global demand remained weak as key economies such as the US and the Eurozone were still struggling.
- Firms which had undertaken massive investments are facing debt servicing issues amidst tightening cash flow.
- Fewer gains in productivity and a declining working population are also dampening prospects
- This is putting pressure on China's trade partners.Mongolia is bearing the brunt of China and has been so badly affected that the government is planning job and salary cuts for bureaucrats and sale of shares in state-owned companies.
- Similar situations are happening in other resource-rich countries such as Congo, Yemen, Zambia and Cameroon.
- Despite the slowdown, China remains a superpower with considerable weight on the global scale.
- In fact, it seems to be following a similar path as the US and the UK in the past towards a new normal, with a more balanced economic structure.

CHINA: SOFT LANDING, HARD LANDING OR NEW NORMAL

China, one of the biggest stories in 2015, has continued to make headlines in early 2016. The influence and importance that China has in the global economy and global trade makes it that regulators and businesses contemplate the effect of China before arriving at a decision.

Following years of solid growth resulting in significant economic and political weight in global affairs, China had a tough year in 2015. It is in the midst of an economic slowdown and the financial services industry is expecting the deceleration to continue in 2016 and beyond.

On a global scale, financial services firms remain skeptical about the Chinese economy, namely in view of mixed signals sent by the Chinese Government. For instance, in response to a massive selloff of equities in 2015, it intervened in the market to prop up prices and ban short-selling, despite its earlier pledge to let free markets have their say. Equity prices were artificially kept up. Again, as another wave of selling activity occurred in the beginning of 2016, the Chinese government intervened on the Chinese stock market through a circuit breaker to stop trading and thereby stop share prices from falling. Confused about the government's aim and competence, many investors have sold their shares.

In this special report, we analyze the situation in China. We try to find the reasons behind the rise of China in global and economic affairs as well as the reasons behind the current situation in the country.

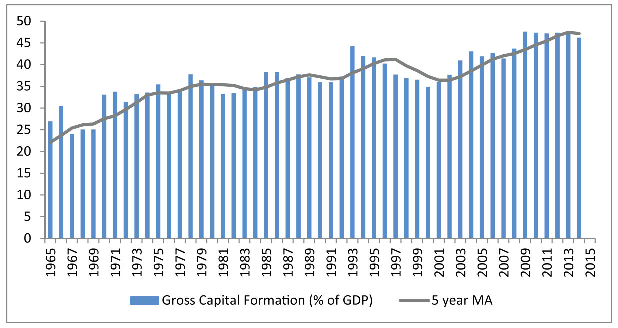
The Rise of China…

The rise of China occurred through rapid industrialization. In the 1980s, a large number of peasants were brought to work in newly set up industries. This cheap labor fuelled factories, triggering a wave of industrialization and urbanization. Alongside industrialization, China began to slowly open its economy to the world, paving the way for an upgrade in technology in the country. The combination of cheap labor and a rise in productivity through technology led to a manufacturing and export boom. China could afford to produce more at a much lower cost of production than many of its competitors and soon became known as the world's factory. This position was strengthened with China's accession to the World Trade Organization in December 2001.

Buoyed by a growing manufacturing sector and rising exports, China invested massively in infrastructure to help businesses. Indeed, better roads were built to lessen time taken to transport goods to ports and bigger ports were constructed to cope with a rise in maritime traffic as larger vessels visited China to load goods. Subsequently, China grew into a global supply chain leader and enjoyed considerable cost efficiency. Investment was also directed towards better transport systems. Fuelled by investment in infrastructure, big cities started to emerge in the vicinity of industrial zones. Urbanization gained pace. Shenzhen was one such city. It was declared a Special Economic Zone by the Chinese Government in the 1980s and was selected to implement market capitalism. Today, the city is listed among the most vibrant and dynamic ones in China.

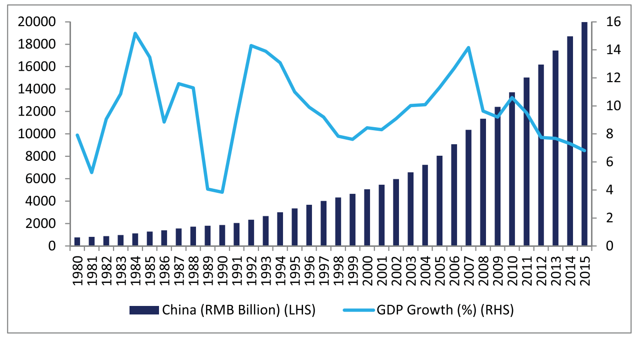
Investment, manufacturing and exports formed the basis of China's rapid economic growth. Figure 5.1 depicts how, over the four decades from 1980 to 2010, Gross Domestic Fixed Capital Formation increased from 35% of GDP to 47% of GDP - an increase of 12 percentage points. Demand for Chinese merchandise exports drove the need for investment. Across the globe, consumers began to be aware of the "Made in China" brand. The drive to manufacture had spill-over effects on other countries. Commodity-endowed countries benefited from this manufacturing boom as Chinese demand for steel, iron ore, copper and other metals soared.

Figure 5.1: Rise in Gross Fixed Capital Formation as a % of GDP (1965-2015)



Source: National Bureau of Statistics-China

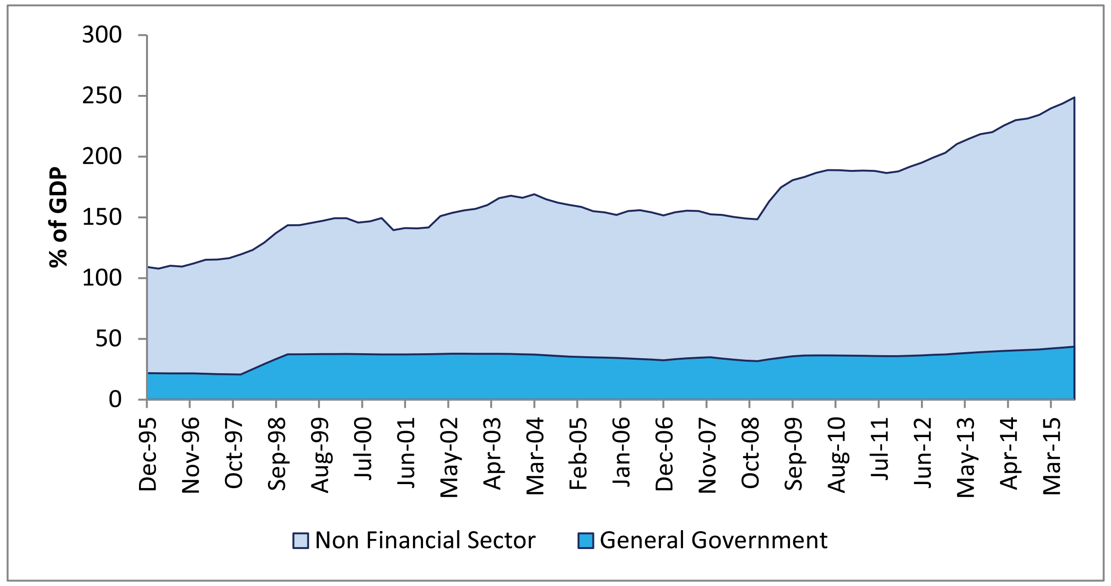
Figure 5.2: Evolution of GDP Growth Rates (1980-2015)



Source: International Monetary Fund World Economic Outlook Database October 2015

From 1980 to 2007, China's economy registered an average GDP growth rate of 10.1%, with very few episodes of sub 5% growth, the late 1990s being a notable exception, amidst political unrest. With the onset of the Global Financial Crisis, GDP growth in China slowed down. GDFCF as a share of GDP decreased over this period. Authorities responded with a colossal stimulus program. Some USD 586 billion was committed by the Chinese government to boost the economy through infrastructure development and real estate investment among others. Firms borrowed heavily to invest, mainly from state-owned banks. A credit boom followed, as shown in Figure 5.3. Whole cities were built from scratch. Office towers, apartment blocks and steel mills sprung at a rapid pace. In parallel with the rise in construction and investment, China started to report a growing number of millionaires. Luxury brands began to set up shop in the country on the strength of a thriving economy and a rising and increasingly sophisticated middle class. Today, China has become a systemically important country, on a global scale, second only to the US.

Figure 5.3: Evolution of Banking Sector Credit



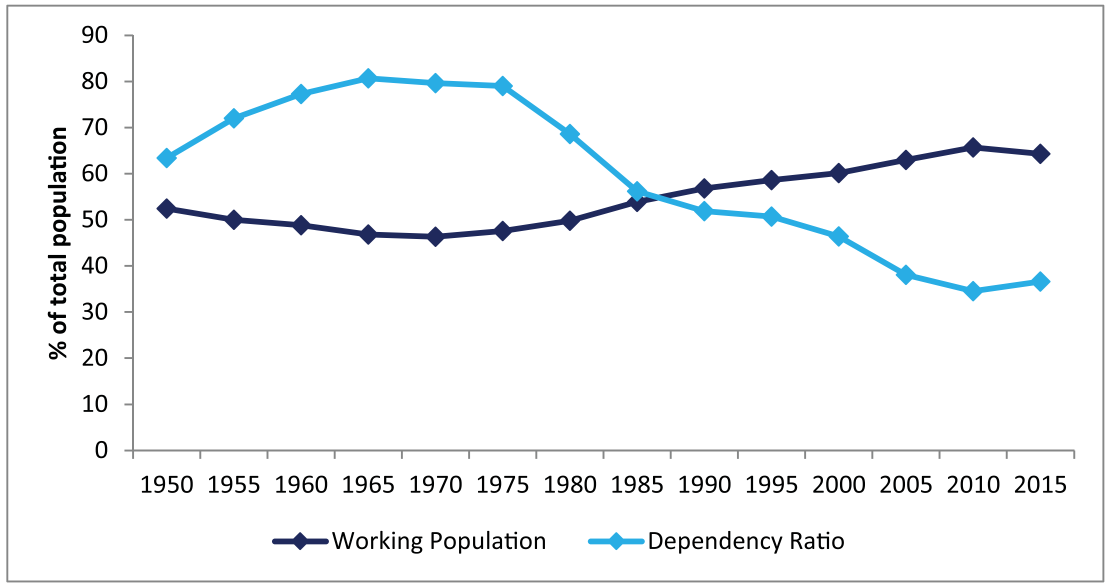
Source: Bank for International Settlements

The Slowdown Begins…

The credit boom, however, had only a temporary effect on growth. Global demand remained weak as key economies such as the US and the Eurozone were still struggling. At the same time, the credit increase to the construction sector led to a situation of oversupply of office towers, apartment blocks and steel mills. Today, ghost cities such as Kangbashi and Yujiapu exist across China. This has led to a considerable build-up in corporate debt. Even though banks clamped down on their lending, corporations have found new ways of borrowing and the shadow banking industry in China has grown significantly. With demand failing to keep pace with supply, firms which had undertaken massive investments face debt servicing issues amidst tightening cash flows. Non performing advances increased significantly in 2015, although remaining under control at only 1.67% of advances. as at year end.

The advantage from cheap and seemingly endless supply of labor that underpinned China's growth is also beginning to erode. As demonstrated in Figure 5.4, the working age population (aged 18-60) has peaked and is now declining, leading to a rise in the dependency ratio. China is facing the prospect of an inverted population pyramid as its demographics change. The one child per couple policy conducted by China is showing its limits.

Figure 5.4: Evolution of Working Population (1950-2015)



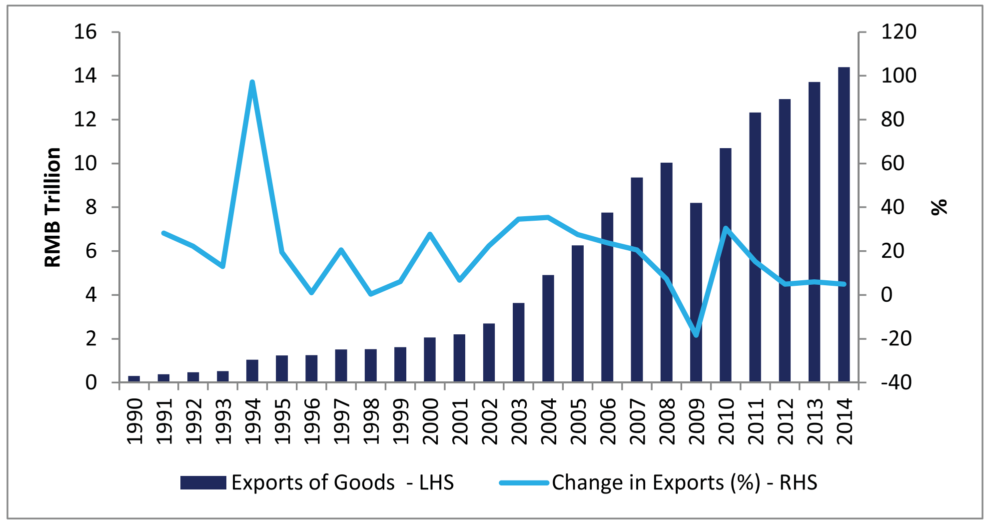
Source: National Bureau of Statistics–China

The slowdown in China may also be linked to a decline in the technology gap. With a big catch-up potential in earlier years, productivity gains were more easily achieved. However, the economy has now reached a point where the gap has narrowed and therefore, there is a less rapid rise in productivity. All in all, the relative advantages that China had over its competitors are eroding.

As depicted in Figure 5.5, the contribution of the manufacturing sector has been declining over the years while that of the services sector has followed an upward trend. This situation is consistent with the view that the manufacturing sector is a major reason behind the Chinese slowdown. The rate of growth of exports of goods is on a decline. The Chinese Manufacturing Purchasing Manager's Index has remained below

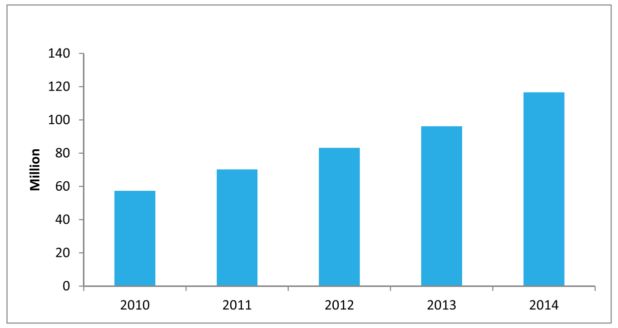
Figure 5.5: Chinese Slowdown Depicted in Graphs

5.5a: Export Performance



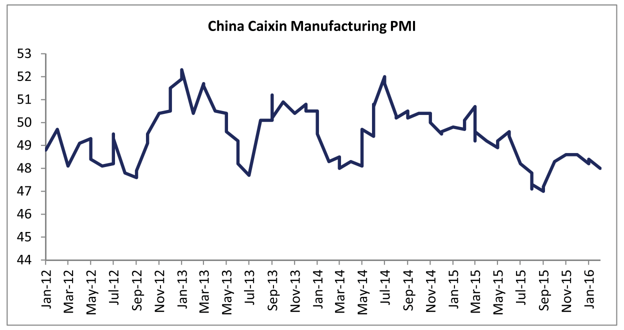
Source: National Bureau of Statistics-China

5.5b: Evolution of Outbound Tourists



Source: World Tourism Organization

5.5c: China Caixin Manufacturing PMI



Source: Markit Economics

50 since March 2015, indicating expectations of a contraction.

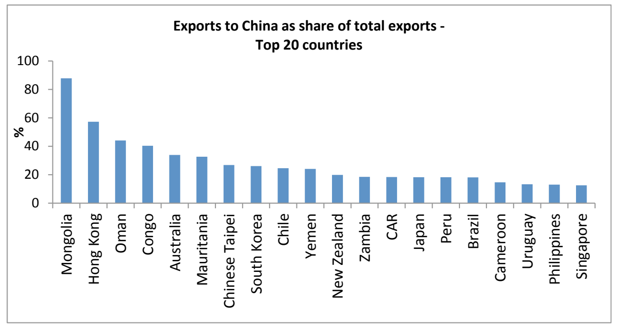
Debt-fuelled investment does not appear to be a viable long term solution and, as a result, the government has started an economic program to become less reliant on infrastructure and more dependent on domestic consumption. The government expects its rising middle class population to contribute to shifting China from a manufacturing oriented economy to a service driven one.

China wants its rising middle class to spend more electrical goods and food to increase the contribution of consumption in the economy. Faced with the prospect of a big dependent population and declining human resources, China has amended its one child policy to a two children policy.

The country has also taken steps to encourage borrowing and raise growth. The People's Bank of China has brought down its benchmark rate since November 2014 and most recently, reduced the reserve requirement by 50 basis points to 17%. Still, lending has been unimpressive. The Central Bank is also using up its reserves to buy Renminbi and stem the effect that outflows of money is having on the local currency.

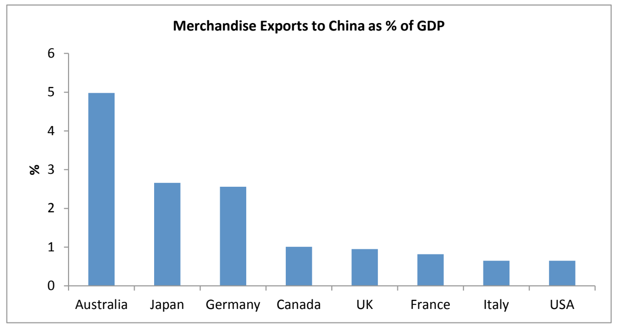
Consequence of Chinese Slowdown on Other Countries

Figure 5.6: Dependence on China



Source: World Trade Organization

Figure 5.7: China and Advanced Economies



Source: International Trade Center, IMF

One of the main repercussions of the slowdown in investment in China has been on the global commodities market. Hence, resource-rich countries, a fortiori those exporting to China, have been particularly hit.

Figure 5.6 shows countries with highest export concentration to the Chinese market. The ranking is mainly occupied by resource-rich countries. Mongolia (88% of total exports) and Hong Kong (57%) have the highest concentration, by virtue of their shared historical ties with China. The other countries in the list are mostly commodity exporters.

The impact of a slowdown in China is best illustrated by the situation in Mongolia. The country has huge deposits of coal and other commodities. It fully benefitted from a booming manufacturing and construction sector in China as demand for its commodities rose. As its dependence on China's manufacturing sector has grown, Mongolia is now bearing the brunt of the slowdown of the Chinese economy. It has been so badly affected that the government is planning job and salary cuts for bureaucrats and sale of shares in state-owned companies.

Similar situations are happening in other resource-rich countries such as Congo, Yemen, Zambia and Cameroon. Angola, which exports 50% of its oil to China, appears to be one of the most exposed countries in Africa. Given that 90% of government revenue comes from oil sector, a fall in Chinese demand for oil combined with the drop in global oil prices, on average, would severely affect the economy.

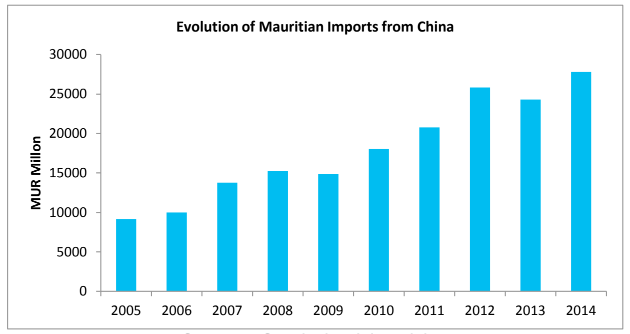
The effect on the developed markets is expected to be less pronounced than that on the emerging and frontier markets. With the exception of Australia, Japan and Germany, merchandise exports to China represent only around than 1% of their GDP. Japanese and German exports to China are mostly consumer goods while Australia exports mostly commodities. With the Chinese government encouraging its population to consume more, Japan and Germany are not expected to be unduly affected by the situation in China, as opposed, arguably, to Australia.

Impact on Mauritius

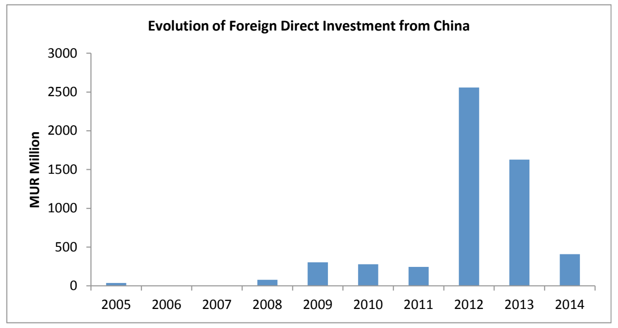
The Mauritian economy is less dependent on Chinese imports as compared to many African countries. Mauritian exports to China do not represent a significant share of total Mauritian exports of goods. Foreign direct investment from China, as well, is small in proportion to investment from other countries. In fact, the change in China's economic structure towards consumption can be beneficial for Mauritius, for instance, in terms of tourist arrivals. Besides, a fall in commodity prices due to the decline in Chinese demand as well as an eventual devaluation of the Renminbi should be beneficial to the terms of trade and reduce the import bill for Mauritius. On the other hand, Mauritian exporters and local manufacturers could face stiffer competition, and lose market share.

Figure 5.8: Economic Ties between China and Mauritius

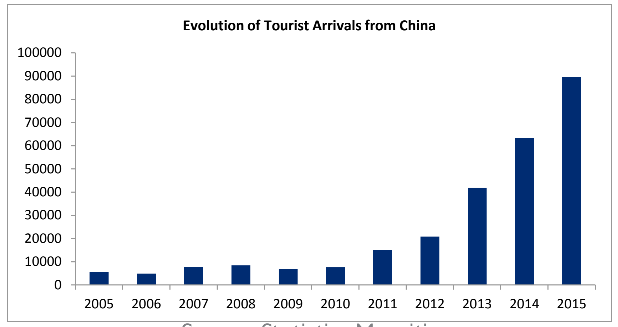
Source: Statistics Mauritius



Source: Statistics Mauritius



Source: Bank of Mauritius



Source: Statistics Mauritius

Transitioning to a New Normal…

Although China is in the middle of a downturn, the situation does not appear to be out of control. Rather, it seems to be more alligned to what advanced economies have gone through in the past. The US moved from a steel manufacturing economy to a service led one. Similarly, the UK moved past the Great Industrial Revolution to a more service based economy. China seems to be following the same path and appears to be transitioning to a new normal. The slowdown is the result of an economic rebalancing and a shift to a more sustainable growth path.

Besides, the country has strong reserves and policy room for maneuver to address countercyclical hiccups. Hence, in spite of impending challenges, China remains a superpower and its considerable weight in global economic and political matters is likely to increase rather than decrease, going forward. This is reflected in the recent addition of the Chinese currency to the Special Drawing Rights (SDR) basket, which would make the country become more integrated in the global financial system and its financial markets more open and market based.

In this respect, the Chinese authorities might gain to become more transparent and consistent in their communications to give a better sense of direction to markets.

SPECIAL REPORT SMART CITIES IN MAURITIUS: MYTH OR REALITY

Highlights

- The "Smart City Project" has been identified as one of the key pillars of growth and has been included in the National Budget and the Government Program.
- Though there is no standard definition of a smart city, the latter usually revolves around integration of information and communication technology, human capital and environment.
- The Board of Investment (BOI) has come up with a Smart City Scheme around the "Live, Work, Play" theme.
- 16 smart city projects have been proposed out of which 10 have received a Letter of Comfort from BOI.
- Potential benefits from smart cities include: pickup inbusiness confidence and investment;job creation; greater emphasis on innovation-led growth; more convenient lifestyle for the population; efficient energy and water management; and higher transparency and accountability.
- Yet, major challenges to the "Smart City Project" exist in the form of: demand constraints; competency gaps; adjustment to a new paradigm; and information security.
- Several avenues can be explored to increase the probability of success of smart cities. These include: setting and managing expectations through smart objectives and key performance indicators; pursuing quick wins within the existing infrastructure; globalizing institutions and creating a highly skilled and agile workforce; and considering alternative models of financing.

SMART CITIES IN MAURITIUS: MYTH OR REALITY?

Smart cities have been put forward by the Mauritian Government as one of the key pillars of growth. The authorities have declared that the country will be embarking on mega projects involving smart cities and new cyber cities to consolidate the country's position as an international business and financial hub, and to improve the lives of people.

In this special report, we seek to advance our knowledge about smart cities. We try to answer questions about the definition of a smart city, the key elements of a smart city, the things to be expected from smart cities, the drawbacks to be considered, whether Mauritius is prepared for implementing the smart city vision, what changes the country needs to make, as well as avenues to be considered for the successful implementation of smart city projects. In the annexes, a status on the announced smart city projects in Mauritius is provided, together with a couple of examples of successful smart city initiatives, notably in Chicago in the US and in Rio de Janeiro in Brazil.

What is a Smart City?

Although the term "Smart City" is being commonly used, there is no standard definition of a smart city. The Research Institute for Housing, Urban and Mobility Studies of Delft University of Technology, Netherlands, defines a smart city as a city with a smart industry, in reference to firms in the fields of information and communication technologies as well as other firms applying ICT in their daily production process. The inhabitants of these smart cities are expected to be smart by their educational grade while e-governance and modern transport system technologies would also form part of the city's infrastructure.

Stressing upon the role of human capital, Berry and Glaeser (2005) and Glaeser and Berry (2006) argue that a smart city is one which continuously innovates and which has a high proportion of skilled labor force.

In more recent years, Caragliu et al (2012) deemed a city to be smart when investments in human and social capital and traditional (transport) and modern (ICT) communication infrastructure fuel sustainable economic growth and a high quality of life with a wise management of natural resources through participatory governance.

The Mauritian definition of a smart city is closer to the definition given by Caragliu et al (2012) with a strong focus on integration of information and communication technology, human capital and the environment.

A city is considered smart when the different elements that make up the city are either managed in a smart manner or make use of technology in a smart manner. Ultimately, however, each country will adapt a Smart City according to their requirements and conditions. Following this line of thought, the Board of Investment of Mauritius (BOI) has come up with a list of elements that make up a smart city and has launched a Smart City Scheme to encourage investment in this area. This scheme is set up under the Investment Promotion Act and it provides investors with a list of elements that make up a smart city. Built around a concept of "Live, Work, Play", these elements are smart governance, smart environment, smart mobility, smart people, smart living and smart economy. Annex 1 provides details on projects that are being planned under the Smart City Scheme. The list is non-exhaustive and projects may subsequently be added or removed. In total, these projects would require investments of around MUR 150 billion and, as per pronouncements made, could create more than 50,000 jobs. Promoters of these projects are both domestic and foreign players. It is to be noted that many of these projects are still in their initial phase. Some have only been announced while others are awaiting further clearances from BOI to proceed.

BOI has broken down the "Smart City Project" into the following:
(i) Be developed on land of an extent of at least 21.105 hectares.

(ii) Adhere to the live, work and play concept and provide for a majority of the residential population to live and work in the same location.

(iii) Incorporate within the development a mix of compatible land use including commercial, leisure, and residential and consisting of a combination of office, light industrial, hotel, retail, public entertainment and housing so that the incisive development achieves physical and functional integration and creates a pedestrian oriented urban environment.

(iv) Have at least 25% of the residential properties sold to citizens of Mauritius or members of the Mauritian diaspora registered with Board of Investment under the Mauritian Diaspora Scheme.

The smart city should have:
(i) Business facilities, with a mandatory innovation cluster.

(ii) Residential properties on the condition that the land area planned for the construction of residential properties does not exceed 50 percent of the total land area

(iii) Affordable housing units for middle-income earners

(iv) Civic centers and leisure amenities

(v) High-quality public spaces that help promote social interaction and a sense of community, including but not limited to gardens, open plazas, cycle routes and pedestrian precincts

(vi) Day-to-day management services

(vii) Use of information and communication technology to sense, analyze and integrate the key information to provide intelligent urban management and services

(viii) The use of technology products or practices resulting in substantial operational cost savings through reduced energy consumption and utility costs

(ix) Measures which to the extent possible –

i. generate their own energy requirements through eco-friendly mechanisms such as solar plants and wind farms
ii. produce their own water needs; and
iii. are autonomous in their waste management systems.

(x) Social programs and obligations.

Expected Benefits from Smart Cities

Through the presentation of the Government Program and Economic Vision Statement 2030, the Government reiterated its engagement to boost the economy through the construction of smart cities. These are expected to change many things in the way of life of citizens as well as in the manner in which business is conducted in Mauritius, and have been positioned as the medium to level up the country's status to a high income economy. Some of the channels through which this can be achieved are discussed below.

1. Investment and Jobs

The emergence of smart cities would give a boost to the construction sector, which has been facing difficulties in recent years due to declining private sector investment and delays in projects, as firms get involved in erecting the required buildings, roads and other infrastructure. Indeed, sizeable investment is expected to occur as depicted in Annex 1. Job creation as well should pick up in various fields. Already, authorities are quoting job creation statistics of around 50,000. Among others, these include workers in the construction, manufacturing, ICT and business sectors with knock-on effects on trade, financial services and real estate.

2. Innovation and growth

Much emphasis would also be laid upon research and innovation. The volume of scientific and technology related activities would rise as these activities would be expected to drive the facilities provided in smart cities. Technology solutions would be required to provide assisted living for the elderly, provide safety and security, monitor traffic as well as enhance medical and educational service. ICT-based concepts such as big data, open data, Internet of Things (IoT), data accessibility and management, data security, mobile broadband, ubiquitous sensor networks would be essential in smart and sustainable cities and would be established on an ICT infrastructure to improve quality of life and promote overall sustainability.

As a result, this sector's activities will grow in volume and diversity and it is expected to directly and indirectly contribute much more to GDP in the future, becoming one of the most important pillars of the economy. People would become more predisposed to acquire new skills and continuously innovate, thus promoting innovation-led growth which would put the country on a higher expansion path.

3. Convenience

At the same time, it is expected that innovation will lead to a more convenient lifestyle for people. Building on the IoT concept and the development of mobile applications, sensors would be placed throughout the smart cities, sending relevant and real-time information to all registered mobile devices users, including updates on traffic, parking spaces, road accidents and so on, enabling citizens to make smart decisions and use their time more productively. Similarly, governance will become more efficient, making use of technology to interconnect institutions. This represents a collection of technologies, people, policies, practices, resources, social norms and information that will interact to support city governing activities. Improved online services as well as other technology applications would support citizen authentication, enable 24X7 access to a wide range of public services and reduce time wasted in queues.

4. Sustainability

A major theme of smart cities is that they should promote sustainability, for instance, by encouraging, to the extent possible, self-sufficiency in water and energy production and recycling activities. Incentives could be reinforced to promote low emission machinery and equipment in industries and households, including transport equipment, which would magnify the impact of "smart" transportation discussed above. Smart application within households should also promote efficiency and reduce energy consumption. For example, if a person falls asleep when watching TV, the TV could automatically switch off. Less energy consumption eventually translates into a low pollution environment.

5. Transparency, accountability and engagement

Following the example of Rio de Janeiro (See Annex 2), transparency would also be a cornerstone of smart cities. Data on various aspects of smart city living would be freely available thereby promoting greater transparency, accountability and citizen engagement. A learn and adapt culture would be promoted, as citizens and authorities measure and analyze the success of initiatives and take corrective measures on a timely basis, as in the example of Chicago City (See Annex 2). In the same vein, cities may come up with ideas to use the crowd to make smarter decisions about how they invest in projects. For instance, the Plymouth City Council has a platform which it runs in collaboration with Crowfunder- a crowd funding site. People can submit ideas for initiatives and even contribute financially if they want to. By taking this approach, the City has been able to engage its people in all its projects and get the latter off the ground. Furthermore, the City gets information about what urban initiatives the people want to see realized and is able to prioritize them.

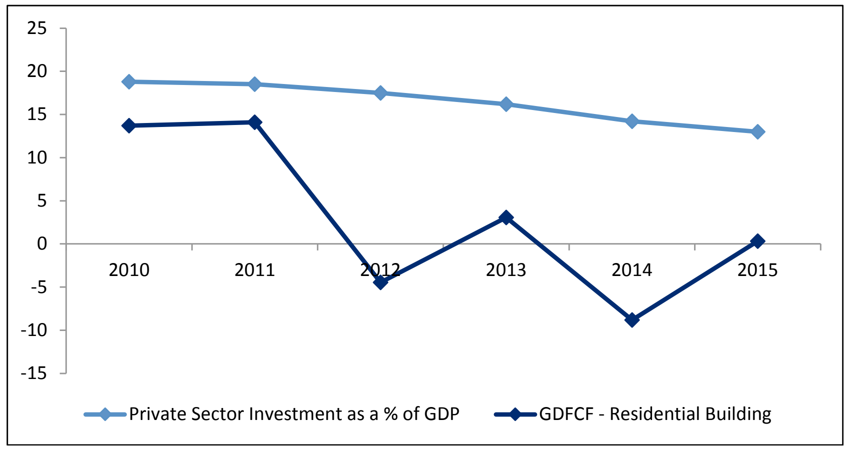
Implementation Challenges

Whereas the realization of the Smart City vision has the potential to help lift the country to high income country status and materially improve living standards, challenges are manifold, as discussed below.

1. Inadequate demand

Eight smart cities were announced as part of the Government Program in 2015. These were meant to transform the lives of Mauritians. Private sector players got involved in the project and subsequently, many announced the construction of smart cities. The question remains however on whether there is a demand for smart cities and whether it is the right time for implementation. Private sector investment has been tepid over the last years and has continuously declined. Firms are holding back on new investment. Real investment in residential buildings grew at only 0.3% in 2015. The five year average growth as well shows an annual rise of 4% only, indicating weak demand.

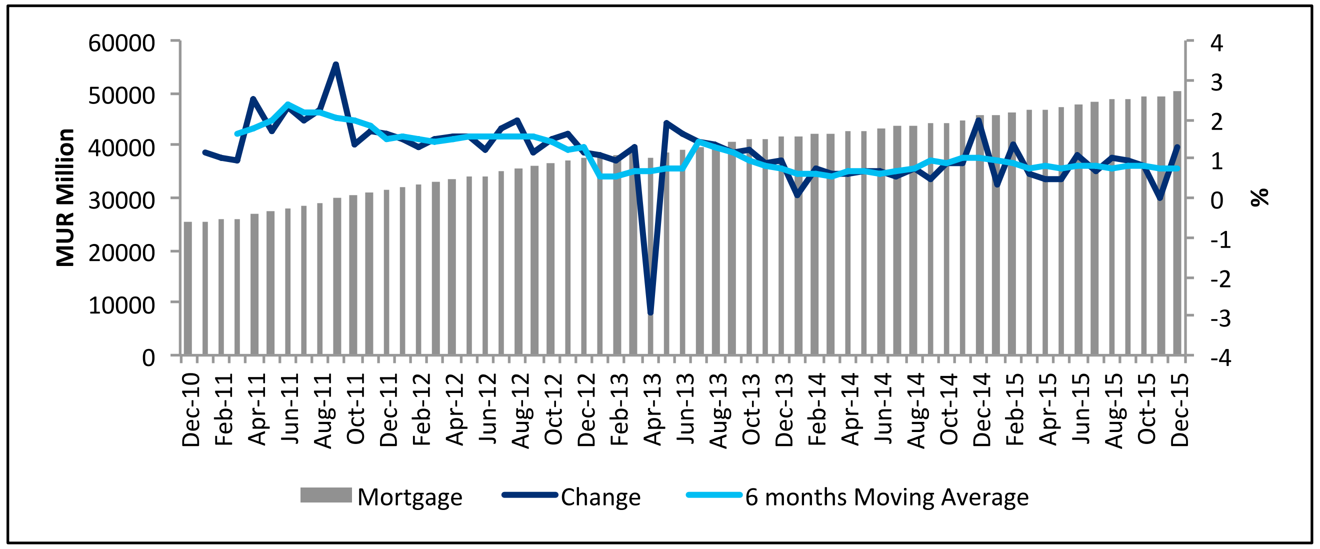
Figure 6.1: Evolution of Gross Domestic Fixed Capital Formation



Source: Statistics Mauritius

The decline in investment in residential buildings is also reflected in the rate of change of amount of credit extended to households.

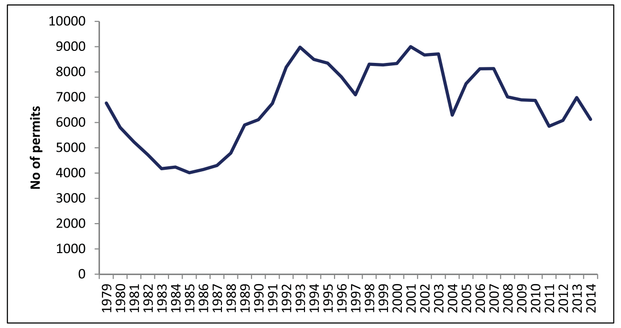
Figure 6.2 Mortgage credit extended by private sector



Source: Bank of Mauritius Monthly Statistical Bulletin January 2016

Though the amount of mortgage credit extended to individuals has risen over the period under consideration, the rate of growth of mortgage credit has gone down.

Figure 6.3: Number of residential permits issued



Source: Statistics Mauritius

Similarly, the number of residential building permits extended has been on a decreasing trend as shown in Figure 6.3. Domestic demand for residential property seems insufficient, at least in the short to medium term, to support the construction of smart cities,given a target population of some 300,000 people, that is, around 85,000 households. Without structural changes to the population structure, including through migration, the demand conundrum could persist even in the long term. In effect, based on current projections, the country's population is already close to its peak, and should start declining in a few years' time.

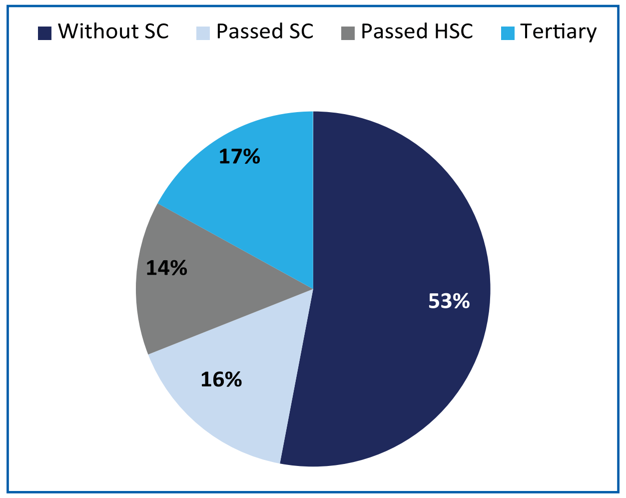
Besides, the construction of smart cities could involve larger initial outlays as compared to traditional projects, which could further restrict demand, although the investment required in smart infrastructure would be expected to pay back over time in terms of efficiency gains and convenience, among others. Promoters and financiers, would, arguably only pursue projects for which demand has been ascertained to a large extent.

2. Competency gaps

The successful construction of smart cities would open up new business avenues and also new fields of activities. For example, big data would become a major component of a smart city; analytics and data modeling would take center stage. Mo reover, expertise on climate, green energy, sustainable urban planning would be required. There would be a need for mobile application users as well as entrepreneurs who would invest in innovation.

The skills set required to carry out all these tasks might not be freely available on the Mauritian market, as gauged by: a low percentage of tech-related employment; a jobless profile with an overwhelming proportion of non-degree holders (see figure 6.4); and an unenviable ranking of 65th and 78th out of 140 countries in respect of technological readiness and innovation respectively, as per the Global Competitiveness Report 2015–16.

Figure 6.4: Unemployment by Qualification



Source: Statistics Mauritius

3. Adapting to a new paradigm – globalization, open data and aging population

Implicitly, the success of smart cities would require the support of foreigners, whether in terms of quasi-population or skills. Even though Mauritius has been a nation which has always welcome foreigners in the form of tourists and even expatriates, there might be fears that foreigners will be competing for jobs and benefits.

On a different note, a smart city would rely hugely on technology, which would be used to monitor traffic, waste management, water supply, energy consumption and also to provide online services, among others. In addition, technology would be used to assess whether the objectives set by the administration are being met or not. Technology would influence many aspects of everyday life.

However, some citizens might not adapt to this. Smart cities involve the use of analytics and the collection of huge amount of data; hence the term big data. Sensors and CCTV cameras would be used throughout the city to gather information. The constant monitoring and analysis of data can have negative ramifications on citizens' morale. Being tracked every day and in all aspects of life such as route taken to work, energy consumption, and water use might be considered by some people as intrusion of privacy.

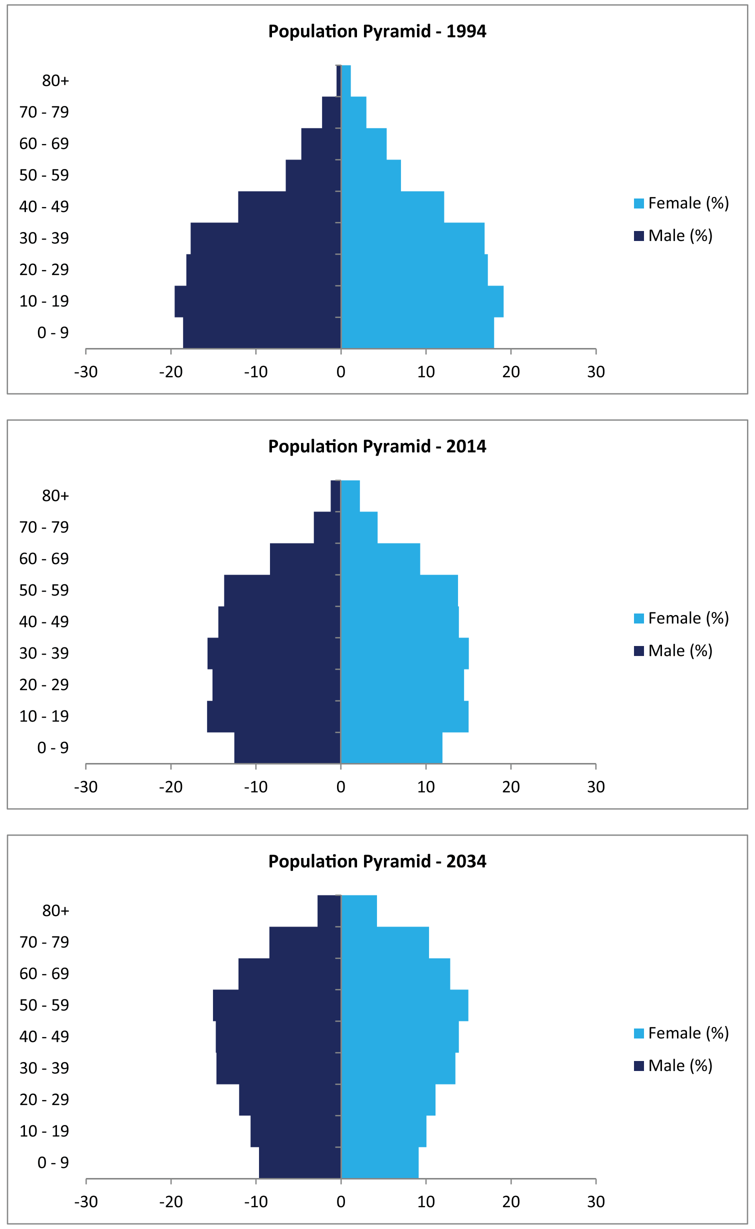
Besides, the changing demographics in Mauritius (see Figure 6.4) might also affect the adoptionrate of smart city projects if due care is not taken to cater to this aspect.

In the 1980s, the population structure was pyramid-shaped, with a large part of the population being young or part of the working population. Over the subsequent decades, however, this structure has undergone changes, notably with a decline in the fertility rate. The dependent population is rising, driven by the share of the elderly segment, and will continue to do so in the foreseeable future if the fertility rate remains around its current level. Should this aspect be neglected, the demand for smart cities might suffer.

4. Information security

The dependence on technology gives rise to yet another issue. A smart city is hugely dependent on forecasting, algorithms and software. Software will be used to keep track of everything- traffic, water, weather, energy consumption etc. However, with ever more sophisticated cases of hacking taking place over the world, there is a risk that information systems supporting the smart city may come under attack. A city could be crippled if hackers gain control of smart city. Unless the security system is excellent, cyber-attacks remain an issue.

Figure 6.5: Changing Population Structure



Source: Statistics Mauritius

Potential Avenues

To mitigate the above challenges, and reap the expected benefits from smart cities, some of the potential steps to consider are discussed below.

1. Set and Manage Expectations

Smart cities would be based on the principles of transparency and citizen welfare. It would thus be helpful to break down the dimensions of welfare into SMART (Specific, Measurable, Attainable, Relevant and Time-bound) objectives, that would help give both an aspiration and a sense of direction to the citizen. At the same time, there would be a greater sense of accountability, and authorities would be able to use data to alter, improve or abandon projects. For example Key Performance Indicators could be set on the time to service citizens, on online utilization of public services or on percentage reduction in energy consumption per capita. Results could be computed and published for different service centers, to establish pain points and address them. In this manner, accountability levels would also be more democratized to avoid bottlenecks.Setting and managing expectations would help citizens gradually and smoothly shift towards a win-win culture of performance and service.

2. Quick Wins

Another way to address resistance to change – which is inherent to long shot projects - is through quick wins. As mentioned earlier, instead of starting from scratch with a greenfield project, brownfield projects can be pursued and can be used as test beds for greenfield smart cities. This would imply improvements that are in line with the concept of smart living within the existing cities and villages. One such initiative could be the extension of online Government services to reduce queuing times and facilitate for example citizen authentication at different service points, both in the public sector and the private sector. Moreover, citizen service centers could be established, potentially on a regional basis, to act as a single point of contact for a range of public services, with emphasis on shifting the citizen towards online and integrated services as far as possible. In this respect, the initiative of the Mauritius Revenue Authority to shift taxpayers to online tax filing through its lucky draw system is commendable, and is indicative of the Maurtian population's eagerness to embrace technology. Another illustration is the high level of interest in the Central Electricity Board's smart grid project. Further quick wins could include flextime systems for a smarter way of living. People will have better balance between work and personal life.

3.Globalize and Up-Skill

Whilst the above initiatives would help drive acceptance and enthusiasm around smart city aspects, the broader question of demand would also have to be addressed, especially if the ambition is to implement a number of new real estate development projects along the smart city concept. Given the current population dynamics, it would appear that a considerable contribution would be required from foreigners in terms of quasi-population or even permanent population. Whereas various studies have demonstrated that migrant population usually have a net positive impact on a country, resistance or sometimes hostility towards expatriates is not uncommon. To address this challenge, a framework should be worked out whereby benefits are clearly seen to accrue to the population. For instance, talent could be attracted in areas where little expertise currently exists, such as big data analytics, with emphasis on training and transferring knowledge to the local population.

It can be also argued that the migration flow could be two-way, with qualified Mauritians also given the opportunity to showcase their expertise or hone their skills in other geographies. Exchange programs with foreign governments could be worked out for win-win partnerships. These initiatives could also be linked with other objectives of the authorities, for instance, greater penetration into the African continent. The Mauritian workforce would become more globalized. To facilitate this, the country's institutions, a fortiori its schools, should align to global standards, and reinforce focus on global languages.

For the long term, changes may have to be brought to the education system and career guidance to cater to the needs of Mauritius. Studies in information technology and software engineering would have to be encouraged. The case of Estonia can be a good blueprint. This country – which has a similar population size as Mauritius (1.3 million people) – boasts very high speed broadband internet facilities, and has a high per capita rate of start-ups. Citizens can pay for parking spaces through their mobile and filing an online tax return takes only about five minutes. These achievements were underpinned by a strong emphasis on information technology and connectivity. For example, all schools became online as early as 1998. In addition, computer coding is taught to five year olds to prepare them for the future labor market. Mauritius might also implement a similar system. Alongside the formal education system, competitions to promote skill development may be held. Hackathons can be organized to enable software developers to find solutions to problems and these solutions can then be upscaled to a smart city level. Start-ups and incubators could also be encouraged. These should prove to be hotbeds for innovations and new technology

4.New Financing Avenues

Considering thathigh initial investment in smart infrastructure might turn off promoters, alternative financing avenues would have to be considered. In some cases, the Government may have to step in. Indeed, in many smart cities throughout the world, Public-Private Partnerships (PPP) has been a favored way of financing projects. For instance, the Centre of Operations in Rio de Janeiro was the result of a PPP. The planned introduction of a Build Operate Transfer Projects Bill in the National Assembly is hence a step in the good direction.

The Government can provide the legal framework to enable the design of innovative financing schemes for smart cities. Private firms can subscribe to these schemes, get funds and then undertake their project. These schemes can be in the form of grants and soft loans which offer longer repayment terms than usual. In return, authorities may have their say on what criteria the project must meet. Financing can also be sought from international organizations, taking advantage of facilities and incentives being offered, such as carbon credits.

Financial services firms can also propose tailor made products for smart cities. In fact, energy efficiency loans are already being proposed in Mauritius. Project bonds are another viable alternative whereby investors invest in a project and receive returns only when the project is completed. Repayment can also be linked to certain social and environmental goals.

Promoters can also propose different models of financing. For instance, taking into consideration that lower running costs would offset higher initial project costs, they could implement a lease-type model, with the help of financial institutions, whereby payments by buyers are made on a monthly basis.

ANNEX 1: SMART CITY PROJECTS IN MAURITIUS

Project	Promoter	Location	Investment (MUR)	Expected Job Creation	Surface Area	Project Description	Status
Omnicane Mon Trésor Airport City	Omnicane Ltd	Plaisance Airport Area	16 billion (Phase 1)	4,800 (3,000 during construction and 1,800 after)	97 acres	The Airport City will comprise a business and logistics park, 3,800 residential buildings, a leisure park and medical and educational facilities	Letter of intent issued by BOI
St Félix Village Project	St Félix Sugar Estates Co. Ltd	St Félix	3.2 billion (Phase 1)	1,000	450 acres	The Village will have a residential area with a marine park. An education hub will also be part of the project alongside a conference center, commercial buildings, offices and sports facilities.	The Ministry of Environment, Sustainable Development and Disaster and Beach Management has provided an EIA permit for the project.
Médine Integrated Park	Médine Ltd	Médine	5 billion	2,000	N/A	The project will comprise an educational village, residential buildings, a business park and a commercial center.	Letter of comfort issued by BOI
Beau Plan Integrated Development	Terra Mauricia Ltd	Beau Plan	2.4 billion	1,100	N/A	Mixed Use Development with residential, office and leisure zones	Letter of comfort issued by BOI
Jinfei Riche-Terre Project	Shanxi Investment Group	Riche Terre	4.5 billion	10,000	N/A	Industrial and Business Park	Letter of comfort issued by BOI
Mont Choisy Smart City	Compagnie Sucrière de Mont Choisy	Mont Choisy	2.5 billion	11,600	N/A	Integrated mixed use project	Letter of comfort issued by BOI
Cap Tamarin	Trimetys Ltd	Tamarin	3.5 billion	2,000	N/A	Clinic, boutique hotel, education zone, residential, retirement homes and office	Letter of intent issued by BOI
Heritage City	Foreign companies	Highlands	30 billion	N/A	336 acres	The city will comprise six buildings and a tower for the Prime Minister's Office. It will also have 200 luxury villas, 400 villas and 400 pavilions.	Announced
Port Louis Smart City	State Land Development Company	Port Louis	52 billion	12,000	Encompass existing city as well as new delopments	The Smart City will comprise an aquarium, a theme park, a cultural art district with a revaluation of China Town and the Aapravasi Ghat Buffer Zone	Announced
Ebène Smart City	Hermès Properties Ltd	Ebène	13 billion	7,500	80 acres	The Smart City will comprise offices, residential buildings, tourist attractions, medical and educational facilities, a startup techno hub and leisure area.	Letter of comfort issued by BOI

Project	Promoter	Location	Investment (MUR)	Expected Job Creation	Surface Area	Project Description	Status
Royal St Louis	Morningside FZ LLC and Groupe Roland Maurel Ltd	Pailles	12 billion	1,265	N/A	A business hotel will be built as well as apartments and buildings for commercial purposes.	EIA permit has been obtained
Yihai Pailles Garden	State Investment Corporation/Yihai International Investment	Pailles	5 billion	N/A	97 acres	Phase I will involve construction of 808 apartments, a commercial center, one office tower and two restaurants. Phase II will see the construction of a hotel and casino. Construction of 88 villas will be the Phase 3.	Letter of comfort issued by BOI
Azuri Smart City	Haute Rive Holdings Ltd	Haute Rive	2 billion	150	10 hectares	The Smart City is part of the Azuri's master plan. It will comprise 34 villas built under the Property Development Scheme. There will be residential buildings, commercial buildings, tourist zones, educational and medical facilities and leisure amenities.	The Ramsar Committee under National Development Unit has given its green light. The District Council of Riviere du Rempart has also given its consent.
Roches Noires Smart City	YIHE Group	Roches Noires	6 billion	1,300	N/A	Mixed Use Development with residential morcellement, hospitality, education and medical zones	N/A

Source: Various Media and Announcements

ANNEX 2: MODEL SMART CITY – SMART CITY SUCCESS STORIES

CHICAGO UNITED STATES OF AMERICA

The city of Chicago underwent a major transformation in 2011 to achieve smart city status. The transformation occurred over a short period but was driven by strong leadership and well aligned governance structure. The smart city was built on the concept of "City as a Platform". Products and services would be built on city owned resources. The city invested in superfast broadband infrastructure, community engagement and projects aimed at fostering technology innovation. The core drivers for the Chicago smart city were transparency, accountability, analytics and economic development. The city is accountable for expenditure of public money, which drives investment into smarter procedures and better ways of operating. It also tracks metrics and uses analytics to offer new insights into data. New businesses and services have also been developed based on access to new datasets.

Strong leadership combined with a robust partnership with civil society has enabled the transformation of Chicago into a smart city. The mayor also played a dominant role by recognizing the importance of data and technology. He created two new roles: Chief Technology Officer and Chief Data Officer. The former position advises the Mayor on strategic technology matters while the Chief Data Officer one is responsible for creating open data policies and collating the City's spatial data. Putting these two positions into the Mayor's office has also been beneficial.

The city's transformation has also been underpinned by the practice of rolling out projects on a pilot basis. Pilot basis projects are seen as a useful way to gain feedback and test real life scenarios. If successful, the projects are rolled out on a grander scale.

The city has made USD 400,000 in savings by switching to cloud-based productivity tools. Another project is intended to save money by enabling insight into how the city operates to enable more efficient operations. The city also works with universities to conduct surveys and help understand the impact of Chicago's work.

RIO DE JANEIRO BRAZIL

Authorities in Brazil have embarked upon the transformation of Rio de Janeiro into a smart city. The city has been making use of Public Private Partnerships to help fund infrastructure projects as well as stimulate private growth. The City partnered with IBM and Cisco to set up a Centre of Operations to support response to natural disasters but also facilitate significant cross-disciplinary working. This has been the city's primary investment in smart technology. The Centre of Operations is also used to channel smart city investments.

The Centre houses representatives from over 30 departments fostering a culture of cooperation and coordination as opposed to a silo mentality.

Transparency is also a cornerstone of the Centre of Operations to the extent that a large amount of data is freely available through a dedicated data portal as well as through the Centre of Operations. Free flow of information has helped manage the city. The data portal provides information about crime rate and demographics while the Centre of Operations holds information for everyday management. The entire city is monitored real time at the Centre of Operations.

To attract new smart city investments, Rio de Janeiro has also set up an agency called Rio Business. The agency provides the private sector with information about the city and supports firms that want to conduct activities in the city.

The administration has created a strategic plan and a Public Management Office (PMO) to ensure that the city is achieving its goals. The PMO has to monitor progress on projects and also ensure that the projects are having the expected impact and citizen value. An incentive scheme has been put in place for all city workers, including teachers, doctors and back end administration workers, among others, whereby they are rewarded through a bonus payment if they achieve their targets.

Another innovative way in which the city is tackling its problems is by making use of its youth. Local teenagers map the city's favelas using digital cameras sitting in old bottles which are launched via kites. Smart phones are then used to take pictures of danger points such as rubbish heaps which can be a breeding ground for mosquitoes. The data is uploaded to a website and an online map. Changes are then made.

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