TURKS & CAICOS ISLANDS FINANCIAL SERVICES COMMISSION

FINANCIAL STABILITY REPORT

December 2016

Turks and Caicos Islands Financial Services Commission

FINANCIAL STABILITY REPORT

as at December 2016

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Financial Stability Report 2016

Turks and Caicos Islands Financial Services Commission

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Preface

The Turks and Caicos Islands Financial Stability Report is an annual publication which describes the overall risks and threats to financial stability in the Turks and Caicos Islands ('TCI') and the resilience of the financial system in the context of those assessed threats. The report is produced by the Turks and Caicos Islands Financial Services Commission ('the Commission'), pursuant to its mandate to monitor financial services business conducted in and from within the TCI. The report is available to the public for download at http://www.tcifsc.tc.

The Commission has sole responsibility for regulation and supervision of financial services in the TCI. The TCI does not have a central bank to provide extraordinary liquidity and to serve as lender of last resort in the event of systemic distress or when there is a threat to financial stability. In the absence of a central bank, although formal responsibility has not yet been assigned, the Commission is the de facto body responsible for monitoring financial stability in the TCI, and shares responsibility for promoting financial stability with the Ministry of Finance and Governor's Office. This tri-partite relationship is critical to the work of preventing and responding to domestic financial crises. Owing to the cross-border presence of a considerable number of financial institutions operating in the TCI, financial stability monitoring initiatives also heavily leverage established mechanisms for collaboration with regional and international supervisors.

This 2016 edition seeks, among other things, to:

(i) describe the overall risks and threats to financial stability in the TCI and discuss the resilience of the system in the context of those assessed threats;
(ii) review trend movement of specific systemic risk indicators and stress test exercise outcomes;
(iii) contextualize the levels/types of systemic risk identified within the current supervisory framework;
(iv) discuss emerging risks to system stability and their likely implications; and
(v) outline the ongoing and planned policy responses to some of these developments.

Relative to last edition, this report discusses a wider set of quantitative risk indicators as well as some of the policy measures afoot to address some of the risks which have been identified. As such, it is analytical in nature with a focus on risk detection and monitoring, and should be read in conjunction with other more descriptive reports produced by the Commission like the Annual Report and other periodic reporting.

This report focuses only on the domestic financial system, and therefore excludes financial institutions licensed to conduct business solely outside of the TCI. This includes the TCI's sole international bank as well as the several Producer Owned Reinsurance Companies (PORCs), captive insurers and active asset managers which operate solely outside of the TCI, as these classes of business have been assessed as posing relatively lower financial risk to the TCI. The National Insurance Board (NIB) which was included in the financial system in previous editions is also not covered in this report.

The FSR is intended to enhance understanding of financial system risks and developments, and highlight policy measures being put in place to respond to these risks. Publication is also intended to stimulate discussion among policymakers, financial market participants and the general public on financial stability issues.

Acknowledgments

The Commission wishes to acknowledge the various consultants and stakeholders – including the Statistical Unit and financial sector participants – who contributed to the production of this report.

In particular, this edition benefitted from thoughtful guidance and advice of consultant, Samer Y. Saab, on the scope and R. Barry Johnston on development of the Commission's methodology for identification of D-SIBs.

Abbreviations

AML	Anti-money laundering
BOT	British Overseas Territory
CAR	Capital adequacy ratio
CFT	Counter financing of terrorism
D-SIB	Domestic systemically important bank
DIO	Domestic Insurance Ordinance
GDP	Gross domestic product
GFC	Global financial crisis
IMF	International Monetary Fund
NPL	Non-performing loan
ROA	Return on assets
ROE	Return on equity
TCI	Turks and Caicos Islands
TCIG	Turks and Caicos Islands Government

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1.0 Executive summary

The TCI financial system performed well and remained stable throughout 2016. This was despite slower than projected global growth, the effects of which caused moderate slowdown in domestic environment. System resilience was most strongly buoyed by the performance of the banking sector which, despite contracting by a slender margin in 2016, remained highly liquid and well-capitalized. That sector reported an aggregate CAR of 25.5 per cent as at December 2016, well in excess of the statutory minimum of 11 per cent. Revamped credit stress tests indicate that current capital buffers should provide strong support for banks to withstand plausible, moderately severe shocks relating to loan quality.

The Commission, in conjunction with relevant stakeholders and policymakers, has initiated steps to further buttress the resilience of the system. Because banking activities continue to underpin almost every aspect of the TCI financial system, a number of the policy measures, including ongoing development of a comprehensive supervisory regime for D-SIBs and expansion of prudential liquidity requirements, are targeted at that sector. In tandem with these measures, the Commission has updated its medium-term priorities to focus on several legislative and policy initiatives to strengthen supervision of non-banks. In particular, there has been considerable work done to strengthen supervisory oversight of the insurance sector to increase protections for policyholders.

Also among the policy matters on the Commission's agenda is the issue of de-risking, which has already resulted in the alteration or termination of banking relationships with some TCI customers. The financial stability impact of de-risking is potentially far reaching, however very few concrete solutions have been derived to date. To the extent that de-risking represents, in part, a response to actual or perceived AML/CFT weaknesses, the Commission is working to ensure that regulatory policies and methodologies not only comply with international requirements and expectations, but as much possible, do not unwittingly or unnecessarily prevent access to financial services. The Commission is also working alongside other regional regulators and policymakers to respond to the issue.

Notwithstanding the various challenges and downside risks which threaten stability, the TCI system should continue to show signs of strengthening, provided that forecasts for accelerated economic growth, both globally and in the TCI, hold through 2017 and beyond. Our overall assessment of the financial stability landscape is for near- to medium-term threats to system stability to remain low, contained by banks' improving asset quality and strong capital buffers. Growth predictions could be negatively impacted by unsettled geopolitics and a rise in inward-looking, protectionist policies, which may stymie the pace and direction of global recovery.

2.0 Financial system overview

2.1 Composition and size

The financial system is the second largest contributor to the TCI economy, behind tourism. At the end of 2016, the formal financial system held assets of $1,774.1mn, roughly equivalent to 186.7 per cent of GDP *(Refer Table 1 and Figure 1)*.

At that date, the system comprised 6 domestic banks, 19 insurance companies, 9 trust companies and 3 money transmitters, all regulated and supervised by the Commission and licensed under the Financial Services Commission Ordinance and its attendant subsidiary legislation.

System assets have declined since 2014 and this trend continued during 2016 by a further 1.2 per cent. Contraction was mainly driven by compression of banks' loan books for a second straight year.

Notwithstanding, the overall structure of the system reflected little change during 2016, as the overwhelming majority ($1,703.9mn or 96.0%) of system assets were deployed within the banking sector, with the remainder shared among the insurance, trust and money transmitter sectors.

After years of consistent balance sheet expansion, the insurance sector contracted by a slender (0.2 per cent) margin in 2016 to account for $46.3mn or 2.6 per cent of system assets.

Though they account for a very small portion of the system, the trust and money service sectors have seen steady growth in assets. At end 2016, proprietary trust sector assets totaled $19.7mn and money transmitters, $4.2mn, each accounting for less than 1 per cent of system assets.

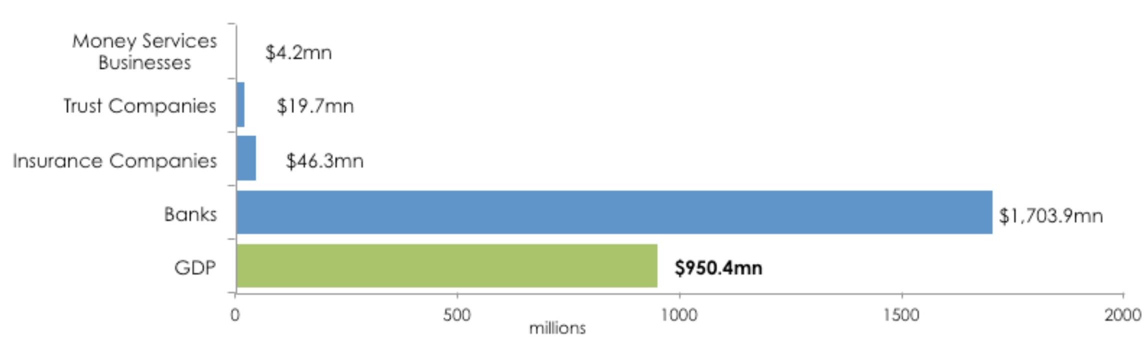
Table 1: Size and composition of the financial system

Gross Assets (000s)

	Dec-16	Dec-15	Dec-14	Dec-13
Overall System	**1,774,098**	**1,783,204**	**1,830,454**	**1,799,563**
Banks	1,703,867	1,719,973	1,769,639	1,743,145
Insurance Companies	46,314	46,409	42,274	37,679
Trust Companies	19,739	14,035	15,992	16,683
Money Transmitters	4,178	2,787	2,549	2,056

Source: Financial Services Commission

Figure 1: Sector size relative to GDP



Source: Financial Services Commission

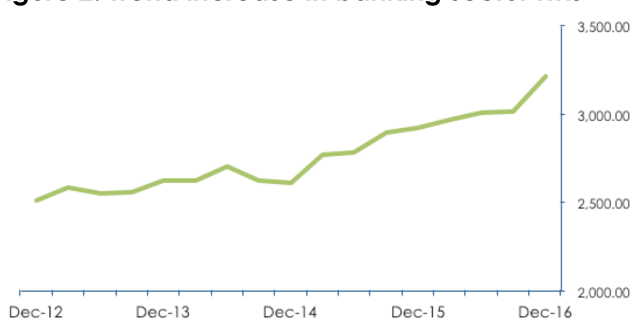
2.2 Ownership

The majority of system assets are foreign owned. All six domestic banks operating in the TCI are owned either by established foreign banking groups or holding companies, while all but two of the insurance companies operating in the domestic space are owned by large regional insurers. Similarly, the money transmitter companies are all foreign-owned and operated. Only the trust sector is majority domestically owned. By virtue of its predominantly foreign ownership, the TCI financial system is exposed to considerable cross-border risks.

2.3 Systemic importance and concentration

Concentration is a chronic and key feature of the TCI financial system, particularly within the critically systemic banking sector. There is significant concentration in that sector, as at the end of 2016, over 82 per cent of banking assets were held among three Canadian banks. Increasing concentration within that sector has been borne out in the trend increase in HHI[1] in recent years *(Refer Figure 2)*.

Figure 2: Trend increase in banking sector HHI



Source: Financial Services Commission

As at end 2016, the Commission has designated 4 banks as systemically important[2]. Total D-SIB assets accounted for over 90 per cent of total system assets. Those 4 banks are the only financial institutions which have been assessed as systemically important within the TCI.

2.4 Main activities

Despite the significance of financial system assets to GDP, the nature of financial market activities in the TCI remains simple and primarily involves intermediation and deposit transformation. There is no active interbank market, capital market, derivatives operations, or wide-scale wholesale funding activity.

While banking in particular remains the life-blood of the Islands' financial system, the trend reduction in that sector's assets is perhaps reflective of the growing share of lending being undertaken by trust companies and non-bank intermediaries.

- **Banking**

Even with the growing presence of non-banks, the financial landscape is nonetheless still dominated by banks, both because of their size and the critical services they provide, including to other financial entities. The three Canadian banks hold a significant portion of assets for non-banks as operational and other balances, in satisfaction of restricted deposit and other statutory requirements.

Lending remains a core driver of banking activity and provides the main source of profit for banks. Typically, just over half of all sector lending is extended for personal use, including acquisition of property, predominantly to residents. In addition, an increasing share of sector assets is being upstreamed for liquidity management, as part of centralized group treasury operations. These assets are roughly two-thirds funded by customer deposits, with the remainder being derived from capital and intra-group funding.

- **Insurance**

Insurance licensees in the TCI fall within the broad categories of life and general insurance providers.

1 The Herfindahl-Hirschman Index (HHI) is a measure of market competition. Index values range from 0 (perfectly competitive) to 10,000 (perfect monopoly).

2 The methodology used by the Commission for identification of D-SIBs was developed by R. Barry Johnston (2014), an international banking consultant, and is based on the Basel Committee's recommended framework, which assesses banks based on factors of size, interconnectedness, degree of substitutability and complexity to derive a composite systemic importance score.

Among life insurers, the main lines of business are credit life – reflective of the requirement often placed on persons to obtain life insurance to qualify to borrow from banks – and group life.
Insuring of property, health and motor vehicle chattel are the dominant lines within the non-life insurance segment.

• **Money transmitters**
The money transmitter sector continues to play an important role in the financial infrastructure by facilitating international payments for the expatriate population in particular. Though the sector is currently being negatively impacted by ongoing regional de-risking *(Refer section 7)*, the three licensed firms continue to expand their agent and sub-agent networks and increase the range of ancillary services provided.

During 2016, total remittance outflows increased to \$96.7mn, from the \$87.0mn recorded at the end of 2015, while inflows increased to \$7.5mn, up from the \$6.3mn recorded in 2015. Haiti and the Dominican Republic were again the largest receivers of outbound funds, together accounting for over 50 per cent of outflows.

• **Trust companies**
In addition to traditional asset management services, segments of the market specialize in provision of other services including offering and investing in private mortgages, as well as ancillary credit card services.

Though traditional trust business has slowed over the years, it is anticipated that new trust legislation enacted in 2016 will help to reinvigorate and bring new business to the sector.

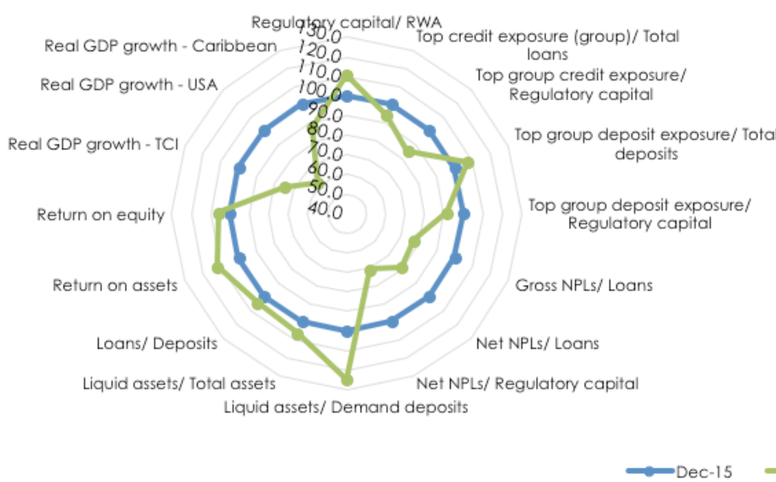
At the end of 2016, the value of assets held under fiduciary arrangements stood at \$752.5mn.

3.0 Financial stability trends

The financial system remained stable during 2016, even as the balance of systemic risk factors shifted. On the whole, system stability was primarily impacted by global and domestic macroeconomic forces, and developments within the banking sector.

The financial stability cobweb *(Figure 3)* depicts the mixed pattern of changes observed during 2016.

Figure 3: Financial stability cobweb



The 2016 Risk Cobweb
The adjacent risk cobweb depicts the spread and direction of changing risk dimensions over the year. The inner circle reflects the base level indicators as at 2015, and all values recorded for that year have been calibrated at 100.

Risk indicators were selected based on relevance in the TCI context, ease of collection and monitoring, and ease of understanding.

While there was improvement across most risk dimensions, the notable exceptions were in those risk factors related to performance in the domestic and international macro environments, caused by general slowdowns in GDP growth. Risks to financial stability emanating from the global economy increased slightly during 2016 as growth slowed in both advanced and emerging economies, including the USA, UK and parts of the Caribbean.

Risks within the domestic macro-economy also intensified, with a 25 per cent relative deceleration in real GDP growth during 2016. Despite this slowdown in 2016, the banks' increased capital, earnings, improving asset quality and greater liquidity have served to reduce financial stability risks *(Refer Table 2)*.

Table 2: Financial stability indicators

		Indicator	2015	2016	Risk Level[3]
…the international environment	US economic growth	real GDP growth - US	2.6%	1.6%	
	Caribbean economic growth	real GDP growth – Caribbean average	3.9%	3.4%	
…the domestic environment	economic growth	real GDP growth - TCI	5.9%	4.4%	
	tourist arrivals	number of arrivals	1.3mn (actual)	1.2mn (actual)	
…risks emanating from the banking sector	earnings	ROE	11.4%	12.0%	
		ROA	1.6%	1.8%	
	credit growth	loan growth	925.4mn (actual)	880.9mn (actual)	
		loans / deposits	79.1%	83.1%	
	liquidity	liquid assets : demand deposits	73.6%	90.9%	
		liquid assets : total assets	42.4%	45.1%	
	asset quality	gross NPLs : loans	14.6%	11.3%	
		net NPLs : loans	7.6%	6.1%	
		NPLs : capital	29.7%	21.3%	
	lending / deposit concentrations	largest loan exposures : total loans	10.0%	9.4%	
		largest loan exposures : capital	39.2%	33.1%	
		largest deposits : total deposits	5.6%	6.0%	
		largest deposits : capital	27.6%	25.3%	
	capital adequacy	CAR	23.6%	26.1%	

Sources: IMF World Economic Outlook Database / Caribbean Development Bank 2016 Economic Review, 2017 Forecast / Strategic Planning & Policy Department, Ministry of Finance, Investment and Trade / Financial Services Commission

[3] The risk levels represent the overall current assessment of the Commission and have been determined and incorporate relevant prudential and other available data, including assessment of qualitative factors. Colours and position on the gauge indicate the current risk intensity for each indicator. Reference coding: green = low potential risk; yellow = moderate potential risk; red = high potential risk.

4.0 Macroeconomic environment

4.1 The global economy

Global economic growth remained relatively sluggish in 2016, bridled by weaknesses in some advanced and emerging economies. The global economy grew by 3.1 per cent, down from 3.5 per cent in 2015 *(Refer Figure 4)*. This slowdown continued a multi-year trend of anemic growth in several economies.

Figure 4: Global economic growth (%)

Source: Financial Services Commission

At the start of 2016, low commodity prices and weak demand contained growth, putting pressure on commodity exporters. In the second half of the year however, the combination of limiting of supply by oil producers and increasingly optimistic forecasts for global demand quickened the pace of economic activity, and buoyed commodity prices. These price increases lessened strictures for exporting countries and eased deflationary pressures globally.

Financial markets also showed signs of improvement during 2016. Despite some volatility influenced by geopolitical uncertainties, financial institutions benefited from an improved climate for earnings, on the heels of increased long-term interest rates and gains in asset prices.

Global equity markets also approached, and in some cases exceeded, high water marks. Several of the major US exchanges recorded all-time highs late in the year, ahead of anticipated policy shifts on tax reform, infrastructure spending and loosening of regulatory restrictions, particularly relating to Dodd-Frank. [4]

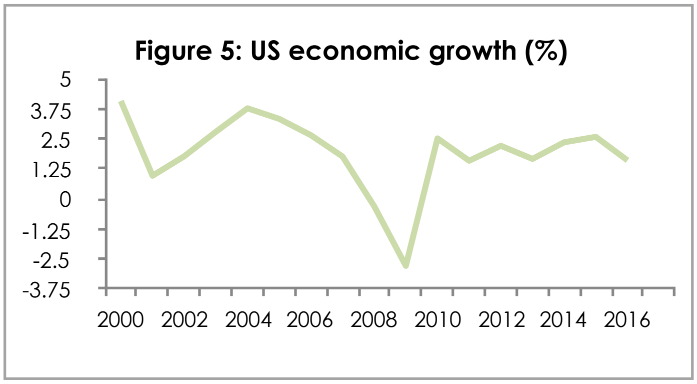
Based on this favorable upturn, the IMF's World Economic Report has revised the forecast for 2017 global growth upwards to 3.5 per cent, in anticipation of continued economic stabilization in developed countries and price recoveries among commodity exporters. Despite slightly dampened outturn in recent years, emerging market and developing economies are expected to continue to lead global growth, expanding by a rate of 4.5 per cent in 2017, up from 4.1 per cent in 2016. This projection reflects the expectation for continued recovery of oil and other commodity prices. The US is expected to lead growth among developed countries, spurred by rising confidence and expected fiscal easing. Several other developed countries – including Canada and several within the Eurozone – are also expected to pursue expansionary strategies. As a group, advanced economies are expected to grow by 2.0 per cent in 2017.

The case for optimism is fragile however, as global outturn and financial stability remain threatened by a number of downside risks, including the potential for spillover of geopolitical risks; the impact of increasing protectionist policies in some countries; and China's ability to gradually reduce its reliance on investment and imports to achieve growth.

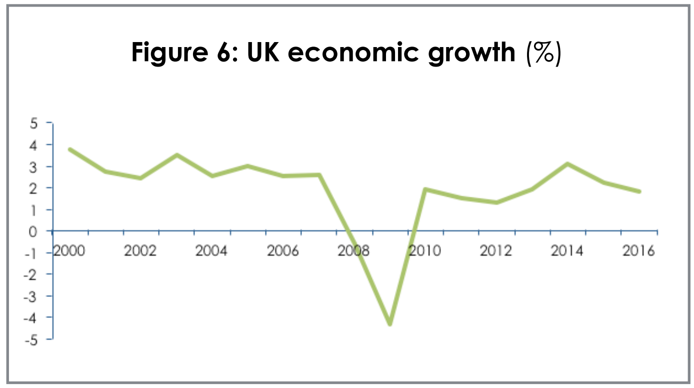
4.1.1 The United States

US GDP growth in the post-GFC recovery period has been stable but slower than projected. During 2016, real GDP growth slowed to 1.6 per cent, down from 2.6 per cent in 2015 and less than the consensus prediction of 2.2 per cent *(Refer Figure 5)*. Weak growth was in large part attributable to lackluster business investment and a hike in the trade deficit. Average inflation rose to 1.3 per cent in 2016 while unemployment remained under 5 per cent throughout the year, with the number of unemployed persons estimated at roughly 7.5mn.

[4] The Dodd-Frank Act (fully known as the Dodd-Frank Wall Street Reform and Consumer Protection Act) is a United States federal law that places regulation of the financial industry in the hands of the government. The legislation, which was enacted in July 2010 on the heels of the GFC, sought to strengthen financial regulatory processes and limit risk by mandating increased transparency and accountability.



Source: IMF World Economic Outlook database



Source: IMF World Economic Outlook database

Still, the growth rally seen in the third quarter may be a tentative signal that the US economy is emerging from a soft patch and poised for further strengthening on the heels of projected fiscal stimulus and rising employment and wages. These, together with anticipated higher levels of corporate investment and promised tax reforms are projected to fuel expansion in household spending, including on travel and related goods and services. The US economy is expected to grow by 2.3 per cent in 2017.

While macro-financial indicators are on the whole positive and markets were buoyed somewhat at the end of 2016 by a 'Trump effect', growth prospects will hinge in large measure on how the confluence of policy changes promised by the new Administration and Congress including on trade, immigration, tax reform and deregulation impact the US and other economies. Outlook is nonetheless clouded by the prevailing air of uncertainty until the raft of proposed policies is activated and its effects seen.

4.1.2 The United Kingdom

Despite mid-year market turbulence following the surprise outcome to the EU referendum, the UK economy ended 2016 with a positive 2.0 per cent growth *(Refer Figure 6)*.

Other economic indicators revealed a mixed picture. The value of the sterling declined markedly in the hours following the vote, and did not regain much of the value lost against the US dollar and euro up to the close of 2016. Falling oil prices and the residual strength of the sterling contained inflation to under 2 per cent during the year. Going forward however, the decline in the value of the sterling may cause the cost of imported goods to rise, and drive inflation back up. As a positive, the unemployment rate fell during 2016 and there was a noticeable, albeit slow recovery in real wages, as the rate of average annual pay growth edged above inflation.

Even though economic growth did not slow in 2016 in line with many analysts' predictions, the consensus view is for further slowdown, with projected growth of between 1 and 2 per cent in 2017. Uncertainty still abounds about the future of the UK economy and the value of the sterling going forward, including the impact on consumers' purchasing power. It also remains to be seen how the UK's growth prospects and its position as a global financial services hub will be affected over the medium term by shifting migration and trade arrangements as it exits the EU.

4.1.3 The Caribbean region

Economic growth slowed across the Caribbean during 2016, as the region as a whole recorded a 0.9 per cent reduction in real GDP, lagging behind most other emerging market groups *(Refer Table 3)*. Within this regional trend however, outturn was mixed. While several of the service-based economies saw modest growth of between 0.9 and 4.4 per cent on the heels of recovery in tourism and construction, regional outturn was constrained by contraction within the large commodity producing economies, especially Trinidad and Tobago. Hurricane Matthew also stymied growth in Haiti and the Bahamas. *(Refer Table 3.)*

Table 3: Caribbean countries' growth (%) in real output

	Weight (2015)	2012	2013	2014	2015	2016
Anguilla	0.40%	-1.9	0.5	5.6	2.8	3.8
Antigua	1.77%	3.4	1.5	4.7	4.1	4.4
Bahamas (The)	12.05%	3.1	0.0	-0.5	-1.7	0.3
Barbados	6.45%	0.3	-0.1	0.2	0.9	1.6
Belize	2.24%	3.7	1.3	4.1	2.9	-1.2
British Virgin Islands (The)	1.34%	-4.6	-0.3	-0.3	0.9	2.2
Cayman Islands (The)	4.94%	1.2	1.2	2.2	2.8	3.2
Dominica	0.73%	-0.8	1.9	3.7	-1.8	0.9
Grenada	1.12%	-1.2	2.4	7.3	6.2	3.2
Guyana	3.16%	4.8	5.2	3.8	3.2	2.6
Haiti	7.95%	2.9	4.2	2.8	1.2	1.1
Jamaica	17.68%	-0.5	0.2	0.5	0.9	1.7
Montserrat	0.09%	3.5	2.0	3.7	-1.4	1.2
St. Kitts & Nevis	1.03%	-0.9	6.2	6.1	5.0	2.8
St. Lucia	1.64%	-1.4	0.1	0.4	1.9	0.0
St. Vincent & the Grenadines	0.97%	1.3	2.5	0.2	0.6	2.8
Suriname	4.68%	3.1	2.8	1.8	-2.7	-9.0
Trinidad & Tobago	30.68%	1.3	2.3	-1.0	-2.1	-5.0
Turks and Caicos Islands	**1.11%**	**-2.5**	**1.3**	**4.6**	**5.1**	**4.4**
ALL CARIBBEAN	**100%**	**1.2**	**1.4**	**1.5**	**0.4**	**-0.9**

Source: Caribbean Development Bank 2016 Economic Review, 2017 Forecast

Inflation outcomes were also mixed. Several of the region's smaller economies saw either negative or very low inflation. Illustratively, Jamaican inflation fell to a 50-year low of 1.7 per cent while at the other end of the spectrum, drought conditions put upward pressure on inflation in Belize, Guyana and Haiti. Suriname recorded the steepest rate of inflation, over 60 per cent, because of exchange rate adjustments and depreciation.

Analyst forecasts point to improved performance and growth of 1.7 per cent for the region in 2017, driven by an expected uptick in tourism and the scope provided by prevailing low interest rates for Caribbean economies to lower their financing costs.

Predictions could however be threatened by a number of downside risks including lower than projected tourist arrivals caused by poor economic conditions in North America and Europe or the lingering threat of the Zika virus on health services and as a deterrent to tourism.

4.2 The domestic economy

In an environment of lackluster global growth, the TCI economy continued to grow at a steady, albeit moderate pace. During 2016, real GDP grew by an estimated 4.4 per cent, outpacing several of its regional and international trade partners. Though this represented a slowdown from the 5.9 per cent estimated for 2015 and predictions point to further

Table 4: Domestic macroeconomic indicators

	Actual		Forecast	Estimate	Projection
	2014	2015	2016	2017	2018
Real GDP (%)	6.7	5.9	4.4	4.3	5.3
Inflation (CPI) (%)	2.3	2.3	2.2	2.0	2.0
Unemployment (%)	12	11	10	8	7

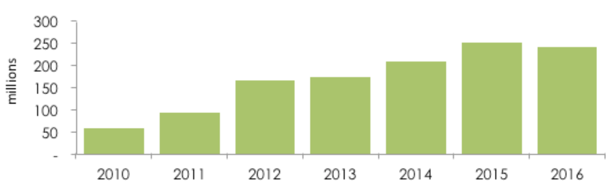
Source: Strategic Planning & Policy Department, Ministry of Finance, Investment and Trade

slowing to 4.3 per cent in 2017, growth prospects remain healthy.

During 2016, inflation was contained at 2.2 per cent, slightly lower than the 2.3 per cent recorded in 2015. Economic improvement was also signaled by the downward trajectory of unemployment, which was estimated at 10 per cent in 2016, and which is projected to continue to decline through 2017. *(Refer Table 4.)*

Upward trending real estate sales and tourist arrivals in recent years are also strong indicators of economic recovery. Though real estate sale volumes in 2016 were slightly lower than in 2015, levels are considerably above those seen in the aftermath of the GFC. In 2016, recorded annual sales topped $250mn *(Refer Figure 7.)*

Figure 7: TCI real estate sales volumes (US$)



Source: Turks and Caicos Real Estate Market Report 2016 / Sotheby's

Tourist arrival levels are also high. Strongest recovery to date has been in the stay-over category, which has increased at an average rate of almost 14 per cent per year since 2012. Cruise ship arrival numbers have dipped slightly since peaking in 2014, but remain among the highest in the Caribbean region *(Refer Table 5.)*

Based on these positive signals, tourism-related revenues are forecast to trend steadily upwards.

Due to the relative importance of tourism and its related industries to the overall TCI economy, outturn in the foreseeable future is heavily dependent on the continued performance of those sectors. Near term growth prospects are however constrained by the fact that occupancy levels are at or near inventory capacity. Plans are advisedly afoot for commencement of construction work on at least two major resort projects on the island of Providenciales. This expansion will not only increase the stock of rooms, but will also usher in diversifying foreign direct investment.

Given its reliance on foreign revenues and investment, the TCI economy remains highly susceptible to the spillover effects of regional and global risks, particularly emanating from North America, the UK and within the Caribbean. Growth could fall below projections should any of a number of downside risks crystallize, including poor economic performance, rising unemployment, or reduced purchasing power in any of the tourism source markets; natural disasters; an upsurge in local crime; or unforeseen global or macroeconomic shocks.

Table 5: TCI tourist arrivals

	2012	2013	2014	2015	2016
Cruise Ship Passengers	676,647	778,920	971,838	929,734	846,963
Stay-Overs	291,723	290,587	357,722	385,531	453,612
Total Arrivals	968,370	1,069,507	1,329,560	1,315,265	1,300,575

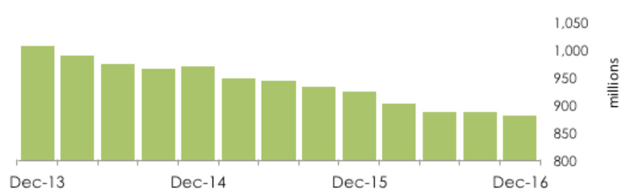
Source: Tourist Board / Strategic Planning & Policy Department, Ministry of Finance, Investment and Trade

5.0 Banking sector performance

5.1 Loans

The stock of banking sector loans contracted during 2016, to $880.9mn, down $44.5mn or 4.8 per cent from 2015 *(Refer Figure 8)*. This trend contraction in loans was mainly a consequence of banks' ongoing clean-up of legacy NPLs.

Figure 8: Banking sector loans



Source: Financial Services Commission

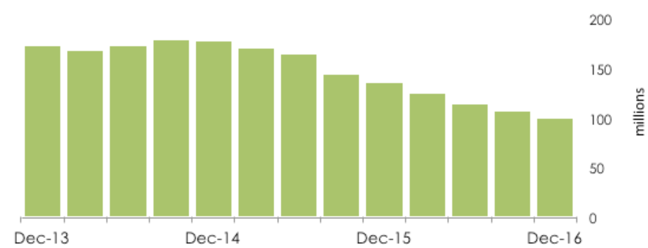
The overall pace of loan originations also slowed across the sector with banks' tightening underwriting standards.

The distribution of credit by economic sector remained relatively unchanged, with the majority of credit allocated to the 'personal' and 'construction and land development' sectors, which accounted for 55.4 and 16.5 per cent respectively.

5.2 NPLs

Credit risk levels have fallen, largely consequent on banks' balance sheet tidying. Banking sector NPLs fell to under $100mn for the first time since the GFC, declining by 26.5 per cent or $35.9mn to close out 2016 at $99.5mn *(Refer Figure 9)*.

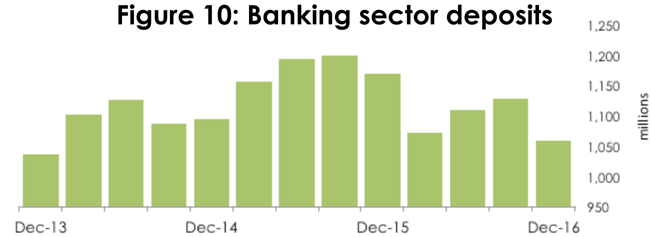
Figure 9: Banking sector NPLs



Source: Financial Services Commission

Following from this reduction, the ratio of NPLs to total loans improved to 11.3 per cent, down from 14.6 per cent a year prior. The ratio of NPLs less specific provisions to capital also improved to 24.2 per cent, down from 33.0 per cent at the end of 2015 *(Refer Figure 10)*.

Figure 10: Banking sector deposits



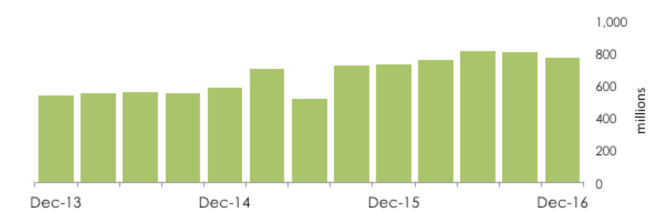
Source: Financial Services Commission

This overarching trend indicates improvement in loan quality across almost every sector, as NPLs declined within the 'construction and land development', 'distributive trade', 'professional' and 'personal' categories. Bucking this trend, NPLs within the 'tourism, entertainment and catering' category remained relatively flat from year to year, while the category of 'other loans' contributed a nominal increase in NPLs of $0.9mn.

5.3 Deposits and borrowings

Loans were primarily funded from customer deposits, which also contracted in 2016. Sector deposits declined by 9.4 per cent to $1,060.0mn, following net withdrawals of $109.4mn over the year, (*Refer Figure 11)*. The effect of the steeper reduction in deposits than loans was improvement in the ratio of loans to deposits, which moved from 79.1 per cent in 2015, to 83.1 per cent at end 2016.

Figure 11: Banking sector liquid assets



Source: Financial Services Commission

Owing to this reduction being primarily driven by time deposits, the distribution of deposits shifted more in favor of demand and savings deposits. These two categories combined accounted for 80.0 per cent of overall deposits, up from 70.0 per cent in December 2015.

Amounts due to financial institutions – mainly in the form of funding from parent and other intra-group sources – went up by 39.1 per cent or $88.2mn, accounting for an increase of $311.7mn, or 22.2 per cent in liabilities.

5.4 Liquidity

Efficient management of liquidity risk is critical in the TCI, given the structure of the financial system. The majority of the system's liquid assets are placed overseas with foreign head offices, because the lack of both government debt and an active private capital market restrict the supply of safe and liquid domestic investments. In addition, roughly one-third of liabilities comprise external funding from both intragroup sources and non-residents' deposits. As a result, external liquid assets nearly match all external funding. Resilience against systemic liquidity shocks critically depends on the timely availability of the liquidity buffer kept at head offices. The importance of these arrangements is amplified by the fact that the TCI does not have a central bank and therefore no lender-of-last-resort function. Notwithstanding, experience to present – even at the height of the turmoil during the GFC – has shown fairly smooth provision of liquidity by head offices.

Liquidity buffers within the sector are trending upwards. During 2016, the stock of liquid assets increased by 5.5 per cent or $40.4mn, to total $768.9mn. As at December 2016, banks' liquid assets accounted for 46.4 per cent of total assets.

5.5 Profitability

Banking sector profitability improved during 2016. Even though interest income declined, net profits increased by 11.8 per cent to $29.9mn, boosted by banks' containment of expenses and to a lesser extent, increased non-interest income. Consequently, sector return on assets improved from 1.6 to 1.8 per cent, while return on equity improved to 12.3 per cent, up from 9.6 per cent in 2015.

Net interest margin for the sector fell $8.1mn or 14.3 per cent short of 2015 levels. This was driven by a 14.2 per cent reduction in Interest income, even as interest expenses declined 11.8 per cent. The fall in interest income was commensurate with the reduction in loans

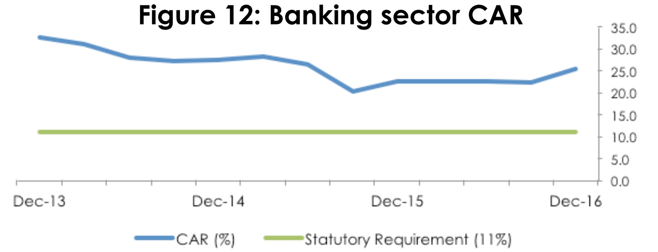
Expenses fell by 21.2 per cent to $49.2mn. Despite this trend, personnel expenses increased by 5.2 per cent, while loan provision expenses fell by 100.9 per cent consequent on significant recoveries and write-backs.

Following the reduction in NPLs and stabilization in write offs, the sector should remain profitable in the near to medium term. Notwithstanding, the prevailing climate of slow loan growth and possible global interest rate increases may put pressure on profits.

5.6 Capital

The banking sector remains well capitalized. At end December 2016, total capital improved to $251.0mn, up from $236.3mn a year prior. As a result, sector CAR improved to 26.1 per cent, up from 23.6 per cent. This movement is consequent on contraction in risk-weighted assets and simultaneous augmentation of capital across banks. The lowest CAR computed for a bank as at December 2016 was 20.2 per cent, well above the statutory minimum 11 per cent *(Refer Figure 12)*.

Figure 12: Banking sector CAR



Source: Financial Services Commission

5.6.1 Stress test outcomes

In its 2016 stress test, the Commission again sought to examine the banking sector's resilience against specific shocks. This test is the first to be conducted under the Commission's revised methodology, which has been expanded to incorporate additional credit shocks. *(Refer Appendix 7.2 for details of the methodology and assumptions applied)*.

The credit stress test

Five separate scenarios were considered under the credit component of the test:

- Scenario 1a: Generalized Increase in NPLs
- Scenario 1b: Correction for 'Underprovisioning"
- Scenario 1c: Migration Across NPL Categories
- Scenario 1d: Sectoral Shock (Mortgages)
- Scenario 1e: Credit Concentration

Summarily, the credit shock outcomes revealed that based on prudential reporting, the banking sector as a whole was adequately capitalized to withstand the moderate shocks applied. The tests nonetheless revealed two instances of capital inadequacy where, based on the scenarios applied, at an entity level, post-shock CAR would have fallen below the statutory 11 per cent minimum CAR, and capital levels would have had to be augmented.

Without prejudice to any of the results, it is important to note the following when considering these outcomes:

- While all banks in the TCI hold capital in excess of minimum statutory requirements, capitalization levels vary significantly across the sector. At end December 2016, CARs for the six banks included in the test ranged between 20.2 and 53.2 per cent. To this point, it bears emphasis that the wealth management category contributes a large portion of system capital relative to the level of lending undertaken by that segment.
- Notwithstanding these and other test outcomes, each bank's capital levels should be calibrated to satisfy the bank's internal needs, as well as all statutory and prudential requirements (including those pertaining to large exposures) on an ongoing basis.
- Since December 2013, several banks have voluntarily increased capital to allow for expansions in lending and to more comfortably satisfy statutory and prudential requirements.

(Refer table 6 for details.)

The liquidity stress test

The liquidity stress test framework has been revised in line with the parameters set out under Annex 1, to introduce even more rigour than in previous tests. The test sought to determine the number of days the system, as well as individual banks can withstand a deposit run before exhausting liquid assets and before tapping into contingent lines or other external sources of liquidity.

In a moderate shock scenario (assuming a 5 per cent daily run rate on all deposits) the sector would have 10 days of liquidity before sector liquid assets would be depleted.

Table 6: Credit stress test summary outcomes

	Banking Sector CAR	Remarks
Baseline:	**25.5 per cent**	
Post credit shocks:		
1a: Generalized increase in NPLs	21.5 per cent	When each category of NPLs was increased by 100 per cent, sector CAR fell to 21.5 per cent. Post-shock CAR levels for all of the six banks included in the test remained above the 11 per cent statutory minimum.
1b: Correction for 'underprovisioning'	18.0 per cent	This test involved fully providing for, and writing off legacy NPLs (in arrears for longer than 1 year). After this simulated correction, sector CAR fell to 18.0 per cent. Though the system as a whole performed well, one bank's post-shock CAR dipped below the statutory minimum under this test.
1c: Migration across NPL categories	17.1 per cent	Under this scenario which assumes deterioration across all categories, post-shock sector CAR remained healthy at 17.1 per cent. In this instance, one bank would have recorded a post-shock CAR below 11 per cent, and would have required the infusion of additional funds to restore capital to adequacy.
1d: Mortgage portfolio shock	20.7 per cent	This scenario assumed a 100 per cent increase in delinquent mortgages. Under this test, the sector recorded a post-shock CAR of 20.7 per cent, and all six banks retained CAR above 11 per cent.
1e: Credit concentration	18.2 per cent	This simulation sought to test the sector's resilience to default by large borrowers. The sector as a whole withstood this test, with a post-shock CAR of 18.2 per cent. Following this shock, all six banks met the minimum 11 per cent ratio,

6.0 Key policy responses to mitigate vulnerabilities

Given that the TCI is primarily a bank-based economy, both private and commercial interests are reliant on banks to supply credit and other services. The stability of this sector is therefore critical to the smooth operation of the economy and a precondition for growth. Accordingly, many of the policy actions being pursued or under consideration for reinforcement of system stability pertain to this sector.

To date, the Commission has implemented a number of measures to mitigate vulnerabilities within the banking sector. These measures have been broadly targeted at strengthening banks' capital and liquidity, and are ultimately intended to, among other things, improve their resilience against financial and economic stresses, and reinforce risk management and governance arrangements.

6.1 D-SIB framework

In April 2014, the Commission undertook a formal exercise to identify the systemically important banks within the system. At that point, four banks were designated as systemically important in the context of the TCI financial system. As outlined at section 2.3, these banks now account for a growing share of financial system assets. In order to more effectively monitor and supervise these entities, the Commission began engaging the banking sector during 2016 to develop a comprehensive framework for ongoing monitoring of D-SIBs, which will ultimately form part of the wider programme of risk-based supervision.

The proposed framework so far includes:

- a requirement for periodic reassessment of the banking sector to identify which, if any banks, (still) meet the designation of D-SIB based on the prescribed methodology;
- description of the tools and mechanisms available to the Commission to ensure D-SIBs have sufficient capital and liquidity buffers;
- description of the nature and frequency of enhanced supervision to which D-SIBs will be subject; and
- provisions for cross-border cooperation and recovery and resolution planning.

As the framework develops and the reach of D-SIBs expands, it may also be necessary for the Commission to assess the need for introduction of other macro-prudential tools for specific application to D-SIBs.

6.2 Enhanced monitoring of large exposures

Banks in the TCI have maintained capital ratios above the 11 per cent regulatory minimum, even at the height of the last recession. Nonetheless, several banks in the TCI have moved to increase capital buffers to further boost resilience, often as part of banking group-wide compliance with international capital standards.

In April 2016, the Commission initiated steps to update the regulatory architecture governing large exposures. Among these was announcement of its intention to recommend for updating of the legislative framework for the measurement of large exposures, to inter alia:

- codify the definition of large exposures in law, and expand the definition to include non-loan credit exposures, including investments;
- limit such exposures to 25 per cent of Tier 1 capital; and
- clearly specify the types of exposures which will not be counted as large exposures.

In conjunction with these proposed legislative changes, the Commission has also stepped up its monitoring of large exposure and concentration risks within banks, and has introduced additional prudential limits and reporting requirements, including a 500 per cent prudential ceiling on aggregate large exposures.

The intended effect of this amended regulatory treatment of large exposures is for containment of risks associated with large exposures as well as greater conformity with international practice.

6.3 Liquidity

Given that liquidity and funding are among the key risks faced by most banks in the TCI, the Commission has, in consultation with the banking industry, sought to more finely calibrate prudential requirements with respect to liquidity. This refinement includes introduction of a requirement for banks to maintain flat maturity mismatch positions, with behavioral adjustments, out to one month for US and non-US dollar positions.

While these measures are intended to increase the resilience of individual banks, they should also improve the robustness of the overall system to weather episodes of market turbulence.

6.4 Monitoring of real estate indicators

As highlighted in the 2015 edition, banks' exposure to the real estate sector is a significant structural vulnerability within the financial system. In recent years, residential mortgages have consistently accounted for close to 50 per cent of banks' total lending. Several of the large loans extended for commercial ventures are also real estate related, and in most instances, are secured by the underlying properties.

This has created a high degree of concentration in some portfolios given the small size of the market; this proves especially problematic in times of economic stress when NPL levels typically spike and banks are forced to recoup through repossession and forced sales. Often, the reported values of the properties securing these loans appear sufficient to protect banks from incurring losses. However where a period of economic stress coincides with a significant fall in real estate values, banks can experience difficulty recovering loan amounts. In this way, boom-bust cycles in real estate markets have commonly served as trigger for financial system crises. The sub-prime mortgage crisis which originated in the US in 2007 and which quickly mushroomed into a global crisis, is testament to the sweeping economic and systemic spillover effects of misalignments in the property market.

The Commission is working to develop its capacity to monitor and assess macro-financial linkages, including the transmission of systemic risk from the real estate sector. Given the sensitivity of both economic performance and system stability to fluctuations in the real estate market, the Commission is now reviewing a recommendation from the IMF for implementation of sector wide caps on loan-to-value ratios. To the extent that independent valuation expertise is also a critical asset in assessing the strength of banks' loan books, the Commission is evaluating options to develop capacity in this area as well.

6.5 Revision of stress testing framework and methodology

Stress tests examine the potential impact of hypothetical stress scenarios on individual institutions as well as on the system. This type of simulation exercise allows the Commission to assess banks' resilience to likely stress events and evaluate the adequacy of capital to cushion potential losses associated with these events. Stress testing therefore also supports the Commission's mission to maintain public confidence in the integrity of the financial services. It bears emphasis that stress tests are not intended to forecast financial and macroeconomic conditions, but instead serve as a device to assess the impact of plausible, hypothetical events.

The Commission began conducting semi-annual stress tests of the TCI banking sector in 2015, shortly after the conclusion of the IMF assessment. The initial round of testing had a dual focus: firstly, the impact of loan quality shocks on system capital, and the impact of shocks to various categories of deposits on banks' ability to satisfy statutory liquid asset requirements.

Since then, the Commission has further strengthened and refined the framework and in 2017, engaged consultant support to revamp both the credit and liquidity modules. The new methodology was first applied to banks' 2016 year-end prudential submissions, results of which are described in this report under section 5.6.1. Annex 8.1 provides additional details regarding the new methodology and summarizes the key assumptions underpinning the tests.

The Commission will continue to refine the scenarios with each iteration of testing, including incorporating more idiosyncratic data for better calibrated results. In addition to this top down testing which will now be conducted annually, the Commission will also engage its bank licensees in coming years to develop stress testing guidelines and methodologies for use among banks, results of which will also be factored into assessments of the resilience of the sector.

6.6 Strengthening protections for insurance policyholders

Though its size has grown in recent years, the domestic insurance sector remains small and has been assessed as low in systemic importance. Together, domestic insurers account for less than 5 per cent of GDP. All but two of the insurers in the market are branches of regional groups: within their respective conglomerate groups, branches typically account for a very small share of group assets and premiums written.

Though not systemically important at this time, the insurance sector plays an undeniably critical intermediation role in the TCI. The sector provides critical life and property insurance coverage for a significant portion of the country's residents, and supports the tourism and other major earning industries.

Given that a significant share of the sector operates through branches in the TCI and is domiciled elsewhere, the Commission has worked to strengthen ties with regulators in other countries who have primary responsibility for regulating insurance groups. The Commission has sought to maximize the benefits of participation in regional bodies such as the Caribbean Association of Insurance Regulators (CAIR) for this purpose. In tandem with these efforts, the Commission has expanded its communication with regional head offices and adapted the scope of group-wide risk assessments to more comprehensively assess the risks to which entities may be exposed.

In conjunction with these efforts, considerable work is underway to strengthen protections for TCI policyholders and strengthen market confidence. The Commission worked closely with policymakers and the Insurance Association to enact a new Domestic Insurance Ordinance in 2016. The underlying Regulations will be developed in the second half of 2017. The primary aims of this new legislation are strengthening protections for policyholders and improving the Commission's ability to supervise the insurance sector.

The sector suffered a loss of confidence immediately following the failure of the regional insurer CLICO and the later closure of BAFSL, which adversely affected a number of policyholders. The new DIO is intended to address a number of weaknesses identified during that period. It has strengthened requirements for restricted deposit for life and general insurance providers to ensure availability of funds to offset liquidations costs, as well as required creation of statutory trusts, solely for the protection of policyholders in the event of closures. On the supervision side, the new Ordinance has standardized the methodology for calculating insurance liabilities and strengthened reporting requirements and prudential standards, including capital requirements, actuarial valuations and risk management.

7.0 Emerging vulnerabilities

7.1 Vulnerabilities emanating from developments overseas

7.1.1 De-risking

Global financial institutions have begun terminating or restricting business relationships with specific sectors considered 'high risk', giving rise to the trend now commonly referred to as "de-risking." As highlighted in the 2015 report, a number of banks and money service businesses across the Caribbean have been affected to varying degrees – some have seen the terms of their correspondent banking relationships altered, while others had these relationships terminated.

The core drivers of this de-risking trend appear to be the rising costs and waning benefits of operating in some markets, including the Caribbean. This increased risk-aversion is at least in part a response to well-intentioned efforts on the parts of global regulators and policymakers to stamp out money laundering and terrorist financing. Following the surge of terrorist attacks since 9/11 and increased incidences of money laundering, international banks have come under greater scrutiny to satisfy due diligence standards. Increasingly, banks are not only being required to demonstrate knowledge of their own clients, but are now being called upon to know their customer's customers. In addition, several large international banks have been fined for weaknesses in their AML/CFT controls. Partial withdrawal from specific markets is therefore also a preemptive economic response to the threat of regulatory fines.

Smaller emerging economies are especially vulnerable to de-risking. While the trend has been observed around the world, the Caribbean is among the most affected regions. In countries where de-risking has occurred on a wide enough scale, the practice has resulted in loss of correspondent banking ties and access to global remittance and payment systems.

Damaging ripple effects may also extend beyond those customers or sectors directly affected and threaten financial inclusion goals. Anecdotal evidence from emerging markets indicate that the practice can close off access to trade and ultimately trigger economic stagnation; amplify the problem of financial exclusion of un- or under-banked populations; and create unintended humanitarian crises where flows to non-profits and similar organizations are interrupted.

The direct impact of de-risking in the TCI is manifestly two-tiered – there is, on one hand, the threat to banks of having their correspondent banking relationships altered or severed; and the concurrent issue of banks strategically altering or altogether suspending ties with specific sectors. The money transmitter sector in particular has been affected by the latter strategy. In addition to these disruptions is the possible knock-on effect of reduced profits for local financial institutions' caused by contraction in their customer bases. While domestic banks' profits appear unaffected by the phenomenon so far, significant reductions in their client bases may threaten profits should this trend continue.

The TCI is working alongside other Caribbean and British Overseas Territories on a multi-jurisdictional response to this issue. The Commission is actively engaged with regulatory peers and other relevant stakeholders on development of appropriate policy responses to the widening threat posed by de-risking. These include efforts to engage parent banks and their regulators to better understand the specific motivations and conditions driving each instance of de-risking. The Commission is also closely monitoring advances in regional and international research.

To the extent that de-risking represents, in part, a response to actual or perceived AML/CFT weaknesses, the Commission also sees it necessary to work with financial institutions to bolster risk management and compliance structures across the system, to assist them in maintaining their correspondent banking relationships. A critical element of this is ensuring that regulatory policies and methodologies not only comply with international requirements and expectations, but as much as possible, do not unwittingly or unnecessarily prevent access to financial services. Ensuring that regulatory guidance is adequate and fit for purpose will require continuation of work now in progress to enhance risk-based and other supervisory methodologies within the Commission and increase in the number, scope and overall rigour of AML/CFT examinations.

7.1.2 Geopolitical uncertainties

Global markets face significant geopolitical uncertainties in 2017**.** Following UK voters' decision in June 2016 to exit the EU and the subsequent triggering of Article 50, there is wide uncertainty about the nature of the UK's relationship with the EU going forward and how imminent changes may impact British Overseas Territories like the TCI. The TCI's political and economic ties with the UK make it especially vulnerable to Brexit-related risks. Similar concerns exist about how the newly elected Trump Administration's policy stances may impact the global economy. In particular, there are concerns that any volatility in these countries could ultimately impact tourist arrivals and direct investment. Though uncertainty clouds forecasts, analysts remain cautiously optimistic based on revised forecasts that the US and UK economies should grow by roughly 2.3 and 1 per cent respectively, in 2017.

7.2 Domestic vulnerabilities

7.2.1 Absence of a regulatory framework for occupational pension funds and intermediaries

At present, there is no legal framework in place to monitor and regulate occupational pension funds and providers of private pension intermediation services. While pension fund intermediaries are

required to obtain an Investment Dealer Licence from the financial regulator, the objective of supervision under this type of licence is arguably incommensurate with the rigorous prudential supervision needed to safeguard pension savings and protect plan beneficiaries.
Given the importance of pension funds in managing retirement savings and their growing role in financial intermediation, there is a need for stakeholder dialogue on this issue, leading ultimately to development of legislation to facilitate regulation of these pension fund plans and intermediaries.

The supervisory framework envisioned would take cognizance of the need to ensure legal segregation of these funds from monies held by employers/ sponsoring entities and establish minimum prudential norms for the management and administration of pension funds by intermediaries, for protection of plan beneficiaries.

8.0 Risk Outlook

On the whole, financial stability risks in the TCI are expected to ease marginally over the near term, notwithstanding the structural and emerging vulnerabilities within the system which have been highlighted in this and previous reports.

Based on the improvement in the global economy during 2016 and the further growth projected for 2017, financial stability risks emanating from the global macro-environment are expected to decline slightly over the next 12 months. Against this backdrop of stronger global growth, private consumption in several of the TCI's trade partners should increase in the short-term, which should augur well for tourist-related sectors in the TCI and further buttress stability. Going forward however, it will be important to monitor how closely fiscal, monetary and other policy shifts across the world threaten this outcome.

The forecast of continued health and strong performance in the financial sector should also positively contribute to system stability. As outlined in this report, despite recent contraction in that sector, banks remain well capitalized and asset quality is improving. As such, the financial stability risks emanating from that sector are expected to decline. Going forward, the Commission will continue to monitor risks to system stability emanating from the banking sector, with special emphasis on those relating to the pace and concentration of credit, as well as management of liquidity risks.

9.0 Annex I: Methodology and key assumptions of the banking sector stress test

Background
Stress testing is one commonly used analytical tool to predict the potential effects of simulated shocks of varying severity on the stability of the system. This kind of testing also allows policymakers to assess an individual bank, or the system's ability to continue to supply credit to the real economy during periods of stress. Stress testing is employed complementary to other regulatory approaches to determine appropriate prudential benchmarks and develop suitable resolution mechanisms to treat with potential severe occurrences.

The Commission considers the results of these annual tests, in conjunction with other prudential information and qualitative factors, to ensure that the banking sector, as a whole, as well as the individual banks within it, have sufficient capital and liquidity.

The 2016 test
The Commission conducted its third round of stress testing simulations on the banking sector using prudential data as at end December 2016. The test covered all six banks active in the domestic market.

With each staging of the test, the methodology and assumptions are refined and adjusted to test banks' resilience to a range of shocks and determine whether their capital buffers are sufficient to not only withstand shocks, but to support their ongoing operation in post-stress periods. The exercise comprised five separate shocks within the credit test, and a standard deposit run shock under the liquidity test. Testing methods are strongly grounded in Martin Cihak's published work on stress testing, much of

Table 7: Credit stress test assumptions

Risk Type	Scenario	Assumptions	Basis for Assumptions
General Credit Risk	1a: Generalized Increase in NPLs	• Each category of NPLs increases by 100 per cent. • Each bank's new NPLs provided for at its current average/effective rate of provisioning.	
	1b: Correction for 'Underprovisioning"	• NPLs in arrears for longer than 1 year fully provided for and written off.	
	1c: Migration Across NPL Categories	• All loans in each NPL category migrate 'down' to the next worst category, and the prudential provisioning rates applied. • Loss category is fully written off.	
Sector Credit Risk	1d: Mortgage Portfolio Shock	• Sector wide deterioration of mortgage loans leads to 100 per cent increase in mortgage NPLs.	
Credit Concentration Risk	1e: Credit Concentration	• Default by each bank's largest borrower (or borrower group, as applicable).	Concentration – including in the loan book - is a structural feature and inherent source of vulnerability for the TCI banking sector. This test is especially relevant for those banks for which hold large exposures, or which significant exposure to a single borrower or group.

which was incorporated with permission and guidance from the IMF following their 2015 review.

The credit stress test

The credit component was expanded in this Report to include two additional shocks – one to correct for "underprovisioning" and another to test the impact of portfolio deterioration and migration across NPL categories – largely in response to post-crisis observations in the domestic and regional markets.

Other departures from the 2015 methodology include:

- The test for sensitivity to a general increase in NPLs under Scenario 1 was applied only with respect to a 100 per cent in each category.
- The 2016 concentration shock scenario focused on exposure to large borrowers or borrower groups.
- The 2016 sectoral shock scenario focused on banks' resilience to increasing delinquency with their mortgage books, to assess the impact of a housing crisis similar to the one triggered by the 2007 GFC.

(Refer table 7 for details.)

The liquidity stress test

Similar to 2015, the liquidity stress test exercise was designed to evaluate the implications of simulated deposit runs the banking sector. This iteration of the test was simplified however and did not differentiate between the resident and non-resident deposit categories.

Assumptions

The tests assumed:

- Steady attrition of time and demand deposits at differing daily rates.
- 75 per cent of (remaining) liquid assets would be available on any given day to offset deposit withdrawals.
- No non-liquid assets were considered available for use under this scenario.

References

Čihák, M., *Introduction to applied stress testing.* IMF Working Paper WP/07/59, March 2007. Online at: https://www.imf.org/en/Publications/WP/Issues/2016/12/31/Introduction-to-Applied-Stress-Testing-20222.

Čihák, M., *Stress testing: A review of key concepts. Czech National Bank internal research and policy note. February 2004. Online at:* https://www.cnb.cz/miranda2/export/sites/www.cnb.cz/en/research/research_publications/irpn/download/irpn_2_2004.pdf.

Durner, T. and Shetret, L., *Understanding bank de-risking and its effects on financial inclusion: an exploratory study.* Global Center on Cooperative Security. November 2015. Online at: http://www.globalcenter.org/wp-content/uploads/2015/11/rr-bank-de-risking-181115-en.pdf.

Williams, M. G., *De-risking/De-banking: The reality facing Caribbean financial institutions.* Staff Paper: Financial Services Regulatory Commission, Antigua and Barbuda. Online at: http://www.ccmf-uwi.org/files/publications/conference/2016/2_1-Williams-p.pdf

International Monetary Fund. *Regional economic outlook: Western hemisphere: Tale of two adjustments.* World economic and financial surveys. April 2017. Online at: http://www.imf.org/en/Publications/REO/WH/Issues/2017/05/10/wreo0517.

International Monetary Fund. *World economic outlook, April 2017: Gaining momentum?* April 2017. Online at: http://www.imf.org/en/publications/weo.

International Monetary Fund. *Global financial stability report: Getting the policy mix right.* April 2017. Online at: http://www.imf.org/en/publications/gfsr.

Caribbean Development Bank. *2016 economic review: 2017 forecast.* Online at: http://www.caribank.org/publications/featured-publications/2016-economic-review-and-2017-outlook.

Sothebys. Turks and Caicos real estate market report year end 2016. Online at: https://turksandcaicossir.wordpress.com/2017/01/31/turks-caicos-real-estate-market-report-year-end-2016/.