INSIGHTS

Banking in Bermuda

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2017 KPMG in Bermuda Banking Survey

KPMG

Welcome to the 2017 KPMG Banking in Bermuda Magazine

Banks are no strangers to the mounting regulatory burdens and the resulting impacts on their day-to-day business processes and customers. These same customers, unfortunately, have limited direct exposure to the demands being placed on banks and all many of them see is the increase in what seems like multiple requests for the same information.

In the 2017 edition of Insights, we explore the theme of the customer and the dichotomy between technology to improve the customer experience and the regulatory demands detracting from it – although designed to protect them. We share our insights, as well as those of the banks' CEOs. Customer experience remains of paramount importance. This is a critical time for banks as they balance regulatory compliance with customer and shareholder demands and shifting business models.

This year we also had the opportunity to have a dialogue with Mr. Jeremy Cox on Bermuda's system of financial stability. Mr. Cox is widely known as the CEO of the Bermuda Monetary Authority but he is also a member of the Financial Policy Council, a key component of Bermuda's financial stability framework.

In addition, we include our traditional review of the Bermuda banks' financial statements, highlighting important trends, and our regulatory update, including the top 10 regulatory challenges in 2017.

Although we are further down the road to consistency in regulatory compliance globally, technology enablement, such as FinTech and RegTech, will be next to take a place on the board's agenda to manage the balance between risk management and continued efficiency and competitiveness. RegTech has the potential to benefit the business, employees and customers. We are excited to see what the future will hold for banks in Bermuda.

I hope you enjoy this issue of *Insights.*

Craig I.V. Bridgewater
Head of Investments & Banking
KPMG in Bermuda

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CEO
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How has your bank responded to the increased regulatory demands of the Bermuda Monetary Authority and those from other regulatory agencies?

Butterfield

“Butterfield’s standards for capital management, client due diligence and the detection and prevention of financial crimes are world class. They reflect Bermuda’s strengthened regulatory requirements which, in many cases, exceed the banking standards that are in force in “onshore” jurisdictions. Over the past two years, Butterfield has made significant investments in systems and personnel to ensure that we are well positioned to comply with new and emerging financial services regulations. This has included the development and installation of new systems and increased staffing in departments tasked with monitoring financial transactions, as well as a major investment in a project to review, update and ensure the currency of tens of thousands of client files across the Group. Our investments in Compliance, Risk Management and Operations over the past several years have been sizeable, but we recognise that they are important to protect the Bank and our customers, and help preserve the island’s reputation as a stable, mature and transparent financial jurisdiction.”

WRITTEN BY: **CRAIG BRIDGEWATER**, HEAD OF INVESTMENTS & BANKING, **ALEXANDRA MCINNES,** SENIOR MANAGER, REGULATORY COMPLIANCE ADVISORY & **KRISTIN CORBIN,** AUDIT SENIOR

“The increased regulatory demands have been challenging for the banking environment across all jurisdictions worldwide, including in Bermuda. BCB has appointed and trained specialised and skilled resources in the compliance, risk and finance departments to address these demands. The bank has also ensured that a three line of defense structure is adhered to at all times with a strong enterprise risk and compliance culture.”

“We have had to become more proactive in our management of both prudential and AML/ATF regulatory requirements. We have invested in our current staff as well as brought new staff on board to increase our level of expertise and to meet the new regulatory demands. We have also had to bring our client records to the current required standards imposed. I foresee this as 'the new norm'.

Furthermore, Basel III requirements imposed more stringent liquidity and capital standards than ever before. These new standards will continue to impact choices that financial institutions will make on businesses they choose to participate in as well as how they wish to deliver these services.

The 'balancing act' is to make sure that Bermuda preserves its regulatory reputation while also providing for a globally competitive jurisdiction.”

“We are managing a business in times of significant global regulatory change, which influences the legislation locally. The National Anti-Money Laundering Committee, Government and the BMA have done a good job of aligning Bermuda’s legislative and regulatory framework with these global requirements. However, this results in a challenging time for this business, which is facing both changing business models and a significantly changing regulatory landscape.

Managing financial crime risk is becoming a key focus for banks as it impacts every customer, every account and every transaction. Our overall response to the increased regulatory demands has been to continue to cooperate with the BMA and comply with the regulatory changes implemented. We are also facing much internally driven change, which needs to be aligned to the externally driven change. Significant time has been invested in the interpretation and application of the regulations and guidance notes to ensure that we are complying with them in both letter and spirit. The regulatory demands also come in the form of more detailed onsite inspections by the BMA. We continue to support the BMA’s more rigorous approach.”

“The 'balancing act' is to make sure that Bermuda preserves its regulatory reputation while also providing for a globally competitive jurisdiction.”

Ian Truran
CEO, Clarien Bank

With this focus on complying with regulatory requirements, what has the impact been on the customer experience over the last year?

"Our customers have widely accepted these new regulatory requirements and are working with our relationship managers to ensure we comply at all times. This has been more challenging for more complex corporate structures. BCB has established a dedicated customer experience team to handle these situations and ensure our processes are as lean as possible from onboarding new customers to managing daily requests. This is achieved under the supervision of our relationship managers so they continue to develop their overall understanding of our customers."

"Where, upon review of their files, we determine that we need more, or more up-to-date information about account ownership, the nature of transactions or sources of funds from current clients to comply with new regulations, we are requesting documentation by certain deadlines. We appreciate that, in many cases, the information we are requesting takes some effort to gather, and that it is an inconvenience for clients. We have tried to assist clients as much as we can, providing dedicated resources, detailed instructions, and frequent reminders of pending deadlines. We're getting through it, and I would like to thank our clients for their patience and assistance in helping us ensure that we have the information we need on file to satisfy regulatory requirements and protect their accounts.

Over the past several years, the breadth and detail of information we require to open accounts has expanded commensurate with changing regulations, and we've changed our processes and documents to streamline the experience for new clients. But the reality is, depending on the nature of the services requested, that it can take longer and it is a much more involved process today to onboard a client than was the case a few years ago."

"As the demands grow on the regulated institutions, so do the demands on our customers. We have focused our efforts to educate and communicate with customers about both our legal obligation to update customer information and the need to protect them – and us – from fraud, identity theft and financial crime. However, as a customer, this is often perceived as an inconvenience. As a bank, we need to do better in converting this 'perceived inconvenience' into a service opportunity for meeting and exceeding our clients' expectations."

"We acknowledge the impact that the regulatory demands have placed on our customers. With experience, we have refined our approach and mandated that we are clear and assertive in relation to the timelines within which customers need to comply. We recognise the frustrations of our customers, but we have to remain focused on what is needed to meet the requirements. We try to help by educating our customers: by explaining to them that we need the information to protect them, and that the information will help us to understand and to serve them better."

How can banks use this information that has been gathered for the benefit of themselves and the customers?

BCB
Bermuda Commercial Bank Limited

“Information gathered from our customers to comply with various legal and regulatory requirements, including the “know your customer” data, is treated highly confidentially. This information is an opportunity for the bank to get to know our customers better so we can assist them with establishing solutions on a needs related basis.”

Butterfield

“Having more detail about clients’ sources of funds, typical transactions and persons or entities with a nexus to their accounts, enables us to more easily flag suspicious account activity and potential fraud, and protect clients’ money. Although the need to gather additional information to onboard clients and provide them with banking, investment or trust services certainly has its genesis in changing regulations, over time, having that information on file may assist us with product development and our efforts to better tailor services to clients’ needs.”

CLARIEN

“It enables us to have a better understanding of our customers and their needs as well as ensuring that their account information is securely protected. It also means we are able to communicate with them more efficiently both in terms of providing security information and marketing products and services. Up to date and accurate reporting improves our ability to assess risk, make better informed business decisions and plan strategically.”

HSBC

“Bermuda has to be commended as a jurisdiction for signing up to the regulations that encourage transparency. The banks need to support this to ensure that Bermuda does not end up on any black list.

We believe that the better we know our customers the better we can satisfy their needs; the more familiar we are with normal customer behaviours the better we can be at identifying when something is not right. So this information gathered is also used in protecting the customer and the bank from financial crime risk. Financial crime is not just the customer doing something wrong – we have to consider external agents such as computer hackers.

We have invested in global systems to ensure that the information we hold on our customers is available to serve them wherever they may be in the world. It is important that the information is available as well as secure.”

“This information is an opportunity for the bank to get to know our customers better so we can assist them with establishing solutions on a needs related basis.”

Hubert Esperon
CEO,
Bermuda Commercial Bank

"Through our advantage of being a global bank, we have been able to leverage global programs on cyber security, data quality and financial crime risk. We have tight procedures over the security of the information that we hold."

Mark Watkinson
CEO
HSBC Bank Bermuda

What are you doing to manage the significant amount of information you hold, including what steps are being taken to protect the security of this data and the privacy rights of customers?

"The security of the confidential data collected and the privacy rights of our customers is of paramount importance for the bank. The Personal Information Protection Act (PIPA), expected to come into force in 2018, will be an additional legislative control to regulate the use of personal information by any organisation."

"The protection of data is a priority for Butterfield. At the Board level, the Risk Policy and Compliance Committee oversees the protocols and safeguards that the Bank has in place to protect the information we have on file. Our systems and processes are reviewed and tested for vulnerabilities and upgraded on an ongoing basis by internal and third-party experts. Information security is a key focus for our audit teams and a component of all of their department reviews. And Butterfield has partnered with industry leaders including Oracle and HP for the design, development and maintenance of our core data processing, storage and retrieval functions, and we operate to a world-class standard in this regard."

"Customer data is the 'crown jewels' of any bank and safeguarding that data is our highest priority in the information security space. Cyber security threats are constantly evolving and our role is to ensure that we create an operating environment that effectively eliminates the ability of client information finding its way into the hands of inappropriate individuals, directly or through our vendor partners. This is an investment in education, technological infrastructure, constant monitoring and management. Our reputation depends on it."

"As an international company, significant efforts are being deployed through utilising global systems to ensure that our customers' data is protected and accurately stored. We take information security very seriously. To respond to the intensifying threat of hackers and fraudsters, the shift is being made to technology that is able to respond quickly to unusual activity. There is a 24/7 response team in place that continually monitors and initiates action against suspicious transactions. We also have invested in "threat hunters" whose task it is to continually try to get ahead of fraudsters.

Through our advantage of being a global bank, we have been able to leverage global programs on cyber security, data quality and financial crime risk. We have tight procedures over the security of the information that we hold."

Can you explain how your bank is embracing financial technology and what changes the customer can expect to see in the year ahead?

“BCB has recently invested in a multi-million dollar state of the art core banking system, including accounting and reporting tools. Our e-banking system is praised by our customers. In general, Bermuda lags behind other jurisdictions in the adoption of financial technology. There are opportunities for the banks to work together, for instance to develop centralised platforms and tools such as for KYC or credit scoring.”

“From Bermuda’s first ATM in the 1980s to the first online banking platform in 2001, Butterfield has long been the island’s leader in terms of the introduction of innovative technology. Over the next year, we will be focused on improving our online and mobile banking platforms, and we have plans to introduce Bermuda’s first “virtual wallet” services in time for the America’s Cup, providing convenient and secure contactless payment options for visitors and residents at island merchants.”

“We are expanding our self-service products and services by introducing new channels for mobile devices — a preferred platform for the younger generation. We are also constantly enhancing our internet banking channels with additional functionalities and features. Our customers can also expect a new generation of self-service automated banking machines over the next 12 months.

Financial technology is the way of the future whether it is in the form of enhancements in service delivery or means of gaining internal efficiency. If we do not keep up, we will become obsolete.”

“HSBC internationally has invested significant amounts of money to support smaller, startup financial technology (FinTech) companies, so that we can receive the benefit from strategic partnerships, with the objective of better serving our customers. We have invested specifically in startups in the IT space: including cyber security, data management, financial crime and payments.

The financial services industry within the next 5-10 years is expected to go through massive changes as it relates to FinTech and it is imperative to our business that we stay abreast of those changes to remain competitive in the environment.”

“Over the next year, we will be focused on improving our online and mobile banking platforms, and we have plans to introduce Bermuda’s first “virtual wallet” services in time for the America’s Cup, providing convenient and secure contactless payment options for visitors and residents at island merchants.”

Michael Collins
CEO
The Bank of N.T. Butterfield & Son

10 key Regulatory Challenges facing the Banking Industry in 2017

Regulatory requirements of banking and other institutions both globally and here in Bermuda are increasing. The tenets of risk governance and conduct and culture are likely to continue to dominate the expectations of regulators and consumers across the industry. In addition, cybersecurity, the protection of consumer data, and the competitive pressures from FinTech firms will only grow in importance. We explored the top 10 regulatory challenges facing the banks as published by KPMG's Americas Financial Services Regulatory Centre of Excellence and added our Bermuda focus.

1

Strengthening enterprise risk governance and culture

There is a need for financial institutions to strengthen their enterprise-wide approach to risk governance. This may be achieved through the connection of disconnected processes in order to analyse key risk and performance indicators more holistically to improve monitoring and reporting capabilities.

Regulators' increased inspection of financial institutions' conduct and culture programmes and the effectiveness of risk governance has increased the emphasis on and action to enhance corporate governance.

2

Transforming the effectiveness and sustainability of compliance

Banks process large volumes of data throughout their daily processes. In efforts to meet the regulatory requirements in an effective and sustainable manner, many are moving towards compliance automation tools that deliver operational value, increased efficiencies, and decreased costs by transforming compliance into an increasingly integrated part of a forward-looking business strategy.

Consumers are likely to experience the Bank's increasing use of electronic transactions and processes as they seek to improve the integration of their processes and systems to better manage the compliance requirements.

3

Examining possible new approaches to managing capital and liquidity

Under current standards, financial institutions both globally and in Bermuda are required to demonstrate their ability to develop internal stress testing scenarios for both capital and liquidity that properly reflect and aggregate the full range of their business activities and exposures, as well as the effectiveness of their governance and internal control processes in both a business-as-usual scenario and a stressed environment. Current capital and liquidity requirements as well as integrated management support safe and sound banking practices and should continue unchanged to promote economic growth and financial stability.

WRITTEN BY: **CRAIG BRIDGEWATER**, HEAD OF INVESTMENTS & BANKING
& **KRISTIN CORBIN,** AUDIT SENIOR

4 Managing the complexities of cross-border regulatory standards

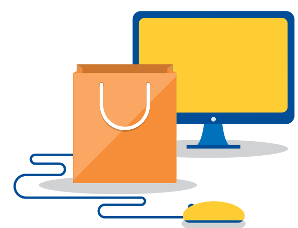
Bermuda is home to a number of international financial services organisations, which may be impacted by increased cross-border regulatory policy divergences, which will require internationally active financial firms to undertake more strategic and comprehensive assessments of their regulatory policy risks. These challenges underscore the importance of developing a centralised process for assessing current and potential future regulatory demands using advanced governance, risk management and compliance regulatory change tools.

Centralised assessments of cross-border risks can help improve overall performance, help ensure risk management frameworks and compliance controls are integrated into strategic objectives, reduce redundancy and enhance the ability to address regulatory expectations.

5 Adjusting to the changing scope of consumer financial protection

The scope and enforcement of regulation around consumer financial protection has continued to expand. Regulators are seeking to ensure all companies that collect, store, and use customer information must take measures to represent that their security practices and data protection procedures are compliant. This includes Bermuda with the introduction of the Personal Information Protection Act (PIPA). We also expect increased regulatory focus on bank third-party relationships regarding consumer protection issues. Importantly, this focus will align with the general heightened focus on cybersecurity and other related concerns.

6 Emphasising cybersecurity while protecting consumer data privacy



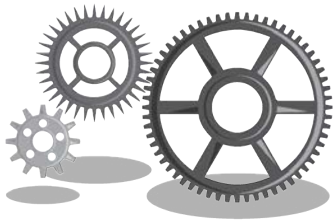
Concerns around cybersecurity and consumer data privacy continue to generate strategic business challenges for banks. As attention is turning to cybersecurity, banks continue to acquire significant amounts of personal, identifiable data from clients. As a result banks are focusing on continuous improvements to data security, IT infrastructure and data management controls. Globally, data sovereignty laws are emerging to regulate how organisations may transfer personal data outside of a country or region.

7 Addressing pressures from innovators and new market entrants

2016 was the year in which FinTech emerged as a significant market force to challenge the financial services industry and its regulatory structure. Innovations such as, mobile payments, distributed ledgers, crowdfunding, online marketplace lending, peer-to-peer lending and virtual currencies hold the potential to transform financial services into platforms for intermediation by third parties. Banks are actively responding to this rapidly changing competitive environment; many have partnered with FinTech firms to support key business processes, develop a lower cost operation model, and provide new services. Although, this strategy also needs to consider any regulatory risks that are introduced.

8 Managing compliance surveillance and financial crimes

There has been a heightened focus both globally and in Bermuda on surveillance, especially around financial crimes and laws including anti-money laundering (AML) and know you customer (KYC), and anti-terrorist financing (ATF). In the coming year, it will be essential for financial institutions to employ a systematic and comprehensive approach to developing a sustainable compliance programme in order to better manage both known and emerging regulatory and legal risks and proactively respond to prospective market structure reforms. Additionally, banks are reviewing, strengthening and implementing controls to help ensure that they are effective across domestic and global financial regulations.



9 Using risk data aggregation and reporting for improved enterprise risk management and transparency

Regulatory requirements have increased risk data aggregation needs and have added pressure on banks to enhance internal data-related systems and processes. There is also an increased focus on both financial and non-financial regulatory reporting and the recognition that data must be mapped to authorised data sources. Adding to this focus are growing regulatory concerns over counterparty credit risk and credit risk concentrations. Banks may be challenged to create systems that can manage this risk, including the capability to identify, aggregate and monitor gross exposures.

Improved data governance and quality is simultaneously becoming a strategic initiative for executive leadership and boards as banks strive to create an integrated framework. Evolving technologies are making it increasingly possible to integrate contextual data and machine-learning to assess a range of data, allowing banks broader insight into operating and business strategies. The challenge is creating the foundation to unlock the value of this data.

10 Reforming regulatory reporting

Regulatory expectations regarding financial, trade, transaction and position reporting continue to increase, creating challenges for banks. Regulators are expressing concerns about the lack of progress in eliminating manual processes and reconciliations, addressing data integrity issues, negotiating resource and other constraints that impact accuracy and timeliness, and fixing weaknesses in data governance. Banks need to develop a more holistic approach to data management that harnesses the use of data collection for risk management and decision making purposes in addition to regulatory compliance. Leading banks are implementing processes that will further automate the regulatory reporting process in an effort to achieve more efficient and accurate reporting outcomes.

Conclusion:

The regulatory environment in Bermuda is changing rapidly to better protect the consumer's investments in financial institutions and to align Bermuda's regulatory requirements with global standards. By building a strong customer-oriented corporate culture, developing a holistic approach to enterprise risk governance, improving data management, embracing technological changes, and streamlining regulatory change capabilities, banks can position themselves to meet the evolving regulatory requirements and achieve controlled growth.

Interview with CEO of the BMA, Jeremy Cox

Bermuda's financial system stability framework

> The Authority's mandate, in a nutshell, is to protect and enhance Bermuda's reputation as a financial services centre.

Tell us about your role as CEO of the Bermuda Monetary Authority (the Authority).

There's nothing typical about the role of the Authority's CEO. While it is true that all leaders face challenges unique to their businesses and markets, most can look to helpful indicators to gauge their relative peer-group performance. Not so for the Bermuda Monetary Authority. For us there are no handy metrics. No earnings targets or stock price to show how well we are doing. Instead, we must rely on more indirect measures like the rate of business formations or the comparative solvency and capital adequacy of the companies we supervise. Or the overall stability of the marketplace and the general economy. That means the CEO is always in dialogue, always in consultation mode: with the entities we regulate, with various Bermuda government agencies, with other international regulators and with the Authority's own supervisory and technical staff.

That is not to say that I have no specific goals. We are currently in the process of developing a multi-year plan to improve the organisation and its operational efficiency based on the findings of a project to formulate a target operating model for the Authority. Additionally, we will shortly complete work on an upgraded registry of beneficial owners.

The Authority's mandate, in a nutshell, is to protect and enhance Bermuda's reputation as a financial services centre.

The bar for international compliance is constantly being raised and Bermuda has to meet or exceed it in order to remain a respected jurisdiction. During my time as CEO, the Authority has:

- overseen the phased implementation of Basel III for Bermuda's banks;
- gained full Solvency II equivalence in Europe — the first non-European country to do so;
- been granted qualified jurisdiction status by the National Association of Insurance Commissioners;
- facilitated alignment with the EU's Alternative Investment Fund Managers Directive; and
- enhanced Bermuda's credibility overseas, notably by developing international contacts within Europe and the US.

I hinted earlier that my role is not that of a typical CEO. Perhaps more than many CEOs, my job requires the development of a network of effective international relationships. These are mission critical to achieving the Authority's objective, namely the creation and maintenance of a respected regulatory environment that enables Bermuda to remain the leading financial services centre that it is today.

WITH: **CRAIG BRIDGEWATER**, HEAD OF INVESTMENTS & BANKING, & **ALEXANDRA MCINNES,** SENIOR MANAGER, REGULATORY COMPLIANCE ADVISORY

What are your thoughts on the state of the banking industry in Bermuda? What are some of the short-term challenges that the industry faces?

The banking industry in Bermuda is well capitalised and the implementation of further international standards (like Basel III) will further improve the liquidity and funding position of Bermuda's banks.

Perhaps the greatest challenge our banks presently face is ensuring compliance with more stringent AML requirements and managing that balance with the need to educate their clients on its impact on customer/bank relationships.

Given its vital importance to Bermuda, I would also like to take this opportunity to remind industry of the upcoming Caribbean Financial Action Task Force Mutual Evaluation Review. The Authority will publicly censure and fine banks that fail to assist in this regard, which may in turn threaten de-risking.

What are the various components of Bermuda's financial stability framework? Can you explain each component and how they work together?

At the legislation level, acts creating the special resolution regime for banks and the Bermuda Deposit Insurance Corporation (BDIC) are key. At an institutional level, the framework's key players are the Financial Policy Council (FPC), Financial Stability Committee (FSC) and Fiscal Responsibility Panel (FRP).

FPC was established in 2015 and advises the Ministry of Finance and the Authority on financial system stability in Bermuda. Its purpose is to assess possible threats to Bermuda's financial stability, and to identify policies and actions to mitigate or eliminate such threats. It also advises on development of the financial stability framework in Bermuda, and makes policy recommendations designed to support the general economic and financial well-being of the country. Members of the Council are the Deputy Premier and Minister of Finance the Hon. E.T. Richards JP MP (chair), Sir Andrew Large (deputy chair), myself as Authority CEO, Sir Courtney Blackman, Michael Butt, Dame Amelia Fawcett and Gil Tucker.

FSC is hosted by the Authority and is designed to facilitate informed, consistent and timely decision-making by the FPC.

FSC also provides advice and recommendations on financial stability issues that may adversely impact the economy of Bermuda.

FRP was set up by government and its role is, as specified in the letter of appointment: "to provide Bermuda's Parliament, Minister of Finance and Financial Policy Council with an annual published assessment of the territory's fiscal strategy, focusing on progress in meeting the territory's medium-term objectives for public spending, taxation, borrowing and debt reduction." Reports from FRP feed into Government's fiscal policy development, as well as into FSC and FPC deliberations. Press releases are issued after each FPC meeting, the most recent being in December 2016.

BDIC was created by the Deposit Insurance Act 2011 and brought into operation on 20th August 2016 by Ministerial Order. BDIC collects premiums from Bermuda's banks, invests them, and compensates depositors up to a current maximum limit of $25,000, should a bank default on its obligations.

How important is an effective financial stability framework to the maintenance of a sound and growing economy?

It is extremely important. Effects from the global financial crisis that started in 2007 are still being felt today 10 years afterwards. The crisis showed that financial instability can have a serious impact on a countries' GDP, adversely affecting the welfare of populations. World GDP dropped in 2009, and although the recovery process has begun, it has often been anemic and uneven.

So although the need to develop a financial stability framework was driven by lessons learned from the global financial crisis, early identification and monitoring of systemic risks and the development and implementation of prevention, mitigation and management measures, will help protect Bermuda's economy, moving forward.

What is the direct effect of the introduction of the various components of the framework to depositors and other stakeholders? e.g. deposit insurance. When do we expect to see the impact of these?

Generally speaking, most stakeholders in Bermuda will lose out if systemic risks are given a chance to materialise, which creates financial instability, which in turn negatively impacts economic development. Measures to counter this should be welcome.

An adequately funded deposit insurance scheme will protect small depositors in Bermuda in the case of a bank failure.

In respect to dealing with banks which undergo distress, a special resolution regime was enshrined into law in 2016. It is a complex piece of legislation, the implementation of which is, like the deposit insurance scheme, at very early stages.

It bears reminding that there is no lender of last resort in Bermuda, so the Bermuda Government is pursuing a policy of super-resilience, that is, one that aims to minimise the risk of materialisation of financial instability.

A key effect of the recent recession has been the growth in the debt-to-GDP ratio of Bermuda as a sovereign state. This has dramatically restricted the ability of the Bermuda Government to provide support to financial instability episodes as it did in 2009 when it guaranteed the issuance of preference shares to recapitalise Butterfield Bank.

Were there significant influences external to Bermuda that encouraged the development of a financial stability framework?

The creation of the Financial Stability Board (FSB) by the G20 group of countries in early 2009 was a key milestone. FSB then joined the ranks of International Association of Insurance Supervisors, International Organisation of Securities Commissions and Bank of International Settlements which seek to develop global best practice for regulating financial services.

As you know, the Authority has a long-standing commitment to adhering to international standards but officially committed to implementing FSB reform in late 2011 when it joined FSB's Regional Consultative Group for the Americas. The Authority has been an active participant ever since and has participated on FSB's shadow banking work at both a global and regional level. In December 2012, the Authority hosted the third FSB Regional Consultative Group for the Americas plenary meeting in Bermuda.

Other threats to depositors and other customers and stakeholders of banks include cyber risks, data security and privacy risk. Does the Authority see that it has a role in overseeing the banks' management of these risks?

Absolutely, yes, because these risks fall under the broader umbrella of operational risks. The Authority assesses how well banks manage operational risks as part of its general daily supervision and during on-site inspections. Where areas of concern are identified, the Authority requires banks to remediate them immediately.

“Perhaps the greatest challenge our banks presently face is ensuring compliance with more stringent AML requirements and managing that balance with the need to educate their clients on its impact on customer / bank relationships.”

“A key effect of the recent recession has been the growth in the debt-to-GDP ratio of Bermuda as a sovereign state. This has dramatically restricted the ability of the Bermuda Government to provide support to financial instability episodes.”

FinTech

Enablement is creating opportunity

The banking sector's business model has developed over centuries. Traditionally, banks are bricks and mortar institutions with distribution through branches, deep expertise in credit underwriting, strong balance sheets, stable regulation and a reputation as one of the pillars of a developed society. Banks have also enjoyed high customer loyalty, as consumers are generally slow to switch financial service providers.

Some things have changed however;

First, the financial crisis had a negative impact on consumer trust in the banking system;

Secondly, there has been a move toward tighter regulation on banking activity and higher capital requirements;

Thirdly, the ubiquity of mobile devices has begun to undercut the advantages of physical distribution that banks previously enjoyed; and

Finally, there has been a significant demographic shift.

The customer base is now dominated by millennials[1], born in the digital age and forming 37% of the adult population globally[2], who are tech-savvy and demand more personalised, on-demand services.

These factors have come together to create an intensely challenging operating environment for banks. Trust with millennials is difficult to establish, and brand loyalty lacks persistence in this generation. Millennials seem more interested in advice from friends, family and their social networks, than from corporate financial advisers.

The global financial technology landscape

Mobile-enabled customers have more options than ever, and are demanding more personalised and convenient services.

Smartphones have enabled a new operating paradigm of mobile (and remote) interaction between consumer and supplier. There has been a quantum leap in the availability of widely accessible, globally transparent data — which enables new entrants and existing competitors to access insights that may have previously taken many years to gather.

Almost every type of financial activity — from banking, to payments, to wealth management and more — is being re-imagined by FinTech startups. These FinTech companies can be broadly categorised by the underlying technology: Blockchain, Security & Biometrics, Data & Analytics, RegTech and Digital Labour; as well as by the industry they serve: Lending, Payments, Capital Markets, WealthTech and InsurTech.

These commercialised technologies are driving the banking value chain to disaggregate from credit approval to data storage.

It is an exciting time for FinTech firms, which are thriving in this "disrupted" landscape, deploying technology to drive profit in the financial services industry. Global venture capital funding continues to grow, reaching a record $13.6 billion in 2016[3].

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[1] *Defined as a person reaching young adulthood around the year 2000.*

[2] *Source: United States Census Bureau.*

[3] *Source: KPMG International and CB Insights data published March 17, 2017.*

WRITTEN BY: **CHARLES THRESH,** MANAGING DIRECTOR
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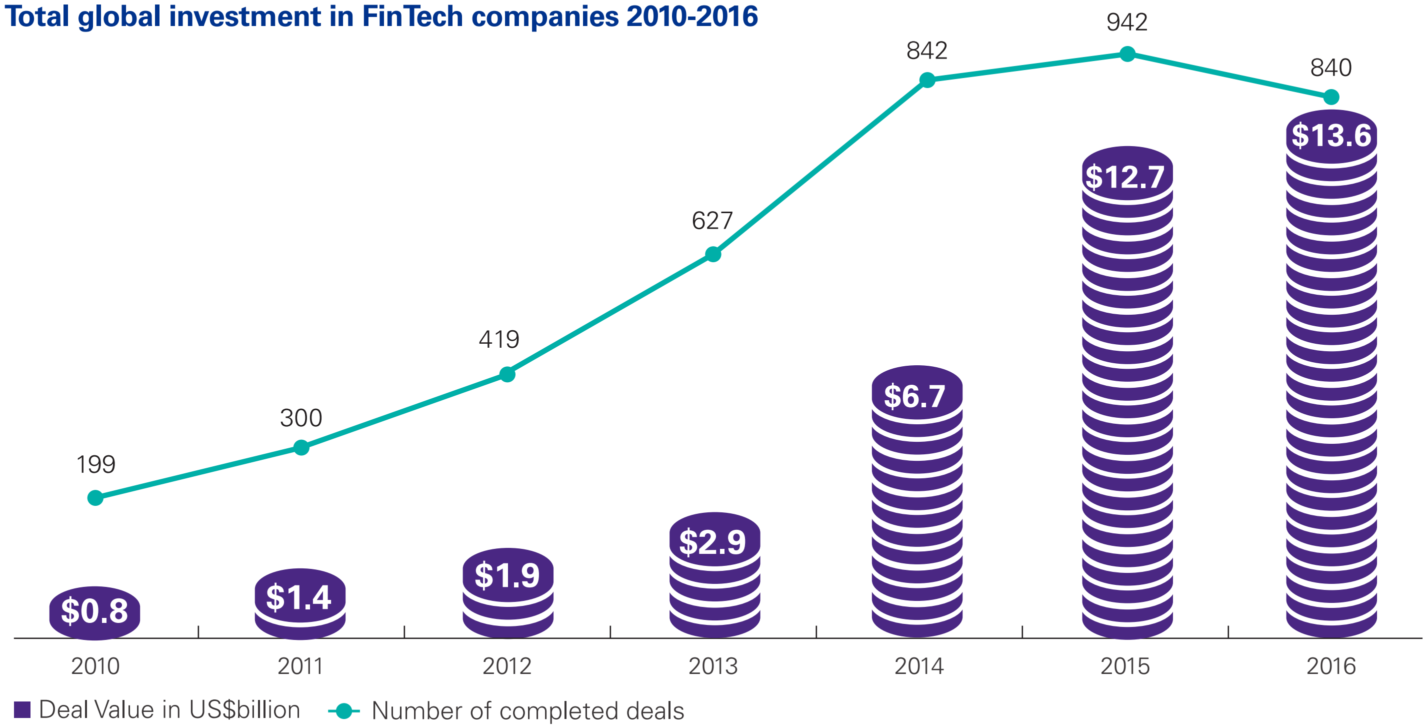
Total global investment in FinTech companies 2010-2016



McKinsey's 2015 Global Banking Annual Review estimates that banks earn an attractive

22%

Return on Equity (ROE) from origination and sales.

From competition to collaboration

Banks have always embraced and leveraged innovative technologies for growth, from the introduction of credit cards and ATMs in the 1960s, to telephone banking in the 1980s, to online banking in the 1990s. These technologies have revolutionised the way we bank.

The explosive growth of FinTech companies, enabled by the capital investments from venture capital and private equity firms, presents the banking industry with an array of threats and opportunities.

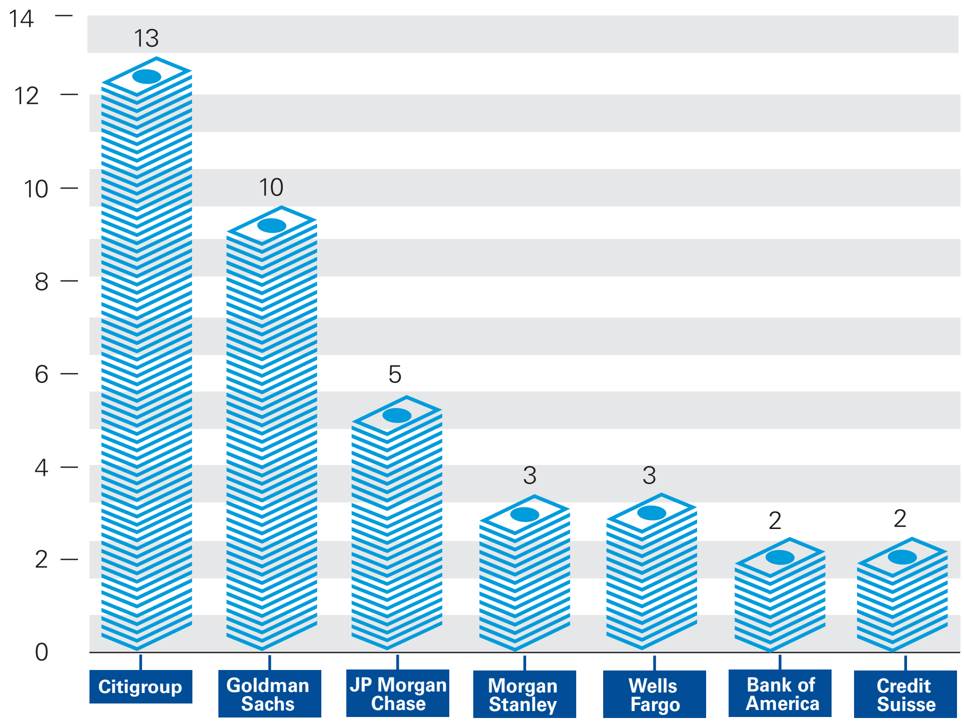
Smaller, independent developers of mobile apps tend to be quicker to market with their ideas and products than large financial institutions. The rise of mobile technology has given banks remote, real time access to their customers but the same technology has facilitated ease of customer movement and a loss of persistency. From this perspective, FinTech has proved to be a disruptor in the banking sector.

However, banks have moved to defend their competitive position by bundling their traditional products with other new services, often provided on a "white-label" basis by other service providers and brought to market through others' apps.

There is also a profit motive for doing this: McKinsey's 2015 Global Banking Annual Review estimates that banks earn an attractive 22% Return on Equity (ROE) from origination and sales, much higher than the provision of credit, which generates only a 6% ROE.

A number of banks have formed collaborative relationships with third party FinTech firms, to embed new services and technologies that improve customer experience and drive efficiency — turning disruptors to co-creators. Some banks have gone further, preferring to buy or build, rather than partnering, to keep pace with new developments. Citigroup and Goldman Sachs have each invested in a number of FinTech startups, choosing to work with the industry sector instead of competing with it.

Major bank investments to FinTech companies between 2011 and 2015[4]



> It is yet to be seen how the local banks will further implement FinTech and whether the focus will be on leveraging technology for enhanced customer services, improving operating efficiency or fulfilling ever increasing compliance requirements, such as AML and FATCA/CRS. Most likely, it will be some combination of these drivers.

In Bermuda mobile banking apps have been introduced since 2013.

It is yet to be seen how the local banks will further implement FinTech and whether the focus will be on leveraging technology for enhanced customer services, improving operating efficiency or fulfilling ever increasing compliance requirements, such as AML and FATCA/CRS. Most likely, it will be some combination of these drivers.

Privacy and the ownership of personal information

With approximately 40% of the world population now online, personal information increasingly comes in digitised format. Personally Identifiable Information (PII) is collected by the online community, often without the knowledge of the consumer. Unfortunately, against that backdrop, the ability of those organisations to protect that information once they have it is very much open to question. In the U.S. alone, 35,233,317 records were exposed as the result of data breaches in 2016.[5] (The population of the U.S. is approximately 326 million.)

There is an increasing debate on the ownership and use of PII, and the associated implications for privacy. Many jurisdictions around the world are changing their laws to prevent companies from using personal data collected without consent from its owner. For example, the EU approved the General Data Protection Regulation (GDPR) in April 2016, requiring organisations that hold personal data to meet significantly more exacting requirements on privacy and consumer protection. The regulation comes into force in May 2018.

Although the GDPR is perhaps the most comprehensive attempt to define a coherent regulatory framework for privacy, governments around the globe are sharpening their focus on the issue and introducing legislation to offer greater protection to consumers — and harsher penalties for violations.

[4] *Source: KPMG International and CB Insights data published March 17th, 2017.*

With approximately

40%

of the world population now online, personal information increasingly comes in digitised format.

"FinTech companies that can design and deliver data security and privacy-related solutions are emerging to bridge the gaps in banks' current capabilities."

Bermuda has introduced the Personal Information Protection Act (PIPA), which received Royal Assent on July 27, 2016 and is due to come into force in the summer of 2018. PIPA was drafted with the intent to enable Bermuda to join the international network of trust currently existing between countries with similar levels of informational privacy protection — a concept the EU refers to as Adequacy.

The EU permits third party countries to apply for an adequacy finding, which allows the free flow of personal data from the EU without the EU data exporter having to implement any additional safeguards or being subject to further conditions. As a result of securing adequacy, transfers to the country in question will be assimilated to intra-EU transmissions of data, thereby providing privileged access to the EU single market, while opening up commercial channels for EU operators.

FinTech companies that can design and deliver data security and privacy-related solutions are emerging to bridge the gaps in banks' current capabilities. Meanwhile banking customers can expect to see updates to terms and conditions and consent-to-use and purpose-of-use notifications as part of the response to change.

[5]Source: Identity Theft Resource Centre published March, 2017.

Conclusion:

Over the years, the banking industry has shown a remarkable ability to address emerging challenges, including economic upheaval, market volatility and threats to its business model.

FinTech will remain a source of disruptive influence, blockchain for example has been held out by many as a possible alternative to traditional banking methods.

However, it seems many banks around the world are embracing the emerging new technologies to remain relevant, valuable and secure to their customers.

RegTech

The combining of technology and regulatory requirements

"CEOs believe technology willl be one of the biggest factors contributing to company growth, second only to economic factors[2]."

Industry-wide compliance cost is ballooning to an estimated

US$70

billion annually in the United States.

In Bermuda, the BMA continues with the phase in of new Basel III requirements. The remaining requirements and their effective dates are as follows[1]:

(All dates are as of January 1)	2017	2018	2019
Minimum CET1 CAR	4.50%	4.50%	4.50%
Capital Conversation Buffer	1.25%	1.88%	2.50%
Minimum CET1 CAR plus Capital Conservation Buffer	5.75%	6.38%	7.00%
Minimum Total CAR	8.00%	8.00%	8.00%
Minimum Total CAR plus Capital Conservation Buffer	9.25%	9.88%	10.50%
Leverage ratio	5.00%	5.00%	5.00%
LCR	80.00%	90.00%	100.00%

The above does not include the capital buffer for being a Domestic-Systemically Important Bank (D-SIB), which can range from 0% to 3%, the Countercyclical Buffer, the Credit Valuation Adjustment, or the introduction of the Net Stable Funding Ratio which is due 2018.

As can be seen by the introduction of these requirements, standard and fixed regulatory reporting has become a thing of the past. Regulators have been changing and increasing the scope of requirements in a proactive manner to avoid another financial crisis. RegTech is the solution, as previous technologies were often custom built for specific reporting and "add ons" had to be programmed and re-programmed to address any changes made to the regulatory requirements.

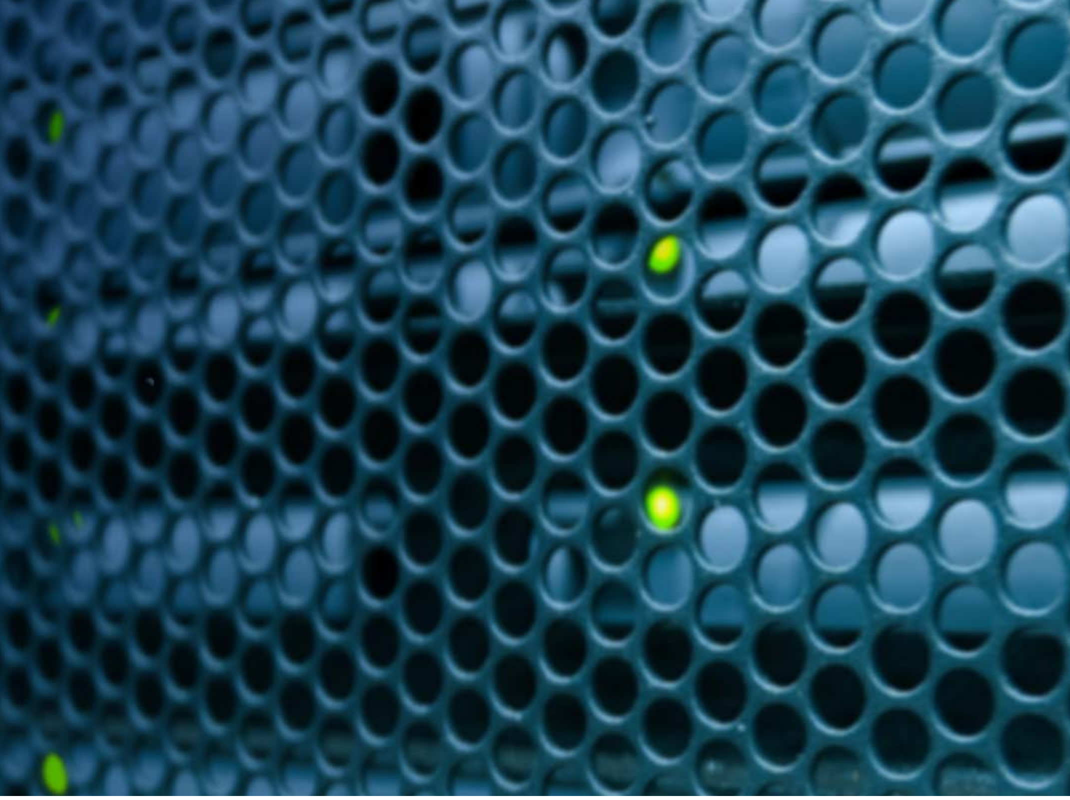
With industry-wide compliance costs ballooning to an estimated $70 billion annually in the United States alone, RegTech solutions have proven to be the accelerator that helps firms respond to increased regulatory expectations while reducing compliance cost, increasing enterprise wide coordination, and making firms' business strategies more agile.

Globally, the regulatory burden continues to increase as well as the timeliness requirements of regulatory reporting. This, in turn, increases the compliance risk of financial institutions. RegTech offers the opportunity to analyse data that may already be available but now can be used to better assist with regulatory reporting as well as the management of the increased compliance risk.

[1]*Source: Basel III for Bermuda Banks-Final Rule, Bermuda Monetary Authority*

[2]*Source: KPMG International, The nexus between regulation and technology innovation, April 2017*

WRITTEN BY: **CRAIG BRIDGEWATER**, HEAD OF INVESTMENTS & BANKING, WITH REFERENCE TO KPMG INTERNATIONAL, THE NEXUS BETWEEN REGULATION AND TECHNOLOGY INNOVATION, APRIL 2017



Exponential growth in regulatory requirements over the last eight years, including a renewed consumer protection agenda and a demand for faster remediation of supervisory issues, has added to the cost of operationalising compliance across the three lines of defense of enterprise risk management and resulted in increased resource spend.

As firms continue to make technological advancements that enhance customer experience and increase convenience, the industry is looking for practical and more effective ways to take advantage of "big data" — customer, risk, financial, operational, and more — that holds the potential to address many of these compliance concerns. However, managing this data efficiently, manipulating it to effectively serve a variety of purposes, and ensuring it is protected from cyber attacks and of sufficient quality to yield actionable results remains elusive. Human biases and other limitations in managing big data's multiple sources, volume, and complexity, while unavoidable, have only served to exacerbate these concerns. Although significant cost and effort has been expended, many firms still find themselves in noncompliance with regulatory obligations which has led to substantial fines and considerable, reputational damage.

RegTech solutions assist firms in moving away from the concept of big data and towards one of "smart data."

Increased competitive pressures from various market players, new entrants, and idiosyncratic customer demands for an improved delivery experience are also driving a need for agility in firms' business processes and their ability to simultaneously achieve real-time compliance.

For regulators, RegTech solutions also offer the potential to reinvest and streamline approaches to the regulatory and supervisory process itself through the use of real-time surveillance, distributed ledger technologies (blockchain), and data analytics.

Ultimately, if implemented correctly, RegTech solutions will lead to reduced errors, improved compliance, and enhanced financial crime detection and fraud surveillance. They will also work in concert to deliver enhanced digital experiences for customers and significant cost optimisation and efficiency opportunities while reducing manual processes and human biases. While not eliminating human capital spend entirely, firms can nevertheless focus on redeploying fewer, highly-skilled compliance resources away from routine processes and towards analysing output and applying critical judgment to this machine reporting.

85%

of CEOs recognise the importance of integrating automated business processes with artificial intelligence and cognitive processes[1].

84%

of CEOs are concerned about the quality of the data they base their decisions on[1].

Regulation Driving Information Requests

How we see the regulatory landscape and the impact on the customer

Customers are experiencing an increased demand from their banks for information both at account opening and during the banking relationship. Customers may feel that they are being asked for the same information multiple times and may have concerns over how well the banks are protecting all of this personal information.

These requests from the banks are being driven by a variety of new local and global regulations that aim to prevent money laundering and terrorist financing, and ensure that jurisdictions such as Bermuda are not being used by those looking to evade tax.

Banks have also seen the reputational damage impacting other industries as a result of data leaks and are addressing the risks of data security and data privacy.

To provide insight into these trends, we have gathered the insights of key members of KPMG in Bermuda's Advisory team who have significant experience in helping both banking clients and customers of banks, to understand their regulatory requirements and to address the associated implications.

WRITTEN BY: **CHARLES THRESH,** MANAGING DIRECTOR
& **ALEXANDRA MCINNES,** SENIOR MANAGER, REGULATORY COMPLIANCE ADVISORY

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Pieter de Maertelaere
Assistant Manager,
Regulatory Compliance
Advisory

Travis Stevens
Assistant Manager,
Information Technology
Advisory

Maria, please explain the key drivers behind the banks increased demand on customers for information?

“The banking sector is rapidly changing around the world to respond to international and local financial crime regulations. The changes are very real for Bermuda too, and include:

- The Caribbean Financial Action Task Force (CFATF) is coming to Bermuda to carry out a mutual evaluation of the country’s Anti-Money Laundering (AML) and Anti-Terrorist Financing (ATF) counter measures in 2018;
- The Bermuda Monetary Authority (BMA) updated its AML/ATF framework in 2016 by issuing amendments to the regulations and has also published guidance notes for the various sectors;
- The U.S. Foreign Accounting Tax Compliance Act (FATCA) was introduced in July 2014 and entities are required to report on an annual basis;
- All financial institutions are also expected to comply with the Common Reporting Standard (CRS) which is similar to FATCA but provides for reporting to other countries their citizens' financial activities; and
- Bermudian banks are expected to enhance their policies and procedures and align them to current regulations. The customer files are expected to be in compliance with the BMA’s guidance for Customer Due Diligence (CDD).

All of these changes are driving the demand for increasing the customers’ personal information held by banks.”

All public officials will be mandated to report any offer of a bribe, or face penalties.

Both the AML/ ATF and ABC regulations are designed to keep businesses honest and create a level playing field for banks, both locally and internationally.

“The Authority will continue its renewed focus on enforcement in 2017, particularly in the areas of AML and sanctions compliance.”

BMA, 2017 Business plan

Pieter, what is new in relation to AML/ATF and ABC?

“The Bermuda AML/ATF regulations and guidance notes have undergone important updates in 2016. Regulated entities must now at all times be able to demonstrate that they follow appropriate and documented procedures for assigning risk ratings to each business relationship they accept or maintain and each transaction they conduct. Moreover, the definition of Politically Exposed Persons (PEP) has been expanded to include domestic PEPs, whereas before only international PEPs were in scope of the regulations. The BMA has also taken this opportunity to describe the criteria for reliance on third parties in more detail. Reliance is only allowed in specific situations and regulated entities remain liable for any failure to apply the required CDD measures. Regulated entities now have the obligation to file the necessary disclosure with the Financial Intelligence Agency (FIA) where they are unable to perform customer due diligence. In light of these new requirements, the BMA has also confirmed its focus on enforcement in the areas of AML compliance over the next year.

The new Bermuda Anti-Bribery and Corruption (ABC) act is expected to come into force in mid-2017. ABC is a rather new regulatory compliance area in Bermuda but will certainly become an area of increased focus going forward with the Bermuda Bribery Act being passed at the end of 2016. The Bribery Act is modelled largely on Britain’s Bribery Act 2010. Among the offences covered are bribery of foreign public officials and the failure of commercial organisations to prevent bribery. All public officials will also be mandated to report any offer of a bribe, or face penalties. Similar to the AML/ ATF requirements, organisations will need to have adequate policies and procedures in place to prevent any form of bribery and evidence compliance with the new legislation.”

And, Pieter, what is the benefit of these new requirements to both banks and their customers?

“The new requirements should allow banks to better understand their obligations in order to prevent any failures in their AML/ATF systems and procedures and avoid being exposed to any adverse regulatory scrutiny. In addition, more detailed rules should lead to more uniform customer information requests across different banks, allowing customers to use similar documents provided to one bank for another bank. Both the AML/ATF and ABC regulations are designed to maintain the integrity of the financial service industry locally and internationally. These requirements are important to maintain Bermuda’s international reputation for equivalence to global ethical standards.”

Stephanie, how have the banks responded to these new requirements?

“The banks have been widely performing updated or additional due diligence on their existing customers. They are also more frequently requesting source of wealth information. For new clients, far more verification is required at onboarding – not just passports and proof of address — but evidence of source of wealth such as employment contracts, pay slips and sale of property agreements. For corporate customers, banks are also far more extensive in the associated persons on whom they obtain due diligence – in some cases they have been requesting CDD on all shareholders. Large scale remediation projects continue to be a significant investment of banks globally, and Bermuda is no exception.”

And, Stephanie, what happens if customers do not provide the information requested by their banks?

“In the case of existing customers, we have seen banks both in Bermuda and internationally freeze accounts and eventually exit relationships where they have been unable to obtain the information or verification requested. The banks in Bermuda are adapting the global trend of “de-risking"; that is, deciding to exit high risk relationships where the cost of compliance is considered too much. This is often the case where clients are registered in or from a high risk jurisdiction or where the transactions on the account cannot be adequately explained by the customer. It can be very difficult for these types of customers to get new bank accounts either in Bermuda or elsewhere.”

The banks in Bermuda are adapting the global trend of "de-risking;" that is, deciding to exit high risk relationships.

The average annual tax gap between tax owed and tax paid for 2008 — 2010 is estimated to be

US$458

billion dollars.

30%

Where FIs do not comply with FATCA, a

30%

withholding tax is imposed on U.S. source income and gross proceeds paid to that FI, both on its own U.S. investments and those held on behalf of its customers.

Stefan, we have heard of FATCA, but can you please explain the purpose of these regulations?

"In recent years, the world has seen a large number of corporate and individual tax evasion scandals. Following those scandals, the U.S. FATCA was enacted in 2010 in an attempt by the U.S. to combat tax evasion by U.S. citizens. For that purpose, FATCA requires Financial Institutions (FIs) outside the U.S. to report information on financial accounts held by their U.S. customers to the IRS. Where FIs do not comply with FATCA, a 30% withholding tax is imposed on U.S. source income and gross proceeds paid to that FI, both on its own U.S. investments and those held on behalf of its customers. To overcome the legal barriers in implementing FATCA, the U.S. has entered into Intergovernmental Agreements (IGAs) with many jurisdictions. The UK soon followed the U.S. example, entering into IGAs with their Crown Dependencies and Overseas Territories (CDOT). The IGAs to implement FATCA have further laid the ground for the OECD CRS as a global initiative to combat tax evasion and increase tax transparency."

What is being asked of the banks in relation to FATCA and other tax driven legislation such as CRS?

"Banks are required to report certain information with regards to "Reportable Account Holders". Generally, reporting Bermuda FIs are required to collect and report the following information under the Bermuda-U.S. and UK IGAs, and CRS, respectively:

- the name, address, Taxpayer Identification Number (TIN(s)) (National Insurance Number under UK IGA), date of birth, and place of birth (under CRS only);
- in case the Account Holder is an entity with Reportable Controlling Persons: the name, address, and TIN(s) of the entity and the name, address, TIN(s) and date and place (under CRS only) of birth of each of the entity's Controlling Persons that is a Reportable Person;
- the account number (or functional equivalent);
- the name and identifying number (if any) of the Reporting FI (under the U.S. and UK IGAs: the Global Intermediary Identification Number - (GIIN);
- the account balance or value; and
- the total gross amount paid or credited to the Account Holder during the year.

In order to meet their reporting obligations under the IGAs and CRS, Bermuda banks have further adjusted their customer onboarding forms. The Banks have further performed extensive due diligence procedures to identify any Reportable Account Holders in their existing client base."

Bermuda FIs usually require new customers to provide their name, address, TIN, date and place of birth, and to disclose the country(ies) in which they are considered resident for tax purposes.

Providing false information under the IGAs or CRS can be punished under the domestic law of each jurisdiction; in Bermuda, this can mean a fine of up to

$10,000

imprisonment of up to six months, or both.

In terms of cybersecurity, it is often said that the human element is the weakest link in the chain.

Nadya, what is being requested from customers in relation to FATCA and CRS? And why is it important that customers provide this information?

“The newly designed onboarding forms used by Bermuda FIs usually require new customers to provide their name, address, TIN, date of birth and place of birth, and to disclose the country(ies) in which they are considered resident for tax purposes. To comply with the Bermuda-U.S. IGA, new customers are typically also required to confirm whether or not they are a U.S. citizen, were born in the U.S. or are considered resident in the U.S. for tax purposes (for example through holding a green card), and for the purpose of both the U.S. and UK IGA, give consent to the information being reported to the IRS / HMRC by the Reporting Bermuda FI.

For individuals and entities, providing the requested information that needs to be reported under the IGAs and CRS has become an essential part of their banking relationships. Banks will only open new accounts where clients provide the required information. Further, where pre-existing clients refuse to provide the information their banks request as part of their client remediation exercise, they are reported as “Recalcitrant Account Holders” or “Non-Consenting Account Holders” to the IRS or Her Majesty's Revenue and Customs (HMRC) respectively, which may result in negative consequences for those Account Holders. Further, providing false information under the IGAs or CRS can be punished under the domestic law of each jurisdiction; in Bermuda, this can be a fine of up to $10,000, imprisonment of up to six months, or both.”

Chris, we have heard about the regulations driving the banks to gather this information, but what regulations are in place to then protect the safety and privacy of this personal information that is being shared with the banks?

“Cyber security and the battle against hackers has long dominated the agenda of the chief information officer (CIO). The EU’s new rulebook, the General Data Protection Regulation (GDPR), marks a fundamental shift towards the view that privacy must be at the forefront of organisations’ minds when dealing with consumer data. Due to come into force in May 2018, it could see organisations hit with fines of up to 4% of global worldwide revenue for non-compliance.

The stricter approach being adopted globally catapults privacy towards the top of an organisation's risk radar. In this rapidly changing environment, organisations need to consider a new attitude towards privacy — and they need to do it quickly to minimise the risks to their balance sheet and their reputation.

Bermuda has introduced the Personal Information Protection Act (PIPA), which received Royal Assent on July 27, 2016 and is due to come into force during the summer of 2018. PIPA introduces significant penalties for non-compliance with fines of up to $250,000 per breach for a corporate entity, and up to $25,000 for an individual and/or imprisonment for up to two years. There is clearly a dynamic tension between the AML/CDD/ATF driven requirements to gather ever more customer information and the potential impact of failing to keep it secure.

Against this backdrop of enhanced scrutiny of cyber and privacy operating procedures, there is a strong driver to ensure that the information entrusted to the banking sector is appropriately safeguarded.”

Travis, what are the banks doing to protect the security and privacy of customers' information?

"Banks have a marked advantage over other organisations in that they typically have a greater understanding of the cyber threat landscape. As part of their risk management process, organisations like banks will have an inclusive risk assessment framework that considers customer data. As with all forms of Personally Identifiable Information (PII), customer data should be subject to data classification. Data classification standards look at assessing data sensitivity, measured by the adverse business impact a breach of the data would have on the organisation.

A comprehensive, scalable controls framework provides a strong foundation for protecting customer information. This controls framework should feature a combination of preventative, detective, and corrective controls that are designed to protect both customers and the organisation. Data transmission within banks (and externally) is widely encrypted and limited to privileged individuals in-line with their job responsibilities. Unfortunately, encryption alone in not always enough.

Protecting PII has forced banks to think outside the box. Protecting sensitive information goes far beyond implementing a set of access controls. In terms of cybersecurity, it is often said that the human element is the weakest link in the chain. It is far easier for a criminal to obtain information over the phone than it is to become a hacker. That said, banks have deployed a host of training initiatives, specifically designed to prevent social engineering attempts and force employees to think twice before releasing sensitive data. Our natural desire to be helpful often directly contradicts our duty to protect information.

Risk mitigation strategies, implementing control frameworks, and training does not come cheap. The International Data Corporation predicts that organisations worldwide will spend nearly $80 billion on cybersecurity in 2017; with that spend anticipated to rise to over $100 billion by 2020. The biggest spenders? Manufacturers, government organisations, and of course banks. The challenge here is that more spending does not always mean more protection.

These tools and initiatives are allowing banks to safely, more efficiently handle our sensitive information while providing the services they are mandated for."

Conclusion:

As has been described, there are a number of local and global regulations driving the banks to demand information from customers, with serious consequences for both the banks and their customers for non-compliance.

As this becomes business-as-usual for the banks and their systems are updated to effectively manage this information, we expect to see the banks using the information to enhance the service offered to their customers.

Bermuda's Banks

2016 financials at a glace

The Bermuda banking sector is made up of four banks of different sizes providing different types of services and products: Bermuda Commercial Bank (BCB); Clarien Bank (Clarien); HSBC Bank Bermuda (HSBC); and The Bank of N.T. Butterfield & Son (Butterfield).

These differences make direct comparisons difficult.

This survey is intended to highlight and discuss trends in the sector and discuss some of the common challenges market participants face in the short term. The source of all the financial information is the audited financial statements of each entity or calculations using such information.

WRITTEN BY: **CRAIG BRIDGEWATER,** HEAD OF INVESTMENTS & BANKING
& **RICHARD HOBDAY,** SENIOR MANAGER

The key players:

BCB
BERMUDA COMMERCIAL BANK LIMITED

Bermuda Commercial Bank "BCB"	
Reporting GAAP	Year End Date
IFRS	30-Sept-16

Butterfield

The Bank of N.T. Butterfield & Son "Butterfield"	
Reporting GAAP	Year End Date
US GAAP	31-Dec-16

CLARIEN

Clarien Bank "Clarien"	
Reporting GAAP	Year End Date
IFRS	31-Dec-16

HSBC

HSBC Bank Bermuda "HSBC"	
Reporting GAAP	Year End Date
IFRS	31-Dec-16

The reporting periods for the banks and their focuses are not consistent, and as such it is important to consider the information below when making comparisons:

- **HSBC Bermuda** is part of a large global banking network. HSBC Bermuda has a December 31 year end and prepares its financial statements in accordance with International Financial Reporting Standards (IFRS);
- **Butterfield** is listed on the Bermuda Stock Exchange and the New York Stock Exchange (NYSE), and has a December 31 year end. Butterfield is headquartered in Bermuda servicing six jurisdictions: Bermuda, The Cayman Islands, Guernsey, The Bahamas, Switzerland and the United Kingdom. Butterfield prepares its financial statements in accordance with accounting principles generally accepted in the U.S. (U.S. GAAP);
- **Clarien** has had a residential lending focus to date it has a December 31 year end and prepares its financial statements in accordance with IFRS; and
- **BCB** has a commercial lending and private client focus. Its year end is September 30 and its financial statements are prepared in accordance with IFRS.

The sector's total assets decreased by approximately (6%)

6% US$1.49

billion in 2016.

Balance Sheet

Bermuda's banking sector, as measured by total assets, decreased slightly in 2016 by approximately $1.49 billion (6%). Butterfield emerged as the largest bank in terms of total assets at $11.1 billion, a position consistently held by HSBC until 2015. The change in position arose as Butterfield completed their acquisition of HSBC's private banking operations in April 2016 (announced in October 2015).

Butterfield continued to grow its asset portfolio during 2016 as a result of the acquisition of HSBC's private banking operations. This was offset to some extent by the wind-down of their deposit taking and investment management businesses in the UK, that was completed during 2016. Butterfield management stated that its London operations were "not consistent with their growth strategy, which is to invest in community banking and wealth management in high quality offshore jurisdictions where it has a substantial presence and can achieve economies of scale". On September 15, 2016, Butterfield debuted on the NYSE by successfully completing an initial public offering (IPO) of its common shares at $23.5 per share, in the process raising $126.2 million of capital.

Figure 1: Total Assets (in '000s)

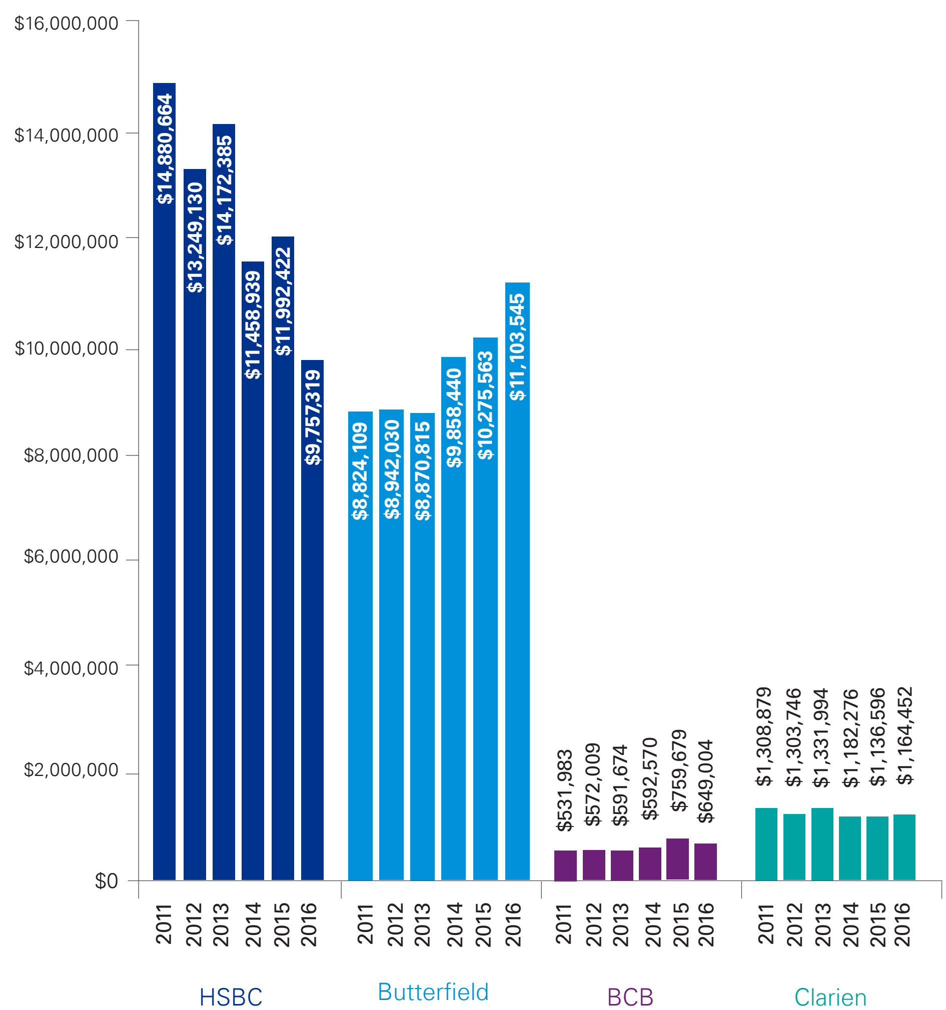
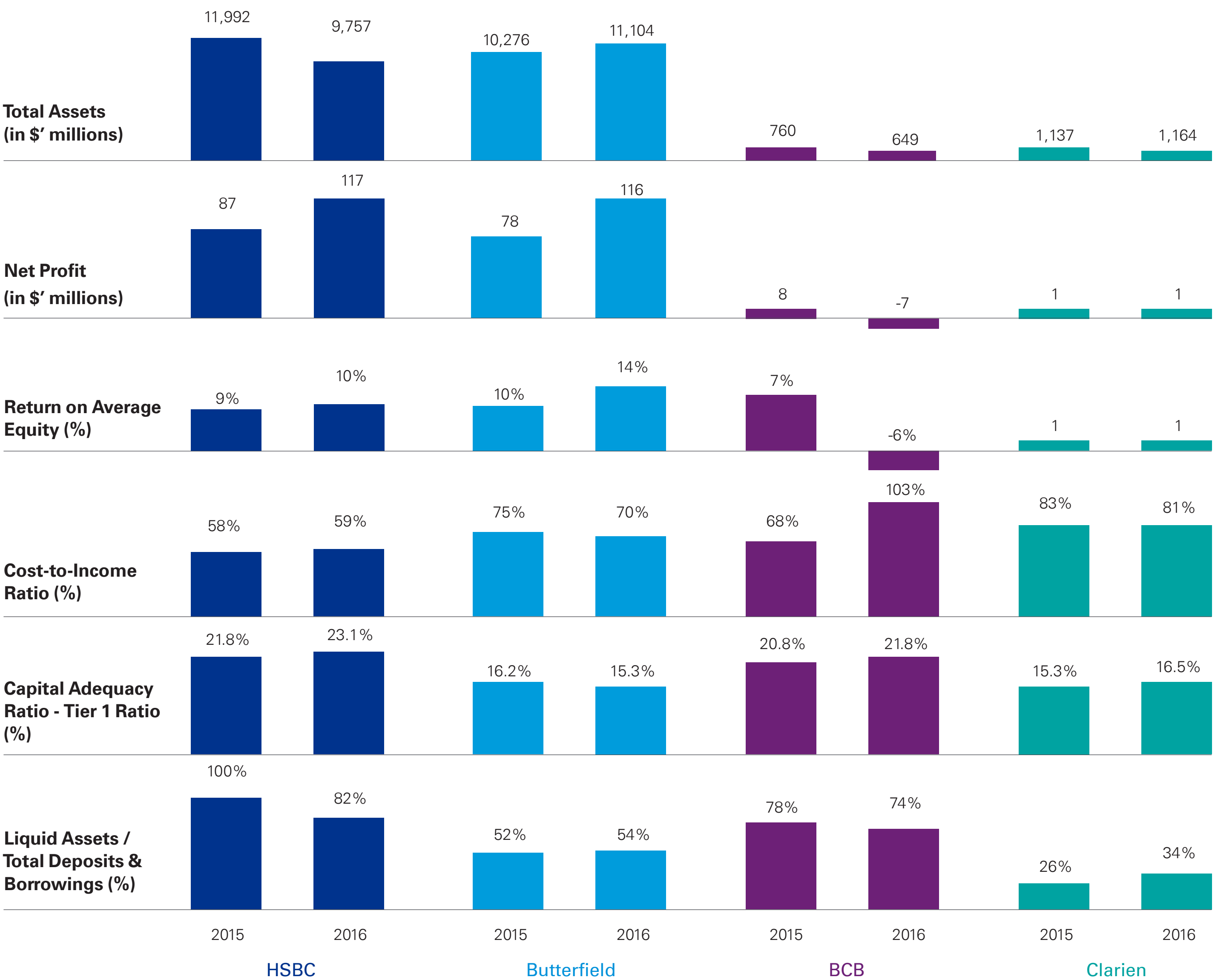


Figure 2: Results Snapshot



Butterfield's share price has risen more than

35%

since the IPO, closing at $31.76 per share on April 21, 2017.

HSBC's total assets declined by

19%

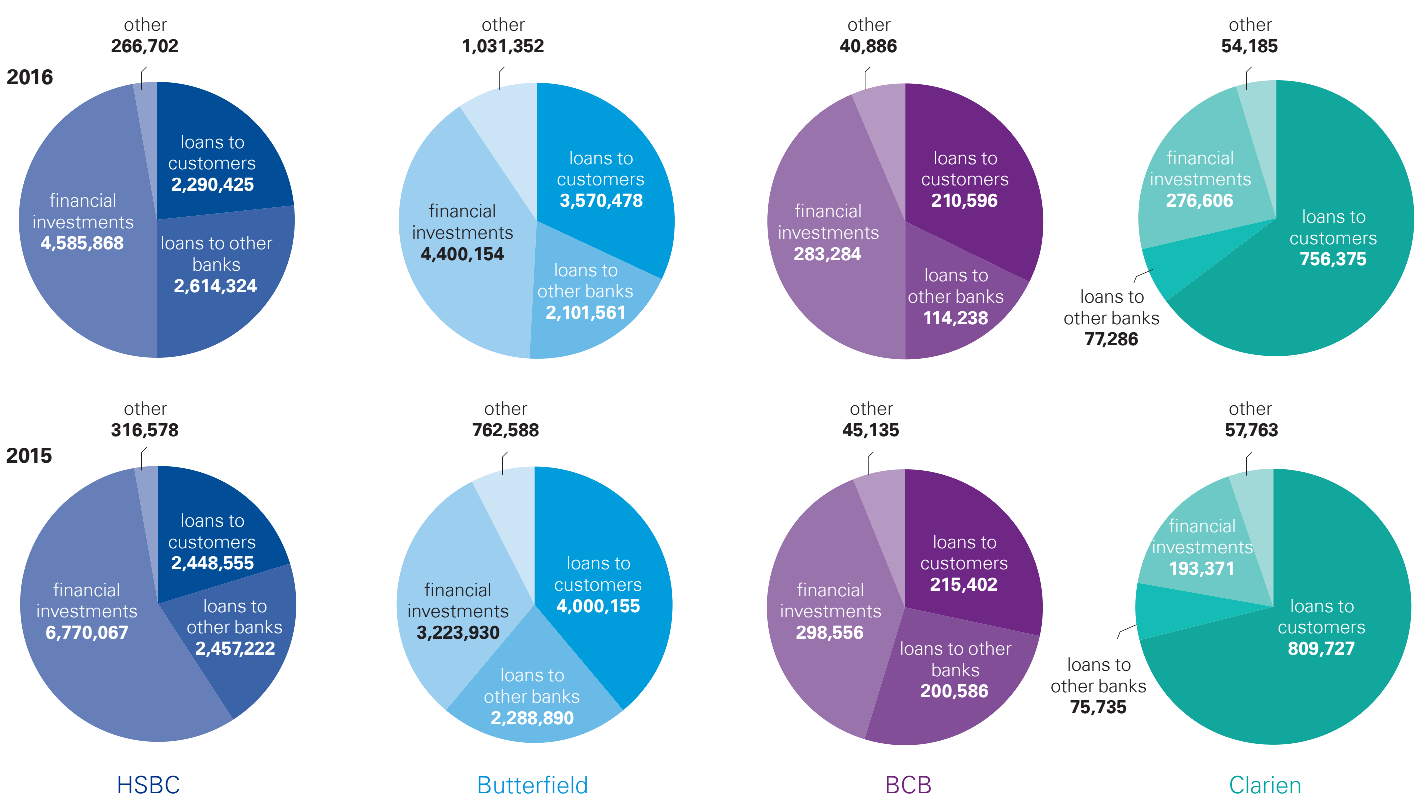
to $9.8 billion, primarily driven by the sale of their private banking operations.

The listing was in part necessitated by an investment agreement entered into with its biggest shareholder, the Carlyle Group, who in 2010, along with Canadian Imperial Bank of Commerce injected cash into Butterfield to help the bank restructure and de-risk its balance sheet. The Carlyle Group completely exited its position through a secondary offering on February 28, 2017. Butterfield's share price has risen by more than 35% since the IPO, closing at $31.76 per share on April 21, 2017. The composition of Butterfield's assets remained relatively consistent with 2015 as it continues to be the largest lender to customers amongst its peers, with a dollar value of loans to customers of $3.6 billion as of December 31, 2016.

HSBC's total assets declined by 19% to $9.8 billion, primarily driven by the sale of their private banking operations. This sale in 2016 follows the sale of their Cayman retail and corporate banking business in 2014, and is in line with HSBC's global strategy to focus on core businesses and locations as they continue to reduce their global footprint under growing pressure from regulators and shareholders to de-risk and simplify operations. Despite the decrease in total assets, HSBC continues to hold strong capital and liquidity positions whilst providing shareholders with significant returns during 2016.

BCB's total assets decreased by 15% to $649 million in 2016. However, BCB continued to maintain a strong liquidity position with cash and cash equivalents making up 33% of total assets. During 2016, BCB fully benefited from their September 2015 acquisition of Private and Commercial Finance Group Plc (PCFG), a UK-based finance house quoted on the AIM stock exchange with a focus on vehicle financing in the business and consumer sectors. BCB's rationale behind the acquisition of PCFG was to diversify BCB's revenues and provide them the ability to more efficiently deploy BCB's assets in the wake of the implementation of the Basel III regulatory framework.

Figure 3: Composition of Total Assets (in $ '000s)



BCB continued to maintain a strong liquidity position with cash and cash equivalents making up

33%

of total assets.

Clarien's total assets increased by approximately

US$28

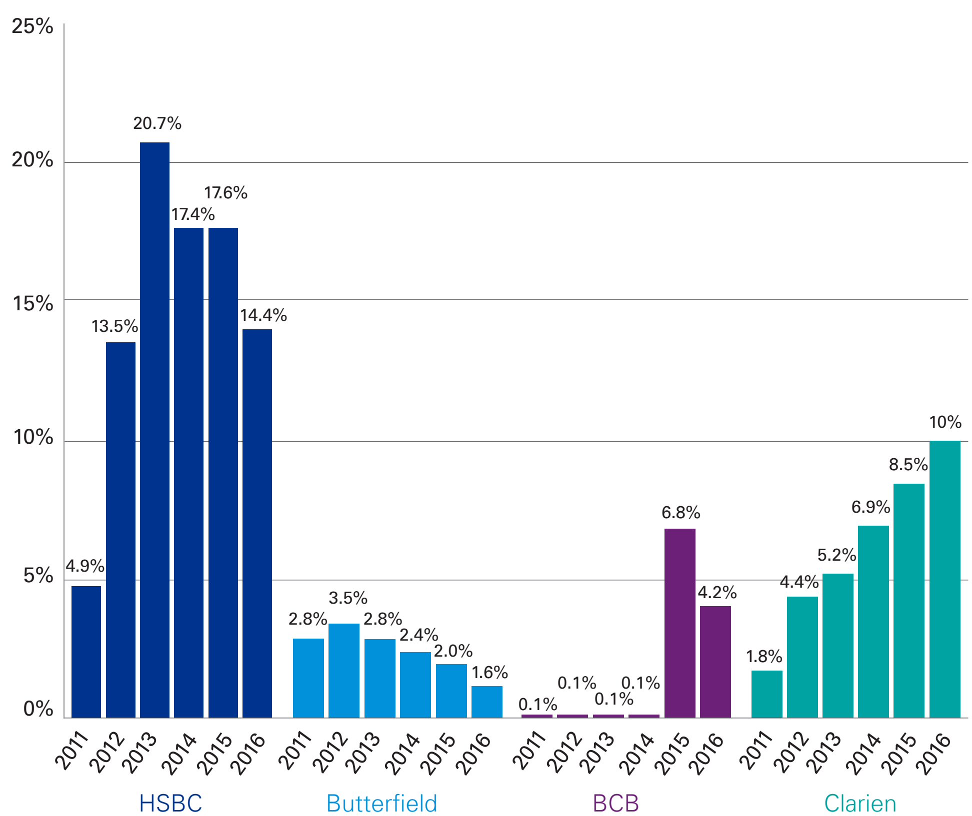
million (2.5%) during 2016.

PCFG contributed $4 million to their 2016 profits. During 2016 BCB relocated into their new premises at the former LP Gutteridge Building on Bermudiana Road.

Clarien's total assets increased by approximately $28 million (2.5%) during 2016, following a $12.6 million investment from Edmund Gibbons Ltd. and a new investor, Portland Private Equity (Portland). Portland is an institutional private equity fund manager focused on investments in the Caribbean, Central America and Andes regions and also owns a controlling stake in National Commercial Bank of Jamaica. Clarien continues to have the highest investment of its assets in loans to customers, representing 65% of its total assets.

The capital injection in 2016 has improved Clarien's total capital ratio to 17.5% and will allow them to continue to pursue their growth strategy.

Figure 4: Impaired Loans as a Percentage of Gross Loans (%)



Profitability

Bermuda's banking sector increased net profits by $26 million or

15%

in 2016 compared to 2015.

Profitability of banks globally is under pressure due to the low interest rate environment, as well as a trend towards more liquid, lower risk, lower return investments in order to react to increasing capital requirements. Despite recent improvements in the local economy, Bermuda's banks continue to face pressure to improve their return on capital.

Despite the headwinds, Bermuda's banking sector increased net profits by $26 million (15%) compared to 2015. Net profit to equity earned was 12% across the sector, which is slightly higher than the 9.05% earned by the U.S. commercial national banks[1].

HSBC reported $117 million in profits for 2016, up by $30 million (34%) compared to prior year decline in operating expenses, and loan impairment provisions and the $20 million gain on sale of wealth management operations were the primary contributors.

Butterfield earned $116 million in profits, up by $37.8 million (48%). An increase in core net income, acquisition of HSBC's wealth management business, and wind-down of the UK private bank were noted as the primary drivers. Michael Collin's, the bank's CEO stated "having repositioned the bank to jurisdictions in which we have scale, we are now focused on growing our community banking market share while cautiously expanding our wealth management business through trust acquisitions."

Clarien ended the year with $1.2 million in net profits, more than double that of the prior year. This was driven by decreased operating expenses as a result of "substantial savings on information technology expenses due to the completion of debit and credit card initiatives, improved office efficiencies, continued disciplined budgeting and a $0.9m reduction in salaries and benefits."

BCB experienced a net loss of $6.63 million, primarily due to poor performance of its investment portfolio as well as currency losses as a result of the depreciation of the pound sterling following Brexit.

Cost-to-income ratio[2] (CI) is one of the key performance indicators for a bank's productivity and efficiency. Generally a lower cost-to-income ratio indicates higher efficiencies in operations, although the ratio is affected by the strategy of each bank and the economic and financial environment in which banks operate. The banking sector in Bermuda has historically experienced high CI ratios, averaging at 68% over the last five years. 2016's ratio was in line with the five year average.

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[1] *Calculated as Net profit after tax/ Equity. For U.S. commercial banks data provided by Federal Deposit Insurance Corporation https://www5.fdic.gov/SDI/SOB/*

[2] *Calculated as the ratio of total operating costs (excluding bad and doubtful debt charges) to total income (the sum of net interest and non-interest income).*

Figure 5: Net Profit (in $ '000s)

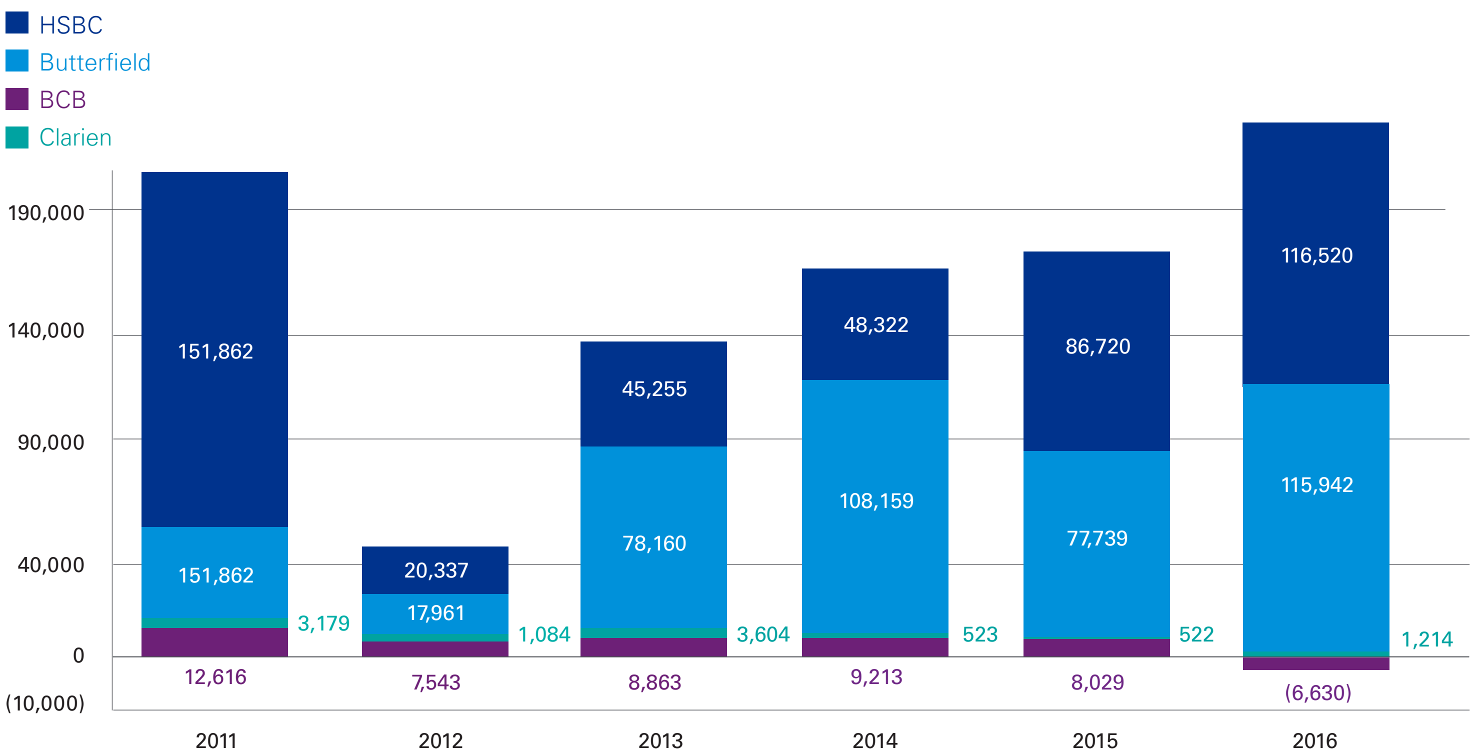
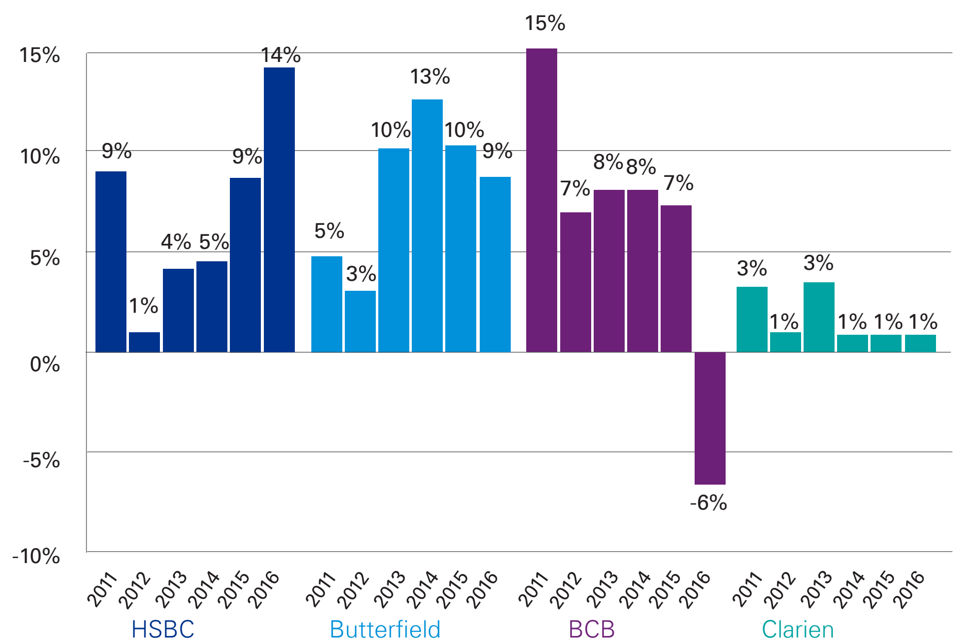


Figure 6: Net Profit as a Percentage of Equity



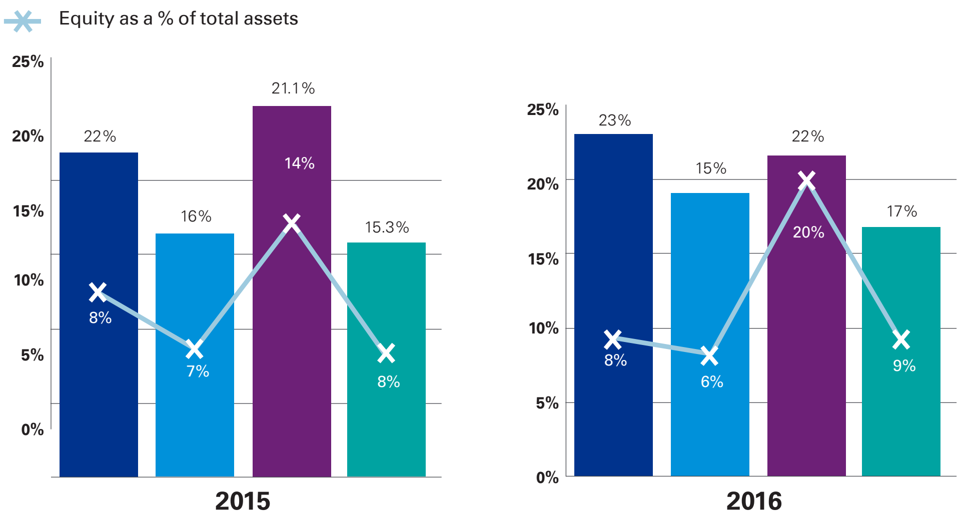
Capital and Liquidity

The Bermuda banking sector has consistently maintained a strong capital base, well above the minimum capital requirement and comfortably exceeding international industry standards. Banks are required to disclose information about their capital, risk exposures, risk assessment processes, and capital adequacy. These disclosures, known as the Capital and Risk Management Pillar III Disclosures, allow informed market participants to gauge the capital adequacy of the banks, and are available on the websites of each of the four banks in Bermuda.

The Bermuda Monetary Authority continues to closely monitor the capital adequacy and risk management of Bermuda's banks, and have recently adopted a phased implementation of Basel III norms by Basel Committee on Banking Supervision which came into force on January 1, 2015, to be fully phased in by January 1, 2019. Basel III requires banks to hold better quality capital, carry more liquid assets, and limit leverage.

An alternative way of assessing liquidity is an analysis of the liquid assets to total deposit and borrowing ratio[4], which indicates the percentage of short term obligations that could be met with the bank's liquid assets in the case of sudden withdrawals. HSBC leads the way with a ratio of 82% followed by BCB at 74%, and BNTB at 52%. Clarien's ratio increased from 26% to 34% in 2016.

Figure 7: Tier 1 capital ratio[3]



Tier 1 capital ratio

Bank	2016	2015	2014	2013	2012	2011
HSBC	23%	22%	24%	21%	28%	33%
Butterfield	15%	16%	19%	20%	19%	18%
BCB	22%	21%	25%	22%	26%	32%
Clarien	17%	15%	15%	13%	13%	14%

[3]2015 and 2016 reported Tier1 Capital Ratios were calculated using Basel III except Butterfield's 2015 ratio which was calculated based on Basel II framework. For period 2010-2014 calculated using the Basel II framework for all banks.

[4]LADST = Liquid asset /Customer deposit and borrowed funds.
Liquid assets = Cash and Cash equivalents + Trading Account & Fair Value of Securities + Available for Sale Securities.
Customer deposit and short term borrowed funds = Total Deposits + Total Deposits from Banks + Total Debt.

Conclusion:

The banking sector remained stable in 2016 with a slight decrease in total assets ($1.49bn) and net income ($26m) compared to last year. The impact of scale on profitability was clearly evident in the strong performance of HSBC and Butterfield relative to the smaller scale banks, Clarien and BCB. It has been an eventful year: Butterfield listed on NYSE; HSBC sold their private banking operations to Butterfield; BCB moved into their new premises; and Clarien received a capital injection.

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