



Cayman Monetary Regulatory Authority International

At the forefront of financial regulation, the Cayman Monetary Regulatory Authority International (CMRAI) is dedicated to upholding the highest standards of financial oversight and compliance. Our mission is to safeguard the stability and integrity of the global financial system by ensuring that financial services operate within a framework of transparency, accountability, and excellence.

As a trusted partner to financial institutions worldwide, CMRAI provides rigorous supervision, innovative solutions, and strategic guidance to foster a secure and thriving financial environment. With decades of experience and a commitment to global standards, we stand as a pillar of trust and security in an ever-evolving financial landscape.

With a legacy of excellence in financial oversight, the Cayman Monetary Regulatory Authority International (CMRAI) is a beacon of trust in the international financial community. Our role extends beyond regulation; we are innovators, collaborators, and protectors of the global financial ecosystem. By fostering compliance, promoting best practices, and embracing technological advancements, CMRAI ensures that financial services remain resilient and adaptable in a dynamic global market.

Our comprehensive approach to regulation encompasses a deep understanding of financial risks and a proactive stance on emerging challenges. We are committed to empowering financial institutions with the tools and guidance necessary to navigate complex regulatory landscapes, thereby contributing to global economic stability and growth.

..... 3 Stress Testing
 Framework 4 Stress Testing
 Methodologies 8 Scenario Analysis
 8 Sensitivity Analysis
 9 Reverse Stress Testing
 9 Stress testing output and
 management actions 10 Stress Testing and the
 ICAAP..... 10 The Authority s Review and
 Assessment Process 11 Appendix A: Scenario Analysis
 Shocks 12 Appendix B: Sensitivity Analysis Shocks
 14 Pillar 2 - Supervisory Review Process

Cayman Monetary Regulatory Authority International 2 | Page LIST OF ACRONYMS
 Acronyms Definition The Authority Cayman Monetary Regulatory Authority International
 BCBS Basel Committee on Banking Supervision BTCL Banks and Trust Companies Law
 (2013 Revision) ICAAP Internal Capital Adequacy Assessment Process Pillar 2 -
 Supervisory Review Process Cayman Monetary Regulatory Authority International 3 | Page
 Introduction 1. A stress test is commonly described as the evaluation of a Bank s
 financial position under a severe but plausible scenario. Stress testing is an important
 risk management tool, used by Banks as part of their internal risk management framework.
 Stress testing is important as it alerts Bank management to adverse, and perhaps
 unexpected, outcomes related to a variety of risks the Bank is exposed to. In addition, stress
 testing provides the likely impact a severe but plausible scenario will have on the Bank s
 capital adequacy and liquidity position. 2. As per the requirements of the Supervisory
 Review Process (Pillar II) Rules and Guidelines, issued by the Cayman Islands
 Monetary Authority (the Authority) in February 2018 (hereafter referred to as the
 SREP Rules and Guidelines), all Banks incorporated in the Cayman Islands and regulated
 by the Authority under the Banks and Trust Companies Law (2013 Revision) (BTCL) as
 may be amended from time to time (herein after referred to as Bank(s)), are required
 to submit, on an annual basis, a comprehensive stress testing analysis as part of their
 Internal Capital Adequacy Assessment Process (ICAAP) submissions. 3. Regardless of
 the requirements specified in the SREP Rules and Guidelines, the Authority is of the
 opinion that a stress testing framework should be a key component of any Bank s risk
 management framework. The Authority therefore expects Banks to incorporate a stress
 testing framework into their risk management processes, including their capital assessment
 and their strategic planning activities. The Authority expects that a Bank would include the
 stress testing analysis used within its ICAAP within such a stress testing framework. The
 Authority is also of the opinion that ad-hoc stress testing, which Bank management could
 use to test the impact of unexpected changes in the economy or markets, should also
 form a part of a Bank s stress testing framework. 4. The Authority has therefore developed
 this Stress Testing: Principles and Guidelines document to guide a Bank in the
 development and implementation of its own stress testing framework. By providing
 principles for a Bank s board of directors (board) and senior management to consider,

this guidance document is aimed at assisting Banks in undertaking stress testing as part of a comprehensive risk management framework. In addition to the guidance provided in this document, Banks should also consider the guidance and requirements in the SREP Rules and Guidelines.

5. The first section of the guidance document provides an overview of a stress testing framework and principles Banks should consider during the development and implementation of a stress testing framework. Thereafter the document provides guidance with respect to stress test methodologies, the outcome of a stress test and the link between stress testing and the ICAAP. Finally the document describes the Authority's review process for a Bank's stress testing framework.

Pillar 2 - Supervisory Review Process Cayman Monetary Regulatory Authority International 4 | Page Stress Testing Framework

6. A stress testing framework is an integrated strategy for meeting a range of purposes by means of the origination, development, execution and application of a suitable range of stress tests. The range of purposes requires the use of a variety of techniques since stress testing is not a one-size-fits-all approach.

7. In this regard, stress tests performed should cover a range of risks and business areas. A Bank should be able to integrate effectively and in a meaningful manner across the range of its stress testing activities to deliver a comprehensive picture of Bank-wide risk. Depending on the purpose of the stress test, the stress testing framework should consistently and comprehensively cover product, business and entity specific views of risk.

8. The result and impact of stress tests should be evaluated against one or more measures depending on the purpose and design of the stress test, the risks and portfolios being analysed. Typical measures that the Authority would expect to see used include asset values; accounting profit/ loss; economic profit/ loss; regulatory and internal capital and risk weighted assets. The outcome of a stress testing framework should provide projections of the pre- and post-stress test regulatory and internal capital position, and the likely impact of the proposed management actions for at least three (3) years going forward.

9. The following paragraphs specify principles relating to risk governance that should guide a Bank in the development and implementation of its stress testing framework. The Authority expects Banks to take into consideration the principles based on the nature, scale and complexity of their business and the overall level of risk that they accept. The principles below have been derived from the Basel Committee on Banking Supervision's publication titled Principles of sound stress testing practices and supervision, which was published in May 2009.

a) Stress testing should form an integral part of the overall governance and risk management culture of the Bank.

10. The Bank's board and senior management should take a leading role in the stress testing process. The board should approve the scenarios and assumptions put forward in the stress test. Senior management is responsible for ensuring that when conducting stress tests, all areas of risk to the Bank are considered. Senior management should be able to identify and clearly articulate the Bank's risk appetite and understand the impact of stress events on the risk profile of the Bank.

11. Stress testing should be actionable, with the results from stress testing analyses impacting decision making at the appropriate management level, including strategic business decisions of the board and senior management. Board and senior management involvement in the stress testing framework is essential for its effective operation.

12. The board should approve and have ultimate responsibility for the overall stress testing framework, whereas senior management should be accountable for the framework's implementation, management and oversight. Senior management should participate in the review and identification of potential stress scenarios, as well as

contribute to risk mitigation strategies. 13. The key underlying assumptions and the extent of judgment in evaluating the impact of the stress test or the likelihood of the event occurring should be explained and Pillar 2 - Supervisory Review Process Cayman Monetary Regulatory Authority International 5 | Page documented such that the board and senior management are aware of the limitations of the stress tests performed. 14. Stress tests can be used to support a range of decisions. In particular, but not exclusively, stress tests should be used as an input for setting the risk appetite of the firm and setting exposure limits. Stress tests should also be used to support the evaluation of strategic choices when undertaking and discussing long term business planning. Importantly, stress tests should feed into the capital and liquidity planning process included in an ICAAP. b) A Bank should operate a stress testing framework that promotes risk identification and control; provides a complementary risk perspective to other risk management tools; improves capital and liquidity management; and enhances internal and external communication. 15. To promote risk identification and control, stress testing should be included in risk management activities at various levels. This includes the use of stress testing for the risk management of individual or groups of borrowers and transactions, for portfolio risk management, as well as for adjusting a Bank's business strategy. 16. Banks should use stress tests to identify, monitor and control risk concentrations in specific business areas and on a Bank wide basis. In addition, stress tests should identify and address potential changes in market conditions that could adversely impact a Bank's exposure to risk concentrations. 17. To the extent applicable, stress testing should be used to provide a complementary and independent risk perspective to the other risk management tools used by the Bank. This includes, if applicable, the assessment of the robustness of internal models to possible changes in the economic and financial environment. 18. Stress testing should form an integral part of the ICAAP, which requires Banks to undertake rigorous, forward-looking stress testing that identifies severe events or changes in market conditions that could adversely impact the Bank. 19. Through the development of plausible forward looking scenarios, stress tests may be more easily grasped and should play an important role in the internal communication of risk within a Bank to assist in the assessment of vulnerabilities and the evaluation of the feasibility and effectiveness of management actions. c) Stress testing frameworks should take account of views from across the Bank and should cover a range of perspectives and techniques. 20. To ensure a sound stress testing framework, there should be collaboration between different senior experts within the Bank such as risk managers, business managers and investment managers. All relevant experts' opinions that have been taken into account to complete the stress testing analysis should be appropriately documented. A sound and robust stress testing framework should be challenged by views from across the Bank and should be benchmarked within and outside the Bank. 21. Banks should use multiple perspectives and a range of quantitative and qualitative techniques in order to achieve comprehensive coverage in their stress testing framework. Stress tests should be run at regular intervals, however a stress testing framework should also allow for the possibility of ad-hoc stress testing. Stress test methodologies are discussed in more detail in the Stress Testing Methodologies section below. Pillar 2 - Supervisory Review Process Cayman Monetary Regulatory Authority International 6 | Page d) A Bank should have written policies and procedures governing the stress testing framework. The operation of the framework should be appropriately documented. 22. A

stress testing framework should be governed by internally documented policies and procedures. The following should, at a minimum, be included in a Bank's policies and procedures:

- 22.1. the types of stress testing and the main purpose of each component of the framework;
- 22.2. frequency of stress testing exercises which could vary by type and purpose;
- 22.3. clear designation of roles and responsibilities including reporting requirements;
- 22.4. the methodological details of each component, including the methodologies for the definition of relevant scenarios and the role of expert judgement; and
- 22.5. the range of remedial actions envisaged, based on the purpose, type and result of the stress testing, including an assessment of the feasibility of corrective actions in stress situations.

23. Documentation requirements should not, however, impede the Bank from being able to perform flexible ad-hoc stress testing, which by their nature need to be completed quickly and often to respond to emerging or unexpected risk issues.

24. A Bank should document the assumptions and fundamental elements of each stress testing exercise and reassess each of the fundamental elements regularly or in light of changing external conditions.

e) A Bank should have a suitably robust infrastructure in place, which is sufficiently flexible to accommodate different and possibly changing stress tests at an appropriate level of granularity.

25. Proportionate to the size and complexity of a Bank, it should have suitably flexible infrastructure as well as data of an appropriate quality and granularity that would enable it to aggregate exposures at various levels, modify methodologies and apply new scenarios as needed.

f) A Bank should regularly maintain and update its stress testing framework. The effectiveness of the stress testing framework, as well as the robustness of major individual components, should be assessed regularly and independently.

26. Stress tests should be assessed regularly, qualitatively as well as quantitatively, in light of changing external conditions to ensure that they are up-to-date. The frequency of assessment of different parts of the stress testing framework should be set appropriately and included in the policies and procedures documentation. The following should be considered during the regular assessment of the stress testing framework:

- 26.1. the effectiveness of the framework in meeting its intended purposes;
- 26.2. stress testing documentation;
- 26.3. system implementation;
- 26.4. management oversight;
- 26.5. business and/or managerial assumptions used; and
- 26.6. data quality.

Pillar 2 - Supervisory Review Process
Cayman Monetary Regulatory Authority International 7 | Page

g) Risk mitigation or contingency plans should be systemically challenged under stressed conditions.

27. Risk mitigation techniques and contingency plans like hedging, netting and the use of collateral should be analysed under stressed conditions. For example, in the event that markets may not be fully functioning and multiple institutions simultaneously could be pursuing similar risk mitigating strategies.

Specific areas of focus

28. The Authority acknowledges that there are some Banks that provide services or undertake investment opportunities categorised as non-traditional Banking activities. The Authority has identified some of the key areas of focus below which should be considered when conducting stress testing analysis of these portfolios.

a) Where applicable, a Bank should apply stress testing to its investment book. The possible scenarios could include changes in credit spreads, shifts in the yield curve and rating migration.

29. Banks with significantly large investment portfolios should carry out stress tests on their investment book. It is expected that Banks will identify key and common risk drivers and incorporate them into their scenarios. Banks may also consider the effect of ratings migration and could assess the impact of movement in rating categories on total capital requirements.

b)

The Authority is aware that some Banks may have bespoke products such as securitised exposures. Stress tests in this regard should consider the underlying assets, their exposure to systematic market factors, relevant contractual arrangements and embedded triggers. 30. Banks with these products should include in their stress tests all relevant information related to the underlying asset pools, their dependence on market conditions, complicated contractual arrangements as well as effects related to the subordination level of the specific tranches. c) Where applicable, a Bank should enhance its stress testing approaches for highly leveraged counterparties and assess for the potential of wrong-way risk related to risk mitigating techniques. 31. Where a Bank has large gross exposures to leveraged counterparties including hedge funds, financial guarantors, investment Banks and derivative counterparties, it should enhance its stress testing approaches related to these counterparties in order to adequately capture any correlated risks. 32. Under normal circumstances these exposures are completely secured or through netting or collateral arrangements exposures are almost zero. However, in cases of severe market shocks, these leveraged exposures may increase abruptly and potential cross-correlation of the creditworthiness of such counterparties with the risks of assets being hedged may emerge (i.e. wrong-way risk). Therefore, stress testing should capture these counterparties and their correlated risks.

Pillar 2 - Supervisory Review Process Cayman Monetary Regulatory Authority
International 8 | Page Stress Testing Methodologies

33. As described in the previous section, a stress testing framework could include various types of stress test methodologies. The Authority does not wish to specify which methodologies a Bank should use within its stress testing framework, however, this section of the guidance document describes some of the more commonly-used stress test methodologies. A Bank should consider these methodologies in the development and implementation of its stress testing framework. Scenario Analysis 34. Scenario analysis is commonly the main methodology within a Bank's stress testing framework. Scenario analysis involves the Bank determining macro-economic scenarios that it believes could occur in the near future with varying degrees of probability. The Bank will run these macro-economic scenarios through its stress testing models or methodologies to determine how these scenarios will impact the Bank's portfolios, specifically its capital adequacy, financial performance and liquidity position. 35. Stress testing frameworks should cover a range of macro-economic scenarios and aim to take into account system-wide interactions and feedback effects. These hypothetical scenarios should at all times be dynamic and forward-looking and designed to take into account the local industry and Bank-specific changes in the present and near future. 36. The stress testing framework should cover forward-looking scenarios to incorporate changes in portfolio composition, new information and emerging risk possibilities. The scenarios used in the stress testing framework should be developed in a manner that is commensurate with the size and complexity of the Bank and should involve dialogue amongst senior management. 37. Stress testing frameworks should comprise of scenarios along a spectrum of events and severity levels and the scenarios should be developed in a manner that will help deepen management's understanding of vulnerabilities across the Bank. 38. In order to address risk concentrations, the scenarios must be firm-wide and comprehensive, taking into account both on and off balance sheet assets, contingent and non-contingent risks. 39. Commensurate with the principle of proportionality, stress tests should feature the most material business areas and events that might be particularly damaging for the Bank.

This could include not only events that inflict large losses but which subsequently could potentially cause damage to the Bank's reputation. 40. A Bank should also include in its stress testing analysis the impact of the probabilities of occurrence of a scenario or multiple scenarios on the Bank results. Stress tests should feature a range of severities, including events capable of generating the most damage whether through size of loss or through loss of reputation, and including scenarios which reflect a severe economic downturn. 41. In developing severe downturn scenarios, Banks should also consider plausibility to the fullest extent possible. There may be times when the stressed scenario is close to the base case scenario, but supplemented with specific shocks (e.g. interest rates, exchange rates).

Pillar 2 - Supervisory Review Process Cayman Monetary Regulatory Authority International 9 | Page

42. Scenario analysis is a key component of a stress testing framework as it is the core of stress testing. Appendix A contains examples of scenarios that could be used by a Bank in its stress testing framework. Sensitivity Analysis 43. Sensitivity analysis is the stressing of one risk driver to assess the sensitivity of the Bank to that risk driver. For example, Banks may choose a simple interest rate reduction, or the default of their largest counterparties. Such analyses provide information about key risks and enhance the understanding about potential risk concentrations in one or several risk factors. A significant benefit of this analysis is that it can provide a fast initial assessment of portfolio sensitivity to a given risk factor and identify certain risk concentrations. 44. To ensure the implementation of a comprehensive stress testing framework, it is expected that a Bank performs sensitivity analyses for specific portfolios or risks. Appendix B contains examples of sensitivity analyses that Banks may consider to incorporate as a part of its stress testing framework.

Reverse Stress Testing 45. Reverse stress testing is a valuable methodology to uncover hidden risks and interactions among risks. Reverse stress testing consists of identifying a significant negative outcome and then identifying the causes and consequences that could lead to such an outcome. Reverse stress tests start from a known stress test outcome (such as breaching regulatory capital ratios, illiquidity, financial losses or insolvency) and then asking what events could lead to such an outcome for the Bank. 46. Reverse stress testing is seen as one of the risk management tools usefully complementing standard stress testing, which examines outcomes of predetermined scenarios. Reverse stress testing also helps to understand potential fault lines in the business.

Pillar 2 - Supervisory Review Process Cayman Monetary Regulatory Authority International 10 | Page

Stress test output and management actions 47. Stress test results should be communicated clearly and regularly to senior management and the board as it is expected that the results will have a meaningful impact on strategic decisions. Banks should identify credible management actions addressing the outputs of stress tests. Management actions should be aimed at ensuring the Bank's ongoing solvency through the stressed scenarios. Senior management and the board should give proper consideration to the implications of the stress test results. Should the stress test results or outcomes fall outside the Bank's risk tolerance and risk appetite, management must formulate appropriate responses. 48. Management's response may include the raising of additional qualifying capital, the restriction of dividend payments, the revision of other limits impacting capital or other prompt corrective action. Any action taken must be clearly articulated with specified timeframes, acceptable to the Authority, for restoring an adequate level of capital to offset the impact of the stress. 49. Where the stress test results in a capital deficit, the Bank will be required to implement

policies and procedures detailing the range of prompt remedial actions envisaged, based on the purpose, type and result of stress testing, including an assessment of the feasibility of corrective actions in stress situations. Stress Testing and the ICAAP 50. Stress testing should form an integral part of a Bank's ICAAP, which requires Banks to undertake rigorous, forward-looking stress testing that identifies severe events or changes in market conditions that could adversely impact the Bank. 51. The Authority expects Banks to evaluate the reliability of their capital planning based on stress test results. Within each ICAAP submission senior management and the board should examine future capital resources versus capital requirements under stressed scenarios. In particular, the results of forward-looking stress testing should always be considered when evaluating the adequacy of a Bank's capital buffer. 52. The stress tests should be forward-looking, cover the same period as the Bank's ICAAP, be updated at least as regularly as the ICAAP and reflect all entities on which ICAAPs for the group are required. Selection of an appropriate time horizon for the forward-looking capital planning stress test will vary with the size and complexity of a Bank. The Authority recommends that capital planning stress tests undertaken by Banks should cover a period of at least three years. 53. The Authority requires that Banks evaluate their capital adequacy relative to incurred risks; and should conduct on-going analysis of the impact of severe stress events on their capital position. The Authority also requires management to explain the rationale for the scenario it has taken as its central scenario for the purposes of its capital planning. Further, the Authority will also expect Banks to share their views on how they plan to manage their overall financial resources through the stressed time horizon. 54. Banks are reminded to review the requirements with respect to stress testing, as specified in the SREP Rules and Guidelines. Pillar 2 - Supervisory Review Process Cayman Monetary Regulatory Authority International 11 | Page The Authority's Review and Assessment Process 55. The Authority will make regular and comprehensive assessments of a Bank's stress testing framework. This includes a review of the stress testing framework as part of the annual ICAAP submission. The Authority recommends that stress testing be an integral part of a Bank's risk management framework. 56. During the Authority's review, it may engage in communication with a Bank's senior management, those charged with governance or experts consulted when preparing stress testing analysis. The Authority may have regular communication with senior management and experts to discuss their views on major macroeconomic and financial market vulnerabilities as well as threats specific to the Bank's operations and business model. 57. The Authority may evaluate how the stress testing analysis impacts the Bank's decision making at different management levels, including strategic business decisions of the board and senior management. The Authority may consider whether a Bank's senior management involvement in the stress testing framework is sufficient and how informed the wider Bank management is of the stress testing process. 58. The Authority may review the level of approvals within a stress testing framework to ensure those charged with governance have taken the overall responsibility of the stress testing framework. 59. The Authority may assess a Bank's stress tests to ensure they are rigorous, include different types of tests, and incorporate a range of scenarios (from baseline to severe). The Authority may review management's assumptions for appropriateness of the selected scenarios to the risks and complexity of the Bank. The Authority may review to determine if the chosen scenarios are pertinent to the economic risk factors affecting the Cayman Islands economy and that of other jurisdictions where the Bank operates. 60. The Authority may evaluate

and challenge the scope, severity, assumptions and scenarios of stress tests. In particular, the Authority may review in detail the results of forward-looking stress testing for assessing the adequacy of capital and liquidity. The Authority may assess capital resources and needs of a Bank under the selected adverse scenarios. The results of forward-looking stress testing will be examined as part of the Authority's evaluation of the adequacy of capital buffers and liquidity sources.

61. The Authority will review qualitatively, Banks' stress testing frameworks alongside their risk and capital management practices. This review includes, but will not be limited to, an evaluation of Banks' policies and procedures established to support their stress-testing models, data quality, the governance structures and internal controls in place relating to the stress-testing programme.

62. The Authority will review the corrective or remediation action plan envisaged by the Bank if its stress test results point to a shortfall. The Authority may place the Bank on an on-going monitoring list and may require the Bank to submit stress testing to the Authority on a more frequent basis.

Pillar 2 - Supervisory Review Process
Cayman Monetary Regulatory Authority International 12 | Page Appendix A: Scenario Analysis

1. The development of scenarios begins by the Bank determining the macro-economic variables that are applicable to the portfolio or exposures being stress tested. The bank then, as best as possible, makes a determination about the future state of the economy. The Bank will forecast the selected variables over at least three years, with a baseline scenario reflecting the results of the forecasting exercise, that is, the most probable future state of the economy. The Bank should develop at least two other scenarios taking into account the effects of various negative shocks to the economy. A mild scenario would assess the effects of shocks that cause a relatively small downturn in the economy. Additionally, the Bank could develop a severe scenario which assesses shocks corresponding to a significant downturn in the economy.

2. Scenarios should not be static. Banks are required to review scenarios and look for new ones, as the Banks' risks, product offerings and business strategy changes. Scenarios should:

- 3.1. Address all the material risk types the Bank is exposed to (e.g. credit risk, market risk, operational risk, interest rate risk and liquidity risk);
- 3.2. Be internally consistent so that identified risk drivers behave in ways which are consistent with the other risk drivers in a stress;
- 3.3. Take into account developments in technology such as newly developed and sophisticated financial products and their interaction with the valuation of more traditional products; and
- 3.4. Be forward-looking and include severe outcomes.

3. The following table provides an example of a baseline, mild and severe scenario for a scenario analysis in a stress testing framework. It is important to note that this is just an example and the Authority would not expect Banks to use the same macro-economic variables or forecasted values of these variables.

	2017	2018	2019	Baseline Scenario	Real Gross Domestic Product (GDP) Growth
	2.60%	2.50%	2.80%		
Consumer Price Inflation (CPI)	-0.40%	-0.20%	0.90%		
Prime Interest Rate	4.25%	4.50%	5.00%		
Unemployment Rate	4.20%	4.00%	3.90%		
Commercial Real Estate Prices	4.20%	4.50%	4.30%		
Residential Real Estate Prices	5.30%	5.00%	5.10%		
Fair value adjustment to investment portfolio:					
Equity Portfolio	5.50%	5.00%	6.20%		
Debt Portfolio	2.50%	2.00%	3.20%		
Mild Scenario					
Real GDP Growth	-0.80%	-1.50%	-1.00%		
CPI	-0.90%	-0.50%	-0.20%		
Prime Interest Rate	3.75%	3.25%	3.25%		
Unemployment Rate	5.70%	6.10%	5.80%		
Commercial Real Estate Prices	-2.50%	-2.80%	-3.00%		
Residential Real Estate Prices	-2.80%	-2.50%	-3.20%		
Fair value adjustment to investment portfolio:					
Equity Portfolio	-2.80%	-2.60%	-3.30%		
Debt Portfolio	0.80%	0.60%	0.90%		
Severe Scenario					
Real GDP Growth	-5.00%	-4.10%	-3.50%		
CPI	-2.00%				

-1.80% -1.20% Prime Interest Rate 3.25% 2.75% 2.50% Unemployment Rate 6.80% 7.00% 6.90% Pillar 2 - Supervisory Review Process Cayman Monetary Regulatory Authority International 13 | Page Commercial Real Estate Prices -9.80% -9.20% -8.50% Residential Real Estate Prices -10.20% -8.70% -8.20% Fair value adjustment to investment portfolio Equity Portfolio -9.75% -8.70% -6.90% Debt Portfolio -0.80% 0.50% 0.60%

Pillar 2 - Supervisory Review Process Cayman Monetary Regulatory Authority International 14 | Page Appendix B: Sensitivity Analysis Shocks Sensitivity analysis is the simple stressing of one risk driver to assess the sensitivity of the Bank to that risk driver. The risk drivers a Bank may use in its sensitivity analysis will be dependent on the business of the Bank and where it believes excessive risk may lie. In this appendix, the Authority provides examples of possible credit risk and market risk factors that may be used by a Bank in its sensitivity analysis. The list of factors below is not exhaustive and Banks may use any factors that it may find useful for its business. Banks need to determine the impact these sensitivity shocks will have on their portfolios, including the possible impact to their capital adequacy ratio. Credit Risk In an economic downturn, some of the major risk factors facing a Bank are the credit downgrades of counterparties, deterioration in asset quality and erosion in collateral value. Against this backdrop, Banks may consider carrying out the following sensitivity analyses on their credit portfolio. Shock Description Examples Increase in non-performing assets (NPA) Credit quality generally tends to deteriorate during an economic downturn as debtors begin to experience cash flow problems which in turn affect smooth servicing of debt leading to a possible deterioration in asset quality. A Bank should review its history of NPAs and include a baseline scenario which takes into account the current view of NPAs, and some stress scenarios to account for shocks to the level of NPAs. Increase in NPA for specific sectors The nature of the Cayman economy is such that some sectors are more affected by an economic downturn than others. This test is to assess the impact of an increase in the NPAs in the Construction, Real Estate and/or Tourism sectors. A Bank should review its history of NPAs for each assigned sector and include a baseline scenario which takes into account the current view of NPAs, and some stress scenarios to account for shocks to the level of NPAs for each assigned sector. Depletion in collateral Significant depletion of collateral increases exposure and the potential loss given default (LGD) if there are no other lines of recovery. A Bank should review its history of collateral and include a baseline and stress scenarios to take account of its current view and significant shocks to its level of collateral. Counterparty downgrade In a downturn, Bank's counterparties may suffer credit downgrades awarded by an external credit rating agency or internally. A Bank should determine its large and significant counterparties and develop a base view of the movement in the ratings of these counterparties. The Bank should then stress these ratings by downgrading the counterparties further than expected. Pillar 2 - Supervisory Review Process Cayman Monetary Regulatory Authority International 15 | Page

Market Risk Sensitivity analysis of market risk factors is often an important aspect of a Bank's stress testing framework. The following table provides a few examples of some of the important market risk drivers that are commonly used in sensitivity analyses. The primary objective of the market risk factors is to study the impact to a Bank's profit and loss. Shock Description Examples Foreign Exchange Risk Foreign exchange risk arises from exchange rate changes adversely impacting the local currency in which the Bank's assets and liabilities are denominated. The Cayman Islands Dollar is permanently fixed at an exchange rate of CI\$0.80 to US\$1. Any non-USD FX exposure is subject to foreign exchange risk. A

Bank should develop a baseline and some severe scenarios to take into account significant and unexpected shocks to foreign exchange rates.

Interest Rate Risk Interest rate risk is the risk where changes in market interest rates might adversely affect a Bank's financial condition. The immediate impact of changes in interest rates is on Bank's earnings through changes in its Net Interest Income (NII). A long-term impact of changes in interest rates is on a Bank's Market Value of Equity (MVE) or Net worth through changes in the economic value of its liabilities and off-balance sheet positions. The interest rate risk, when viewed from these two perspectives, is known as 'earnings perspective' and 'economic value' perspective, respectively. The shocks for interest rate risk are to be assessed for both the trading and the Banking book. A Bank should develop a baseline and some severe scenarios to take into account significant and unexpected shocks to interest rates.

Equity Price Risk Equity price risk arises from a Bank's exposure to equity (stocks). Unfavourable movements in equity prices may have a negative effect on a Bank's profit/loss. A Bank should develop a baseline and some severe scenarios to take into account significant and unexpected shocks to equity prices.