THEMATIC REVIEW - COLLATERAL MANAGEMENT STANDARDS AND PRACTICES OF CORPORATE LENDING BUSINESS

INFORMATION PAPER

AUGUST 2019

MAS

Monetary Authority of Singapore

TABLE OF CONTENTS

I Executive Summary 1

II Observations from the Thematic Review 4

A. Governance over Collateral Management 5

B. Collateral Portfolio Monitoring 7

C. Valuer Selection 10

D. Valuation Practices 12

III Conclusion and Next Steps 15

I EXECUTIVE SUMMARY

1 The slowdown in global growth over the past year, amid heightened uncertainty and increased downside risks posed by trade and geopolitical developments, would have an impact on credit risk faced by banks. As credit risk remains a key concern for the financial sector, MAS expects banks to be vigilant in adopting sound credit risk management standards and practices to guard against these external vulnerabilities.

2 Against this backdrop, MAS conducted a thematic review on collateral management standards and practices of banks' corporate lending business over 2018 and 2019. This is the third in a series of credit thematic reviews of banks' corporate loan portfolios, which started in 2015. These thematic reviews, taken together, covered key control elements of banks' credit life cycle, and highlighted sound practices that the industry should benchmark against.

Series of Credit Thematic Reviews - Corporate Lending Business

3 The first phase of credit thematic reviews, which started in 2015, focused on banks' credit underwriting standards and practices. Credit underwriting is the process where a bank assesses the creditworthiness of potential borrowers and decides whether to extend a loan. It is fundamental and important, as effective underwriting and loan origination processes are pre-requisites to a credit portfolio of sound quality. An information paper on "Thematic Review of Credit Underwriting Standards and Practices of Corporate Lending Business" was issued in 2016 to share observations and sound industry practices[1]. In the same year, MAS started the second phase of the credit thematic reviews, focusing on banks' credit review standards and practices. These included credit grading and monitoring, provisioning and loan portfolio management practices. These are critical processes as effective credit review and monitoring processes allow a bank to identify and manage problem loans at an early stage. An information paper on "Thematic Review of Credit Review Standards and Practices of Corporate Lending Business" was issued in 2018[2].

[1] Thematic Review of Credit Underwriting Standards and Practices of Corporate Lending Business: https://www.mas.gov.sg/publications/monographs-or-information-paper/2016/thematic-review-of-credit-underwriting-standards-and-practices-of-corporate-lending-business

[2] Thematic Review of Credit Review Standards and Practices of Corporate Lending Business: https://www.mas.gov.sg/publications/monographs-or-information-paper/2018/thematic-review-of-credit-review-standards-and-practices-of-corporate-lending-business

4 MAS started this third and final phase of credit thematic reviews in 2018, focusing on the collateral management standards and practices of selected banks[3]. As part of credit risk mitigation, banks hold various classes or types of pledged assets to secure and protect their interests. Banks are expected to lend based on the credit worthiness of borrowers, but collateralisation serves as an important risk mitigation measure to manage credit risk exposures. Accuracy of collateral valuation also has a direct impact on loss allowances. Hence, it is important for banks to establish effective collateral valuation standards and practices that lead to realistic and substantiated appraisal values.

5 The areas assessed by MAS include the banks' governance over, as well as policies, procedures and practices relating to (i) collateral management and portfolio monitoring, (ii) valuer selection, and (iii) valuation. Banks generally manage collateral as part of their overall credit risk management processes. They have established governance frameworks with respect to the permissible classes or types of collateral that are aligned to their risk appetite and business strategies. Most banks also apply stricter requirements in assessing the valuation of collateral for problem credits or non-performing loans (NPLs). On the other hand, some banks lacked appropriate mechanisms to monitor collateral composition, and failed to use updated and realistic valuations for collateral, including of loans that turned non-performing.

6 This paper sets out sound standards and practices relating to collateral management that MAS expects to see in banks. In particular:

- Board and senior management of banks set the risk appetite, as well as business and risk strategies, with regard to the acceptance and valuation of collateral for the credit-granting activities. Banks develop appropriate collateral management policies and procedures that are aligned with their risk appetite and strategies.

- Proper segregation of duties exists between the functions responsible for collateral management and front office, to ensure independence in monitoring, escalation and reporting of collateral covenants and conditions.

- Banks have timely, accurate and comprehensive information on credit exposures and collateral portfolios to facilitate proactive and prompt credit risk monitoring and oversight by relevant functions, senior management and Board. Collateral concentration is monitored and stress tests

[3] The review focused on certain collateral classes such as real estate, vessels and aircraft.

performed to enable timely actions to be taken in response to emerging adverse trends or developments.

- Banks establish adequate processes to manage and regularly review collateral valuations. Banks also ensure that valuations obtained are independently sourced, reliable and reflect the market conditions.

- Banks establish clear approaches for valuation of collateral for problem credits, to obtain timely and prudent estimates of the loss allowances required for each problem credit exposure. Provisioned amounts are adequate to cover loan loss experience.

7 MAS expects banks to benchmark themselves against the good practices set out in this paper, as well as the information papers referenced in paragraph 3, if not already done. Banks should assess the ability of their internal controls and processes to achieve good credit risk management outcomes effectively, and take steps in a risk-appropriate manner to address gaps, if any. In performing their internal benchmarking, banks should consider their specific organisational structures, business models and risk profiles. Credit is the primary risk for many banks given the nature of their lending businesses. It is hence important for banks to remain vigilant and keep pace with credit risk management practices so as to stay ahead of changes in the macro-economic environment.

II OBSERVATIONS FROM THE THEMATIC REVIEW

1 MAS' thematic exercise included reviewing the banks' frameworks, policies and procedures, conducting interviews and discussions with management and staff, performing walkthroughs of banks' processes, and reviewing samples of credit files and management reports. We also benchmarked practices amongst banks included in the thematic exercise.

2 MAS' key observations and identified areas of improvement for banks that were part of this thematic exercise are set out under the following themes:

A. Governance over Collateral Management

B. Collateral Portfolio Monitoring

C. Valuer Selection

D. Valuation Practices

3 We have also highlighted our supervisory expectations and desired outcomes under each theme (Boxes 1 to 7) to facilitate self-assessments, in particular for banks that were not included in the thematic exercise.

A. GOVERNANCE OVER COLLATERAL MANAGEMENT

1 Effective oversight by the Board and senior management is critical in managing credit risk in a bank's loan and collateral portfolios. The Board and senior management are responsible for developing business and risk management strategies that are consistent with the bank's risk appetite.

2 These strategies form the basis of a bank's credit underwriting framework. As part of this framework, the bank should develop and implement sound collateral management policies and procedures that are appropriate for its strategies and risk appetite. These should include acceptance criteria and advance margins for permissible types of collateral, clear guidance on valuation requirements and approaches, and expectations with respect to valuers. Banks should regularly monitor the effectiveness of their collateral management policies and procedures to ensure that they achieve the intended outcome of prudent risk management.

3 ***Governance and oversight by Board and senior management*** – Overall, the Board and senior management of banks have implemented appropriate frameworks to exercise oversight of collateral management. Collateral management issues are included in the banks' credit risk management agenda and discussed at credit risk committee meetings. Issues discussed at such forums include banks' collateral composition, acceptance of new types of collateral and results of collateral-related stress tests.

Box 1 – Governance and oversight by Board and senior management

The Board and senior management are responsible for setting business and risk management strategies for its lending activities, which form the basis of the bank's credit underwriting framework and collateral management policies and procedures.

Collateral management is an important aspect of the bank's overall credit risk management framework. Clear parameters for each type of acceptable collateral are established.

Banks develop sound and comprehensive collateral management policies and procedures, and regularly review their effectiveness. These policies and procedures should minimally include acceptance criteria and advance margins for permissible types of collateral, factors to consider in the selection and periodic reviews of valuers, as well as types (i.e. full, desktop or indicative) and frequency of valuation.

4 ***Independence of units responsible for collateral management*** – Most banks have instituted proper segregation of duties in the reporting lines of units responsible for

collateral management. However, in some banks, certain collateral management roles are performed by the front office or units reporting to the business heads. These roles include approving periodic reviews of valuers and extension of overdue insurance policies[4], deciding reference prices for collateral valuation, as well as signing off deviations from or waivers of credit conditions imposed on the borrowers. These were done without endorsement or oversight by the second line of defence. We expect front office to take ownership of its risks and be proactive in monitoring them. However, being the business unit originating the loans and often having to fulfil business targets, front office may not be incentivised to escalate and report certain issues, such as aggressive valuers, overly optimistic valuations or overdue valuations. Where front office is tasked with these responsibilities, the second line of defence plays an important role in mitigating such conflicts of interest inherent in the front office. We expect a unit independent of front office (for example, a credit control unit that reports to the Chief Credit Officer or equivalent) to exercise oversight or conduct independent checks to ensure that such issues are escalated for management's attention.

Box 2 – Segregation of duties

There is proper segregation of duties, where functions responsible for collateral monitoring and management are independent of front office.

[4] The insurance policies refer to those undertaken on the collateral, to protect the banks' interests in the security.

B. COLLATERAL PORTFOLIO MONITORING

1 Banks should have timely, accurate and comprehensive information on credit exposures and collateral portfolios to facilitate prompt credit risk monitoring. Such information should also be reported to the Board and senior management, including credit committees and relevant forums, to facilitate effective credit risk management oversight.

2 ***Data governance and management*** - Banks typically have collateral management information systems that maintain records of collateral data. Such records include latest collateral valuation, due dates for revaluation, security coverage and loan to value (LTV) covenants. Information on exceptions to credit conditions imposed on borrowers, such as outdated valuations and breaches in LTV covenants, is also maintained. Some banks have integrated systems that allow a single point of data entry to capture different aspects of collateral information. Others have multiple, distinct systems to record collateral information. Such multiple systems tend to have limited system interfaces, necessitating multiple data entries into the various systems. Some banks also rely on spreadsheets to perform monitoring controls, such as tracking of collateral covenants and documentation. Banks with multiple systems and heavy reliance on manual data inputs are more prone to input errors which affect the integrity of reporting and quality of credit and collateral monitoring. The bank's ability to extract information for timely reporting is also impacted.

2.1 Some banks are exploring opportunities to leverage technology by implementing system-based solutions to reduce the extent of human intervention and its associated operational risks. Such system and infrastructural changes may be necessary for banks that have aspirations to expand their business and hence, manual processes may not be tenable as a longer term strategy. Where manual processes continue to be in place, we expect banks to establish checks to mitigate the risks of data errors and mis-reporting. Such checks include reconciliation of information residing in various systems, and robust maker-checker controls or four-eye checks. Ultimately, credit and collateral data form the basis of management reporting and informed credit decisions. It is therefore important for banks to put in effort to ensure the integrity of its data.

Box 3 – Data governance and management

Banks have timely, accurate and comprehensive information on credit exposures and collateral portfolios to facilitate proactive and prompt credit risk monitoring and oversight by the relevant functions, senior management and Board.

Banks establish checks and processes to ensure the integrity of credit and collateral data that form the basis for credit monitoring and decisions.

3 ***Monitoring of collateral portfolio composition*** - The thematic review noted varying standards of collateral monitoring and reporting across banks. Some banks have comprehensive and regular reports that are submitted to credit committees and senior management on a monthly basis. Such reports include analyses on loan exposures, their corresponding collateral and collateralised amounts, by sector and country. Detailed analyses on collateral composition and concentration are also included, with granular breakdown by collateral types (financial or physical and their asset classes) as well as their sub-categories such as types of properties, vehicles or vessels. Some reports also facilitate monitoring of loan distribution by LTV values, and afford closer scrutiny on loans that breach LTV covenants or become non-performing.

3.1 Other banks did not prepare reports on collateral for management's review. Without any process or report to regularly monitor the composition of its collateral, these banks run the risk of not being able to identify, or respond to, emerging adverse trends or increasing concentration risks on a timely basis. This is particularly important for banks that are highly concentrated in certain collateral types, due to their business strategies, expertise and target customer segments. For instance, our inspections noted a bank which did not regularly monitor its collateral composition, even though one particular collateral type constituted as high as 50% of its total secured loan portfolio. Further, some banks did not put in place any collateral concentration limits, although they monitored industry exposure limits as proxies to collateral concentration. There are however limitations to this approach, as borrowers do not necessarily pledge assets that are part of their business activities. They could provide their personal or other assets as collateral for their corporate loans. To illustrate, not all real estate collateral are pledged by property developers. Monitoring industry limits on property developers may therefore not be a good proxy for monitoring concentration of real estate collateral held by a bank.

3.2 We expect banks to establish processes to periodically analyse and report to Board and senior management, the composition of their collateral portfolio and any potential concerns. Banks should also set triggers to identify emerging risks or concentrations in their portfolios.

4 ***Stress testing*** – Banks do not typically conduct stress tests specifically on collateral portfolios. However, regular stress tests on their loan portfolios may encompass some aspects of stresses on collateral. For example, the stress tests on exposures to real estate or property developers typically incorporate stress assumptions such as declines in property prices and downturn of the property market. These parameters are applied to the properties pledged as collateral by these property developers, and reflect the performance and valuation of these assets under a stress scenario. Hence, stress tests on the exposures can serve as proxies to stresses on the pledged assets.

4.1 Nevertheless, as mentioned in paragraph 3.1, a borrower's pledged collateral may not reflect its industry. In such cases, banks should subject the collateral to the relevant stress test parameters as far as possible. For instance, parameters used in stress tests on exposures to property developers could be similarly applied to stress the value of a real estate collateral pledged by a borrower in the manufacturing industry where appropriate. This is useful in providing insights to the valuation of such collateral under stress and their impact on the bank's loan asset quality.

4.2 In view of the above, banks should conduct stress tests on collateral, where applicable. Examples where such stress tests are warranted include instances where the collateral portfolio is concentrated in certain asset classes or where certain asset classes are susceptible to emerging risks. Banks should stress these collateral valuations to identify vulnerabilities for management's attention.

Box 4 – Collateral portfolio monitoring and stress tests

Banks establish processes to regularly monitor and report the composition of their collateral portfolios.

Banks conduct stress tests, as warranted, that would highlight vulnerabilities in their collateral portfolios to adverse external factors or market conditions for management's attention.

C. VALUER SELECTION

1 Collateral values should be assessed in a prudent manner. The expertise to value collateral typically rests with internal specialists or external service providers who are trained and qualified to provide such services. It is important that banks set out clear policy requirements with regard to these valuers or appraisers who provide the appraisals for the assets pledged to the bank, including those obtained through appraisal pricing systems or other price feeds[5].

2 ***Independence of appraisers*** – Most banks rely on external sources of valuations from appraisers accredited by professional bodies. Some banks supplement these with internal valuations by in-house specialists. These in-house specialists typically report to a unit independent of front office, to ensure independence and objectivity in the valuations used. Some banks have also established clear criteria to determine when external appraisals are required, in addition to internal assessments. This include circumstances where internal valuers lack the requisite expertise, or when a loan has become non-performing, resulting in a need for a more formal and independent valuation. This is necessary for the bank to accurately measure its loss allowances.

3 ***Due diligence and review of valuers*** – While banks place heavy reliance on valuation services provided by external appraisers, they remain responsible for ensuring that such valuations are accurate, unbiased and appropriate. Most banks have established structured due diligence processes for the selection of valuers, and including them on their approved panel of valuers. They also regularly assess the valuers' performance based on established criteria of track record, professional skill and qualifications.

3.1 A few banks had relied on "commonly-used" valuers in the industry, instead of establishing a panel of approved valuers. These "commonly-used" valuers, albeit known in the industry, were not subject to any internal due diligence and regular reviews. Some banks had also formalised their panel of valuers without performing any due diligence or documenting the due diligence performed. There were also instances where lack of proper justification and approval were noted when valuers not on the bank's panel were used.

[5] These include web-based systems or publications that provide indicative price feeds on assets.

3.2 A lack of guidance on the process to reinstate valuers to the panel was also observed in a bank. Consequently, a valuer that was previously removed from the panel due to concerns over providing valuations that were overly optimistic or aggressive, was subsequently reinstated without performing adequate due diligence.

Box 5 – Valuer selection and due diligence

Collateral valuations are performed by appraisers who are subject to the bank's due diligence and regular re-assessments of their professionalism, expertise, track record and independence. Exceptions are subject to proper justification and approval.

Appraisers, and providers of appraisal pricing systems or sources, are independent of the business and front office to ensure objectivity of valuations provided.

D. VALUATION PRACTICES

1 Collateral values should be updated on a regular basis to reflect prevailing price levels or market values. It is important that banks adopt proper appraisal practices that lead to realistic and substantiated valuations, and use valuation methods and assumptions that are both reasonable and prudent.

2 ***Frequency and type of valuation*** – Most banks require annual revaluation of collateral. There are also clear requirements on the acceptable types of valuation for different collateral classes, such as requiring full and formal valuations that include on-site inspections or site visits, or obtaining desktop valuations or indicative estimations as alternatives. Most banks also specify the acceptable validity period of valuations obtained, for instance, valuations of real estate collateral are valid only if they are performed within the last six months.

2.1 More frequent valuations may be necessary, depending on the nature and inherent volatility of the collateral and market conditions. For instance, the valuation frequency for financial collateral such as quoted equities ranges from daily to fortnightly, as prices could be more volatile and subject to large swings. In contrast, valuations of physical collateral such as real estate are less susceptible to such price movements, and are typically valued at a lower frequency, such as annually. Some banks did not have clear policies to guide the revaluation of collateral. One bank allowed revaluation on a discretionary (rather than periodic) basis for performing loans. Consequently, vessels pledged as collateral for the borrower’s credit facilities were not revalued for as long as five years. Another bank exempted some classes of collateral, namely machinery and vehicles, from the need for revaluation altogether.

2.2 Onsite inspections at loan inception assure banks of the existence and condition of the collateral pledged to them as security. Subsequent inspections should also be carried out where practical and warranted, depending on the judgement of the credit risk management team. For instance, an onsite inspection could be required when markets experience vulnerabilities, or when adverse news on the borrower surface. For physical collateral such as vessels (both ocean-going and other vessel types), banks may not be able to perform onsite inspections due to practical reasons such as vessels being out at sea. In such cases, banks rely mostly on desktop valuations during their periodic credit reviews, where valuations of these collateral could be reasonably benchmarked to market prices based on asset specifications. While such practical considerations are valid, we expect banks to assess the reasonableness and prudence of the assumptions underpinning the desktop valuation, and maintain clear documentation of the assessment.

2.3 The thematic review also noted instances where significant deviations in valuations obtained from more than one valuer were not followed up. In one instance, the deviation between two valuations was as wide as 60%. As banks obtain different sources of valuations as a form of sanity check, inadequate follow-up on significant variances would render such reasonableness checks ineffective.

Box 6 – Frequency and type of valuation

Collateral is valued at its net realisable value, based on reasonable and prudent assumptions. It is revalued on a regular basis, with the frequency dependent on factors such as the nature of the collateral, volatility of price changes and market outlook.

Clear requirements on the types of acceptable valuation (i.e. whether full, desktop or indicative) are specified for both initial valuation and subsequent updates. Where it is not feasible or impractical to perform onsite inspections, the risks of not doing so are properly addressed.

3 ***Valuation practices for non-performing loans*** – Banks should have adequate policies and processes for the maintenance of loss allowances for NPLs. As the accuracy of collateral valuation has a direct impact on loss provisioning, banks are expected to have robust internal policies and procedures to provide assurance on the collateral values used for NPLs, so that provisioned amounts adequately cover loan loss experience. While all banks subject NPLs to more stringent valuation requirements, there is room for greater attention to be paid on collateral valuation practices for problem credits.

3.1 All banks require collateral to be revalued on a more frequent basis when loans become non-performing. The increased revaluation frequency, whether semi-annually, quarterly or monthly, were dependent on factors such as the stage of credit deterioration, nature of the asset and prevailing market conditions. Some banks did not prescribe the types of valuation (i.e. whether full, desktop or indicative) required to be obtained when a loan turned non-performing. Such guidance is useful given that different types of valuation are based on different assumptions and entail differing levels of due diligence and assurance. For example, full valuations are in-depth and systematic assessments, desktop valuations typically assume that the assets are of average physical condition, while indicative valuations are preliminary or informal estimations.

3.2 Most banks also impose minimum haircuts (i.e. market price discounts) on collateral values to better reflect the collateral's net realisable value during liquidation. Such haircuts are applied to reflect the liquidity of the market and the liquidation strategy as these collateral may need to be realised within a short time period. However, some

banks did not set baseline haircuts but relied on the experience and judgement of staff in determining the appropriate haircuts on a case-by-case basis. Other banks did not periodically review the reasonableness of their haircuts, citing the lack of historical liquidation data.

3.3 Banks are expected to develop liquidation cost and haircut assumptions for collateral valuation, based on observed empirical evidence or loss experience. Reasonable effort should also be taken to source for reference data that is representative of their collateral portfolios when setting haircuts. Further, banks should periodically backtest and review the baseline haircuts to ensure that they remain appropriate.

Box 7 – Valuation practices for NPLs

Banks adopt more stringent valuation requirements for collateral of problem credits. The collateral of problem credits are subject to more frequent revaluation, to ensure that the haircuts are reasonable and valuation reflective of the net realisable value under stressed conditions. The required type and validity periods of valuation are clearly specified.

Banks periodically backtest and assess the reasonableness of haircuts imposed on its collateral, taking into account market conditions and loss experience. Where limitations in internal data exist for such assessments, banks source for reference data that is representative of their portfolio.

III CONCLUSION AND NEXT STEPS

1 All three phases of MAS' credit thematic inspections have shown that there continues to be room for improvement in the banks' credit risk management of their corporate loan portfolios in various aspects of credit underwriting, credit review and collateral management standards and practices. Banks are expected to actively manage their credit risks to ensure that their credit portfolios remain resilient. It is important that banks uphold prudent lending practices and maintain sound credit risk management policies and processes to avoid severe asset quality deterioration. In addition, banks should have adequate policies and processes for timely identification and management of problem credits, and maintenance of adequate loss allowance in accordance with accounting rules.

2 Banks should assess the effectiveness of their credit risk controls against MAS' expectations and good practices set out in all the three information papers and take risk-appropriate steps to address any gaps. MAS looks to the banks' Board and senior management to provide oversight and maintain high standards in this area. MAS will continue to engage banks on the effectiveness of their credit risk management as part of our on-going supervision.

Monetary Authority of Singapore