Domestic Systemically Important Banks (D-SIBs)

Framework for Oman

January 2015

1. The financial crisis of 2007-2009 revealed that, the failure or impairment of banks having systemic implications ("Too-Big and/or Too Complex-To Fail") had profound damaging implication for the whole economy. Orderly functioning of the financial system and hence ultimately the real economy were in jeopardy considering their size and functional linkages with other players in the system leading to huge loss of public money.

2. The damage was so severe because of the absence of a crisis management framework at hand. Since an adequate Early Warning System was not in practice, financial entities remained unaware of the ailments until they caught them. Nor was the system of keeping in readiness a Resolution Regime to act quickly in response to the inflicted distress was in vogue.

3. Accordingly, the Basel Committee on Banking Supervision (BCBS) coined a concept called Domestic Systemically Important Banks (D-SIBs) and evolved an empirical mechanism through which such banks could be identified in any jurisdiction. It formulated an enhanced regulatory/supervisory regime for such banks to reduce their probability of failure.

4. As a possible policy response, many jurisdictions are in the process of putting in place adequate measures in advance so that in the extreme event of any problems arising with them, the damage to the system is kept at the minimum. With such measures at place, public perception and hence confidence on the robustness of their health, it is felt, would improve and with that the financial stability of the system would get a boost.

5. The D-SIB framework has evolved through two important circulars of Basel Committee on Banking Supervision (BCBS). These are:

A framework for dealing with domestic systemically important banks, October 2012 and

Global systemically important banks: updated assessment methodology and the higher loss absorbency requirement, July 2013.

6. In terms of these two circulars, the BCBS has recommended the following approach to deal with this crucial issue:

- To identify banks in the national jurisdiction having systemic importance (D-SIBs).
- To formulate a regulatory/supervisory regime (especially a higher capital framework) for the D-SIBs to reduce their probability of failure by increasing their going-concern loss absorbency.

7. Some countries have already implemented or are in the process of implementing the framework for dealing with D-SIBs, these countries include USA, UK, Canada, Denmark, Sweden and Switzerland. Unlike the prescriptive approach followed for G-SIBs (Global Systemically Important Banks), the framework for D-SIBs allows significant degree of national discretion in order to accommodate the structural characteristics of individual jurisdictions.

8. In Oman, as a measure of sharing of information with the banks, the documents; (i) BCBS guidelines on D-SIBs" as above, (ii) Financial Stability Board Guidelines on "Key Attributes of Effective Resolution Regimes for Financial Institutions (October 2011)"and (iii) Financial Stability Board Consultative Document "Principles for an Effective Risk Appetite Framework (July 2013)" were sent to the banks. In addition, the Concept Paper "Identification of Domestic Systemically Important Banks in Oman (D-SIBs)" detailing the methodology used for the task for Oman prepared by Central Bank of Oman (CBO) was also sent to the banks.

9. Elaborate consultative exchanges were held with the banks resulting in mutual and overall positive understanding and appreciation of the subject. Detailed discussions, including those with the team of officers of the banks led by Chief Risk Officer on the existing risk governance culture of the banks, were also pertinent and useful.

Part I

Methodology of Identification of (D-SIBs) in Oman

10. An attempt was made to identify D-SIBs in the Omani banking sector as per the methodology suggested by BCBS. The methodology is based on an indicator-based measurement approach. To identify those global systemically important banks(G-SIBs), the BCBS proposed a method where a weighted average of the institution's

score on *size, interconnectedness, substitutability, complexity, and cross-jurisdictional activity* is calculated, and against this background, a decision is made as to which institutions are identified as G-SIB and how much additional capital the relevant institutions should be required to hold. For D-SIBs, however, the BCBS takes a more principle-based approach, firstly based on four of the five criteria mentioned above, excluding the criteria on cross-jurisdictional activities, and secondly providing the possibility to consider specific national conditions, including the opportunity to involve relevant country-specific factors [1]. For assessment, BCBS suggests that the impact of a D-SIB's failure on the domestic economy may be assessed having regard to bank-specific factors that include ***size***, ***interconnectedness***, ***substitutability***, ***complexity*** *(including cross-jurisdictional activity),* and ***other*** measures that national authorities consider important.

11. Further, as per Principle 8/Para 32 of the BCBS Circular "A framework for dealing with domestic systemically important banks, October 2012" it is also suggested that "the concentration of the banking sector could also be considered (as a failure in a medium-sized highly concentrated banking sector would likely create more of an impact on the domestic economy than if it were to occur in a larger, more widely dispersed banking sector)" in addition to 'size-to-GDP' which is easy to calculate. In another Concept Paper on Concentration, Competition and Stability in Omani banking system, it was observed that Omani banking sector is 'moderately concentrated' and operates under monopolistic competition[2]. Accordingly, this variable was not considered in this exercise. However, another variable 'Domestic Sentiment' was taken in sync with a new work on this.

12. For each bank, the score for a particular indicator is calculated by dividing the individual bank amount by the aggregate amount for the indicator summed across all banks in the sample. This amount is then multiplied by 10,000 to express the indicator score in terms of basis points. For example, if a bank's size divided by the total size of all banks in the sample is 0.03 (i.e. the bank makes up 3% of the sample total) its score will be expressed as 300 basis points. Each category score for each bank is determined by taking a simple average of the indicator scores in that category. The overall score for each bank is then calculated by taking a simple average of its five category scores. The maximum total score, that is, the score that a

[1] The BCBS, "A framework for dealing with domestic systemically important banks", October 2012.

[2] An updated assessment of the concentration and competitive structure of the Omani banking system for the recent period covering 2006-12 suggests that Oman's banking system can be characterized to be 'moderately concentrated' in deposit, credit and banking asset markets and operating in a scenario of 'monopolistic competition'. While the former was established through the concentration ratio (CR) of top 2, 3 and 5 banks (CR-2, CR-3 and CR-5 respectively) and the Herfindahl-Hirschman Index (HHI), the latter was through the application of the Panzar-Rosse (P-R) statistic.

bank would have if it were the only bank in sample, is 10,000 basis points (i.e. 100%).

13. Following Brämer and Gischer (2013)[3] the same **indicator-based measurement approach** that is employed by BCBS for G-SIBs as mentioned above was adopted. The only difference[4] lies in the choice of some financial indicators which are used to reflect the five categories of systemic relevance. The selected indicators are chosen to reflect different aspects of what generates negative externalities and makes a bank critical for the stability of the financial system in Oman.

14. The categories that constitute our measurement of Oman's D-SIBs as well as the respective indicators necessary to calculate the individual category scores are given as follows.

14.1. **Size**: Any possible damaging effects in the form of risks for the economy (negative externalities) if a bank fails, are likely to increase more than proportionally with the size of the institutions. If a large bank fails this may, to a greater extent than for smaller institutions, damage public confidence in the financial system as a whole.

14.1.1. The size of a bank can be measured in several ways. The BCBS uses the total exposure of the institution as an indicator for size in connection with identifying G-SIBs. In the United Kingdom, risk-weighted assets as a percentage of GDP are used as an indicator of how systemic institutions are, Switzerland uses an indicator composed of market share for loans and deposits and the size of total assets in relation to GDP, while Denmark uses total assets to GDP and share of deposits of banks. Thus, at international level, a uniform measure for the size of an institution in relation to identifying SIBs has not been established.

14.1.2. While we appreciate that various measures of size like total assets, total deposits, and total credit may be fairly correlated, however, banks may differ in their business orientation and may thus rank differently on various measures. Moreover, we consider that there is merit in taking into account off-balance sheet activities of banks as well. All these four indicators (That is, 'total assets', 'total deposits', 'total credit' and 'total off balance sheet exposure of each bank relative to that of the banking sector) have been included with equal weights assigned to each of them.

[3] Brämer, P. and H. Gischer 2013, "An Assessment Methodology for Domestic Systemically Important Banks in Australia" *Australian Economic Review, Vol. 46, Issue 2, pp. 140-159, 2013*

[4] Moreover, rather than multiplication by 10,000, we use a factor of 100, which mean that the results reported in this note are expressed in terms of per cent rather than basis points.

14.2. **Interconnectedness**: Interconnectedness means that problems in a bank may spread to the rest of the sector, for example as a consequence of contractual obligations between the institutions. The interconnectedness of the institution with the rest of the financial system may pose a risk that winding-up the institution reduces the loss-absorbing capacity of the rest of the sector due to losses on exposures incurred by the D-SIBs.

14.2.1. To measure the score of this category the BCBS makes use of three indicators weighted equally. The indicators are, 'intra-financial system assets', 'intra-financial system liabilities' and 'securities outstanding'[5]. For Oman, an equally weighted set of four indicators vis-a-vis 'interbank assets' (including investments and credit), 'interbank liabilities', 'deposits from / debt securities issued to non-bank financial corporations' and 'credit to / investment in non-bank financial corporations' have been used.

14.3. **Substitutability**: The systemic impact of a bank's distress or failure is greater the less easily it can be replaced as both a market participant and a financial service provider. As a result, identification of D-SIBs also takes into account the types of roles that banks play in domestic financial markets and in domestic financial infrastructures, which inform views regarding substitutability. For example, this includes share of payments/receipts made through retail and large value payment and settlement systems or providing underwriting services for debt and equity securities.

14.3.1. BCBS proposes 'assets under custody', 'payments activity' and 'underwriting transactions in debt and equity markets' as measures of (non) substitutability. BCBS primarily projects substitutability as a measure of provision of critical financial infrastructure, although, some other aspects might very well be difficult to be substituted by other providers should a big bank fail. For example, if a big bank, that provides 40 per cent of the household loans, fails others might not be able to easily fill the gap because of their capital and liquidity constraints. However, this aspect is already captured under size, therefore, we opt out of using it as a measure of substitutability.

14.3.2. In the case of Oman, custodial services provide by banks have been meagre, similarly the securities issues have been very limited, suggesting that even if an institution has a very large share (even 100 per cent) in underwriting services in certain years, it can still be easily handled by the

[5] The July 2013 update replaces 'wholesale funding' with 'securities outstanding', that was used earlier.

rest of the banking sector. Considering this, share of 'payments received and made' by a bank has been taken as a measure of '(non-)substitutability' in Oman.

14.4. **Complexity**: An institution's systemic importance is higher, if the institution has a business model, structure and operations which make it particularly difficult to assess (with respect to risks), hard to resolve, and costly to wind up. Assessing building up of risks in more complex banks is more difficult, and winding-up of complex institutions is likely to generate higher costs than winding-up less complex institutions, and will therefore, all else being equal, have a greater impact on financial stability.

14.4.1. BCBS uses three indictors to measure complexity: (i) notional amount of over-the-counter (OTC) derivatives; (ii) Level 3 assets; and (iii) trading and available-for-sale securities. Factors which complicate winding-up may e.g. be the scope of bilateral (Over-The- Counter OTC) trading with financial derivatives, large trading portfolios, or that the institution has many assets in its balance sheet which have not been measured at market value and thus may prove to have a significantly different realizable value. Moreover, significant cross-border activities also add to complexities in operations and resolution[6].

14.4.2. Considering above, in order to assess the complexity of the banks in Oman, four indicators: 'notional amount of over-the-counter (OTC) derivatives', investments in 'trading and available-for-sale securities', 'cross-border assets' and 'cross border liabilities' have been used.

14.5. **Domestic Sentiment**: The BCBS allows national discretion in adding more categories to the four proposed by it, based on the local factors. Following Brämer and Gischer (2013), we use 'domestic sentiment' as an additional category to emphasize the domestic relevance of an institution. We use share of 'deposits by households' to capture the public perception of the domestic impact that is caused by a bank's failure. The more deposits of households are at risk, the more likely anxiety spreads across country, which might involve a general reduction of national savings or even bank runs.

14.6. Table 1 at the Annexure summarizes the indicators used for various categories in the official G-SIBs approach and the approach proposed in this note for identification of D-SIBs in Oman.

[6] For G-SIBs assessment, cross-jurisdictional activities are dealt with separately as an independent category.

The Model

15. We measure the systemic risk of each bank operating in Oman for years 2012, 2011 and 2010. The total score ($SCORE\ ij$) which summarizes the degree of domestic systemic importance of a bank i, at time j is calculated as follows:

$$Score_{ij} = \frac{1}{5}\text{x}\ [0.25\ \left(\frac{ASSETS_{ij}}{\Sigma_{\text{i}}^{\text{n}} ASSETS_{ij}} + \frac{CREDIT_{ij}}{\Sigma_{\text{i}}^{\text{n}} CREDIT_{ij}} + \frac{DEPOSITS_{ij}}{\Sigma_{\text{i}}^{\text{n}} DEPOSITS_{ij}} + \frac{OBS_{ij}}{\Sigma_{\text{i}}^{\text{n}} OBS_{ij}}\right) \text{x}\ 10{,}000$$

$$+ 0.25\ \left(\frac{INTBNK_{AST_{ij}}}{\Sigma_{\text{i}}^{\text{n}} INTBNK_{AST_{ij}}} + \frac{INTBNK_{LIAB_{ij}}}{\Sigma_{\text{i}}^{\text{n}} INTBNK_{LIAB_{ij}}} + \frac{NBFI_{AST_{ij}}}{\Sigma_{\text{i}}^{\text{n}} NBFI_{AST_{ij}}} + \frac{NBFI_{LIAB_{ij}}}{\Sigma_{\text{i}}^{\text{n}} NBFI_{LIAB_{ij}}}\right) \text{x}\ 10{,}000$$

$$+ \frac{PAYMENTS_{ij}}{\Sigma_{\text{i}}^{\text{n}} PAYMENTS_{ij}}\ \text{x}\ 10{,}000$$

$$+ 0.25\ \left(\frac{CROSS_{AST_{ij}}}{\Sigma_{\text{i}}^{\text{n}} CROSS_{AST_{ij}}} + \frac{CROSS_{LIAB_{ij}}}{\Sigma_{\text{i}}^{\text{n}} CROSS_{LIAB_{ij}}} + \frac{AFS_{HFT_{ij}}}{\Sigma_{\text{i}}^{\text{n}} AFS_{HFT_{ij}}} + \frac{OTC_{DERIVATIVES_{ij}}}{\Sigma_{\text{i}}^{\text{n}} OTC_{DERIVATIVES_{ij}}}\right) \text{x}\ 10{,}000$$

$$+ \frac{HH\_DEPOSITS_{ij}}{\Sigma_{\text{i}}^{\text{n}} HH\_DEPOSITS_{ij}}\ \text{x}\ 10{,}000]$$

Size

Interconnectedness

Substitutability

Complexity

Domestic Sentiment

where,

n = total number of banks operating in Oman at the end of year j (j= 2012, 2012, 2011, 2010)

ASSETSij = Total Assets of bank i at the end of year j

CREDIT ij = Total Credit of Bank i at the end of year j

DEPOSITS ij = Total Deposits of bank i at the end of year j

OBS ij = Total Off-Balance-Sheet exposure of bank i for year j

INTBNKAST ij = Interbank Assets of bank i at the end of year j

INTBNKLIAB ij = interbank liabilities of bank i at the end of year j

NBFIAST ij = Credit to / Investment in non-bank financial companies given by of bank i outstanding at the end of year j

NBFILIAB ij = deposits from / debt securities issued to non-bank financial companies liabilities obtained by bank i outstanding at the end of year j

PAYMENTS ij = total payments made and received by bank i during year j

CROSSAST ij = cross-border assets of bank i outstanding at the end of year j

CROSSLIAB ij = cross border liabilities of bank i outstanding at the end of year j

AFSHFT ij = available for sale and held for trading investments of bank i outstanding at the end of year j

OTCDERIVATIVES = notional value of over the counter derivatives outstanding in the books of bank i at the end of year j

HHDEPOSITS = household deposits held by bank i at the end of year j

Threshold Levels to Discern Systemic Importance:

16. The BCBS does not prescribe definite threshold levels to differentiate between systemically important banks and non-systemic ones. A *priori*, we define systemic importance by a total score ($SCORE_{ij}$) of 800 or above[7]. We believe that, the high importance of a bank in one category alone can pose a threat to the system as a whole. Accordingly, we also propose that an institution may be classified as systemic if it scores 1,000 or above in any single category regardless of the total score, and be required to meet the (stringent) regulations for D-SIBs including requirement of holding any higher capital requirement. As such, the CBO can apply its considered judgement to declare any bank as (more) systemic on the basis of qualitative assessment for the purpose of requiring additional capital and/or requiring any such institution to comply with other stringent regulations that are tailored for D-SIBs.

The Results

17. The results of systemic scoring for year 2013, 2012, 2011 and 2010 are reported in tables 2, 3,4 and 5 (at the Annexure) respectively. The results indicate that, based on the above defined threshold levels, five banks namely ***Bank A, B, D, E*** *and* ***F*** may be judged as systemic in the context of Oman. Moreover, Bank A scores the highest and turns out to be most systemic among the banks operating in Oman.

18. These results are not surprising, and confirm our cut-off scores as judicious, given that these banks are large in terms of their balance sheets as well. However, it may be noted that, size alone might not be sufficient to designate a bank as systemic or otherwise. A case in point is Bank G, which scores higher than Bank F on size

[7] There is no global consensus on the exact threshold levels, we have defined thresholds by reviewing explicit or implicit thresholds levels gleaned from practices in other jurisdictions while taking into account the structure of the banking sector of Oman. Some of the international practices are given below:
-For Australian D-SIBs, Brämer and Gischer (2013) define tentative thresholds at a category score value higher than 1000 or a total score higher than 1000
- In Sweden, so far the four largest credit institutions have been designated as national D-SIBs, exact criteria for identification have not been established there, however, this roughly equates to a threshold level of score of 200 to 1600 on size dimension.
-In Switzerland, the thresholds have not been made public, however, reverse engineering shows that the implicit thresholds are score of 10 size dimension (deposits and loans to be more precise)
- Preliminary report from UK suggests that the banks with deposits of more than GBP 25 bn would be classified as D-SIBs.

(largely because of significantly higher off-balance sheet exposure) and substitutability metrics in 2012 but is considered less systemic than Bank F because of the higher complexity and interconnectedness of the later. Similarly Bank B is larger than Bank D in on size metric, but ranks lower than the later because of higher score of Bank D in other categories. Moreover, systemic importance (and relative rankings) of banks may change over time because of mergers and acquisitions or they rebalance their portfolios. For example, following the merger of two banks in 2013, the new entity became of higher systemic significance than both of the parent entities. Moreover, Bank F grew in systemic importance over time and is assessed as a systemically important bank in 2012 only. It ranks higher than Bank E in 2012, whereas, Bank E had a higher systemic score than the Bank F in the two preceding years. This leads us to suggest that, banks be assessed annually to gauge their systemic importance and for change in their capital requirements for the year following the assessment year.

Higher Capital Stipulations

19. A key aim of identification of D-SIBs is to increase their loss absorbency capacity, in view of their systemic importance. One way of achieving this is through setting higher capital requirements for D-SIBs[8] to ensure higher loss absorbency (HLA). For this, we tend to favour a bucketing approach and propose equally sized buckets with additional Common Equity Tier-1 capital requirements of 1 per cent to 2.5 per cent of risk weighted assets for D-SIBs in increments of 0.5 per cent based on the relative systemic importance of banks[9]. Moreover, we also considered the idea of adding a 'un-populated' top bucket with additional capital requirements of 3.5 per cent. We are of the view that, there is merit in having a 'top bucket' as it would serve as a deterrent for banks in the highest populated bucket from becoming more systemic. Without this 'top bucket', the bank(s) in the highest populated systemic bucket do not have any incentive for not becoming more systemic. We also recommend that once the 'top bucket' is populated, another higher un-populated bucket be created to keep the incentives there for the bank(s) in the highest populated bucket. The proposed scheme of higher loss absorbency is presented in Table 5 at the Annexure.

20. If the above mentioned bucketing approach is applied to Oman, then the Tier 1 Capital to be held by the most systemic bank would be 14 per cent of Risk Weighted Assets (RWAs). This is higher than any other jurisdiction that we studied (Graph 1), however, this was not unexpected as the capital requirements in Oman are quite stringent to begin with as compared to the internationally advised requirements (Tier 1 Capital requirement in Oman for non-SIBs is 11.5 per cent as compared to Basel III

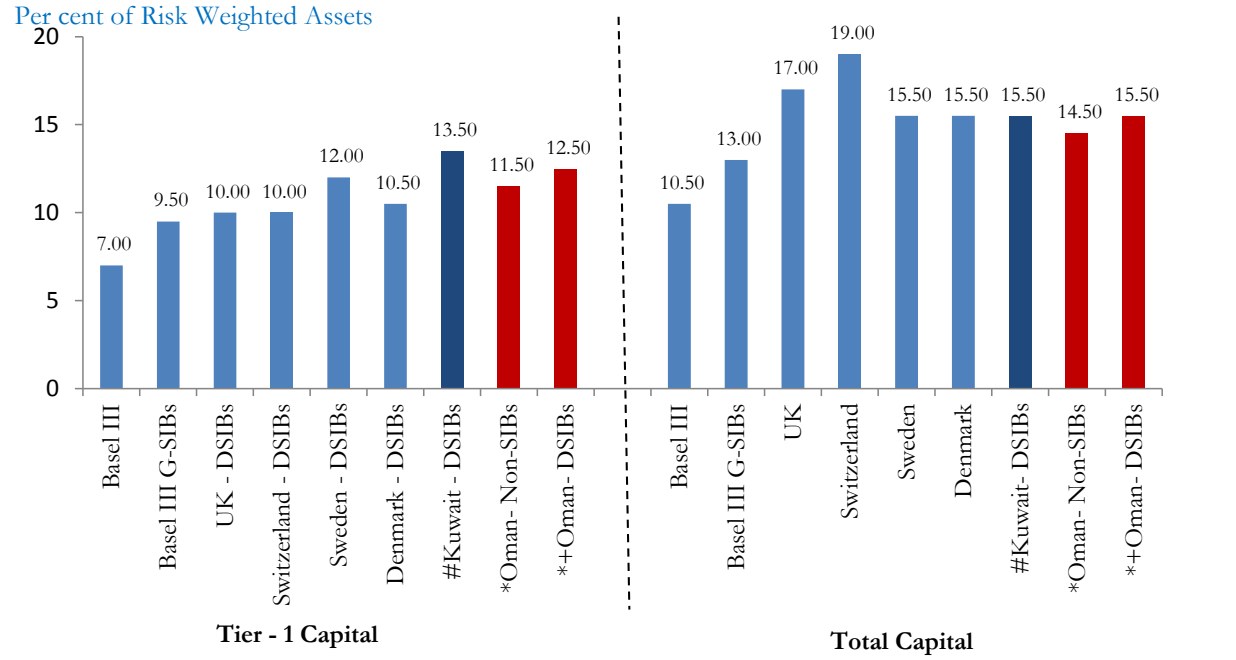
[8] An alternative but less efficient way can be to directly capping their exposures.
[9] This is exactly the same approach that is followed by BCBS for G-SIBs.

minimum requirements of 7 per cent). If the above proposals are implemented, then the total regulatory capital for the most systemic bank in Oman would be 15.50 per cent[10], which is equal to that of Kuwait, Denmark, Sweden but less than Switzerland and UK. A comparison of capital requirements for D-SIBs in a set of countries is given in Graph 1.

21. The additional capital that individual banks operating in Oman would be required to hold if the fore mentioned scheme of identification of D-SIBs and higher loss absorbency (HLA) is applied is given in Graph 2. The graph shows that ***Bank A*** would be subject to an additional 2.5 per cent, whereas, Banks ***B, D, E*** *and* ***F*** would be required to shore up additional Tier-1 Common Equity capital of 1 per cent of their risk weighted assets.

Graph 1

Capital Requirements for Omani and Foreign DSIBs, and Non-DSIBs(fully phased-in)



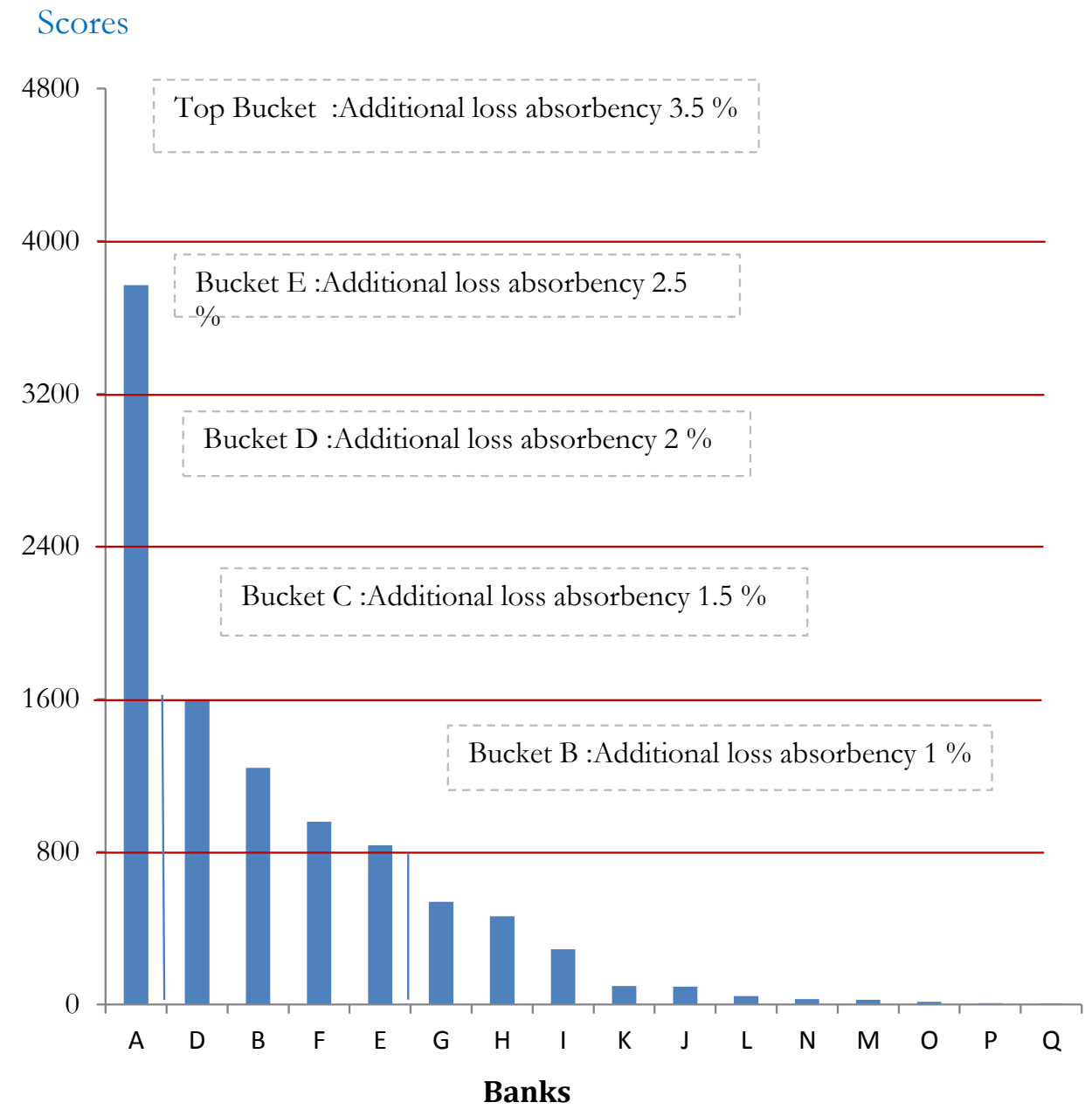
* Includes Capital Conservation Buffers(CCB) of 2.5 % being implemented in phases (currently CCB is 0.625%).
# Includes maximum capital surcharge for D-SIBs, proposed range is 0% to 2.5 %.
+ Includes capital surcharge of 1% decided by CBO for D-SIBs, the maximum capital surcharge can go up to 2.5 %

Source: Central Bank of Oman, Central Bank of Kuwait, BIS, and The Committee on Systemically Important Financial Institutions in Denmark

[10] Considering the decision to keep D-SIB capital surcharge in Oman at 1 per cent.

Graph 2

Banks' Systemic Risk Scores and their Allocation to Buckets



Designating D-SIBs in Oman

22. Empirical thresholds as per the above methodology indicated five banks to be designated as D-SIBs. However, considering the size and complexities of the overall banking sector as also incremental supervisory resources required to be able to administer additional regulatory stipulations on the D-SIBs (as indicated below), it was decided to designate only one bank as D-SIB for the time being. This decision will be reviewed from time to time based on regulatory experience gathered in the matter.

Part II

D-SIBs in Oman - Revisit of Regulatory/Supervisory Actions

Enhanced Capital Surcharge for D-SIBs in Oman

23. It should be noted that capital cushion to meet the unforeseen contingencies could be a necessary condition but not the sufficient one. What, also, is considered more important is the prevailing risk culture in the bank which could obviate the possibility of emergence of crisis-like situations.

24. Further, the banks in Oman *ab initio* hold sufficient capital. The regulatory CRAR for banks in Oman has been mandated at 12 per cent (excluding CCB) as against the international norm of 8 per cent. Within that, the CET-1 component is required to be 7 per cent (excluding CCB) as against the international norm of 4.5 per cent. The actual CRAR and CET-1 as on 30 September 2014 worked out to 15.5 per cent and 12.7 per cent, respectively.

25. The enhanced capital surcharge (CET1 only) for any bank - being an identified D-SIB in Oman **(hereinafter 'the bank')** – accordingly, is stipulated at 1 per cent which will be enforced either in phases or in full depending on the decision taken by CBO.

26. CBO reserves the right, among others, to restrict distribution of profits by way of reducing dividend payments and staff bonus payments, in the event of failure by the bank to meet the enhanced capital surcharge and/or the other additional requirements as hereunder.

27. CBO is also of the view that further additional capital surcharge will remain in tandem with the quality of self-preserving risk culture maintained by the bank. Capital surcharge may be made stiffer (say up to 2.5 per cent) if in the evaluation of CBO, compliance to risk management related stipulations (as under) is considered to be not up to its desired expectations.

Enhanced Regulatory Regime for D-SIBs in Oman

28. It is advised that the bank should usher in a sound risk culture that "will provide an environment that is conducive to ensuring that emerging risks that will have material impact on a firm, and any risk-taking activities beyond the firm's risk appetite, are recognised, escalated, and addressed in a timely manner (BCBS-2013)". The quality of overall risk governance is considered as important as the quality of management of sources and uses of funds and other relevant parameters.

29. As a beginning, the current risk governance system should be subjected to an Internal Peer Review by an Inter-Departmental Independent Evaluation Group. An independent, concurrently undertaken External Assessment of the same by the bank's External Auditing Firm may also be undertaken. The top management of the bank should engage itself actively on the observations and recommendations of these two different reports and finalise an updated Risk Governance Architecture for the bank in line with the systemic criticality as a D-SIB. The recommendations of the relevant guidelines issued by FSB should be kept in view as far as possible while finalizing these documents. This entire system, its efficacy and the associated outputs must be perused / approved by the bank's Board along with monitored follow-up actions as will be needed.

30. While so doing, sufficient care should be taken to ensure that the following systems and procedures are taken into consideration, of course in a bank-specific manner. The timeline for all these processes to be in place is stipulated to be about a year.

Stress Testing of Portfolios (STP)

31. The bank should be having its own model of STP and also be doing such an exercise under ICAAP module mandated by CBO. This process must also include the system of 'Bottoms-Up Stress Testing' (for individual banks) which has since been introduced by Financial Stability Department (FSD) of CBO. In this exercise, the 'scenarios and methodology' are CBO-led and the results are needed to be sent to FSD on quarterly basis. The D-SIB is also expected to undertake additionally the exercise of "Macro-Stress Testing" in sync with the same being done at FSD. Details on this will be shared in due course with the bank.

32. The process of STP acquires added significance for D-SIBs and the bank should accordingly reckon possible additional stress scenarios and analysis as it finds relevant dynamically.

Early Warning System (EWS)

33. This system should be embedded in the bank's working explicitly by way of having a written Manual prepared by a dedicated group of experts who should also administer it with specified periodicity. What is recommended is to make it focused and 'single-point-oriented'. There should be an appropriate review process as well.

34. Indicators chosen should be well-researched and be divided into short (week), medium (month) and long (quarter/annual) term risk basis, the maximum horizon length being a year. Tolerance levels and trigger points for each of these indicators should be devised.

35. Illustratively, an Early Warning System should constantly watch and monitor at least the following indicators:

- Credit growth vis-à-vis GDP growth and sectoral credit growth – Exposures to sensitive sectors.
- Incremental Credit to Deposit ratio.
- Movement in incremental sources and uses of funds.
- Incremental slippages in loan portfolio – quick mortality cases.
- Maturity mismatches in "liabilities & assets portfolio" (for instance, if sudden pressure arises on deposits, banks will run out of liquidity very quickly, potentially creating systemic problems).
- Mismatches in rate sensitive liabilities and rate sensitive assets vis-à-vis interest rate movements in the economy.
- Incremental movement of Off-balance sheet exposures vis-à-vis on-balance sheet exposures.
- Extent of Connectedness both domestic and external.
- Payments System outages or any similar untoward material happenings evidencing significant issues of systems and controls.

Crisis Management Mechanism (CMM)

36. While an effective EWS would signal brewing points of distress in the bank, CMM should be in place to handle them to either to nip it in the bud or at least to contain possible damages. A Crisis Management Document (CMD) should be codified having Board's approval specifying an elaborate disaster recovery planning. A Crisis Management Group (CMG) should be formally in place to plan and administer its prescriptions. Such a comprehensive contingency plan should envisage, in a given context, all possible crisis situations of varying gravity and possible decisions and actions as well as the framework under which decisions can be taken and implemented.

37. Illustratively, the CMG should

- Identify parameters that characterize the crisis, specify and study data that will evidence the onset and evolution of the crisis based on simulations at periodic intervals with continually evolving scenarios.

- Create a framework for decision making involving the functionaries that will be involved in the decision making process, with clearly defined responsibilities and mechanism for information exchange and coordination.

- Create a structure for implementation of the decisions, with well-defined roles and accountability.

- Generate a communications plan to manage rumours and hence panic.

- Conduct, to the extent feasible, Crisis Simulation Exercises periodically in the nature of Disaster Drills for safe proofing of fire safety mechanisms.

Recovery and Resolution Planning (RRP)

38. For an identified D-SIB, RRP (or a Living Will) is considered a must. The objective should be to pre-plan a process of self-propelled recovery and resolution process in the extreme eventuality of EWS and CMM not being able to deliver desired results and enabling the bank to face the consequences without state-sponsored bail-outs. The Plan should spell out bank's operations, the inherent risks and the possible mitigating measures to re-establish bank's health, having larger stability impact, without any official support within a realistic timeframe. This blueprint, a Board-approved formal Document should inspire reasonable confidence in the minds of the depositors that they would not lose at any cost as also the Government that it would

not be propelled into a 'moral hazard' to bail the bank out at the cost of the exchequer.

39. The fact of having a formal RRP as above should be disclosed in the bank's Annual Report.

40. Illustratively, such plans, inter alia, should consider:

- Creation of an ex ante, bank-prompted 'resolution fund' in the nature of a sinking fund created out of net profits every year.

- Bank management/owner-sponsored mechanism to raise the bank's capital and liquidity to required levels in case of a rigorous financial shock (Scope for support from significant shareholders, in particular) - provision of inherent 'bail-in' mechanisms and in the event of extreme eventuality enabling provisions to undertake sale of a particular asset, or a wing of businesses or subsidiaries or even further harsher measures to ensure that the depositors do not lose in any manner, whatsoever.

- A possible set of critical issues which may crop up in different portfolios / business dimensions in stressed situations and proactive steps and prompt remedies in cases of need.

Risk Appetite Framework (RAF)

41. RAF should embody a clear understanding of each item of liabilities and assets of the bank, its quantitative/qualitative business profiles/strategies and the inherent risks these might be carrying. The bank's professed risk management models and systems need to be reflective of this. Risk management committee/s of the Board should be responsible for strengthening governance and control as also market monitoring and enforcement by competent authorities.

42. The appropriateness of the level of systemic risk appetite should be an issue **of self-introspection by the bank itself in the best of interest of the bank and other various stakeholders. The bank's Board should review and set appropriate systemic risk appetite levels for the bank to be strictly adhered to.**

43. Illustratively, such a Document , inter alia should cover:

- Internal risk limits on deals, currency, dealer, stop-loss, country risk, inter-bank exposures and counterparty (single & group) exposures should be (a) unambiguously clear and (b) backed by rational logic in sync with changing times and changes in nature of business by banks.

- The role and responsibilities of Assets Liabilities Management (ALM) Committee to reflect taking 'funds management' decisions on a 'cost-benefit' and 'independent profit center' basis. The bank's internal and external audit system should also capture this area for validation.

- RAF should define sound Risks Disclosures Mechanism that should include all relevant information on the working results while being transparent enough to indicate even the activities which earn profits, which incur losses and the extent of cross-subsidisation across various activities. Meant for customers and general public, the assessments should be easily-understandable, accessible and meaningfully comparable formats.

- The bank's board and management should be made directly responsible for controlling the level of risk taken. RAF should define evaluation systems to gauge the ability of management and board to run and monitor such a large and complex bank by way of making use of fit-and-proper tests for potential management and board candidates.

- The approach to internal delegation, system of staff accountability, earning-based compensation policy etc. should also be part of this Document and be subject to periodical external review.

- The bank should actively engage itself on the issues of size and complexities and its wherewithal to handle them without carrying potentials for systemic risk.

Enhanced Supervisory Regime for D-SIBs in Oman

44. In line with the improved rigours in the systems and procedures as above, the Supervisory Regime at CBO will be suitably enhanced. The off-site surveillance system at the Banking Surveillance Department (BSD) will identify areas of concerns in the bank on a regular basis.

45. The Central Point of Contact (CPOC) at BSD should be provided with a quarterly report by the bank on significant happenings, if any, in the bank (changes in senior management and significant issues with risk implications).

46. The CPOC should be provided the comments made on the bank by the statutory auditors / concurrent auditors. CPOC can call for any information from the bank as and when required including those on the deliberations of the bank's Board.

47. A copy of any significant approval having regulatory significance received from any department of CBO should be endorsed to the CPOC for information.

48. An IPOC (Internal Point of Contact) system should be introduced in the bank which should work in coordination with the CPOC at CBO. But CPOC may have direct interaction with Heads of the different activities of the bank in case of need.

49. Observations of the CPOC will be used as feedback for the regular examination/s conducted by CBO. If considered necessary, portfolio-specific / risk-specific on-site examination may be mandated from time to time. A special examination may also be conducted on the compliance of the requirements contained in this letter.

50. CBO's regular examination/s will also cover the requirements indicated in this letter.

51. A system of Bi-Annual Discussions (Post June and December financial results of the bank) with the Management of the bank will be introduced.

52. From the bank's side, a Team led by the Chief Risk Officer (CRO) will attend discussions with CBO which will inter alia cover the bank's Half-Yearly results, early warning signals and the operations of the other risk-governance related systems in the bank. The findings of the mandated portfolio-specific scrutiny will also find place in these meetings.

Structural Regulatory Issues

53. If while working out the numbers using the required criteria used to identify D-SIB (Size, Complexity, Interconnectedness, Substitutability and Domestic Sentiments), the bank's numbers works out to be on the higher side, the bank should make sufficient strategic review addressing this issue from the point of view of being a D-SIB as also as a measure of self-introspection covering, among others, risk tolerance / culture and manageability.

54. It is appreciated that there could be serious collateral difficulties associated with any measure of right-sizing a bank. The contribution of the bank to priority sectors and overall development of Oman in general is recognized. However, the objective and rationale in recognizing systemic risks (and taking measured prudent measures) in the approach to a very large/systemically important bank with financial stability implications and having a balanced approach in the interests of all the stake holders along best practices cannot be ignored. A possible desirable option may be to care for overall contributions and at the same time, share business with other banks.

55. Accordingly, the bank may prepare a Vision Statement on how best it can project itself in medium/long term perspectives and what the appropriate strategies will be from the angle of addressing systemic risk. This may be submitted to CBO after getting due approval of the bank's Board.

Part III

Implementation Schedule in Oman

56. The bank will prepare the proposed timeline for putting in place the suggested stipulations within one month of its being designated as a D-SIB so as to be able to complete the process within a year thereafter.

57. The fact of the bank being designated as a D-SIB should be disclosed in the bank's Annual Report.

58. Future correspondence in this regard may be made to Financial Stability Department (FSD).

* * * * * *

ANNEXURE

Table 1 Indicators of the Official G-SIB Approach and Proposed D-SIB Approach

	Individual indicator	
Category (and weighting)	**BCBS approach for G-SIBs**	**Proposed Approach for D-SIBs in Oman**
Size (20 %)	(i) Total exposures as defined for use in the Basel III leverage ratio	(i) Total Assets (ii) Total Deposits (iii) Total Credit (iv) Off-balance sheet exposure
Interconnectedness (20%)	(i) Intra-financial system assets (ii) Intra-financial system liabilities (iii) Securities outstanding	(i) Inter-bank assets (ii) Inter-bank liabilities (iii) Credit to non-bank financial institutions (iv) Deposits from non-bank financial institutions
Substitutability (20%)	(i) Payments cleared and settled through payn (ii) Values of underwritten transactions in debt and equity markets (iii) Assets under custody	(i) Payments made and received
Complexity (20%)	(i) OTC derivatives notional value (ii) Held for trading and available for sale (iii) Level 3 assets	(i) OTC derivatives notional value (ii) Held for trading and available for sale (iii) Cross-border assets
Cross-jurisdictional activity (20%)	(i) Cross-jurisdictional claims (ii) Cross-jurisdictional liabilities (iii) not included	- Included in complexity
Domestic sentiment (20%)	- not included	(i) Deposits from households

Table 2 : Systemic Importance of Banks Operating in Oman - December 2013

	Total Score	Size	Interconnectedness	Substitutibility	Complexity	Domestic Sentiment
Bank A	3,539	4,012	2,427	2,389	4,708	4,160
Bank D	1,349	853	332	2,173	1,963	1,424
Bank B	1,136	1,172	1,153	1,043	823	1,488
Bank E	1,102	1,154	2,220	988	221	926
Bank F	863	788	1,432	609	921	566
Bank H	728	565	1,244	873	699	260
Bank G	585	764	623	770	59	711
Bank I	321	257	92	674	478	106
Bank K	130	126	161	277	31	53
Bank J	72	104	23	52	28	153
Bank N	68	70	225	23	5	17
Bank L	50	78	49	66	1	56
Bank M	27	20	17	19	8	72
Bank O	17	27	0	22	28	6
Bank P	10	6	1	21	19	1
Bank Q	3	5	1	0	6	2

Table 3: Systemic Importance of Banks Operating in Oman - December 2012

	Total Score	Size	Interconnectedness	Substitutibility	Complexity	Domestic Sentiment
Bank A	3,770	4,031	3,666	2,273	4,841	4,039
Bank D	1,595	1,063	709	2,597	2,095	1,512
Bank B	1,240	1,187	1,510	1,075	855	1,570
Bank F	959	770	1,627	682	1,159	555
Bank E	834	979	1,148	887	276	881
Bank G	538	797	338	746	93	715
Bank H	462	483	644	523	408	254
Bank I	289	226	75	809	229	107
Bank K	97	161	70	199	1	54
Bank J	94	145	60	70	26	168
Bank L	44	44	54	65	0	60
Bank N	29	56	62	17	0	11
Bank M	24	18	15	18	7	62
Bank O	15	28	11	20	9	7
Bank P	7	7	9	18	0	2
Bank Q	2	6	1	1	0	2

Table 4: Systemic Importance of Banks Operating in Oman - December 2011

	Total Score	Size	Interconnectedness	Substitutibility	Complexity	Domestic Sentiment
Bank A	3,940	4,044	4,183	2,414	5,197	3,863
Bank B	1,239	1,163	1,543	1,110	965	1,414
Bank C	871	529	597	1,509	570	1,149
Bank E	837	1,012	1,144	815	242	971
Bank D	705	588	230	978	1,167	560
Bank F	703	752	898	716	614	538
Bank G	543	785	222	868	109	732
Bank H	452	471	597	432	467	294
Bank I	339	204	104	739	548	100
Bank K	123	143	236	157	35	46
Bank J	103	141	74	64	55	182
Bank L	47	47	48	80	0	58
Bank N	28	51	55	23	0	12
Bank M	28	20	16	26	11	68
Bank O	23	31	30	28	19	5
Bank P	12	10	17	32	1	3
Bank Q	6	8	5	10	0	5

Table 5: Systemic Importance of Banks Operating in Oman - December 2010

	Total Score	Size	Interconnectedness	Substitutibility	Complexity	Domestic Sentiment
Bank A	3,924	3,960	4,085	2,414	5,077	4,083
Bank B	1,121	1,128	1,422	1,110	651	1,296
Bank C	895	547	683	1,509	559	1,179
Bank D	881	633	337	978	1,887	571
Bank E	847	1,005	1,206	815	238	970
Bank F	713	777	998	716	636	440
Bank G	523	775	203	868	85	686
Bank H	391	489	573	432	218	246
Bank I	365	242	196	739	537	113
Bank J	112	133	94	64	72	198
Bank K	87	149	65	157	12	51
Bank L	51	50	64	80	0	59
Bank M	27	21	12	26	6	69
Bank N	23	41	41	23	0	11
Bank O	23	29	18	28	21	18
Bank P	10	12	2	32	0	4
Bank Q	6	10	4	10	2	7

Table 6 : Bucketing Approach

Systemic Risk Bucket	Score Range	Higher Loss Absorbency*
Top Bucket	4000 and above	3.5%
D	3200 to 3999	2.5%
C	2400 to 3199	2.0%
B	1600 to 2399	1.5%
A	800 to 1599	1.0%
Non-systemic	upto 799	0.0%

*Additional Common Equity Tier 1 capital as per cent of Risk Weighted Assets as compard to non-SIBs