Navigating Bank Treasury and asset-liability management (ALM) practice through the Covid-19 Stress Event

BTRM Thought Leadership Webinar

2nd July 2020

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Agenda

- The current environment
- Central bank and regulator support
- Role of ALCO
- ALM impact and actions
- Short- and medium-term actions
- Appendix: Policy checklist

Introduction: Coronavirus impact and response

- A global “pandemic” that has resulted in severe economic output contraction as countries closed borders and enforced “social distancing” measures that have resulted in many sectors experiencing zero or near-zero revenue for a period of several months
- The majority of governments response to the covid-19 risk has been “lockdown”, in parallel with public sector support measures
- This has created a market-wide stress event
- Responding to this stress event is a challenge for all entities in all sectors…
- …within banks, ALCO, Treasury and ALM have a critical role to play.
- And significantly, this time banks aren’t part of the problem.

Economic Policy Response Across Countries

USA

- $2.2 Trillion Stimulus
- Federal Funds Rate set near 0%
- Trillions in Repurchase Agreements

UK and Europe

- United Kingdom
  - BOE Cuts rates to 0.10%
  - ~£500 Billion Stimulus
- Eurozone
  - Interest Rates held at -0.5%
  - €1 Trillion in asset buybacks

Asia

- Japan
  - Asset buybacks including ETFs
  - Zero-late loans
- China
  - ¥2.8 Trillion fiscal stimulus
  - Rate cuts

Middle East

- UAE and Saudi Arabia
  - Hit hard with coronavirus shutdowns and oil price fallout
  - Oil prices rebounding

US Federal Reserve

Extending USD Swap Lines	• **Eased terms of existing USD swap lines with BoE, Bank of Canada, BoJ, ECB and SNB…plus new lines to 9 other central banks**
Primary Lender Credit Facility	• 0.25% 90 day loans to financial institutions
Money Market Mutual Fund Liquidity Facility	• Assist money market funds in meeting outflows of investment
Relaxing Capital Requirements	• Promote lending by lowering capital reserve requirement
Corporate Credit Facility	• Issuing new or purchase existing corporate bonds
Term Asset-Backed Securities Loan Facility	• Supports households by buying ABS on car payments, students loans, etc.

European Central Bank

Incentivize Lending	ECB offers -0.5% loans to be used as lending to other entities
Relaxed Capital Requirements	Promote lending by lowering capital reserve requirement
Forbearance	Relaxed rules regarding which loans are “non-performing loans”
Money Market Funding	Assist money market funds in meeting outflows of investment

Bank of England

Relaxed Capital Requirements	• Promote lending by lowering capital reserve requirement • Loan payment holidays not to be treated immediately as Stage1 to Stage 2 expected credit loss (ECL) for loan loss provisioning under IFRS9
Commercial Paper Purchase	• BoE will buy commercial paper from businesses, maturity 12-months
Cash for corporate debt, payroll, and suppliers	• Large firms given cash to pay payroll, debt, and suppliers

Covid-19 policy impact

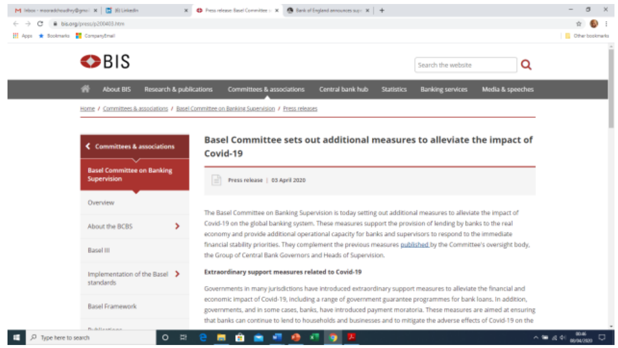
- The longer the “lockdown” approach to managing this risk continues, the deeper and longer-lasting the recession will be
- This has impact on bank Treasury and asset-liability management (ALM) desks and how they manage their balance sheet risk
- This slide deck summarises the author’s view on the most appropriate action that Treasury and ALM desks should be taking
- The focus is on ***supporting the customer franchise***: the lockdown approach has impacted certain types of Retail and SME customer – such as the self-employed, those on zero-hour contracts, SMEs dependant on social interaction (leisure, entertainment, etc) and export market, for example – more severely than it has impacted others (public sector employees, etc), and banks must remain adaptable to specific customer requirements during this stress event
- Adaptability and speed of response to changing circumstances and recessionary environment are important – the role of ALCO is key

Market impact

- Initial expectation of significant downturn in the market causing liquidity and funding stress for banks
- For example:
  - *Potentially up to 40% decline in LCR due to excess drawing of lines, guarantees and margin calls…*
  - *For a sample of 20 European banks the average LCR would decline from 140% to 100% due to the following assumptions: Doubling of margin requirements for derivatives, increase in drawing of credit lines to 35% of commitments and increase of guarantees, etc. to 10%.*
  - (Source: McKinsey & Co, March 2020)
- Widening of 3m Libor-OIS spread, eg., USD spread widened out to levels last seen in Q1 2009
- Bond market liquidity levels reduced, and credit spreads widened. Usual "flight to quality" has seen sovereign bond yields turn negative including for the first time Gilts out to 5Y.
- UK BoE base rate down to 10bps from 25bps has also driven sovereign yields down
- However, up to now little liquidity and funding risk impact for banks…this is not 2008

Regulatory guidance response

- BIS press statement 3/4/2020…
- *The Committee:*
- *- provided guidance on payment moratoria & government guarantees to support countries' extraordinary measures;*
- *- encouraged banks applying expected credit loss accounting to use the flexibility inherent in these frameworks & adjusted transitional capital arrangements to allow more flexibility;*
- *- agreed to conduct the annual G-SIB exercise but defer methodology changes by one year to reduce operational burden;*
- *- together with the International Organization of Securities Commissions (IOSCO), agreed to defer by one year the final implementation of the framework for margin requirements for non-centrally cleared derivatives*
- *https://lnkd.in/dm5JTcK*
- *Finally, the Committee reiterated its view that capital resources should be used by banks to support the real economy and absorb losses.*



This statement is significant.....it will have material impact on a whole range of issues in banking in the current environment, from the Board level downwards...everything from management actions being taken today to support customers, the risk appetite statement, the stress testing process and related regulatory submissions, and capital planning. A timely announcement….

….subsequently issued by many national regulatory authorities

Capital and Liquidity Management and Covid-19: UK regulator responses

- The PRA "Q&A" issued 20 April 2020 makes clear that bank capital and liquidity buffers are there to be used, and that dipping below regulatory minimums is acceptable as part of a bank's response to assist the customer franchise….
- …a bank would be expected to inform the regulator in advance of its intention to so do, and also to provide a high level restorative plan
- The time expected to return to "BAU" capital and liquidity buffer balances would be at *least a year after* the crisis period was observed to have passed
- The text in the PRA document on page 2 (2nd paragraph after Q2) and page 5 (2nd paragraph again after Q2) makes the position fairly clear in this regard

PRA "Q&A" issued 20 April 2020

BANK OF ENGLAND
PRUDENTIAL REGULATION AUTHORITY

Q&A on the use of Liquidity and Capital Buffers

Overview

The Bank of England and its three policy committees have, in recent weeks, announced a number of measures to help UK businesses and households to bridge across the economic disruption resulting from Covid-19. These actions have sought to reduce pressure on banks, building societies and designated investment banks (hereafter 'banks') to restrict the provision of financial services, including the supply of credit and support for market functioning, and ensure that the financial system can be a source of strength for the real economy during this challenging period.

The Prudential Regulation Authority (PRA) and Financial Policy Committee (FPC) have previously, on several occasions, stated their expectation that all elements of the substantial capital and liquidity buffers that have been built up by banks exist to be used as necessary to support the economy.

The FPC noted in its Record of 24 March 2020[1] that "ensuring businesses and households could bridge the downturn would ultimately increase the resilience of the banking sector and it was therefore in the banking sector's collective interest". In addition, the Bank of England's lending facilities provide banks with a range of options to obtain additional liquid assets to support lending, including via the Term Funding scheme with additional incentives for lending to Small and Medium-sized Enterprises (TFSME).

The FPC also noted that "banks should not face obstacles to supplying credit to the UK economy," and that "given the resilience of the core banking system, businesses and

Page 2, Q2, paragraph 2
Page 5, Q2, paragraph 2

Banks hold substantial liquid assets in normal times so that they are better able to accommodate increased demands for liquidity from customers and clients and lower inflows of funds in times of stress. It is to be expected that the stock of these assets will decline during a stress, and that LCR ratios will fall far below their levels in normal times in a period of stress.[2]

During this time of Covid-19 related disruption to the economy, the PRA expects banks to focus on continuing to service and support their customers and clients. Banks are expected to use their liquidity buffers in doing so, even if it means LCR ratios go significantly below 100%.

The PRA recognises that the current conditions – with, for example, disruption to corporate customers' cash flow and sharp moves in the prices of many financial assets – mean that bank customers will have extraordinary needs for funds. Banks should not hold back from supplying these funds because their LCR ratios decline as a consequence of assisting their

The Bank, the FPC and PRA have reiterated that all elements of the substantial capital and liquidity buffers that have been built up by banks exist to be used as necessary to support the economy, during this period of Covid-19 related stress. Banks' supervisors consider it appropriate that banks draw down on their capital buffers for this purpose.

Banks can draw down on all available capital buffers starting with any additional capital buffer held above their regulatory buffers. Whilst a bank should notify the PRA if its capital level is, or is forecast to be, below the level of capital we ask it to maintain, this should just be viewed as part of its usual supervisory communication. This communication would include a discussion about a bank's plan to restore its buffers (see Q3 below).

As shown in Figure 1 the top part of the regulatory buffer is the PRA buffer. The PRA buffer is not disclosed publicly and using the PRA buffer does not trigger any automatic restrictions.

If a bank has used its PRA buffer, it will then start drawing down on its publicly disclosed

PRA: CONVERSION OF PILLAR 2A CAPITAL REQUIREMENTS FROM RWA PERCENTAGE TO A NOMINAL AMOUNT

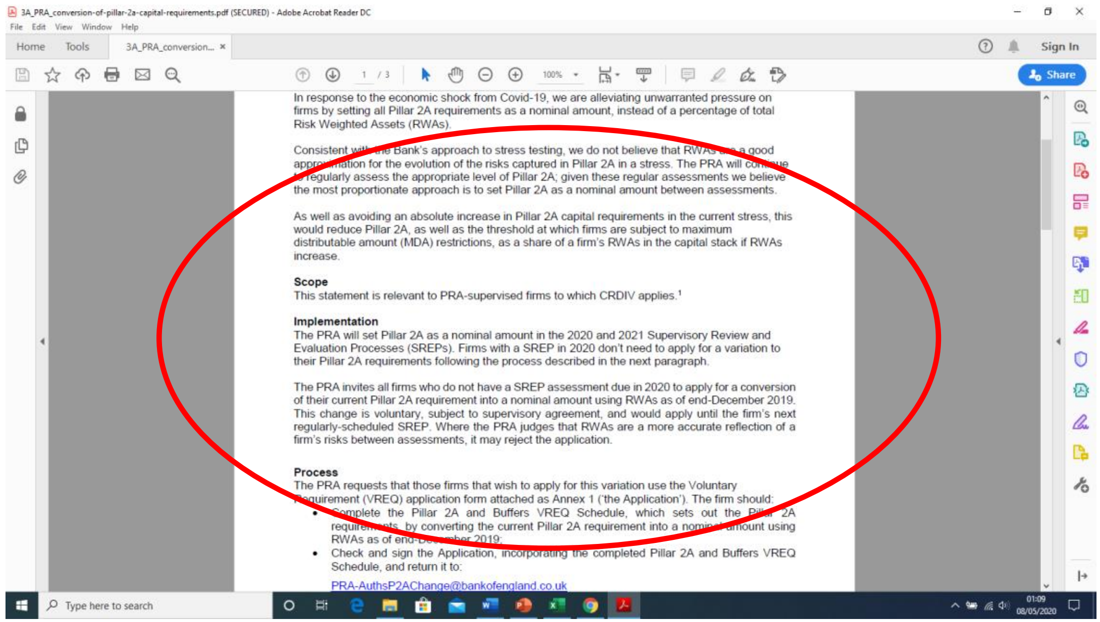
7 May 2020

"In response to the economic shock from Covid-19, we are alleviating unwarranted pressure on firms by setting all Pillar 2A requirements as a nominal amount, instead of a percentage of total Risk Weighted Assets (RWAs).

"Consistent with the Bank's approach to stress testing, we do not believe that RWAs are a good approximation for the evolution of the risks captured in Pillar 2A in a stress. The PRA will continue to regularly assess the appropriate level of Pillar 2A; given these regular assessments we believe the most proportionate approach is to set Pillar 2A as a nominal amount between assessments.

"As well as avoiding an absolute increase in Pillar 2A capital requirements in the current stress, this would reduce Pillar 2A, as well as the threshold at which firms are subject to maximum distributable amount (MDA) restrictions, as a share of a firm's RWAs in the capital stack if RWAs increase."

A practical effect of this is to assist increased lending to customers without increasing P2a capital requirement…



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Scope

This statement is relevant to PRA-supervised firms to which CRDIV applies.[1]

Implementation

The PRA will set Pillar 2A as a nominal amount in the 2020 and 2021 Supervisory Review and Evaluation Processes (SREPs). Firms with a SREP in 2020 don't need to apply for a variation to their Pillar 2A requirements following the process described in the next paragraph.

The PRA invites all firms who do not have a SREP assessment due in 2020 to apply for a conversion of their current Pillar 2A requirement into a nominal amount using RWAs as of end-December 2019. This change is voluntary, subject to supervisory agreement, and would apply until the firm's next regularly-scheduled SREP. Where the PRA judges that RWAs are a more accurate reflection of a firm's risks between assessments, it may reject the application.

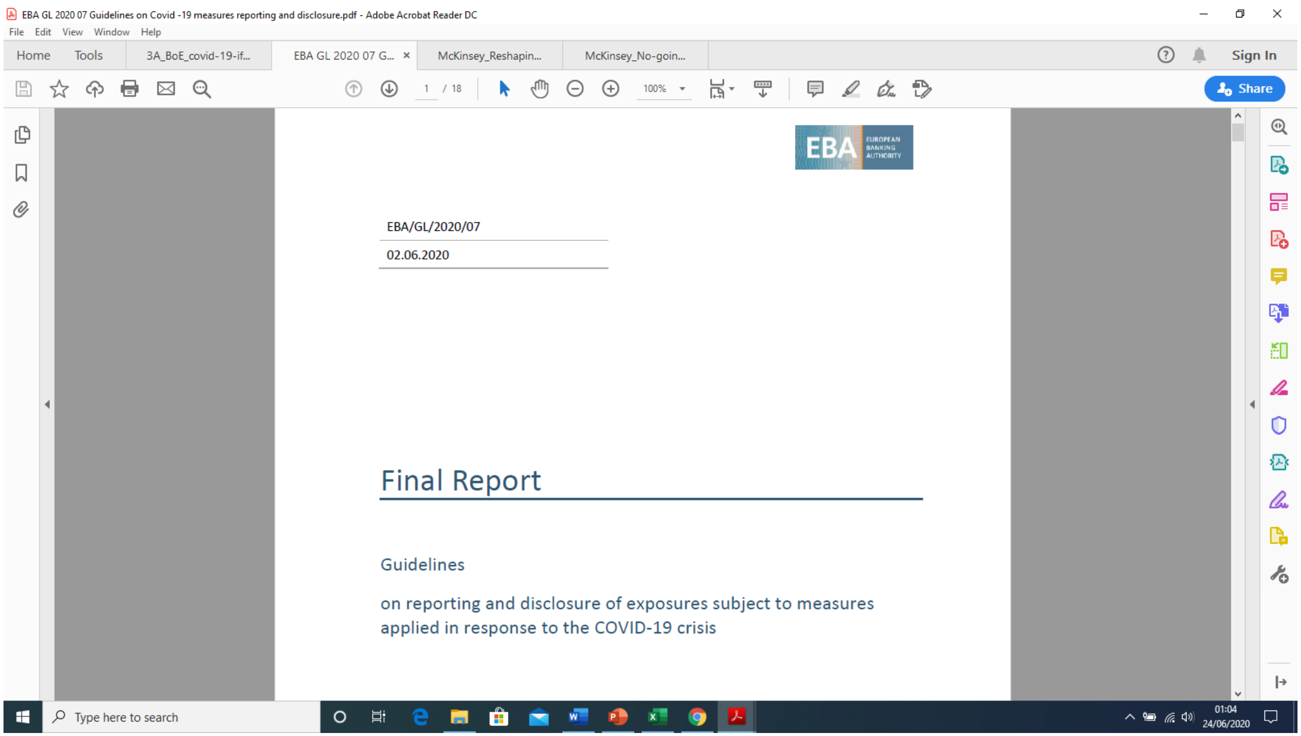
Process

The PRA requests that those firms that wish to apply for this variation use the Voluntary Requirement (VREQ) application form attached as Annex 1 ('the Application'). The firm should:

- Complete the Pillar 2A and Buffers VREQ Schedule, which sets out the Pillar 2A requirements, by converting the current Pillar 2A requirement into a nominal amount using RWAs as of end-December 2019;
- Check and sign the Application, incorporating the completed Pillar 2A and Buffers VREQ Schedule, and return it to:

PRA-AuthsP2AChange@bankofengland.co.uk

EBA Guidance 2/6/2020



EBA Guidance…extract

- Para 4:
  - *…**moratoria on loan payments that are in accordance with the EBA Guidelines on legislative and non-legislative moratoria on loan repayments applied in the light of the COVID-19 crisis do not trigger forbearance classification and the assessment of distressed structuring of loans and advances benefiting from these moratoria and they do not automatically lead to default classification.** For example, if a performing loan is subject to a moratorium compliant with the GL on moratoria, which brings contractual changes to the terms of the loan, in the existing supervisory reporting this loan will continue to be reported under the category of performing exposures with no specific indication of the measures applied. However, it is also emphasised that the credit institutions should continue the monitoring and where necessary the unlikeliness to pay assessment of loans and advances that fall under the scope of these moratoria.*
  - *It is expected that credit institutions make use of general payment moratoria and other measures applied in response to COVID-19 in a transparent manner under the current market and regulatory conditions. In order to allow effective monitoring of the effects of the COVID-19pandemic and the application of response measures, it is necessary for credit institutions to collect information about the scope and effects of the use of the moratoria and other COVID-19 related forbearance measures. Monitoring of the application of the moratoria on loan repayments, COVID-19-related forbearance measures and the use of public guarantees to new lending is crucial for the purposes of risk analysis of individual institutions and for the overall financial stability in the EU.*

Customer franchise objectives

- Support customers – all customers – that require support (not only “vulnerable” customers)
- Examples so far (quote banks…)
  - Loan payment holidays
  - Waive of overdraft interest
  - Min payment on credit cards £1 and no interest charged
- In a recessionary environment marked by unemployment and failure of SME businesses, in the past customers have preferred to pay down debt rather than increase it…this should see drawdown on deposits rather than overdrafts.
- In an extended downturn this ceases to be an available solution and so the time for lending support will be later rather than sooner
- ***Fees and loan rate – as well as ease of transaction and speed of decision making – are the support parameters in such an environment***

Imperatives for risk management

- As we are still in the midst of the current stress event, predicting the impact of lockdown policy is essentially supposition
  - The length and depth of the recession will reflect the length of lockdown, the speed at which consumers return to “normal” economic activity (and the parallel fall in demand during this time) and nature of the recovery.
  - The timescale of government support is also important - governments in the EU have introduced support measures equivalent to ~30 percent of GDP (source: McKinsey) – and withdrawing these measures may cause a renewed fall in output
- This will impact banks directly, because of the significant increase in cost of risk – and managing risk – for all banks
  - Some banks will be affected more than others – it depends on the nature of their customer franchise
  - McKinsey Global Institute predicts that, sector-wide in the EU, revenues after adjusting for risk costs will fall by over 40%, with recovery to pre-crisis levels only in 2024
- Of course the current stress event is not “simply” a revenue issue….the impact on capital and liquidity will be significant. As noted in *The Economist*, at present (due largely to Basel III rules) this stress event is not an existential crisis for banks, but over time the erosion of capital may turn it into one – for some banks at least.

Imperatives for risk management…

- Similarly, up to now (thanks again to Basel III but also speedy support measures from central banks, such as extension of USD swap lines from US Federal Reserve) this has not been a liquidity stress event for banks
- But again, high liquidity coverage ratio (LCR) levels at banks will start to decline as the impact of lockdown policy starts to feed through to customer cash balances…..for example, as customers outside of the immediate impact area of Retail and SME, such as large corporates and HNWIs, start withdrawing deposit balances and as large corporates start to draw down on liquidity facilities
- From observation in 2007-08, we know that it requires only one bank to be seen to be suffering from liquidity issues to trigger stress across the banking sector, as lines are withdrawn. It is not a great stretch of the imagination to foresee some banks being unable to meet cash flow obligations without recourse to central banks and/or government support
- Therefore the urgent imperative for banks is to address the potential for serious depletion of capital and liquidity thru the implementation of action plans now, on a dual basis:
  - The customer angle: a strategy to optimise customer engagement that simultaneously supports the customer franchise but also does this in the most efficient and cost-effective way
  - The balance sheet risk management angle: action to manage capital and liquidity to ensure continued balance sheet viability

Balance sheet management

The full impact of the crisis on loan portfolios will not be known until some time after the stress event has abated…close attention to credit risk issues of the existing loan portfolio and new originations is important

- ***Agree approach for customer credit risk management policy during economic recovery phase:*** Government support measures such as interest payment holidays and relaxation of capital buffer minimum levels will not last beyond 2020. Address the capital restoration plan now, including treatment of different classes of customer. Proactive RWA management is key, enabling the bank to maximise value from the existing capital base. For example,
  - Introduce, or market anew, lower RWA products or look to adjust existing loan terms (eg., changing the ratio of committed to uncommitted liquidity lines, increasing share of loans that are secured versus unsecured, etc
  - Ensure (if not already) that loan pricing is sensitive to RWA impact and incentivise lower-RWA lending via the pricing mechanism.
  - Run regular scenarios analyses of the potential balance sheet impact of different combinations of loan books of different credit and liquidity scenarios.
- ***Proactively manage non-performing loans (NPLs):*** Credit-related losses will be a significant driver of balance sheet and P&L performance during 2021. Efficient management of this process is imperative.
  - Following removal of government support measures, an ability to distinguish as early as possible those that will remain unperforming from those that were only temporarily affected but remain viable is key. The earlier such detection is possible the lower will be longer-term risk management impact.
  - If possible, implement (or improve) customer credit-monitoring capability to identify at-risk loans quicker. A data analytics capability that enables assessment of a recessionary economy on specific economic sectors will assist this process.
  - Where possible extend support (further payment holidays, freezing (not rolling up) of interest, etc where customers are seen as viable in the longer term

Credit risk provisioning

- Recent regulatory guidelines are encouraging banks to view arrears and other issues in previously viable clients as temporary, and to filter government reliefs out of staging assessments. Of course banks are responsible for managing their credit risk and reporting…
- ***Approaches to new business credit risk assessment during stress***

- Regulatory guidelines encourage bank to view any worsening credit risk perception as "temporary"
  - Hence not immediate new additional provisioning
  - Guidelines designed to support counter-cyclical lending
- Of course the bank is still responsible for managing its credit risk
- If data analytics capability supports it, take as granular an approach to customer decision-making as possible, if possible case-by-case. This requires robust data analytics and if this is not available it's a "lesson learned" for implementation post-crisis…
- …revise the credit assessments of customers and overlay the government support to see impact case-by-case
- ***Undertake a "reverse stress test":*** and then run successively less severe stress scenarios to model impact and see what balance sheet capacity there is to support customer lending…this analysis informs the lending decision, and also informs the discussion on reviewing risk appetite and recommend any temporary changes to risk appetite levels and/or framework
- As well as lending to support government schemes (CBILs, etc) continue standard lending to the customer franchise as part of the revised approved risk appetite statement

Credit risk provisioning…

How best to overlay practically government support measures to your model risk assessments?

- If data analytics capability supports it: on a case-by-case basis per customer
- Many banks still applying orthodox credit risk modelling to assess risk (macroeconomic data, and firm-specific data, including external credit rating)…
- ….so how best to incorporate government support such as loan guarantees?
  - Should it be translated automatically to an X-notch upgrade in the bank's internal credit grading / external agency credit quality step?
  - Blanket treatment or specific by customer type?
  - Loan guarantee impact compared to payment holiday impact
  - Remembering a payment holiday is not suitable for every customer or type of customer (unless it is accompanied with a freezing, not rolling up, of interest, and attendant P&L impact for the bank)

Loan terms of trade

- To maximise flexibility (as part of achieving objective of supporting the customer franchise) consider
  - Shorter-tenor loans
  - Simple vanilla products (paradoxically whilst applying flexibility per customer type)
  - Revised temporary risk appetite

Credit risk provisioning…

Treatment of loans granted 3-month payment holiday:

- Interest rolled up
- Interest free
- P&L impact so revise 2020 budget and update Board on revised forecasts
- IFRS9 Stage 1>2 transition is the key issue
  - Best approach customer-specific case-by-case
  - PRA guidance suggests not an automatic provisioning transition BUT ideally customer-specific: some customers will be viable businesses at end of payment holiday, some may not…any business left to restore?
  - Isolate the impact of any other factors and delinquency indicators…if this assessment suggests these other factors are at work, transition loan to Stage 2
  - The move to Stage 2 can be temporary (to consider if customer recovers to loan servicing – observe how customer responds after end of payment holiday
- Observe sectors that are not necessarily big users of liquidity lines, overdrafts etc such as HNWIs and large cash-rich corporates: such customers drawing down or withdrawing deposits is a good EWI for the wider economy
- Levels of loan impairment are rising during this stress event…manage this thru use of capital buffers whilst continuing customer lending

ALCO and the balance sheet

ALCO and managing the balance sheet

- The role of the bank's ALCO is key in this crisis (as it should be in any stress event impacting the balance sheet…
- *…first, to provide direction to RMs as they seek to support the customer*
- *…secondly, to recommend upwards for Board approval as necessary (eg., specific management actions, temporary changes to risk appetite statement (RAS), dipping in to buffers, etc)*
- Hold extraordinary asset-liability committee (ALCO) meetings as often as required to monitor the balance sheet position and implement management actions as necessary
- The case for being able to utilise both Pillar 2b and Pillar 2a buffers as a temporary measure during the crisis can be made
- "Cash is king" in this environment, not only for balance sheet management but also to enable adequate funding of operational issues (utility bills, salaries, etc)
- The liquidity book should be optimised to cash as far as possible
- The liquidity metrics will reflect greater usage of credit facilities from non-bank financials and large corporates; therefore real-time constant monitoring of regulatory-driven metrics such as LCR, CET1 and Leverage ratio is imperative to manage indicators to within current Recovery Plan (RP) trigger levels

Manging the balance sheet

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- The case for being able to utilise both Pillar 2b and Pillar 2a buffers as a temporary measure during the crisis is strong
- Interest rate risk should be managed to within Recovery Plan triggers

ALCO, Treasury and ALM action plan

- ALCO should be monitoring customer behaviour and balance sheet impact on daily basis and at granular a level as possible; for example including (but not limited to):
  - Impact on existing borrowing, new borrowing, rollover requests, increase in limit requests, overdraft usage
  - Impact on deposit levels, by product
- Treasury to propose for ALCO approval
  - Immediate action plan / management actions
  - Short-term action plan / management actions
  - Medium-term action plan / management actions

Summary of approach

- ***Immediate term:***
- Confirm ALCO's objective of supporting the customer franchise
- Address availability of capital and liquidity buffers
- Ensure transparency of bank's liquidity position and cash flows
- Monitor customer behaviour and impact on loan and deposit notionals (see slide on modelling expected future impact based on updated data)
- ***Short-term:***
- Review and update as necessary short-term funding plan and/or adapting existing 2020 liabilities strategy
- Review liquidity contingency plan
- ***Medium-term***
- ALCO to review "lessons learned" for stress testing and ICAAP/ILAAP process
- Update / upgrade data analytics capability
- Review effectiveness of risk management framework (RMF) and risk modelling capability, and amend / upgrade as necessary
- Seek to integrate - or better integrate – data analytics and IT framework within RMF and customer behaviours modelling

Management Actions: Cash

Impact / Implication	Management Action
Optimise Cash Position	Maximise high quality liquid asset (HQLA) buffer as cash at the central bank and non-HQLA buffer as cash at counterparty banks Maximise the non-HQLA buffer as cash at counterparty banks Monetise proportion of non-cash HQLA and non-HQLA bonds to cash. Note that: -- This will crystalise a P&L position; compare this to the actual cash available via a Central Bank borrowing facility post-haircut using these same assets as collateral -- Bond markets liquidity levels will be reducing the longer the crisis lasts Diversify cash holdings across different counterparties
Customer Deposits	Maintain and increase customer deposit levels with proactive marketing and maintaining competitive interest rates in current zero-rate environment

Management Actions: Customer Franchise

Impact / Implication	Management Action
Deposit outflow levels	Monitor customer deposit balances on daily basis to inform ALCO management action Maintain deposit interest rate levels to attract and retain deposits
Loan and liquidity lines	Maximise customer loan requests and liquidity line drawdowns as permitted by balance sheet and Board risk appetite statement (RAS) considerations: modify the RAS if required to meet customer demand Seek to rollover liquidity lines as far as possible Proactively inform regulator of potential impacts on capital buffers

Management Actions: Central Bank

Impact / Implication	Management Action
Accessing central bank support	Ensure familiarity and testing if necessary of all available central bank support facilities -- incorporate additional central bank facilities announced since start of crisis into liquidity contingency plan (LCP) -- ensure all availlable facilties are in place for access if necessary
Use of central bank facilities	If required under LCP triggering, access different available central bank facilties in priority order of lowest haircut and widest collateral eligibility

Management Actions: Balance Sheet Risk

Impact / Implication	Management Action
Foreign Exchange (FX) risk position	Maintain intra-day monitoring of FX position to ensure all positions can be funded and to inform management actions as necessary Access all currently available FX funding sources Ensure familiarity and testing if necessary of FX funding facilities available at central bank(s) *Significant for USD-denominated assets funded with non-USD liabilities via FX market*
Interest-rate risk in the Banking Book (IRRBB)	Maximise balance sheet hedging to floating-floating overnight index rate IRRBB exposure
Collateral management	Monitor daily collateral position -- valuation and haircuts -- collateral posting / funding requirement -- availability and transparency of collateral across bank

Management Actions: Data Analytics

Impact / Implication	Management Action
True balance sheet position	Circulate snapshot of key balance sheet metrics to ALCO daily Create integrated Treasury dashboard of key metrics and ensure universal data source and format for all operating deparments (1st Line of Defence, 2nd Line of Defence and 3rd Line of Defence)
MI transparency	If feasible monitor intra-day customer deposit, liquidity line drawdown and collateral availability position

“Short-term” balance sheet risk checklist

Potential risk exposure	Response / Mitigation	Impact
Higher collateral funding requirements	HQLA and liquid buffers; benefit from current low base rate and market rates environment to increase term funding	Liquidity P&L (funding cost)
Customer delay in interest payments and loan repayments	Payment holiday Interest accrual freeze for 3 months Loan restructuring (ECL impact noted) (No NPL impact) Government guarantee Capital buffers	Capital P&L
Increased drawdown of overdraft and liquidity facilities	Capital buffers Provide cheaper loan to replace overdraft usage	Liquidity Capital P&L
Customer deposit withdrawals	HQLA and liquid buffers	Liquidity

Potential risk exposure	Response / Mitigation	Impact
Wholesale funding restrictions and early redemption (eg requested buy-back of MTNs)	HQLA and liquid buffers	Liquidity P&L (funding cost)
Increased derivatives funding requirement	HQLA and liquid buffers; benefit from current low base rate and market rates environment to increase term funding	Liquidity P&L (funding cost)
Illiquidity in Money Markets and FX markets	Central bank facilities	Liquidity P&L (funding cost)
Negative interest rates	Model the scenario; ALCO review of policy and action plan in negative rates environment	Liquidity P&L (funding cost)
	Modify deposits and funding strategy; lessons learned from eurozone; impact on IRRBB risk and appropriate hedging action; HQLA portfolio policy review	Liquidity P&L (funding cost)

Preserving customer franchise

- The current crisis is an opportunity for banks to assist in minimising the recessionary impact of government policy by supporting the customer franchise to the maximum extent of their ability
- Tracking customer behaviour at as granular level as possible will assist speed and flexibility of response…this also speaks to data analytics and IT landscape (with desired improvements raised in priority level for medium-term action)
- Monitoring and managing customer deposits is crucial
- Regulatory pronouncements from the BoE / PRA (and now BIS) make clear - my interpretation – that capital and liquidity buffers are there to be used in this current time (and one assumes immediate aftermath as economy recovers from recession)
- ***Critical action points:***
  - ALCO recommendation for Board approval of all relevant management actions and any temporary relaxation of specific KRIs limits (capital, liquidity etc)
  - Keep regulator informed of management actions including any dip into buffers and Board's action plan for restoration to usual RAS KRI limits

Preserving customer franchise….immediate

- ***Additional action points for ALCO***
- Monitor customer behaviour and ensure this data is used to inform and update the bank's liquidity and funding position…
- …increased drawdown of liquidity lines and overdrafts by customer type (Retail, SME, corporate)
- …withdrawal of deposits particularly those deemed "stable funding" in regulatory treatment, by customer type (Retail, etc). Note withdrawals from HNWI and large cash-rich corporates (in the current environment this is another "EWI" of future liquidity and funding squeeze
- …investors asking bank to buy-back MTNs, private placement notes
- Monitor FX position and market conditions in case central bank support required for FX funding
- Clear and transparent communication…
- …update and marketing / communications for customers, clearly articulate support that is available for customers
- …update regulatory authority on bank's balance sheet position, detail observed behaviours, current and expected risks, use of buffers and (if necessary) any anticipated central bank support

Preserving customer franchise…short term

- ***Additional action points for ALCO***
- Review current liability strategy and update as necessary 2020 balance sheet funding plan…
- ….seek to remain within LCP (RP) triggers or otherwise revise RAS KRIs for Board approval (buffers are there to be used…)
- Monitor and forecast all key liquidity KRIs (LCR, Survival Days, loan-deposit ratio, average tenor funding, etc) using multiple scenarios assuming stressed period is 90-180-365 days (see checklist following…)
- Monitor and inform (Board, or appropriate sub-committee) customer behaviour on both sides of balance sheet that is beyond / unexpected to that informed by stress testing
- Ensure stable funding: continue to market new products and attractive interest rates to maintain customer deposit balances
- Continuously assess and stress test the impact on balance sheet (capital, liquidity, non-traded market risk) of the customer support actions the bank is taking
- Weekly review of Risk Appetite Statement key risk indicator triggers for capital and liquidity, and for Board comfort and with respect to Recovery Plan / LCP

Medium-term strategy

- The current crisis contains pointers for medium-term policy at banks:
  - Ensure appropriate standalone self-sufficiency for liquidity under a prolonged stress period (minimum 180 days). This goes beyond Pillar 2 liquidity
  - Implement a governance process that enables adaptability and quick decision making
  - Create an integrated data analytics capability that enables “smart Treasury” MI reporting on real-time basis for instant transparent balance sheet position reporting, particularly with respect to daily liquidity outflow, FX position and collateral value and availability
  - Review and the risk management framework as fit for purpose with respect to:
    - Satisfactory governance structure, adaptability and speed of response
    - Suite of capital and liquidity KRIs adequate and sufficient
  - Manage the balance sheet with awareness of capital availability under stress and use of regulatory buffers where appropriate and necessary
  - Manage to a flexible and adaptable risk appetite statement (RAS)

Medium-term strategy…

- Review and modify if necessary risk models and RMF
- Modify liquidity and funding risk models so that they address a sufficiently long stress period time horizon (say, 365 days) if not already in place
- For specific pertinent storyboard scenarios for stress tests (eg., market-wide stress) include the different buffers and support available (central bank funding, coming inside "green" zone internal limits, etc)
- Stress testing to reflect lessons learned and incorporate realistic survival periods, assuming (i) no management actions (ii) management actions implemented (iii) dipping into buffers (iv) central bank support
- Review and update if necessary Risk Management Framework and Risk Appetite Statement (and limits), for communications, hierarchy, escalation, delegation, hierarchy and authorities
- Implement integrated data analytics models for capital, liquidity and market risk management:
    - Integrate data and IT landscape
    - Implement a single-source system for all Treasury related data (ie., balance sheet data) for Finance, Treasury and Risk. Granular and consolidated levels and "real-time" smart Treasury dashboard
    - Create a harmonised technology data analytics approach incorporating BAU and stress scenarios for the whole balance sheet (capital, liquidity, funding, interest rate risk, FX and credit spread risk). Ensure swift turnaround times for calculation of scenarios

Conclusions

- The coronavirus crisis has highlighted the fact that stress events will always occur with little prior warning and will not play out like past crises
- The current crisis has significant implications for bank customers, which stresses the importance of the customer franchise
- Banks should seek to support customer franchise as far as possible, which will in turn be supporting the economy and society as a whole
- This means responding positively and proactively to customer needs
- Post-crisis business-as-usual balance sheet risk management practice and the bank's risk appetite statement need to reflect the potential longer-term nature of future stress events
- Data analytics capability should enable transparent real-time reporting of the complete and accurate balance sheet position at all times
- Investigate (and debate at ALCO as necessary) any opportunities that your bank can potentially benefit from. Is there a "silver lining"? New and existing customers?
- This time ***is*** different…banks aren't part of the problem. But they are part of the solution…

Appendix

Policy and Management Actions Checklist

Policy and management actions checklist today

Using stress and customer behaviour modelling to inform response to Covid19

- Review and ALCO approve the most appropriate scenarios for your stress testing
- Scenario-test short, medium and long-term stresses which might arise from Covid19
- Update business plans to reflect how they will be affected
- Observe and model customer behaviour to as granular level as possible (by customer type and product type)
- Review and ensure that the parameters used to assess impact on your ICAAP, ILAAP, forecasts and budgets/targets are fit-for-purpose
- Operationalise ongoing observations results into the bank’s communication strategy, funding plans and business strategy
- Keep regulators, customers and other stakeholders informed
- Try to adopt the appropriate balance between modelling and planning with the required proactive management of a rapidly developing situation

Policy and management actions checklist today…

- Assessing impact on the bank, its customers, counterparties and funding
- Review and modify as necessary the key risk and key performance metrics being used to monitor the effects of the economic shutdown on customers, counterparties and markets / funding
- Identify vulnerable customers and present for ALCO approval the actions the banks will be taking to support them (and ultimately all customers that require support)
- Ensure detailed and appropriate documenting of all communication with customers and stakeholders
- Establish genuine two-way communication channels

Policy and management actions checklist today…

New and/or modified service provision

- Identify new services that will assist the customer franchise, or modifications to current services, and implement via ALCO / Board approval. Includes:
  - Any reduced capital requirements-enabled lending
  - Dipping into capital and liquidity buffers to support customer franchise (see earlier slides)
  - Government and central bank supported lending
  - *Management plan with 12-24 month timeframe on managing this balance sheet impact to retain robustness and viability*
- Ensure appropriate resources / policies / data support available to enable existing services to be delivered under existing or modified continuity working arrangements

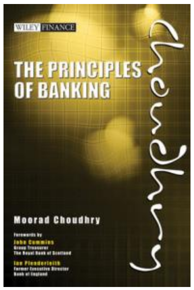
Policy and management actions checklist today…

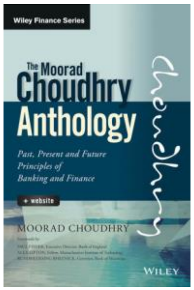
- Monitoring, risk management, control and reporting collateral
- Keep the Board (and BRC / ARC / ARCC) informed – is there adequate resource and infrastructure in place to support this?
- Ensure adequate and sufficient KRI / KPI dashboard metrics
- Obtain comfort (and review regularly) the role of 2nd Line of Defence function
- Maintain robust internal financial control and internal control environments
- Obtain comfort (and review regularly) the role of 3rd Line of Defence function
- Ensure you meet deadlines and keep stakeholders informed

Policy and management actions checklist tomorrow

- Continuous learning culture
- Ensure mechanisms are in place to continuously review and learn from this experiences, in place for future stress events
- Ensure the Risk Management Framework and governance structure – and delegated authority – enables adaptability, flexibility and speed of response…
- …whilst also enabling "lessons learned" to feed through into strategy and priorities
  - On Linked In last month:
  - *"What has been the biggest driver of improvement in your data analytics and modelling capability?*
    a) CEO
    b) CTO
    c) Covid-19"

Reading





The Principles of Banking, Singapore: John Wiley & Sons Ltd 2013, chapters 11-15

Moorad Choudhry Anthology: Past, Present and Future Principles of Banking and Finance, Singapore: John Wiley & Sons Ltd 2018, chapters 8, 10-14

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