

FINANCIAL STABILITY

JOURNAL

Insights and Thought Leadership on Financial Stability

Supervisors' Key Roles as Banks Implement Expected Credit Loss Provisioning

Gerald A. Edwards, Jr.

Supervisory Concerns of FinTech in SEACEN Jurisdictions

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Article Submission Guidelines

The **SEACEN Financial Stability Journal** Editorial Board welcomes potential contributions to the **Journal**. Articles written for the **SEACEN Financial Stability Journal** should focus on providing insights and thought leadership with respect to information and developments relevant and critical to promoting financial stability and related matters, contextualized to the Asia-Pacific region.

- Article drafts should be submitted in 12 point Times Roman font and should be double-spaced, and sent by email to: article@seacen.org.
- The length of draft articles will generally range from 3,000 to 5,000 words (12 to 20 double-spaced typed pages), though treatment of some topics could necessitate longer articles, which would be considered.
- Authors should include a biographical summary at the end of the article. If an article
 expresses expert opinions, contributors' expert credentials should be apparent.
- Articles will be evaluated by the *Journal's* Editorial Board.
- The Manager, Communications Unit and Executive Director, are available at any time to answer authors' questions, discuss potential articles, review early drafts, or provide other input. Their contact details are as follows:

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Letter from the Executive Director

Dear Colleagues and Readers

I am very pleased to introduce the seventh issue of the *Journal*, which also marks the *Journal's* third anniversary. We continue to strive to provide our readers with valuable, actionable information on "cutting edge" topics by top experts that evidence thought leadership in financial stability and bank supervision. This issue's lead-off article by Gerald A. Edwards, Jr., former Chief Accountant of the Federal Reserve Board and a respected international expert on accounting and financial reporting, exemplifies our strong commitment to that goal.

Since the U.S./Eurozone Crisis of 2008-09, bank regulatory policymakers and other standards-setting bodies have been adjusting their rules and policies to take cognizance of lessons learned from the Crisis. For example, pre-Crisis accounting standards inhibited banks from increasing their reserves for possible loan losses during a time of dramatically increasing credit risk. As the Crisis unfolded, many banks' credit losses greatly exceeded their reserves. This resulted in many institutions confronting the extreme challenge of having to restore reserves during a period when their earnings and capital were already under tremendous pressure. This prompted post-Crisis calls for action by G20 leaders, regulators, industry participants and investors to change accounting standards to provide for more flexibility and prudence in setting aside reserves for potential loan losses.

In 2014, the International Accounting Standards Board, the global accounting standards setter, announced a significant change in accounting for banks' allowances for possible loan losses. International Financial Reporting Standard 9, *Financial Instruments*, includes a new standard for loan loss provisioning – known as the expected loss provisioning approach – that allows for more prudent reserving practices. Mr. Edwards' article provides a comprehensive discussion of implementation issues that banks and their regulators face as they prepare for the fast-approaching mandatory 1 January 2018 implementation date.

Over the past two years, there has been a rapid expansion in the provision of financial services by using new technologies. Some of this has occurred through financial technology ("FinTech") companies who sometimes offer services on a standalone basis, and sometimes in partnership with traditional financial services providers, such as banks. An article by Dr. Herbert Poenisch and Michael Zamorski provides an overview of FinTech trends in Asia Pacific. Bank regulatory policymakers are trying to weigh the need to regulate FinTech to protect consumers of such services without inhibiting sound innovation that may benefit the banking public.

The Financial Action Task Force, the IMF and many bank regulators continue to express concerns about financial stability risks associated with money laundering and terrorist financing. An article by Mark McKenzie, a SEACEN expert on financial

stability and financial crimes prevention, discusses vulnerabilities and risks to banks in dealing with corporate customers whose complex organizational structures may inhibit proper due diligence in identifying who, ultimately, is/are the beneficial owner(s) of bank accounts or transaction counterparty(ies).

An article by Obiyathulla Ismath Bacha and Daud Vicary Abdullah provides insights into the nature of Islamic Finance, where transaction structuring seeks to achieve risk-sharing through financing structures that combine equity and debt.

The establishment of the *Journal* in 2013 was an important organizational accomplishment. I would like to express my sincere gratitude to Mr. Michael Zamorski, the Chief Editor of the Journal since its inception, for his vital contribution to its success. I would also like to thank our readers, authors, SEACEN member central banks and monetary authorities and the *Journal's* Editorial Board for their support in advancing the quality and reputation of the Journal.

Dr. Hans Genberg Executive Director

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Supervisors' Key Roles as Banks Implement Expected Credit Loss Provisioning

By Gerald A. Edwards, Jr.*

In 2014, the International Accounting Standards Board (IASB) published IFRS 9, *Financial Instruments*, that includes a new standard for loan loss provisioning based on "expected credit losses" (ECL), which will be effective in 2018. The U.S. Financial Accounting Standards Board (FASB) published its final provisioning standard based on "current expected credit losses" in 2016 which will be effective starting in 2020 for listed companies and 2021 for all other firms. The new standards responded to calls for action by the G20 Leaders, investors, regulatory bodies and prudential authorities following the global financial crisis which highlighted the need for improved loan loss provisioning standards and practices. Once effective, the new loan impairment standards are expected to result in a significant rise in the level of provisioning for many banks – perhaps increases of up to 25% for loan loss provisions for most banks, coupled with a decline of up to 50 basis points in core Tier 1 capital ratios, perhaps more for other institutions – based on recent global surveys of banks' IFRS 9 implementation progress, as discussed more fully below.

Central banks and other prudential authorities continue to have a strong interest in this important topic and the Basel Committee on Banking Supervision (BCBS) has issued final supervisory guidance on ECL provisioning under the new standards and a consultative paper on possible capital treatments. Other organizations have been reviewing banks' progress in implementing the new standards and addressing issues associated with appropriate governance, auditor efforts, and transition risk disclosures. Supervisors should carefully consider the impact of the new ECL requirements on supervisory provisioning matrices, financial reports, analysis reports, asset quality reviews, stress tests and other supervisory tools to ensure that prudential objectives are met. With little more than one year remaining before mandatory implementation, this article explores the significant role that banking supervisors can have in encouraging robust implementation of IFRS 9 in a manner that promotes transparency, strengthens bank governance and auditor reviews, and avoids undue burden on banking organizations.

1. An introduction to the new expected credit loss provisioning approach

Under both IASB standards (called International Financial Reporting Standards or IFRS) and FASB standards, the accounting model for recognizing credit losses is commonly referred to as an "incurred loss model" because the timing and measurement of losses is based on estimating losses that have been incurred as of the balance sheet date. Provisioning requirements in IASB and FASB standards thus generally limit provisioning to losses that are considered probable as of the balance sheet date based on past or current information. In addition, the current accounting standards do not permit credit losses based on events that are expected to occur in the future to be included in provisions until the event or events that would probably result in a

loss have occurred, generally supported by observable evidence (e.g., borrower loss of employment, decrease in collateral values, past due status). These events are sometimes referred to as "triggering events".

The experience of the global financial crisis highlighted the delayed recognition of credit losses caused by the incurred loss standards which, during the "good years" before crises, preclude banks from provisioning appropriately for credit losses likely to arise from emerging risks. These delays resulted in the recognition of credit losses that were widely regarded as "too little, too late."

As part of a joint approach to address the reporting issues arising from the global financial crisis, the IASB and FASB formed the Financial Crisis Advisory Group (FCAG) in October 2008 and asked FCAG to consider how improvements in financial reporting could help enhance investors' confidence in financial markets. FCAG's members were senior leaders with broad international financial markets experience and were joined by participating official observers representing the Financial Stability Board (FSB), BCBS and key global banking, insurance and securities regulators. In July 2009, the FCAG report identified delayed recognition of credit losses associated with loans (and other financial instruments) and the complexity of multiple impairment approaches for different types of financial assets as primary weaknesses in accounting standards and their application. The FCAG report included a recommendation that the IASB and FASB explore alternatives to the incurred loss model that would use more forward-looking information. Moreover, this recommendation was also consistent with investors' comments and FSB and BCBS recommendations to the G20 Leaders and accounting standard setters in 2009. Since 2009 the BCBS has also provided extensive technical comments to the IASB and FASB on their proposed impairment standards through its High Level Working Group on the G20 Accounting Recommendations and the Accounting Task Force (now the "Accounting Experts Group").4

The new impairment requirements of IFRS 9 are designed to provide financial statement users with more useful information about a company's ECL on financial instruments that are not accounted for at fair value through profit or loss (e.g., trading portfolios). The impairment approach requires banks and other companies to recognize ECL and to update the amount of expected credit losses recognized at each reporting date to reflect changes in the credit risk of financial assets. The IASB approach is forward-looking and eliminates the threshold for the recognition of expected credit losses, so that it is no longer necessary for a "triggering event" to have occurred before credit losses are reported. IFRS 9 requires companies to base their measurements of ECL on reasonable and supportable information that is available without undue cost or effort, and that includes historical, current and – *for the first time* – forecast information. Thus, the effects of possible future credit loss events on expected credit losses must be considered.⁵

In summary, all banks and other companies that hold financial assets or commitments to extend credit that are not accounted for at fair value through profit or loss (e.g., trading portfolios) would be affected by IFRS 9's impairment rules. This includes loans and other financial assets measured at amortized cost or that are reported at "fair value through other comprehensive income" (like today's available-for-sale assets), trade receivables and lease receivables, loan commitments and financial guarantee contracts.

As summarized below and in Figure 1, IFRS 9 requires banks and other companies to report ECL in three stages as deterioration in credit quality takes place after initial recognition of loans.⁶ For stage 1, they would report "12-month expected credit losses" and for stages 2 and 3, full "lifetime expected credit losses" would be reported.

Increase in credit risk since initial recognition Significant increase in credit risk Stage 1 Stage 3 Stage 2 Impairment recognition 12-month Lifetime Lifetime expected expected expected credit losses credit losses credit losses Interest revenue Effective interest Effective interest on gross carrying on amortised cost

Figure 1
IFRS 9 Impairment Stages

Source: Adapted from IASB Project Summary: IFRS 9 Financial Instruments, July 2014.

Stage 1. As soon as a financial instrument is originated or purchased, 12-month ECL are recognized as an expense and a loss allowance is established. This serves as a proxy for the initial expectations of credit losses. For financial assets, interest revenue is calculated on the gross carrying amount (i.e., without adjustment for the loss allowance).

A bank or other company would calculate 12-month ECL as the portion of lifetime expected credit losses that represent the expected credit losses that result from default events on a financial instrument that are possible within the 12 months after the reporting date. The IASB stresses that this is not the expected cash shortfalls over

the next twelve months—instead, it is the effect of the entire credit loss on an asset weighted by the probability that this loss will occur in the next 12 months. Also, 12-month ECL are not the credit losses on assets that are forecast to default in the next 12 months, and if a bank can identify such assets or a portfolio of such assets that are expected to have increased significantly in credit risk, their lifetime ECL must be recognized.

If a financial instrument is determined to have "low credit risk" at the reporting date – for example, a loan or debt security with an investment grade rating – a bank may assume that the credit risk of the financial instrument has not increased significantly since initial recognition. Credit risk is considered low if the financial instrument has a low risk of default, the borrower has a strong capacity to meet its contractual cash flow obligations in the near term and adverse changes in conditions in the longer term may, but will not necessarily, reduce the ability of the borrower to fulfil its obligations.

Stage 2. When the credit risk increases (or credit quality deteriorates) significantly and the resulting credit quality is not considered to be "low credit risk," full lifetime ECL would be reported (if the credit quality deteriorates significantly from that at origination or purchase). The increase in the provisions resulting from a move from 12-month to lifetime ECL is typically expected to be significant. The calculation of interest revenue on financial assets remains unchanged from the approach set forth for Stage 1.

Under IFRS 9, lifetime ECL are an expected present value measure of losses that arise if borrowers default on their obligations throughout the life of the financial assets. They are the weighted average credit losses with the probability of default as the weight. Since expected credit losses consider the amount and timing of payments, a credit loss (i.e., a cash shortfall) arises even if the bank expects to be paid in full but later than when contractually due. Banks and other companies should base their measurement of ECL on relevant information about past events, including historical credit loss events for similar financial instruments, current conditions and reasonable and supportable forecasts.

Assessment of significant increases in credit risk may be done on a collective basis, for example on a group or sub-group of financial instruments. This should ensure that lifetime ECL are recognized when there is a significant increase in credit risk even if evidence of that increase is not yet available on an individual level. However, regardless of the way in which an entity assesses significant increases in credit risk, there is a *rebuttable presumption* that the credit risk on a financial asset has increased significantly since initial recognition when contractual payments are more than 30 days past due. The IASB stresses that the rebuttable presumption is not an absolute indicator, but is presumed to be the latest point at which lifetime ECL should be recognized even when using forward-looking information.

Stage 3. This stage occurs when the credit quality of a financial asset deteriorates to the point that credit losses are incurred or the asset is credit-impaired. Lifetime ECL would continue to be reported for loans in this stage of credit deterioration but interest revenue is calculated based on the lower net amortized cost carrying amount (i.e., the gross carrying amount adjusted for the loss allowance).

Thus, the IFRS 9 approach initially recognizes a portion of the lifetime expected credit losses, and then the full lifetime ECL only after significant deterioration in credit quality is expected. The IASB believes that this approach ensures more timely recognition of expected credit losses than the existing incurred loss model; distinguishes between financial instruments that have significantly deteriorated in credit quality and those that have not; and better approximates economic expected credit losses.

As discussed below, IFRS 9 also includes new guidance on loan write-offs which was not included in the current standard, IAS 39, *Financial Instruments: Recognition and Measurement*. Moreover, IFRS 9 requires extensive new qualitative and quantitative disclosures about credit risk management policies, expected credit losses, loan write-offs, and changes in the credit risk of the loan portfolio and other financial instruments subject to its impairment approach.

The standard is mandatorily effective for annual periods beginning on or after January 1, 2018, although earlier adoption is permitted.

2. Summary of the main differences between the IASB and FASB approaches

Two key differences between the IASB and FASB expected credit loss approaches will be addressed in this article. First, the FASB has adopted a single measurement objective that results in the recognition of lifetime ECL for all exposures in scope and, thus, there is no need to categorize these exposures as being in Stages 1, 2 or 3. This is illustrated in Figure 2.

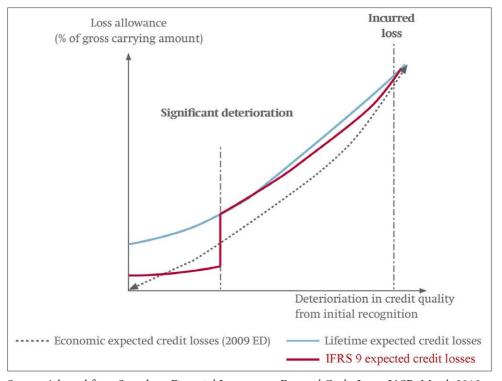
Figure 2

Expected credit losses (ECL) measurement				
	Performing assets	Underperforming assets (assets with a significant increase in credit risk)	Impaired assets	
IASB	"Stage 1"	"Stage 2"	"Stage 3"	
	12-month ECL	Lifetime ECL	Lifetime ECL	
FASB	Lifetime ECL			

Source: Regulatory treatment of accounting provisions, BCBS, October 2016.

Since lifetime ECL are recorded for all exposures, the recognition of credit losses is expected to be earlier and more significant under the FASB approach. This is illustrated in Figure 3.

Figure 3



Source: Adapted from Snapshot: Financial Instruments: Expected Credit Losses, IASB, March 2013.

Figure 3 illustrates that expected loss impairment approaches of both the IASB and FASB should result in earlier recognition of credit losses than under the incurred loss impairment model. In Figure 3, the red line approximates the recognition of credit losses under the IASB's expected credit loss approach (12-month ECL for loans in Stage 1, followed by lifetime ECL for loans experiencing significant credit quality deterioration in Stages 2 and 3). The blue line in Figure 3 approximates the way that the FASB expected loss approach (essentially, lifetime expected credit losses) would recognize credit losses. Assuming robust forward-looking estimates, both impairment approaches would recognize credit losses well before they would be reported under the incurred loss model (the right-most black vertical "dashed" line in Figure 3). In addition, officials from the FASB, IASB, the banking industry, and prudential authorities have noted that the FASB approach will likely result in more "upfront" recognition of expected credit losses than the IASB approach. This can be seen in Figure 3, as the blue line (the FASB approach, essentially, lifetime ECL) initially exceeds the red line (the IASB 12-month ECL under Stage 1) until serious credit

quality deterioration occurs (at which point, in Stages 2 and 3, the IASB approach also requires use of lifetime ECL).

From a supervisory perspective, the second key IASB-FASB difference involves income recognition on problem loans. IFRS 9 continues to allow the accrual of interest income on nonperforming loans but in some cases this may exceed the amount of interest income that the bank receives in cash. Unlike IFRS 9, the new FASB standard does not provide proscriptive guidance that precludes a bank from putting an instrument on nonaccrual status, but instead permits existing U.S. nonaccrual accounting practices to continue. As with current U.S. generally accepted accounting principles (GAAP), the new FASB standard allows a bank or other creditor to use existing accounting methods for recording payments received on nonaccrual assets, including a cash basis method, a cost recovery method, or some combination of both. Concern has been expressed that income recognition on nonperforming loans coupled with inadequate loan loss provisioning and delayed loan write-off practices have provided disincentives for banks in certain countries following IFRS to reduce their excessive levels of nonperforming loans.⁷ Similar concerns prompted the European Central Bank (ECB) to recently propose including information on both accrued interest income on nonperforming loans as well as cash interest income received (similar to nonaccrual treatment) for nonperforming loans for supervisory reporting purposes and to also propose public disclosure of this information by banks to promote transparency and market discipline.8 This type of information in both supervisory reporting and public risk disclosures could provide important incentives for certain banks to implement more effective strategies for reducing their nonperforming assets.9

3. BCBS guidance on expected credit loss provisioning^{10,11}

After extensive consultation, in December 2015 the BCBS published its final supervisory guidance to address how ECL accounting approaches – whether set forth in IASB, FASB or other accounting standards -- should interact with a bank's overall credit risk practices. It expresses the BCBS' support for the use of ECL approaches and encourages their application in a manner that will provide incentives for banks to follow sound credit risk management practices and achieve earlier recognition of credit losses than takes place using incurred loss provisioning approaches. Recent BCBS consultative documents issued in October 2016 address possible approaches to regulatory capital requirements on expected loss provisioning under the Basel capital framework. The December 2015 guidance replaces the BCBS' 2006 loan loss provisioning guidance¹² and has four main parts:

- An introduction to the objectives, scope and application of the guidance;
- Supervisory guidance for banks on credit risk and accounting for ECL (eight principles);
- Supervisory evaluation of credit risk, ECL, and capital adequacy (three principles);
 and
- An appendix presenting supervisory guidance specific to banks applying IFRS.

At the beginning of the policy document, it states, "This paper is intended to set out supervisory guidance on accounting for expected credit losses that does not contradict applicable accounting standards established by standard setters. Representatives of the IASB have been provided with the opportunity to comment on this document and have not identified any aspects of it that would prevent a bank from meeting the impairment requirements of International Financial Reporting Standard (IFRS) 9 Financial Instruments."

The BCBS understands that the implementation of ECL accounting frameworks will require an investment in resources and in system development and system upgrades. However, because the accounting standard setters have given banks and other firms over three years to transition to the new accounting requirements, the BCBS expects internationally active banks to ensure a disciplined, high-quality implementation of the ECL accounting requirements.

The BCBS notes that banks may have well-established regulatory capital models for the measurement of expected losses. However, due to differences between the objectives and inputs for accounting versus capital purposes, while these models may be used as important starting points for estimating ECL for accounting purposes, regulatory capital models may <u>not</u> be directly usable without adjustment in the measurement of accounting ECL. For example, as illustrated in Figure 4, the Basel capital framework's expected loss calculation for regulatory capital differs from accounting ECL in that the Basel capital framework's probability of default (PD) may be "through the cycle" and is based on a 12-month time horizon. Additionally, loss-given-default (LGD) in the Basel capital framework reflects downturn economic conditions. 13

Figure 4
Differences between IASB and FASB ECL approaches and
Basel Capital Models

Performing assets and under-performing assets (with a significant increase in credit risk)				
		IASB	FASB	Basel Committee
PD	Measurement period	12 months (Stage 1) Lifetime (Stage 2-3)	Lifetime	12 months
	Cycle sensitiveness	Point-in-time, considering forward-looking information, including macroeconomic factors		Economic cycle
LGD/ EAD	Measurement	Neutral estimate, considering forward-looking information, including macroeconomic factors		Downturn estimate

Source: Adapted from Regulatory treatment of accounting provisions, BCBS, October 2016.

Consistent with the Basel Core Principles, the BCBS recognizes that supervisors may adopt proportionate approaches that should enable banks to adopt sound allowance methodologies commensurate with the size, complexity, structure, economic significance, risk profile and all other relevant facts and circumstances.

The principle of materiality is important to accounting practices. However, the BCBS stresses that this should not result in individual exposures or portfolios being considered immaterial if, cumulatively, these represent a material exposure to the bank. In addition, materiality should not be assessed solely based on potential impacts on the profit and loss statement at the reporting date. For example, in the BCBS' view, large portfolios of high-quality credit exposures should be considered material.

The 11 principles for banks and supervisors are listed in Figure 5. In discussing the principles in the supervisory guidance, the BCBS highlights that:

- Sound bank methodologies for assessing credit risk and estimating ECL should cover all lending exposures, including for restructured and credit impaired loans;
- Robust bank credit risk rating processes should result in sufficiently granular groupings based on shared credit risk characteristics, and should be subject to independent reviews;
- The information that banks consider in estimating ECL must go beyond historical and current data to consider relevant forward-looking information, including macroeconomic factors, that affect collectability and credit risk;
- Clear roles and responsibilities for model validation are needed along with adequate independence and competence, sound documentation, and independent process review;
- Appropriate model validation scope and methodology include a systematic
 process of evaluating the model's robustness, consistency and accuracy as well as
 its continued relevance to the underlying portfolio, and should include a review
 of model inputs, model design and model outputs/performance;
- Experienced credit judgment is essential to the estimation of expected credit losses (e.g., in adjusting historical information to reflect current conditions and trends, and assessing the potential impact of all reasonable and supportable forward-looking information on ECL estimates) and the use of experienced credit judgment needs appropriate documentation and oversight; moreover, banks should use their experienced credit judgment in determining the range of relevant information that should be considered and whether information is considered reasonable and supportable; and
- Supervisors may make use of the work performed by banks' internal and external auditors in reviewing banks' credit risk assessment and ECL measurement functions.

Figure 5 BCBS principles for banks and supervisors

Supervisory guidance principles (expectations for banks)

Principle 1 – Board and management responsibilities: A bank's board of directors (or equivalent) and senior management are responsible for ensuring that the bank has appropriate credit risk practices, including an effective system of internal control, to consistently determine adequate allowances in accordance with the bank's stated policies and procedures, the applicable accounting framework and relevant supervisory guidance.

Principle 2 – Sound ECL methodologies: A bank should adopt, document and adhere to sound methodologies that address policies, procedures and controls for assessing and measuring credit risk on all lending exposures. The measurement of allowances should build upon those robust methodologies and result in the appropriate and timely recognition of ECL in accordance with the applicable accounting framework.

Principle 3 – Credit risk rating process and grouping: A bank should have a credit risk rating process in place to appropriately group lending exposures on the basis of shared credit risk characteristics.

Principle 4 – Adequacy of the allowance: A bank's aggregate amount of allowances, regardless of whether allowance components are determined on a collective or an individual basis, should be adequate and consistent with the objectives of the applicable accounting framework.

Principle 5 – ECL model validation: A bank should have policies and procedures in place to appropriately validate models used to assess and measure expected credit losses.

Principle 6 – Experienced credit judgment: A bank's use of experienced credit judgment, especially in the robust consideration of reasonable and supportable forward-looking information, including macroeconomic factors, is essential to the assessment and measurement of expected credit losses.

Principle 7 – Common data: A bank should have a sound credit risk assessment and measurement process that provides it with a strong basis for common systems, tools and data to assess credit risk and to account for expected credit losses.

Principle 8 – Disclosure: A bank's public disclosures should promote transparency and comparability by providing timely, relevant and decision-useful information.

Evaluation principles for supervisors

Principle 9 – Credit risk management assessment: Banking supervisors should periodically evaluate the effectiveness of a bank's credit risk practices.

Principle 10 – ECL measurement assessment: Banking supervisors should be satisfied that the methods employed by a bank to determine accounting allowances lead to an appropriate measurement of ECL in accordance with the applicable accounting framework.

Principle 11 – Capital adequacy assessment: Banking supervisors should consider a bank's credit risk practices when assessing a bank's capital adequacy.

Source: Guidance on credit risk and accounting for expected credit losses, BCBS, December 2015.

The Appendix with guidance for banks following IFRS provides additional supervisory expectations on the loss allowance for 12-month ECL, the assessment of significant increases in credit risk, and the use of practical expedients. It should be read in conjunction with the main section of the guidance.

For allowances for 12-month ECL, the BCBS expects banks will always measure ECL for all lending exposures, and that a nil (zero) allowance will be rare because ECL estimates are a probability-weighted amount – informed by management's experienced credit judgment – that should always reflect the possibility that a credit loss will occur. Consistent with IFRS 9, the BCBS guidance emphasizes that 12-month ECL is the expected cash shortfalls over the life of the lending exposure or group of lending exposures, due to loss events that could occur in the next 12 months, considering all relevant information. The guidance recommends using the BCBS' regulatory default definition (*Revisions to the Basel II market risk framework*, available at www.bis.org/publ/bcbs158.htm, para, 542). For any high-credit-risk exposures with ECL initially measured at 12-month ECL, banks should closely monitor for significant increases in credit risk.

With respect to IFRS 9's required assessment of significant increases in credit risk, this is very challenging and the guidance sets forth the BCBS expectations in this area. For example, the BCBS:

- Strongly endorses the IASB's view that lifetime expected credit losses are generally
 expected to be recognized before a financial asset becomes past due and that
 credit risk typically increases significantly before a financial instrument becomes
 past due or other lagging borrower-specific factors (for example a modification or
 restructuring) are observed.
- Gives specific guidance on assessing for significant credit risk increases, as summarized in Figure 6; and
- Emphasizes that, when assessing whether credit risk has increased significantly, banks should consider changes in the risk of default occurring over the expected life of the credit exposure, since it may not always be appropriate to use changes in the 12-month risk of default for this purpose.

Figure 6 Conditions and factors that may indicate a significant increase in credit risk

- A discretionary decision by management such that, were an existing loan newly originated at the reporting date, the element of the price of the loan that reflects the credit risk of the exposure would be significantly higher than it was when the loan was originated because of an increase in the credit risk of the specific borrower or class of borrowers since inception;
- Management's decision to strengthen collateral and/or covenant requirements for new exposures similar to exposures already advanced because of changes in the credit risk of those exposures since initial recognition;
- Borrower downgrades by a recognized credit rating agency, or within a bank's internal credit rating system;
- For performing credits subject to individual monitoring and review, an internal credit assessment summary credit-quality indicator that is weaker than upon initial recognition;
- Deterioration of relevant determinants of credit risk (e.g., future cash flows) for an individual obligor (or pool of obligors); and,
- Expectation of forbearance or restructuring due to financial difficulties.
- In addition, banks should consider more general factors such as the deterioration of the macroeconomic outlook relevant to a specific borrower or group of borrowers; and deterioration of prospects for the sector or industries within which a borrower operates.

Source: Guidance on credit risk and accounting for expected credit losses, BCBS, December 2015.

In addition to the conditions and factors summarized in Figure 6, the BCBS cautions that modifications or renegotiations of loans and other financial assets can mask increases in credit risk, resulting in ECL being underestimated, delaying the transfer to lifetime ECL for obligors whose credit risk has significantly deteriorated, or can inappropriately result in a move from lifetime ECL measurement back to 12-month ECL measurement. When assessing whether there is a significant increase in credit risk for a modified lending exposure, the BCBS expects a bank to demonstrate whether such modifications or renegotiations have improved or restored the bank's ability to collect principal and interest payments compared with the situation upon initial recognition.

With respect to the use of the practical expedients mentioned in IFRS 9, the BCBS expects banks will make limited use of the "low credit risk" exception and will not use "30 days past due" as a primary indicator of when it is appropriate to recognize lifetime ECL. The BCBS expects that any use by banks of these practical expedients should be documented and should be reviewed by banking supervisors.

Capital adequacy considerations. ¹⁴ The BCBS recognizes that the new ECL provisioning standards will introduce fundamental changes to banks' provisioning practices and that higher provisions are possible due to the lifetime loss concept and the inclusion of forward-looking information in the assessment and measurement of ECL. While supporting ECL provisioning standards, the BCBS is considering the implications for regulatory capital, since the impact of ECL provisioning could be significantly more material than currently expected and result in an unexpected decline in capital ratios, and considering the two-year difference between the IASB and FASB implementation dates. ¹⁵ In October 2016, the BCBS released a consultative document that proposed to retain for an interim period the current regulatory expected loss (EL) treatment of provisions under the standardized and the internal ratings-based (IRB) capital approaches for credit risk. In addition, the BCBS requested comments on whether the following possible transition approaches are warranted to allow banks time to adjust to the new ECL accounting standards:

- Approach 1: Day 1 impact on CET1 capital spread over a specified number of years;
- **Approach 2:** CET1 capital adjustment linked to Day 1 proportionate increase in provisions; or
- **Approach 3:** Phased prudential recognition of IFRS 9 Stage 1 and 2 provisions.

The BCBS mentioned that its current preference is for Approach 1 because it directly addresses a possible "capital shock" in a straightforward manner. Nevertheless, comments on Approaches 2 and 3 are encouraged because they consider the ongoing evolution of ECL provisions during the transition period and not just the impact at the date of adoption of ECL accounting on banks' provisions and CET1 capital. Once finalized, any transition approach would be accompanied by related Pillar 3 disclosure requirements.

At the same time the BCBS also issued for public comment a discussion paper on policy options for the long-term regulatory treatment of provisions under the new ECL standards, but noted that it has not yet decided to pursue any of the approaches presented in the paper. Comments from the public on the two consultative documents should be provided by January 13, 2017.

4. Enhanced risk disclosure needed during the transition period to IFRS 9

The importance to market confidence of useful disclosure by financial institutions of their risk exposures and risk management practices has been

underscored during the global financial crisis and its aftermath. In May 2012, the FSB appointed a private-sector task force to develop principles for improved bank disclosures and identify leading practice risk disclosures. The Enhanced Disclosure Task Force (EDTF) was comprised of senior officials and experts representing financial institutions, investors and analysts, credit rating agencies, and external auditors. In October 2012, it reported recommendations to the FSB in which were welcomed by the G20 Leaders, FSB, and the chairs of the IASB and FASB. ¹⁶ Each year from 2013 to 2015 the EDTF reported ever improving global voluntary implementation of these recommendations in annual implementation progress assessments. For example, in its implementation progress survey for 2015 annual reports, 40 major international banks from Asia, Australia, Europe, and North America participated in the survey. ¹⁷

Given the importance of the new IASB and FASB ECL accounting standards for the banking industry, the FSB requested the EDTF to recommend disclosures to help market participants understand the upcoming changes resulting from ECL approaches and to promote consistency and comparability. The EDTF's report, published in December 2015, found that investors and other financial report users want to understand the specific reasons for any changes at transition in ECL loan loss provisions compared to the existing approach and the ongoing drivers of variability in credit losses. ¹⁸ Key areas of user focus during the transition period include:

- concepts and policies developed to implement the new ECL approaches, including the "significant increase in credit risk" assessment required by IFRS 9;
- the specific bank methodologies and estimation techniques developed;
- the impact of moving from an incurred loss approach to an ECL approach;
- understanding the dynamics of changes in credit losses and their sensitivity to significant assumptions, including those resulting from the application of macroeconomic assumptions;
- any changes made to the governance over financial reporting, and how they link
 with existing governance over other key areas including credit risk management
 and regulatory reporting; and
- understanding the differences between accounting ECL and regulatory capital EL.

The EDTF recommended that a gradual and phased approach during the transition period would be most useful to users to give them clearer insights as implementation progresses into the likely impacts of the new ECL standards and to allow users to make increasingly useful comparisons between banks. ¹⁹ The initial focus should be on qualitative disclosures but quantitative disclosures – including the impact of ECL approaches – should be added as soon as they can be practicably determined and are reliable but, at the latest, in 2017 annual reports for banks following IFRS. For example, the EDTF recommends banks following IFRS should provide:

qualitative disclosures about general ECL concepts, differences from the current approach, and implementation strategy starting with 2015 and 2016 annual reports;

- **qualitative disclosures** about detailed principles, governance organization, and capital planning impact starting with 2016 annual reports; and
- **disclosure of quantitative assessments** of the impact of adoption of the ECL approach starting when practicable and reliable, but at the latest in 2017 annual reports.

In addition, the EDTF recommended that the granularity of disclosures should improve each year during this transition period. When IFRS 9 becomes effective in 2018 or when adopted if earlier, banks would provide the IASB's required ECL disclosures.²⁰

5. Banks' progress in implementing IFRS 9's ECL impairment rules

In 2016, global surveys by major accounting firms and other organizations noted progress by banks in implementing IFRS 9's ECL impairment approach but found considerable work remains to be completed before 2018. For example, Deloitte's Global Banking IFRS Survey captured the views of 91 banks – 16 from the Asia-Pacific region, seven from Canada, and 69 from Europe, Middle East and Africa – including 16 global systemically important financial institutions (SIFIs).²¹ Key findings in 2016 include:

- 60% of banks either did not disclose or could not quantify the transition impact of IFRS 9. Of the banks who responded, the majority estimate that total impairment provisions will increase by up to 25% across asset classes due to the new ECL approach. (PwC's 2016 global survey of 43 institutions across 10 countries found that, "Overall the majority of the institutions expect IFRS 9 to increase their provision requirements: 19% of respondents expect an increase of 0%-10% in provisions, 32% expect an increase between 10%-30%, while we note that 30% of respondents do not yet have an indication of the impact of IFRS 9."²²)
- 70% of respondents anticipate a reduction of up to 50 bps in core tier 1 capital ratios due to IFRS 9. However, most banks do not yet know how their regulators will incorporate IFRS 9 ECL allowance estimates into regulatory capital estimates.
- Total estimated program budgets continue to increase. However, more than three
 quarters of these budgets have yet to be spent, with less than two years to the
 IFRS 9 effective date.
- Almost half of banks do not have enough technical resources to complete their IFRS 9 project and almost a quarter of these do not believe sufficient skills will be available in the market to cover shortfalls.
- Most price makers expect that moving to an ECL model will have an impact on product pricing, while most price takers still think that this is unlikely to have an impact on product pricing.
- In general, approximately half of participants are unsure of the answer to many key ECL modelling design questions, which may delay banks' IFRS 9 implementation programs.

- Data quality and the availability of the origination lifetime PD (needed as part of the assessment to determine whether a significant increase in credit risk has occurred) are the biggest data concerns for most banks.
- Despite IAS 8 requirements and the 2015 EDTF recommendations for improved ECL transition disclosures, over 40% of banks do not plan to disclose quantitative information before 2018. (Ernst & Young's 2016 survey of 36 top-tier financial institutions worldwide found that "most banks expect to disclose a first quantitative impact assessment to the markets during 2017." Of the 36 surveyed banks, 28 have already implemented the EDTF's 2012 recommendations but only 23 plan to implement the EDTF's recommended ECL disclosures.²³)

In addition, in November 2016, the European Banking Authority (EBA) published its report on the IFRS 9 implementation progress of over 50 financial institutions across the European Economic Area.²⁴ The survey was launched in January 2016 and found many of the same broad types of issues related to banks' implementation progress that had been noted in the global surveys summarized above.

- The EBA found that the involvement of some key stakeholders in IFRS 9 implementation seemed limited currently and that sufficient resources needed to be assigned by banks to ensure high quality implementation. As the implementation process requires collaboration between different departments within banks, key functions should be involved in this effort, including senior credit risk experts, audit committees and the board of directors.
- While noting that quantitative estimates provided by survey respondents were preliminary, the EBA report estimated the increase of loan loss provisions compared to the current levels of provisions under IAS 39 will be 18% on average and up to 30% for 86% (75th percentile) of respondents. CET1 and total capital ratios are estimated to decrease, on average, by 59 bps and 45 bps respectively. CET1 and total capital ratios are estimated to decrease by up to 75 bps for 79% of respondents (75th percentile).

These summary survey results indicate a need for central banks and other prudential authorities to become more active in encouraging banks in their jurisdictions to devote more resources to implement ECL provisioning requirements in a more robust, consistent and transparent manner.

6. How supervisors can promote robust implementation of IFRS 9 ECL impairment rules

The BCBS recognizes that banking supervisors have a strong interest in promoting the use of sound credit risk and provisioning practices by banks. Experience during financial crises has shown that poor credit quality and deficient credit risk assessment and measurement practices for accounting and capital purposes are significant causes of bank failures. Delays in identifying, measuring and recognizing

increases in credit risk can aggravate and prolong bank problems. Inadequate credit risk policies may lead to delayed recognition and measurement of increases in credit risk, which adversely affects banks' capital adequacy and provisioning and hampers proper credit risk management. Supervisors expect banks to provide useful public disclosures about credit risk exposures, credit risk management, provisioning and related matters to bring about transparency that facilitates market discipline. Principles 17, 18 and 28 of the Basel Core Principles emphasize that banks must have adequate credit risk management processes, including prudent policies and processes to identify, measure, evaluate, monitor, report and control or mitigate credit risk on a timely basis, and covering the full credit life cycle. Furthermore, adequate bank policies and processes must be in place for the timely identification and management of problem assets, and the maintenance of adequate provisions and public disclosures. ²⁶

My earlier article in this journal discussed how prudential authorities had a key role in encouraging accounting standards setters to issue the new ECL accounting standards. Central banks and other prudential authorities can also have a very important role in promoting high quality bank implementation practices through their banking supervisory activities in a manner that compliments the efforts of accounting standards setters.²⁷ For example, prudential authorities can promote high quality implementation practices through the following activities with key stakeholders:

- Encourage industry and supervisory participation in seminars and dialogue **about the new standards and their implementation**. Leaders as well as technical experts at supervisory authorities and banks need to understand the new ECL standards; bank implementation strategies, and needed systems, controls, governance, reasonable and supportable forward-looking information, write-off policies, and related issues; and implications for capital adequacy, supervisory reporting and public disclosures. Prudential authorities should ensure periodic training programs for their officials and supervisory experts, but should also encourage and participate in periodic industry seminars and roundtables on key implementation topics. Participating in these programs can also help foster dialogue about important issues arising during the transition period. For example, in the U.S. the Federal Reserve Board (FRB), Office of the Comptroller of the Currency (OCC), and the Federal Deposit Insurance Corporation (FDIC) (collectively, the U.S. banking agencies) have taken a leading role in encouraging attention by banks, auditors, and supervisory teams to the FASB's Current Expected Credit Loss approach (CECL) not only this year when the final standard was published but also for many years before its issuance.²⁸
- 2. Require banks to periodically present updates that will enable supervisors to monitor their ECL implementation strategies and efforts, and related timetables and understand their implementation challenges. For example, the ECB announced earlier this year that it would be undertaking a review of IFRS 9 implementation practices. Also, certain supervisors in the Asia-Pacific

region have asked domestic and foreign banks to provide them with qualitative and quantitative information on their implementation efforts and the updated estimated impact of the ECL standard, and to meet to discuss these updates. Some supervisors have also incorporated IFRS 9 implementation reviews into their follow up with banks about asset quality reviews (AQRs).

- 3. Encourage those charged with bank governance to achieve a greater understanding of IFRS 9 and related implementation efforts and to be more active in discussing these matters during meetings of the Board of Directors (or its equivalent) and its Risk and Audit Committees. In addition to the principles and other guidance in the BCBS supervisory guidance previously discussed, those charged with governance may find useful the paper published by the Global Public Policy Committee (GPPC) on implementation of IFRS 9's impairment requirements.²⁹ The paper includes recommendations on governance and controls, and factors affecting the selection of modelling approaches and transition approaches. It also includes 10 questions that audit committees of SIFIs and other institutions can use to focus their discussions with management about implementation efforts. These 10 questions address the following four broad topic areas:
 - Important IFRS 9 decisions and interpretations;
 - Sophistication of ECL modelling;
 - Key systems and controls; and
 - Transparency to support effective internal governance and market discipline.
- 4. Encourage auditors to achieve a greater understanding of IFRS 9 and related implementation efforts and supervisory guidance, and supervisors should gain a better understanding of auditor roles, meeting with them when appropriate. This could be helpful in encouraging an improvement in the quality of bank auditor practices. As previously mentioned, the BCBS supervisory guidance recognizes that supervisors may make use of the work performed by banks' internal and external auditors in reviewing banks' credit risk assessment and ECL measurement functions. Thus, it is very important that auditors understand the accounting requirements and supervisory guidance, and that supervisors fully understand the role of auditors when determining whether to "rely" on their work, in whole or in part. The following documents could be helpful in this respect:
 - The International Auditing and Assurance Standards Board's (IAASB) ISA 540 Task Force has been reviewing ECL issues and challenges for external auditors and published a paper setting forth its preliminary views in March 2016. This IAASB paper was developed by a task force comprised of representatives from the IAASB, BCBS, the International Association of Insurance Supervisors, bank auditors, and the Public Company Accounting Oversight Board, the U.S. audit regulator. It highlights audit issues arising from the shift to ECL provisioning approaches, summarizes related audit challenges and provides initial thinking on how these challenges may be addressed under the current International Standards on Auditing (ISA).³⁰

- BCBS supervisory guidance on internal audit (2012) and external audit (2014), which includes guidance on audit committee efforts that can contribute to the improvement of audit quality.³¹
- The 2016 report of the International Forum of Independent Audit Regulators (IFIAR) on its 2015 Inspection Findings Survey summarizes key inspection results from the audits of public companies, including SIFIs, and audit firm systems for quality control submitted by 35 IFIAR members in jurisdictions around the world. Inspection findings are deficiencies in audit procedures that indicate that the audit firm did not obtain sufficient appropriate audit evidence to support its opinion on the financial statements. For audits of SIFIs, the survey found the highest number of deficiencies related to (i) internal control testing, (ii) auditing of loan loss allowances and loan impairments, (iii) auditing the valuation of investments and securities, and (iv) use of experts and specialists.³² Furthermore, the problems noted in this report led IFIAR to request the GPPC audit firms to undertake an extensive review of their internal quality control processes for external audits and to substantially reduce these audit quality deficiencies. Thus, this report by audit regulators can provide supervisors with keen insights about potential problems with bank external auditors' practices involving provisioning that should be rectified.
- 5. Encourage banks in your jurisdiction to implement the EDTF's 2012 recommended disclosures and its 2015 recommended ECL transition disclosures (during the transition period), as well as the ECL disclosures required by the IASB once IFRS 9 is adopted. The EDTF's 2012 report includes extensive recommendations for improved bank credit risk disclosures that major investors and banks have agreed are useful, and the EDTF's 2015 report shows how these can be updated for useful and reliable qualitative and quantitative information about the transition to ECL provisioning.³³
- 6. Consider the impact of ECL requirements on supervisory provisioning matrices, supervisory financial reports, analysis reports, AQRs, stress tests and other tools to ensure that prudential objectives are met. The potential impacts of the new impairment standards will be important for leaders in the Asia-Pacific region and other regions to carefully evaluate. Research has highlighted that after the Asian financial crisis, many countries in the Asia-Pacific region enhanced their loan loss provisioning requirements by adopting international standards and overlaying these with prudential rules and other requirements that sought to increase provisioning in good times in response to rising levels of credit risk. These requirements have also led to bank provisioning practices that have tended to be countercyclical in nature in many Asian jurisdictions.³⁴ Care must be taken by prudential authorities so that implementation of the new IASB expected loss provisioning standard will improve transparency while also building on progress in achieving important prudential objectives. For example, prudential authorities will need to understand and address whether revisions should be made to their current national provisioning matrices or other requirements that have

contributed in the past to robust provisioning levels. This will be particularly important if surveys or other analyses indicate that the level of provisions of certain banks might be reduced when implementing ECL provisioning.³⁵ Furthermore, supervisors will need to place more emphasis in their analyses, AQRs, and stress tests on ECL considerations, including on financial assets that are 30 days or more past due since there is a rebuttable presumption in IFRS 9 that a significant increase in credit risk has occurred for those exposures, resulting in the recognition of lifetime ECL. In addition, in jurisdictions not requiring nonaccrual treatment for nonperforming assets, supervisors should consider requiring that banks' supervisory reports and public disclosures provide both (1) the amount of interest income accrued on nonperforming assets and (2) the cash interest income received on nonperforming assets to provide incentives to appropriately recognize interest income and provisions for these exposures and to provide incentives for certain banks to implement more effective strategies for reducing their nonperforming assets.

Working with banks, the BCBS, accounting standard setters, investors, and auditors, consider how to achieve important transparency goals and prudential objectives while also reducing the regulatory burden associated with ECL provisioning. The move to ECL provisioning by accounting standard setters is an important step forward in addressing the weakness identified during the global financial crisis that credit loss recognition was too little, too late. The development of ECL approaches is also consistent with the April 2009 call by the G20 Leaders for accounting standard setters to "strengthen accounting recognition of loan loss provisions by incorporating a broader range of credit information."36 In this respect, the underlying principles supporting IFRS 9's ECL approach are broadly reasonable and are an improvement over IAS 39. However, the adoption of IFRS 9 will require significant enhancements to banks' governance and management engagement, data, systems and controls, and quantitative models, resulting in more complexity and volatility in reporting, and substantial investments by banks. This move to ECL approaches requires significant updates to models beyond those used for regulatory capital purposes at a time when the BCBS has been exploring ways to reduce undue dependence on models for certain capital adequacy purposes.³⁷ Are there ways to achieve the transparency principles underlying IFRS 9 and the BCBS' desire for robust credit risk management and provisioning practices, while at the same time reducing unnecessary burden on banks, including smaller institutions? This topic is quite complex and beyond the scope of this article, but given the significant systems and modelling updates and investments involved, it would be worthy of future constructive dialogue between banks, the BCBS, IASB, investors and auditors.

The new era of expected credit loss provisioning will arrive soon and significant transition efforts are underway by banks, supervisors and auditors. Implementation of the new ECL impairment standards should improve transparency to investors and help banks' financial reporting of credit losses to better reflect the emerging risks inherent in their loan portfolios. Important BCBS consultation documents on capital treatment, once finalized, and the BCBS December 2015 supervisory guidance on ECL provisioning will help guide banks and supervisors during the transition period and the initial years of implementation. Supervisors can also be proactive in promoting sound practices by key stakeholders that will contribute to high quality implementation of credit risk management and robust ECL provisioning. Working with the banking industry, accounting standards setters, investors and auditors, supervisors can have a significant role in helping to secure the potential benefits of the new ECL provisioning regime in ways that enhance transparency and risk management, and reduce undue burdens on banks.

Gerald A. Edwards, Jr., Chairman, JaeBre Dynamics, LLC, has held important positions with both the U.S. Federal Reserve Board and the Financial Stability Board and has served as an expert adviser to the International Monetary Fund for technical assistance and FSAP missions. He retired in 2013 with over 30 years' experience from the U.S. Federal Reserve Board's Division of Banking Supervision & Regulation in Washington, DC, USA, where he most recently held the official position of Senior Adviser and had served earlier as Associate Director and Chief Accountant. Previously, from mid-2005 to end-2012, he served as Senior Advisor on Accounting and Auditing Policy with the Financial Stability Board (FSB, and its predecessor, the Financial Stability Forum), with a dual senior advisory role with the Basel Committee's Accounting Task Force, at the Bank for International Settlements (BIS) in Basel, Switzerland. He was heavily involved in the international efforts to address the global financial crisis and its aftermath and participated in the development of international policy recommendations to promote financial stability. He also co-chaired the Basel Committee's High Level Working Group on the G20 Accounting Recommendations from 2009 to 2012. In addition, He served as the FSB's representative on the IASB-FASB Financial Crisis Advisory Group and on other key accounting and auditing advisory groups. He has also developed seminars and assessments about ECL provisioning for central banks and international organizations.

Endnotes

- 1. IFRS 9 *Financial Instruments*, IASB, July 2014. IFRS 9 also includes new rules for classification and measurement of financial instruments and hedge accounting.
- 2. Accounting Standards Update No. 2016-13, Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments, FASB, June 2016. The FASB standard refers to its new provisioning approach as being based on "current expected credit losses" or "CECL."
- 3. My earlier article in this Journal in May 2014, *The Upcoming New Era of Expected Loss Provisioning*, addressed key efforts of the G20, Financial Stability Board (FSB and its predecessor, the Financial Stability Forum, or FSF) and BCBS that encouraged the development of these new standards, summarized the IASB and FASB approaches (and why convergence was not achieved) and explored their potential impacts and implementation challenges before IFRS 9 was published. See www.seacen.org/products/702003-100340-PDF.pdf.
- 4. Moreover, questions were raised about whether the incurred loss model contributed to procyclicality. This topic and related FSB and BCBS efforts to address this matter and encourage improvements to provisioning standards are discussed more extensively in my earlier article.
- 5. IFRS 9 applies the same impairment approach to all financial assets that are subject to impairment accounting, thus removing a source of current complexity.
- 6. Project Summary: IFRS 9 Financial Instruments, IASB, July 2014.
- 7. Staff Discussion Note (SDN/15/19): A Strategy for Resolving Europe's Problem Loans, IMF, September 2015. See www.imf.org/external/pubs/ft/sdn/2015/sdn1519.pdf.
- 8. Draft guidance to banks on non-performing loans, ECB, September 2016. See Annex 7 in www.bankingsupervision.europa.eu/legalframework/publiccons/pdf/npl/npl_guidance.en.pdf.
- 9. IFRS 9 also includes more extensive guidance on write-offs than IAS 39 by requiring write-offs when the bank has no reasonable expectations of recovering a financial asset in its entirety or a portion thereof (and related disclosures), but it does not specify the number of days past due or other information often considered by banks as a basis for loan write-offs. Generally, the FASB CECL

standard allows write-offs to continue to be made under banking practices for writing off uncollectible loans -- practices that have been shaped in large part by U.S. supervisory guidance and practices. U.S. GAAP and bank supervisory financial reports (e.g., FFIEC Reports of Condition and Income ["Call Reports"], and FR Y-9C reports for holding companies) require extensive public disclosures about bank write-offs.

- 10. Guidance on credit risk and accounting for expected credit losses, BCBS, December 2015. The consultative version of the guidance had been published in February 2015.
- 11. Regulatory treatment of accounting provisions interim approach and transitional arrangements, BCBS, October 2015, and Regulatory treatment of accounting provisions, BCBS, October 2016.
- 12. Sound credit risk assessment and valuation for loans, BCBS, June 2006.
- 13. Under both IASB and FASB ECL standards, the use of a PD/LGD method to measure ECL is not required and other methods can be used (e.g., a loss rate method).
- 14. Regulatory treatment of accounting provisions interim approach and transitional arrangements, BCBS, October 2016; and Regulatory treatment of accounting provisions, BCBS, October 2016.
- 15. As previously mentioned, IFRS 9 will be effective in 2018 and the FASB's CECL standard will be effective starting in 2020 for listed companies and 2021 for all other firms.
- 16. Many large banks are implementing the recommendations of the FSB's Enhanced Disclosure Task Force, issued in October 2012, to improve their risk disclosure practices and transparency to investors. See www.financialstabilityboard.org/press/pr_121029.pdf.
- 17. 2015 Progress Report on Implementation of the EDTF Principles and Recommendations, EDTF, December 2015. See www.fsb.org/2015/12/2015-progress-report-on-implementation-of-the-edtf-principles-and-recommendations/.
- 18. Impact of Expected Credit Loss Approaches on Bank Risk Disclosures, EDTF, November 30, 2015. See www.fsb.org/2015/12/impact-of-expected-credit-loss-approaches-on-bank-risk-disclosures/.

- 19. In making these recommendations, the EDTF understood that paragraph 30 of IAS 8 applies when an entity has not yet applied a new IFRS that has been issued but is not yet effective, with expectations for disclosure of information on expected impacts of the new standard, if reasonably estimable. Likewise, there are also U.S. requirements regarding disclosures about impending accounting changes (e.g., SEC SAB Topic 11-M) and other jurisdictional requirements. The EDTF recognized that these requirements continue to apply although they typically do not require the full range of specific useful information investors desire, as set forth in the EDTF's ECL transition disclosure recommendations.
- 20. A similar approach, adjusted for the applicable transition period years, would be used for banks subject to U.S. GAAP, including FASB's CECL standard.
- 21. Sixth Global IFRS Banking Survey No time like the present, Deloitte, May 2016.
- 22. *IFRS 9: Impairment Global banking industry benchmark*, PricewaterhouseCoopers UK, May 2016.
- 23. EY IFRS 9 impairment banking survey, Ernst & Young, 2016.
- 24. "Report on results from the EBA impact assessment of IFRS 9," EBA, November 2016. See the report at: www.eba.europa.eu/documents/10180/1360107/EBA+ Report+on+impact+assessment+of+IFRS9.
- 25. Guidance on credit risk and accounting for expected credit losses, BCBS, December 2015.
- 26. Core Principles for Effective Banking Supervision, BCBS, September 2012.
- 27. These supervisory activities focus on encouraging *sound implementation practices* and not on developing accounting standards or interpretations, so they do not infringe on the roles and independence of accounting standard setters. In my experience, such carefully developed, sound activities are appreciated by accounting standard setters and securities regulators.
- 28. For example, in September 2016, the U.S. accountancy association, the American Institute of Certified Public Accountants (AICPA), held a three-day national banking conference with over 1,400 in attendance and nearly 80% of the sessions were about the CECL standard and key implementation issues, with U.S. banking agency experts participating as speakers and attendees. Earlier, Thomas Curry, the U.S. Comptroller of the Currency, gave the keynote speech at the 2013 AICPA national conference and included remarks about the importance of CECL provisioning. The U.S. banking agencies also hold substantial interagency and agency-only conferences for their supervisory teams that address key implementation issues.

- 29. The implementation of IFRS 9 impairment requirements by banks -- Considerations for those charged with governance of systemically important banks, Global Public Policy Committee, June 2016. The Global Public Policy Committee ("GPPC") is the global forum of representatives from the six largest international accounting networks BDO, Deloitte, EY, Grant Thornton, KPMG, and PwC. Its public interest objective is to enhance quality in auditing and financial reporting.
- 30. Project to Revise ISA 540 (An Update on the Project and Initial Thinking on the Auditing Challenges Arising from the Adoption of Expected Credit Loss Models), IAASB, March 2016.
- 31. The internal audit function in banks, BCBS, June 2012 (available at www.bis.org/publ/bcbs223.pdf); and External audits of banks, BCBS, March 2014 (available at www.bis.org/publ/bcbs280.pdf). Consistent with the BCBS external auditor policy, supervisors should also have discussions about these provisioning and audit quality matters with audit regulators when appropriate. While very informative and helpful, unfortunately, the above BCBS policies were issued before IFRS 9 was published and have not yet been updated for ECL provisioning considerations.
- 32. Report on 2015 Survey of Inspections Findings, IFIAR, March 2016. (See the report at the following link: www.ifiar.org/IFIAR/media/Documents/General/About%20Us/IFIAR-2015-Survey-of-Inspection-Findings.pdf.)
- 33. See the earlier section of this article for links to these important EDTF reports.
- 34. Loan loss provisioning practices of Asian banks, Frank Packer and Haibin Zhu, BIS Working Paper No. 375, April 2012.
- 35. In October 2016, Fitch Ratings published an alert that transition to IFRS 9, or its local equivalent, is likely to create operational challenges across many of Asia-Pacific's (APAC) banking systems, leading to a negative initial effect on capital, and potentially raise the volatility of earnings and regulatory capital ratios. However, Fitch stated that "...there are some countries in the region where the financial impact of IFRS 9 for banks could be softened by regulatory framework practices. These include Australia, Hong Kong, Korea, Malaysia, the Philippines, Singapore and Taiwan. Banks will still face provisioning pressures in these markets, but their current regulatory frameworks either already involve elements of the expectedloss approach or banks hold reserves that regulators did not allow them to fully release when IAS 39 was introduced. Regulators in most of these countries have also been progressively forcing banks to hold higher reserves, which will provide a buffer against potential losses. Nevertheless, the impact from moving to ECL is likely to vary from bank to bank even in the most prepared systems, reflecting the underlying riskiness of their assets and their own internal system capabilities." (emphasis added). IFRS 9 Poses Implementation Challenges for APAC Banks, Fitch Ratings, October 2016.

- 36. Available at www.g20.org.
- 37. For example, a recent consultative document sets out the BCBS' proposed changes to the advanced internal ratings-based approach and the foundation internal ratings-based approach. The proposed changes discuss complementary measures, including the elimination of certain model-based approaches, that aim to: (i) reduce the complexity of the regulatory framework and improve comparability; and (ii) address excessive variability in the capital requirements for credit risk. Reducing variation in credit risk-weighted assets constraints on the use of internal model approaches, BCBS, March 2016.

Supervisory Implications of FinTech in SEACEN Jurisdictions

By Herbert Poenisch, formerly BIS and Michael Zamorski

Over the past two years, financial technology (FinTech) companies have increasing offered financial services through the creative use of technology, which offers lower cost and greater customer convenience, in direct competition with banks and other traditional financial services providers. Some FinTech firms have adopted a different approach, partnering with traditional providers of financial services to harness technology to offer greater speed, convenience and innovation in the delivery of financial services. The banking public has responded favorably to these developments.

Regulators of financial services are confronted with the challenge of allowing sound innovation through FinTech solutions, while making sure that consumer protection and financial stability risks are adequately controlled. They need to decide where the "regulatory perimeter" should be drawn, and the intensity of FinTech supervision. Striking a balance in related policy decisions requires consideration of various trade-offs. Some national authorities have allowed time-limited, controlled experiments in banks' efforts to develop innovative FinTech products, referred to as the "sandbox" approach, that attempts to understand the risks and implications of new products, without stifling innovation that can benefit consumers of banking services.

Compared with advanced economies, Asia-Pacific has a tremendous untapped potential in finance. There is a very significant underserved market for financial services in Asia-Pacific, in Southeast Asia, in China and India. There is also a new generation of tech-savvy individuals in Asia. ¹

Central banks acknowledge that FinTech offers vast opportunities for those who have not had ready access to traditional finance, such as small and medium-sized enterprises, and those without convenient access to basic banking services who are the target group of financial inclusion, as well as those consumers who feel that traditional banking does not offer the most efficient services in payments or wealth management.

This article will look at the economic functions of the various FinTech products. Following the allocation of functions, existing supervisory authorities should take the new FinTech products on board according to the providers of these products and their responsibilities. There might even be multiple supervisors responsible for certain products which would call for a national coordination among them.² Cross references will be made to shadow banking and financial inclusion.

Finally, the various approaches among supervisory authorities towards innovation will be covered. They range from laissez faire until risks emerge to a proactive risk management approach. Various central banking laws will be scrutinized regarding their

adequacies to meet challenges from FinTech. The conclusion will suggest what can and should be done to ensure an orderly development of FinTech competing with established players on a fair basis.

1. Economic functions of FinTech products

FinTech may be defined as technology-based businesses that compete against, enable and/or collaborate with financial institutions. The more than 12,000 estimated start-ups in the FinTech space are utilising tech tools and innovative financial services for the banked and unbanked population.³

FinTech products mark a shift away from centralised trading and they reduce the need for liquidity by increasing net settlement.⁴ How this holds up during market turbulence remains to be seen. Central banks might be called in for support during stress periods, which will affect regulation and supervision in part 3 below.

The main areas where FinTech has made rapid advances are digital currencies, payments (including automation of receivables), crowd sourcing, lending in the form of peer-to-peer (P2P), wealth management and credit insurance.⁵ The usual risks of financial products apply, plus importantly, cybersecurity.

Taking the Financial Stability Board's methodology to classify shadow banking activities according to their economic functions,⁶ the same approach will be used here to classify FinTech products.

Economic Function	Fintech Term	Definition	Entity
E1	Digital currency	Money for internet use	Digital operators
E2	Payments	Retail payment system	Payment Providers
E3	Crowd Sourcing	Collective investment vehicles	Various types of funds
E4	Lending P2P	Extension of credit	Finance companies
E5	Wealth Management	Investment activities	Broker-dealers
E6	Insurance	Credit facilitation	Credit insurance companies

While it is difficult to precisely measure the economic importance of each FinTech product,⁷ the ranking reflects their potential relative importance.

Taking the products one by one according to the "definition" in the preceding table, the following characteristics are noteworthy.

DIGITAL CURRENCIES

E-money in the form of electronic purses and internet banking has been used for a while but it posed no problem as it was tied into commercial bank money. E money created on the internet, such as bitcoin, provides a new challenge to central banks as it is independent of the current money supply. It is argued that it is neither an asset nor the liability of anybody as it is only a protocol. Such a protocol is a set of rules users follow to send and receive information over the internet. The purpose of the protocol is very specific: to disseminate authenticated transactions. Being the object of such transactions is what makes bitcoins money-like.⁸ Thanks to the protocol, no single entity can impact the supply of units.

The Committee on Payments and Market Infrastructures (CPMI) argues that bitcoins are assets which have some monetary characteristics, such as being used for transactions. They are not typically issued in, or connected to, a sovereign currency, are not a liability of any entity and are not backed by any authority. Furthermore they have zero intrinsic value and, as a result they derive value only from the belief that they might be exchanged for other goods or services, or a certain amount of sovereign currency, at a later point in time.⁹

Having some monetary characteristics or money-like functions puts digital currencies firmly in the court of central banks who are responsible for the ultimate means of payment, sovereign currencies.

PAYMENTS

Retail payment systems in advanced economies are still relying on traditional instruments, such as credit transfers or direct debits, cheques, various payment cards, such as EC card, and credit and debit cards. Companies which have offered payment solutions to replace physical wallets and credit cards include Apple, Google, Paypal, Amazon and Alibaba. The meteoric rise of internet payments in China is part of a dramatic increase in total payments (47% in 2014) due to the popularity of smart mobile handsets, provision of internet services, expansion of e-commerce and associated online payments. By 2014 more than 400 million Chinese clients used Alibaba, Chinese payment provider for online payments. It is estimated that 80% of retail payments are made online. At present banks are still involved as customers have to deposit sovereign currency with the payments provider. It is feasible, though, that the payments provider can create its own currency for settlements in the form of a digital currency. Chinese payments are made on create its own currency for settlements in the form of a digital currency.

A centralised clearing is not required as all participants have decentralised distributed ledgers, which allow participants direct settlement. It also enables participants to monitor the counterparts' liquidity and solvency and do their own netting. As a result, the liquidity requirements for the whole system have been radically

reduced. However, credit risk and other risks have not been eliminated from the system, which could still lead to a gridlock in extreme situations.

A related internet solution for small businesses is to help them to automate receivables. One of the biggest problems for small businesses is that they do not receive their payments on time, often due to clerical errors and logistical issues. This software helps small businesses to create invoices and track them, by automating payment reminders.¹³

CROWDSOURCING

This product is like a collective investment vehicle, functioning like a mutual fund, with the risk spread over many retail investors. The design will most likely be that of an open ended mutual fund, with new contributors coming in and the equity shareholding of each one declining. It can be assumed that control of the fund is not of primary importance to retail investors compared with returns. The resulting opacity of such funds can increase the incentives to runs.

However, investment choices cannot be delegated to the platform operators and possibly asset management companies (AMCs) only. Some form of control has to be installed, otherwise this could open the floodgates for fraud. Control would either be through real time monitoring by investors or strengthening the supervision of the platform; otherwise, mismanagement such as in the case of Ezubao can happen again (see below).

LENDING P2P

Through this product ordinary customers cut out banks and lend directly to each other via online platforms. Companies such as Zopa, Lending Club and Funding Circle offer peer-to-peer lending solutions that match lenders and borrowers on their online platforms. Web-based micro-credits through P2P platforms became a convenient channel for retail investors in China with almost 3,500 platforms operating by the end of 2015, 46% of which were assessed as "problematic." According to the design, money raised from the general public is supposed to be on-lent to small and medium businesses, thus sharing the risk among many small investors.

However, this online finance became risky in China as platforms did not invest as intended in small and medium-sized enterprises, but joined the surge on the Chinese stock market in 2015, only to be driven into bankruptcy once the market collapsed in mid-2015. These circumstances ultimately led to the Ezubao scandal, which erupted in February 2016, in which almost 1 million investors lost USD 7.6 billion through a P2P lender's Ponzi scheme.¹⁵ Lack of regulation of the platform operators remains the

main problem and lending guidelines need to be established, made transparent and enforced with adequate monitoring tools.

Internet-based lending has a strong competitive position compared with bank lending, as it is not subject to banking regulation, such as capital requirements, and monetary policy regulation, such as compulsory reserve requirement. At the same time there are weak transparency requirements, which have led to the misuse of funds for speculative purposes.

WEALTH MANAGEMENT

Wealth management has been plagued by excessive fees and delegation disincentives. Internet wealth management offers the chance to alleviate these deficiencies by providing advisory and investment services at low fees and allow real time monitoring of the investment portfolio.

These services range from data analytics through Wealth Front to actual investment. High net worth individuals make deposits in online platforms to be invested in various funds. In China, wealth management products outside the banking system have taken on great importance because bank deposit rates are still controlled. Some of the online funds offered rates of return well above the market rate. This was because these fund sponsors were not only providing a fund sales platform, but also boosting their funds' apparent rates of return by paying bonus interest funded from sources other than their funds' investment returns and without adequate risk disclosure. ¹⁶

Similar to the previous products, lack of regulation and supervision of such platforms can lead to spectacular failures and even systemic risk if the platform affected is significant enough. This can only be alleviated by imposing investment guidelines, making them transparent, and enforcing them with adequate monitoring tools.

INSURANCE

Providing credit insurance facilitates the extension of online lending but just shifts the risk from the credit provider to the agent providing insurance. Rather than reducing credit risk it adds another layer of credit risk, the insurer.

This problem can only be alleviated by adopting clear insurance guidelines, making them transparent and enforcing them. In particular, it needs to be clear under what conditions the insurer has to step in. Learning from the lessons of insuring CDOs before the global financial crisis of 2007-08, insurers need to be aware of the credit risk they are taking on in extreme market conditions. It has so far not been tested whether online insurers have the capacity to absorb losses.

2. Supervisory responsibilities for various FinTech products

Central banks believe that the challenge posed by FinTech will be in ongoing one. Ravi Menon, Managing Director of the Monetary Authority of Singapore (MAS), gives a number of reasons for this, including mobility of technology, mobility of ideas, mobility of payments and new trends in technology affecting finance. These are mobile and digital payments, authentication and biometrics, block chains and distributed ledgers, cloud computing, big data and thinking computers or learning machines. ¹⁷

FinTech products offer opportunities for the 40% of the adult population (ages 15-64) world-wide, about 2 billion people, who still do not have a bank account to initiate and receive payments. As most of these people have access to mobile phones, FinTech offers a real chance to provide basic financial services, payments needs, safely store some value and as gateway to other financial services. ¹⁸ This poses the need for a legal and regulatory framework which underpins financial inclusion by effectively addressing all relevant risks and protecting consumers, while at the same time fostering innovation and competition.

China is a large economy with a developing financial sector with broad internet access. The People's Bank of China, which faces these very challenges in the domestic financial system, has gone a long way in assigning the supervisory responsibilities for various products to particular supervisory agencies. Their classification will mostly be followed here.

Various FinTech products are provided by different entities (see table column 4) which might eventually need to be subjected to regulation and supervision. Existing entities, such as banks, payment providers, various funds, insurances and broker-dealers are less of a problem as they are already regulated and supervised to a great extent.

The challenge, however are entities which only exist in the virtual world, without links to 'brick and mortar' institutions. The experience of e-money in the 1990s shows that these were short-lived and did not pose a real challenge to established institutions. This time, however, might be different, as Managing Director Menon from MAS suggested. Therefore they need to be taken seriously for regulation and supervision.

DIGITAL CURRENCIES

Regulatory issues for digital currencies based on distributed ledgers cover three main fields: consumer protection, prudential and organisational rules for different stakeholders, and specific operating rules as payment mechanisms.¹⁹ As they are presently not widely used, their impact on the mainstream financial system is negligible. The IMF sums up similarly: some are asking whether bitcoin or other block chain applications could eventually undermine monetary policy and financial stability – but the consensus is that there is no immediate risk.²⁰

However, central banks have set up dedicated units to monitor developments as it is they who are responsible for monetary and financial stability. All central bank laws assign the power to issue sovereign currency to the central bank. Trust in digital currencies rests ultimately in sovereign currencies. It is unlikely that digital currencies would be accepted if they cannot be freely exchanged into any sovereign currency. Confidence in a decentralised system can side-line cash and the sovereign currency for the time being, but never displace it. Central banks have to be alert for changes in trust in digital currencies, even before a possible collapse. However, recent episodes of breach of cybersecurity (latest one in August 2016) in digital currencies have led to significant losses, but not resulted in panics that required central bank intervention.

As a result, central banks through their dedicated FinTech units monitoring developments, would be well advised to prepare a contingency plan for dealing with holdings of digital currencies by citizens in case confidence evaporates and a flight into sovereign currencies occurs.

THE PAYMENT SYSTEM

Central banks usually have an explicit mandate to promote a safe and efficient payments system. Acting as a lender of last resort is the core of a financial system linking monetary policy with financial stability. How far a central bank is responsible for a smooth running of the payment system, if it is largely run by internet companies with distributed ledgers, is uncharted territory. Banks are already deprived of big data on clients as online payments operators cut lenders' access to crucial transaction details.²¹

Total reliance on smooth internet functioning can lead to a false security that payment risks have been eliminated. Central banks remain responsible for flagging, monitoring and managing risks in the payment system, such as counterparty risk, liquidity risk, legal and operational risk. For internet payment systems, providing cybersecurity is of paramount importance. The role of a central bank in case of hacking into such a payment system occurs has not yet been defined. It has been argued that in times when commercial banks find the payment function costly and risky, the internet payment system is not yet ready to replace it.

CROWD SOURCING

As a collective investment vehicle is part of the asset management industry, as such it belongs in the domain of the securities supervisor. Most funds have a whole set of regulations to comply with, including their funding, their investment strategy and their transparency requirements. While in the regulated and supervised world open-ended funds make up the majority of funds for retail investors, ²² internet platforms acting as such funds have so far been unregulated.

On-line platforms have a clear competitive advantage as their fees are much lower than established funds, and they allow online monitoring of their investment strategies. It is questionable if retail investors are able to exercise this function.

LENDING AS P2P

This is clearly a credit provision activity and falls within the authority of the banking regulator. As such the funding, liquidity and risk management needs to be reported regularly. Whether online P2P lending can be excluded from banking regulation and monetary policy regulation is an ongoing discussion.

Allowing P2P lending to be excluded from banking regulation is rightly seen by traditional banks as unfair competition which feeds the disruption of traditional banks which still support the main part of the economy, not only in Japan, China and India, but also in financial centres such as Hong Kong and Singapore. Excluding P2P lending from monetary regulation would seriously undermine the effectiveness of monetary policy and the transmission mechanism.

WEALTH MANAGEMENT

The responsibility of dedicated supervisory authorities for the safety of investments by high net worth individuals has been tested in the past. While hedge funds and private equity funds act largely free of regulation and supervision and losses have been accepted by accredited investors, limits have been imposed where regulated and supervised investment funds have been involved.

It has yet to be decided whether internet wealth management belongs to the first category of lightly or non-supervised entities, or the broker dealers are subject to tighter regulation and supervision. The national securities commissions and the International Organisation for Securities Commissions (IOSCO) as the international body are working on recommendations for FinTech securities regulation.²³

INSURANCE

Insuring the risks of financial products has provided rich experience, ranging from rather successful derivatives markets to specific products, such as insuring CDOs, which has been more problematic. While derivative markets, both market risk as well as credit risk derivatives, have survived the GFC rather unscathed, individual players such as AIG had to be bailed-out because of systemic concerns.²⁴

If the risks of providing credit can be insured and sold in the derivatives market, the players are well-known and well-regulated and supervised. However, even established players, such as AIG got themselves into trouble with new products, such

as CDOs. Moreover, if new insurance players emerge on the internet, their ability to assess risks and manage these might not be up to the task.

At present protecting the insurance customers has priority over financial stability concerns relevant for real world insurance business. This should also be a prime concern of national insurance supervisors, as well the International Association of Insurance Supervisors (IAIS) as they develop recommendations regarding online insurance.

3. Supervisory way forward for FinTech

While the discussion about FinTech in advanced countries is led with the prominent participation of the major financial players, emerging markets realise the importance of services provided by non-bank lenders and non-regulated internet entities. From the supervisory point of view, it is probably beneficial to involve the major players in banking, fund management, insurance, etc., as they are well-supervised. However, as FinTech is a grassroots movement which might challenge or disrupt the established financial IT players must be given a fair chance to develop, implement and operate their new solutions.²⁵

At present there are two extremes of approaches to FinTech regulation and supervision. The "laissez faire" approach, which allows innovation up to the point when risks emerge. At the other extreme are the regulators who want to channel innovation into desirable products by designing regulation to limit the extremes of financial innovation. This school has taken on board the lessons of the GFC when financial engineering was in the lead, designing products based on assumptions which failed the reality check and contributed to the GFC.

Central banking laws and banking laws in Asia on the whole are still evolving and developing their regulatory response to internet developments. There are two groups of countries: those where central bank laws focus on banks as financial intermediaries and those which cast a wider net to include various types of financial intermediation. Among the first group are countries such as Japan, Korea, Philippines, and Thailand. Among the second group are China, Singapore, Hong Kong and Malaysia.

Starting with the wide-casting of the financial sector regulatory net, central banks and establised supervisory authorities are better equipped to regulate FinTech for supervisory purposes.

MAS clearly states that regulation must not front-run innovation, as introducing regulation prematurely may stifle innovation and potentially derail the adoption of useful technology. The statutes of MAS allow it to "conduct integrated supervision of the financial services sector and financial stability surveillance." Thus, MAS has a wide legislative mandate to supervise FinTech.

The Hong Kong letter of Functions and Responsibilities in Monetary Affairs allows the HKMA to promote "appropriate market development initiatives that help to strengthen the international competitiveness of Hong Kong's financial services."²⁸

The Central Bank Act of Malaysia 2013 stipulates, in section 31, that BNM may "specify measures...to limit the accumulation of any risk to financial stability, to a class, category or description of persons engaging in financial intermediation" and "issue an order....to take such measures as the Bank may consider or appropriate to avert or to reduce any risk to financial stability."²⁹

The Law on the People's Bank of China (PBOC) is relatively recent (revision 2003) and includes a section on financial markets. Article 31 stipulates that the PBOC "shall...monitor the operation of the financial markets, conduct macroeconomic management over the markets and promote balanced development of financial markets."³⁰ It is part of fulfilling this latter function that the PBOC has issued its guidelines for FinTech supervision (see endnote 6).

Older central bank laws are focused on banks as key financial intermediaries. In all these laws the main criteria for being subject to supervision by the central bank is the acceptance of deposits, which features prominently in the central bank as well as banking laws.

Central banks usually have a mandate for monitoring and securing a safe payments system. Therefore internet payment operators and payment solutions fall within this mandate.

Laws of central banks might have to be revised in view of the dynamic FinTech development to cast the net wider and to capture any financial market activity which can affect financial stability. Over the recent years central banks have been pondering whether to explicitly include financial stability in their mandates and to revise their central bank laws accordingly. However, as FinTech has not raised any financial stability concerns, linking the two might be premature.

A more practical approach to avoid having to revise regulatory and supervisory mandates would be to capture entities which only exist on the internet. Platforms for internet payments, crowd sourcing, P2P lending, wealth management and financial insurance could by required to obtain a licence once their scope of operations reaches a specified level. From then onwards, they would be subject to reporting requirements and monitoring by the relevant supervisory authority.

The cross-border implications need addressing in due course as well. Major online entities such as Ant Finance of Alibaba are already serving overseas clients (see endnote 11). It will be up to the international standard-setting bodies, such as the Basel Committee on Banking Supervision, CPMI, IOSCO and IAIS to address the cross-border risks of FinTech.

CONCLUSION

As FinTech innovations continue to evolve, regulatory and supervisory authorities have to confront the policy dilemma of whether certain FinTech activities should be regulated and, if so, to what extent. Excessive regulation may inhibit sound innovation and disadvantage consumers or put banks at a competitive disadvantage. Financial services supervisors need to carefully assess risks and benefits and, to the maximum extent prudently possible, avoid choking-off sound innovation. This can pose some risks to regulators, but they can be satisfactorily controlled.

Some unregulated entities might enjoy some competitive advantages compared with traditional players. Clients should be made aware that they might be taking on additional risks, including cybersecurity risk, in return for their cost advantage. Remembering the development of e-money in the 1990s, the experience shows that only entities linked with well established players and solid internet entities have some staying power.

Finally, internet solutions might be called "fair weather" solutions which might not survive during periods of systemic stress. In such circumstances, central banks will likely be called upon to calm the situation and provide the well known and tried lender of last resort function. Central banks would be well advised to prepare contingency plans for dealing with problems that might arise.

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Risks and Challenges of the Use of Corporate Vehicles (CVs) and Identifying Ultimate Beneficial Owners (UBOs)

By Mark McKenzie

1. Background

The recent publication of the Panama Papers by Washington, D.C.-based International Consortium of Investigative Journalists covering the massive leak of 11.5 million documents from a Panamanian law firm, covering four decades, has renewed world attention on tax havens, offshore companies and beneficial ownership. The Panama Papers provides insight into the methods used by criminals and corrupt individuals to launder money, evade taxes and finance arms and drug deals. The Panama Papers revelations prompted renewed calls from the United States, the United Kingdom and others to make beneficial ownership information public, especially in international financial centres or so-called "secrecy jurisdictions," some of whom have exhibited vulnerability to criminal misuse in the past.

Asian governments and regulators have adopted standards set by the intergovernmental Financial Action Task Force (FATF) to strengthen their antimoney laundering (AML) and combating the financing of terrorism (CFT) regimes. However, a number of factors including social, cultural and legal factors and business traditions can pose obstacles to effectively enforcing international AML/CFT rules. In addition, rigid confidentiality rules and privacy laws in some jurisdictions can prevent access by regulators and other authorities to information on suspicious transactions. The continued acceptance of nominee ownership (where an entity holds assets for the actual owner) in some economies prevents the proper identification of beneficial ownership, reduces transparency, and makes it difficult to enforce "know your customer" requirements. 5

The objective of this article is to explore the issues of money laundering and other financial crimes facilitated by the use of corporate vehicles (CVs) and the absolute need for banks and other financial institutions to do due diligence to identify ultimate beneficial owners (UBOs). The article looks at some requirements in China, Singapore, Hong Kong, Malaysia and South Korea, as well as approaches being taken in the U.S. and EU.

2. Relevancy of AML/CFT to financial stability and supervision in Asia Pacific Economies

Money laundering and terrorist financing are widely recognized as factors that may undermine financial stability.⁶ As stated by Min Zhu, Deputy Managing Director of the IMF:

"Money laundering and the financing of terrorism are financial crimes with economic effects. They can threaten the stability of a country's financial sector or its external stability more generally. Effective antimoney laundering and combating the financing of terrorism regimes are essential to protect the integrity of markets and of the global financial framework as they help mitigate the factors that facilitate financial abuse. Action to prevent and combat money laundering and terrorist financing thus responds not only to a moral imperative, but also to an economic need."

Money laundering, terrorist financing and other financial crimes can adversely affect foreign investment and distort international capital flows. There may also be negative consequences for a country's macroeconomic performance as result of money laundering and other financial crimes. This may result in welfare losses, draining resources from more productive economic activities, and can even have destabilizing spillover effects on the economies of other countries.

Money launderers and terrorist financiers exploit both the complexity inherent in the global financial system as well as differences between national AML/CFT laws and systems, and they are especially attracted to jurisdictions with weak or ineffective controls where they can more easily move their funds without detection. Moreover, problems in one country can quickly spread to other countries in the region or in other parts of the world.

Strong AML/CFT regimes enhance financial sector integrity and stability, which in turn facilitate countries' integration into the global financial system. They also strengthen governance and fiscal administration. The integrity of national financial systems is essential to financial sector and macroeconomic stability both at the national and international levels.

In recent years, Asian economies have made significant progress towards implementing AML/CFT standards promulgated by the FATF. To combat risks associated with money laundering and other financial crimes, economies in the region have strengthened AML laws, established financial intelligence units, developed AML/CFT supervisory frameworks for financial institutions, and improved coordination and cooperation between national agencies and across economies.

However, compliance with these standards across the region has been uneven. The Asian Development Bank conducted a reviewed of ADB developing member

countries based on mutual evaluations completed between 2008 and 2012. The ADB found that there is much scope for improvement in dealing with money laundering and terrorist financing risks.¹¹

3. FATF Recommendations and Guidance on Transparency and Beneficial Ownership

The FATF Recommendations are recognised as the international standard for combating of money laundering and the financing of terrorism and proliferation of weapons of mass destruction. They form the basis for a coordinated response to these threats to the integrity of the financial system and help ensure consistency and adherence to at least minimum standards. The FATF monitors the progress of its members in implementing necessary measures, reviews money laundering and terrorist financing techniques and counter-measures, and promotes the adoption and implementation of appropriate measures globally. In collaboration with other international stakeholders, the FATF works to identify national-level vulnerabilities with the aim of protecting the international financial system from misuse.

3.1 Corporate Vehicles and the Definition of Beneficial Owner

Corporate vehicle such as companies, trusts, foundations, partnerships, and other types of legal persons and arrangements have legitimates commercial purposes. However, corporate vehicles have been misused for illicit purposes, including money laundering (ML), bribery and corruption, insider dealings, tax fraud, terrorist financing (TF), and other illegal activities.

The lack of beneficial ownership requirements and anonymity can inhibit law enforcement. For criminals trying to circumvent anti-money laundering (AML) and counter-terrorist financing (CFT) measures, corporate vehicles are an attractive way to disguise and convert the proceeds of crime before introducing them into the financial system.

The FATF definition of beneficial owner in the context of legal persons must be distinguished from the concepts of legal ownership and control. On the one hand, legal ownership means the natural or legal persons who, according to the respective jurisdiction's legal provisions, own the legal person. On the other hand, control refers to the ability of taking relevant decisions within the legal person and impose those resolutions, which can be acquired by several means (for example, by owning a controlling a block of shares). However, an essential element of the FATF definition of beneficial owner is that it extends beyond legal ownership and control to consider the notion of ultimate (actual) ownership and control. In other words, the FATF definition focuses on the natural (not legal) persons who actually own and take advantage of capital or assets of the legal person as well as on those who really exert effective control over it (whether or not they occupy formal positions within that legal person), rather than just the (natural or legal) persons who are legally (on paper) entitled to do so.

For example, if a company is legally-owned by a second company (according to its corporate registration information), the beneficial owners are actually the natural persons who are behind that second company, or ultimate holding company in the chain of ownership, and who are controlling it. Likewise, persons listed in the corporate registration information as holding controlling positions within the company, but who are actually acting on behalf of someone else, cannot be considered beneficial owners.

Another essential element to the FATF definition of beneficial owner is that it includes natural persons on whose behalf a transaction is being conducted, even where that person does not have actual or legal ownership or control over the customer. This element of the FATF definition of beneficial owner focuses on individuals that are central to a transaction being conducted even where the transaction has been deliberately structured to avoid control or ownership of the customer but to retain the benefit of the transaction.

To get to the heart of beneficial ownership information, the FATF requires each jurisdiction to collect and maintain the following information pertaining to legal persons:

- the company name,
- proof of incorporation,
- legal form and status,
- the address of the registered office,
- basic regulating powers (for example, memorandum and articles of association),
- a list of directors.¹²

In addition to the above, companies should be required to obtain and record basic information which should include the following:

- · a register of their shareholders or members, and
- the number of shares held by each shareholder and categories of shares (including the nature of the associated voting rights).

The beneficial ownership information of legal persons should be determined as follows:

Step 1

- a) The identity of the natural persons (if any, as ownership interests can be so diversified that there are no natural persons, whether acting alone or together, who exercise control of the legal person through ownership) who ultimately have a controlling ownership interest in a legal person, and
- b) to the extent that there is doubt as to whether the persons with the controlling ownership interest are the beneficial owners, or where no natural person exerts control through ownership interests, the identity of the natural persons (if any) exercising control of the legal person through other means.

Step 2

Where no natural person is identified under (a) or (b) above, financial institutions should identify and take reasonable measures to verify the identity of the relevant natural person who holds the position of senior managing official.

FATF Recommendation 24 also requires countries to implement the following fundamental requirements to enhance the transparency of legal persons:

- a) Keep beneficial ownership information on all legal persons accurate and updated on a timely basis.
- b) Have sanctions for failing to comply with requirements for collecting and maintaining beneficial ownership information.
- c) Implement measures to overcome specific obstacles to the transparency of companies.

Countries must also take specific measures to prevent the misuse of other mechanisms that are frequently used to disguise ownership of companies, including bearer shares, bearer share warrants, nominee shares and nominee directors.

The FATF definition of beneficial owner also applies in the context of legal arrangements, meaning the natural person(s), at the end of the chain, who ultimately owns or controls the legal arrangement, including those persons who exercise ultimate effective control over the legal arrangement, and/or the natural person(s) on whose behalf a transaction is being conducted.

However, in this context, the specific characteristics of legal arrangements make it more complicated to identify the beneficial owner(s) in practice. For example, in a trust, the legal title and control of an asset are separated from the equitable interests in the asset. This means that different persons might own, benefit from, and control the trust, depending on the applicable trust law and the provisions of the document establishing the trust (for example, the trust deed). In some countries, trust law allows for the settlor and beneficiary (and sometimes even the trustee) to be the same person. Trust deeds also vary and may contain provisions that impact where ultimate control over the trust assets lies, including clauses under which the settlor reserves certain powers (such as the power to revoke the trust and have the trust assets returned). This may assist in determining the beneficial ownership of a trust and its related parties.

Under FATF Recommendation 25, "legal arrangements" means express trusts or other similar arrangements. Much of Recommendation 25 focuses on how to apply comprehensive AML/CFT due diligence measures to trusts.¹³

Trust law countries should require the trustees of any express trust governed under their law to obtain and hold adequate, accurate, and current beneficial ownership information regarding the trust. This information should be kept as accurate, current

and up-to-date as possible by updating it within a reasonable period following any change. In this context, beneficial ownership information includes:

- a) information on the identity of the settlor, trustee(s), protector (if any), beneficiary or class of beneficiaries, and any other natural person exercising ultimate effective control over the trust, and
- b) basic information on other regulated agents of, and service providers to the trust, including investment advisors or managers, accountants, and tax advisors.

Recommendation 25 places specific requirements on all countries, irrespective of whether the country recognises trust law. In particular, all countries should implement the following measures:

- Require that trustees disclose their status to financial institutions and designated non-financial businesses and professions (DNFBPs) when forming a business relationship or carrying out an occasional transaction above the threshold. The trustee needs to actively make such disclosure (and not only upon the request of a competent authority). Trustees should not be prevented from doing this even if, for example, the terms of the trust deed require them to conceal their status. The only source of information on the trustee often available comes from the business relationship of a financial institution/ DNFBP and the trustee.
- b) Require professional trustees to maintain the information they hold for at least five years after their involvement with the trust ceases. Countries are also encouraged to extend this requirement to non-professional trustees and the other relevant authorities, persons and entities.

3.2 Wire Transfers

In relation to wire transfers, the circumstances covered by the Interpretive Note to FATF Recommendation 16 include wire transfers above USD/EUR 1000. This means that financial institutions should undertake customer due diligence (CDD) when carrying out cross-border wire transfers above USD/EUR 1000, including the requirement to identify and take reasonable measures to verify the identity of the beneficial owner of the originator or beneficiary, as outlined above. In addition, Recommendation 16 also requires financial institutions to take further measures such as collecting certain originator information and ensuring that this information accompanies a wire transfer.

4. EU's Fourth EU Anti-Money Laundering Directive (4AMLD)

On June 5, new EU's anti-money laundering (AML) rules, namely the Fourth EU Anti-Money Laundering Directive (4AMLD) and a new Regulation on the information accompanying transfer of funds were published in the Official Journal of the European Union. EU Member States will have until June 26, 2017 to transpose the requirements of the 4AMLD into national law.

A key feature of the new Directive is the introduction of a central UBO-register, a public register which identifies the ultimate beneficial owners (UBOs) of companies and trusts. The AMLD defines a UBO is any natural person(s) who ultimately owns or controls the customer (i.e. a corporate entity or other legal entity) and/or the natural person(s) on whose behalf a transaction or activity is being conducted. In respect of corporate entities this definition of a UBO is further specified as a natural person who ultimately holds a shareholding, controlling interest or ownership interest over 25% of the shares or voting rights in a corporate entity. If no UBO can be identified, the natural person(s) holding the position of senior managing official are in principle registered as UBO. At least the following information on the UBO would be included in the UBO-register:

- name;
- month and year of birth;
- nationality;
- country of residence; and
- nature and extent of the beneficial interest held.

The UBO-register will be accessible to:

- competent authorities and EU Financial Intelligence Units, without any restriction;
- obliged entities (such as banks, notaries and lawyers conducting their "customer due diligence" duties); and
- a member of the public that can demonstrate a "legitimate interest" (i.e. in respect of money laundering, terrorist financing and the associated predicate offenses such as corruption, tax crimes and fraud).

EU member states are authorized to deny access to obliged entities, or the public, part or all of the UBO-information in exceptional circumstances, on a case-by-case basis, e.g. when there is a high risk of fraud, kidnapping, blackmailing, etc.

In case of trusts, a separate arrangement will apply, whereby the EU member states must provide for a central register for UBOs of trusts governed by their law that will, in principle, only be accessible to competent authorities, EU Financial Intelligence Units and obliged entities that are conducting customer due diligence, but not to the public. EU member states must include UBO-information in this register in respect of trusts and comparable legal arrangements that are governed under the law of this respective EU member state if the trust generates tax consequences. However, the meaning of the term "tax consequences" has not been clarified yet.

The information included in this trust register should include the identity of:

- the settlor;
- trustee(s);
- protector(s) (if any);
- beneficiaries or class of beneficiaries; and
- any other natural person exercising effective control over the trust.

Other elements of the 4AMLD include, for example, a reshaping of the risk-based approach for customer due diligence concerning the obligation of obliged entities to check the identity of their customers and to report suspicious transactions; new and increased administrative sanctions for serious, repeated or systematic breaches of the 4AMLD's requirements; and, new requirements for traceability of fund transfers, including information on the payee (and not only the payer).

5. The UK's The Register of People with Significant Control Regulations 2016

New UK laws, which came into force on April 6th, impose an obligation publicly to disclose the ultimate beneficial owners or controllers who have "significant control" over UK incorporated companies.

The UK is the first country in the European Union ("EU") to implement this new disclosure regime through the Small Business, Enterprise and Employment Act 2015, which amends the Companies Act 2006. However, under the Fourth EU Money Laundering Directive, all member states in the EU are required to introduce an Ultimate Beneficial Owner register by June 26, 2017 to record "adequate, accurate and current" information about a company's beneficial owners.

What do the new UK laws mean for companies incorporated outside the UK which have a subsidiary in the UK?

From April 6th this year, the law requires most UK companies, Societates Europaeae (public companies registered in accordance with European law), ("SE's"), and Limited Liability Partnerships ("LLP's") to keep a register of persons or entities that have significant control over them. Companies subject to chapter 5 of the Disclosure and Transparency Rules including those listed on the main market of the London Stock Exchange or AIM will not be required to do so, on the basis that they are already required to disclose significant shareholdings. Furthermore, from June 30th 2016, companies must deliver this information to UK Companies House when filing their Confirmation Statements (the new equivalent to Annual Returns). Persons of significant control ("PSC's") are defined as an individual who meets one or more of the following conditions in relation to the UK company, SE or LLP:

- directly or indirectly holding more than 25% of the shares;
- directly or indirectly holding more than 25% of the voting rights;
- directly or indirectly holding the right to appoint or remove a majority of directors;
- otherwise having the right to exercise, or actually exercising, significant influence or control; or
- having the right to exercise, or actually exercising, significant influence or control over the activities of a trust or firm which is not a legal entity, but would itself satisfy any of the first four conditions if it were an individual.

Although a PSC is by definition an individual, legal entities can own and control companies, and must be put on the PSC register if they are "relevant and registrable".

"Relevant" is defined as fulfilling any one of the five PSC criteria above plus one or more direct criteria described as follows:

- it keeps its own PSC register; or
- it is subject to Chapter 5 of the Financial Conduct Authority's Disclosure and Transparency Rules (DTRs); or
- it has voting shares admitted to trading on a regulated market in the UK or European Economic Area (other than the UK) or on specified markets in Switzerland, the USA, Japan and Israel.

And an entity is "registrable" if it is the first relevant legal entity in your company's ownership chain. Venture capital funds or other investors may be "relevant and registrable" and therefore trigger the PSC disclosure requirements to identify their beneficial owners.

Relevant UK Companies, SE's or LLP's must take reasonable steps to identify if they have a PSC. The legal guidance suggests that the company also record the steps it has taken to make that identification: doubtless with a view to producing this evidence if a regulator subsequently comes calling.

6. FINCEN's Final Rule on Beneficial Ownership Requirements

On May 6, 2016, the U.S. Department of the Treasury's Financial Crimes Enforcement Network (FinCEN) released a final rule (the "Final Rule") requiring banks, brokers or dealers in securities, mutual funds, futures commission merchants, and introducing brokers in commodities (collectively, "covered financial institutions") to obtain and record beneficial ownership information as part of their anti-money laundering (AML) obligations under the Bank Secrecy Act (BSA). The Final Rule will become effective 60 days after its publication in the Federal Register. However, covered financial institutions will have a two year implementation period to comply with the new requirements.

The Final Rule requires covered financial institutions prospectively to identify and verify the identity of beneficial owner(s) of each legal entity customer when a new account is opened. Beneficial owners are persons meeting either the "ownership prong" or the "control prong" of the definition of "beneficial owner." The Final Rule does not apply to existing customers or retrospectively. However, the Final Rule is applicable if pre-existing customers that open new accounts after promulgation of the rule and this means covered financial institutions must obtain beneficial ownership for all new accounts.

The Final Rule only applies in relation to beneficial ownership information for "legal entity customers," which are defined to include any corporation, limited liability company, or other entity that is created by the filing of a public document with a Secretary of State or similar office, a general partnership, and any similar entity formed under the laws of a foreign jurisdiction that opens an account.

FinCEN clarified that this definition does not include sole proprietorships or unincorporated associations because neither is an entity with legal existence separate from the associated individual or individuals. The definition also does not include natural persons opening an account on their own behalf. Nor does it include trusts (other than statutory trusts created by a filing with a Secretary of State or similar office). With regard to so-called "intermediated account relationships," (such as, for example, when a broker-dealer opens an account with a mutual fund to engage in transactions on behalf of its customers) FinCEN explained that in cases where existing guidance provides that a financial institution shall treat an intermediary (and not the intermediary's customers) as its customer for purposes of the Customer Identification Program (CIP) rules, the financial institution should likewise treat only the intermediary as its customer for purposes of the new beneficial ownership requirement.

The Final Rule defines beneficial owners as those individuals meeting either the ownership prong or the control prong. Beneficial owners identified under the ownership prong are defined as "[e]ach individual, if any, who, directly or indirectly, through any contract, arrangement, understanding, relationship or otherwise, owns 25 percent or more of the equity interests of a legal entity customer." FinCEN stated that it intended the term "equity interest" to be "broadly applicable" and declined to further clarify the definition beyond describing it as "an ownership interest in a business entity." FinCEN confirmed that the phrase "directly or indirectly" meant that the covered financial institution's customer must identify its ultimate beneficial owner[s] and not their nominees or "straw men." Covered financial institutions may establish a threshold below 25 percent based on their own assessment of risk in appropriate circumstances.

Special circumstances involving trusts and entities excluded from the definition of "legal entity customer". The Final Rule specifies that if a trust owns directly or indirectly, through any contract, arrangement, understanding, relationship or otherwise, 25 percent or more of the equity interests of a legal entity customer, the beneficial owner for purposes of the ownership prong shall mean the trustee. The Final Rule also specifies that where one of the entities holding 25 percent or more of the equity interests of a legal entity customer is itself excluded from the definition of a "legal entity customer," no individual need be identified under the control prong.

Beneficial owners identified under the control prong are defined as "[a] single individual with significant responsibility to control, manage, or direct a legal entity customer," including:

An executive officer or senior manager (e.g., a Chief Executive Officer, Chief Financial Officer, Chief Operating Officer, Managing Member, General Partner, President, Vice President, or Treasurer); or any other individual who regularly performs similar functions.

FinCEN further stated that "the control prong provides for a straightforward test: the legal entity customer must provide identifying information for one person with significant managerial control."

It should be noted that there could be variations on the number of beneficial owners identified under the ownership and control prongs. FinCEN recognized that, under the ownership prong, depending on the factual circumstances, as few as zero and as many as four individuals may need to be identified. All entities, however, would be required to identify one beneficial owner under the control prong. It is also possible that in some circumstances the same person or persons might be identified under both the ownership and the control prongs. FinCEN further noted that covered financial institutions had the discretion to identify additional beneficial owners as appropriate based on risk.

FinCEN noted that it would be impracticable for covered financial institutions to monitor the equity interests and management team of legal entity customers on an ongoing basis and continually update this information. It "emphasize[d] that the obligation for identification and verification should be considered a snapshot at the time that a new account is opened, not a continuous obligation." However, FinCEN does expect covered financial institutions to update this information episodically based on risk, generally triggered by a covered financial institution learning through its normal monitoring of facts indicative of a change in beneficial ownership relevant to assessing the risk posed by the customer. This presents a second way that a pre-existing customer of a covered financial institution might have to provide beneficial ownership information, in this case even if no new account has been opened. This obligation to update arises from the general CDD obligation FinCEN codifies in the new rule that covered financial institutions must update all customer information on a risk basis, i.e., when customer information changes in a way that may affect its risk profile.

In addition to the Final Rule, the U.S. governmental authorities also announced a series of other related initiatives that target the key points of access to the international financial system. That is when companies open accounts at financial institutions, when companies are formed or when company ownership is transferred, and when foreignowned U.S. companies seek to evade their taxes.

First, the U.S. governmental authorities reported that they have sent a legislative proposal to Congress that would require all corporations formed in the U.S. to report their beneficial ownership information at the time of formation. Such a national requirement relating to corporate formation has long been resisted by states that are popular places of incorporation, such as Delaware. The legislation also reportedly would "clarify" the scope of FinCEN's authority to gather information using geographic targeting orders, in particular with respect to the collection of wire transfer information.

Second, the Internal Revenue Service issued a proposed rule to require foreignowned single member limited liability companies and other so-called "disregarded entities" to obtain a tax identification number from the IRS, thereby requiring these entities to report ownership and transaction information.

Third, U.S. authorities proposed legislation that would enhance the Department of Justice's authority in money laundering and anti-corruption cases. The administration's proposal would, among other things, expand foreign money laundering predicates to include violations of foreign law that would be money laundering predicates if committed in the U.S. It would also authorize the use of administrative subpoenas for money laundering investigations and enhance prosecutors' ability to access foreign bank or business records by service branches located in the U.S.

Finally, the administration urged Congress to amend financial reporting requirements to establish full reciprocity with U.S. Foreign Account Tax Compliance Act (FATCA) partners and to approve eight tax treaties that are currently pending with the Senate.

The legislative proposal with respect to beneficial ownership in particular may also help to satisfy FATF as it conducts its review of U.S. AML practices in ways that the new Final Rule does not, because it speaks specifically to FATF's longstanding concern that beneficial ownership information be obtained at the time of company formation.

7. Requirements for Identifying Ultimate Beneficial Owners in Selected SEACEN Member Economies

a. Malaysia

In Malaysia, the Anti-Money Laundering, Anti-Terrorism Financing and Proceeds of Unlawful Activities Act 2001 requires financial institutions to conduct customer due diligence on beneficial owners. There are no requirements for a public registry.

Under the AML Guidelines, legal arrangement means an express trust or other similar legal arrangement. Legal person means any entity other than a natural person that can establish a permanent customer relationship with a reporting institution or otherwise own property. This can include companies, body corporates, foundations, partnerships, or associations and other similar entities.

Beneficial owner means the natural person(s) who ultimately owns or controls a customer and/or the natural person on whose behalf a transaction is being conducted. It also includes that person who exercises ultimate effective control over a legal person or arrangement.

Reference to "ultimately owns or controls" and "ultimate effective control" refer to situations in which ownership/control is exercised through a chain of ownership or by means of control other than direct control.

b. China

China is a member of FATF as well as the Asia/Pacific Group on Money Laundering and the Eurasian Group on Combating Money Laundering. Chinese AML regulations establish a comprehensive system that is broadly comparable with EU rules. The main activities of money laundering are criminalized in China, with sanctions including imprisonment, dependent on degree of misconduct, confiscation, and compensation. There are strict rules relating to customer due diligence, including the identification of beneficial ownership of assets, and financial institutions are also required to report suspicious activity of customers as well as large value transactions. Also, Chinese AML law requires financial institutions to establish internal AML control programs, designate specialist AML units, establish a customer identification program, and provide appropriate staff training.

c. South Korea

In South Korea, the Trust Act applies to personal trusts and under Article 33 obliges a trustee of a personal trust to keep books and clarify the management affairs of the accounts pertaining to each trust and prepare a list of inventory at least once a year. Personal trusts are required to file tax returns but personal information contained therein is limited to the trustee. According the 2009 Mutual Evaluation Report, Korean officials state that "there are few personal trusts in Korea." Korea does not have a central trust registry for personal trusts and consequently, it is difficult to know the full dimensions personal trust activities. Trust companies may be banks or other financial institutions licensed under the Trust Business Act to engage in trust business.

When entering in trust contract, trust companies are required to include information as below in the contract (Article 37-4 of the Trust Business Act and the Article 18 of the Presidential Enforcement Decree of the Trust Business Act).

- Names of truster, beneficiary and trust company.
- Information on designation and changes of beneficiary.
- Type, amount and price of property in trust.
- Purpose of trust.
- Information that shows trusted properties of securities, stock certificate and bond certificate.
- Type of trusted properties that would be granted to beneficiary and methods and timing of delivery.

Law enforcement agencies have powers to obtain information on both personal and business trusts, including the "truster" (i.e. settlor), and to some extent beneficiaries,

in business trusts, in criminal investigations. Given the absence of a central registry for personal trusts, the information is limited to what is required under Article 33 of the Trust Act (as noted previously). And, while personal trusts are obliged to file tax returns, given the strict Korean laws on tax secrecy, that information is not available to other agencies except for a criminal investigation in relation to tax matters or pursuant to a court order.

Trust companies are regulated by the Financial Supervisory Service (FSS) which has a full range of administrative powers of access to information held by trust companies (see earlier discussion in Section 3.10 of this report). The Financial Services Commission (FSC) which oversees the FSS, may supervise the business of trust companies, and issue an order required therefore (Article 24-2 of the Trust Business Act). And the FSC may, where it deems necessary, have a trust company report on the status of business and assets or submit documents or accounting books (Article 25 of the Trust Business Act). In addition, the FSC may entrust the FSS with supervision and have officials of the FSS inspect the business and assets of trust companies. The FSS may request trust companies to submit documents and ask an interested party to attend and state his opinion (Article 26 of the Trust Business Act).

Law enforcement authorities have the authority to obtain or access available information on beneficial ownership on trusts in these trust companies only in case of criminal investigations or pursuant to a court order.

There are no requirements for financial institutions to obtain information on the intended nature and purpose of the business relationship, identify beneficial ownership beyond the direct beneficiary and to conduct ongoing due diligence on all customers, and to subject higher risk customers/transactions to enhanced due diligence. Thus, while law enforcement agencies and supervisory authorities have access to information, little exists which relates to beneficial ownership and control of legal arrangements.

d. Hong Kong

Based on Hong Kong's Guideline on Anti-Money Laundering and Counter-Terrorist Financing, where there is a beneficial owner in relation to the customer, financial institutions are required to identify and take reasonable measures to verify the beneficial owner's identity. In addition, in the case of a legal person or trust, the financial institution is to take measures to enable that it understand the ownership and control structure of the legal person or trust.

A beneficial owner is normally an individual who ultimately owns or controls the customer or on whose behalf a transaction or activity is being conducted. In respect of a customer who is an individual not acting in an official capacity on behalf of a legal person or trust, the customer himself is normally the beneficial owner. There is no requirement on FIs to make proactive searches for beneficial owners in such a case, but

they should make appropriate enquiries where there are indications that the customer is not acting on his own behalf.

The obligation to verify the identity of a beneficial owner is for the FI to take reasonable measures, based on its assessment of the ML/TF risks, so that it is satisfied that it knows who the beneficial owner is. In determining what constitutes reasonable measures to verify the identity of a beneficial owner and reasonable measures to understand the ownership and control structure of a legal person or trust, the FI should consider and give due regard to the ML/TF risks posed by a particular customer and a particular business relationship.

FIs should identify all beneficial owners of a customer. In relation to verification of beneficial owners' identities, the AMLO generally requires FIs to take reasonable measures to verify the identity of any beneficial owners owning or controlling 25% or more of the voting rights or shares, etc. of a corporation, partnership or trust. In "high risk" situations, the threshold for the requirement is 10%.

For legal persons, the principal requirement is to look behind the customer to identify those who have ultimate control or ultimate beneficial ownership over the business and the customer's assets. FIs would normally pay particular attention to persons who exercise ultimate control over the management of the customer.

In deciding who the beneficial owner is in relation to a legal person where the customer is not a natural person, the FI's objective is to know who has ownership or control over the legal person which relates to the relationship, or who constitutes the controlling mind and management of any legal entity involved in the funds. Verifying the identity of the beneficial owner(s) should be carried out using reasonable measures based on a risk-based approach.

Where the owner is another legal person or trust, the objective is to undertake reasonable measures to look behind that legal person or trust and to verify the identity of beneficial owners. What constitutes control for this purpose will depend on the nature of the institution, and may vest in those who are mandated to manage funds, accounts or investments without requiring further authorisation.

For a customer other than a natural person, FIs should ensure that they fully understand the customer's legal form, structure and ownership, and should additionally obtain information on the nature of its business, and the reasons for seeking the product or service unless the reasons are obvious.

An FI should obtain and verify the following information in relation to a customer which is a corporation:

- (a) full name;
- (b) date and place of incorporation;

- (c) registration or incorporation number; and
- (d) registered office address in the place of incorporation.

If the business address of the customer is different from the registered office address in (d) above, the FI should obtain information on the business address and verify as far as practicable.

In the course of verifying the customer's information for a corporation, an FI should also obtain the following information:

- a) a copy of the certificate of incorporation and business registration (where applicable);
- b) a copy of the company's memorandum and articles of association which evidence the powers that regulate and bind the company; and
- c) details of the ownership and structure control of the company, e.g. an ownership chart.

Beneficial owner in relation to a corporation is defined as an individual who:

- a) owns or controls, directly or indirectly, including through a trust or bearer share holding, not less than 10% of the issued share capital of the corporation;
- b) is, directly or indirectly, entitled to exercise or control the exercise of not less than 10% of the voting rights at general meetings of the corporation; or
- c) exercises ultimate control over the management of the corporation; or (ii) if the corporation is acting on behalf of another person, means the other person.

e. Singapore

Based on the Monetary Authority of Singapore Notice 626 issued 24 April 2015 to banks under MAS Act, CAP. 186 Prevention of Money Laundering and Countering The Financing of Terrorism – "beneficial owner," in relation to a customer of a bank, means the natural person who ultimately owns or controls the customer or the natural person on whose behalf a transaction is conducted or business relations are established, and includes any person who exercises ultimate effective control over a legal person or legal arrangement.

For this purpose "legal arrangement" means a trust or other similar arrangement and "legal person" means an entity other than a natural person that can establish a permanent customer relationship with a financial institution or otherwise own property.

For AML customer due diligence purposes a bank shall inquire if there exists any beneficial owner in relation to a customer. In the case there is one or more beneficial owner in relation to a customer, the bank shall identify the beneficial owners and take reasonable measures to verify the identities of the beneficial owners using the relevant information or data obtained from reliable, independent sources. Reasonable measures means appropriate measures which are commensurate with the money laundering or terrorism financing risks.

The bank shall:

a) for customers that are legal persons:

- identify the natural persons (whether acting alone or together) who ultimately own the legal person;
- ii) to the extent that there is doubt under subparagraph (i) as to whether the natural persons who ultimately own the legal person are the beneficial owners or where no natural persons ultimately own the legal person, identify the natural persons (if any) who ultimately control the legal person or have ultimate effective control of the legal person; and
- iii) where no natural persons are identified under subparagraph (i) or (ii), identify the natural persons having executive authority in the legal person, or in equivalent or similar positions;

b) for customers that are legal arrangements:

- i) for trusts, identify the settlors, the trustees, the protector (if any), the beneficiaries (including every beneficiary that falls within a designated characteristic or class), and any natural person exercising ultimate ownership, ultimate control or ultimate effective control over the trust (including through a chain of control or ownership); and
- ii) for other types of legal arrangements, identify persons in equivalent or similar positions, as those described under subparagraph (i).

Where the customer is not a natural person, the bank shall understand the nature of the customer's business and its ownership and control structure.

8. Recommendations

Relevant national authorities should review their AML requirements for legal persons and legal arrangements and identification of beneficial ownership, and consider establishing comprehensive public registries for ultimate beneficial ownership information.

The following steps may strengthen AML/CFT requirements and allow law enforcement to better track illicit use of financial services:

- 1) Set up a public registry for beneficial ownership information
- 2) Financial institutions identify and verify the identity of beneficial ownership information
- 3) Financial institutions establish procedures for making and maintaining a record of all information obtained under the procedures implementing the identification and verification requirements of beneficial ownership information. At a minimum the record must include the following:
 - i) any identifying information obtained by the financial institution, and

ii) a description of any document relied on (noting the type, any identification number, place of issuance and, if any, date of issuance and expiration), of any non- documentary methods and the results of any measures undertaken, and of the resolution of each substantive discrepancy.

Further, financial institutions have in place adequate custom due diligence measures including:

- 1) customer identification and verification,
- 2) beneficial ownership identification and verification,
- 3) understanding the nature and purpose of customer relationships to develop a customer risk profile, and
- 4) ongoing monitoring for reporting suspicious transactions, and, on a risk-basis, maintaining and updating customer information.

9. Conclusions

The recent publication of the Panama Papers has renewed world attention on tax havens, offshore companies and beneficial ownership. The Panama Papers revelations prompted renewed calls from the United States, the United Kingdom and others to make beneficial ownership information public, especially in international financial centres and so-called secrecy jurisdictions.

Corporate vehicle such as companies, trusts, foundations, partnerships, and other types of legal persons and arrangements provides useful commercial purposes. Despite their usefulness, corporate vehicles have been misused for illicit purposes, including money laundering (ML), bribery and corruption, insider dealings, tax fraud, terrorist financing (TF), and other illegal activities.

The lack of beneficial ownership requirements and anonymity inhibits law enforcement. For criminals trying to circumvent anti-money laundering (AML) and counter-terrorist financing (CFT) measures, corporate vehicles are an attractive way to disguise and convert the proceeds of crime before introducing them into the financial system. Money laundering and other financial crimes can expose a country to financial instability and macroeconomic risk by accelerating the growth of domestic credit and create market volatility that threatens sustainable economic growth and price stability.

An effective domestic AML/CFT regime requires the existence of certain structures, such as a robust regulatory framework, the rule of law, government effectiveness, a culture of compliance, and an effective judicial system. While most regional economies have made substantial progress in the implementation of global AML standards, some have room for improvement. Some economies do not have fundamental structural elements in place, while others have significant weaknesses or shortcomings that impair the implementation of an effective AML/CFT framework. In

some cases, policies on taxes, currency controls and trade restrictions serve as incentives for individuals to circumvent formal financial channels and drive the demand for money laundering.

Asian financial systems continue to increase in complexity over time as they develop. From this perspective, it is imperative that regulatory regimes, including AML/CFT oversight, need to be sufficiently broad and comprehensive to cover the entire spectrum of the financial system. Regulatory regimes need to be integrated so that issues of market transparency and interconnectedness of financial firms are covered. Finally, authorities need to continuously upgrade technical and analytical capacity to effectively regulate and supervise financial institutions and markets to promote financial innovation and stability.

Endnotes

- 1. Read more about the Panama Papers at https://panamapapers.icij.org/
- 2. http://www.scmp.com/news/hong-kong/article/1943463/chinese-dominate-list-people-and-firms-hiding-money-tax-havens-panama
- 3. http://atimes.com/2016/04/south-korean-links-to-panama-papers-spread/
- The Financial Action Task Force (FATF) is an inter-governmental body established in 1989 by the Ministers of its Member jurisdictions. The objectives of the FATF are to set standards and promote effective implementation of legal, regulatory and operational measures for combating money laundering, terrorist financing and other related threats to the integrity of the international financial system. The FATF is therefore a "policy-making body" which works to generate the necessary political will to bring about national legislative and regulatory reforms in these areas. First issued in 1990, the FATF Recommendations were revised in 1996, 2001, 2003 and most recently in 2012 to ensure that they remain up to date and relevant, and they are intended to be of universal application. In 2001, the development of standards in the fight against terrorist financing was added to the mission of the FATF. In October 2001 the FATF issued the Eight Special Recommendations to deal with the issue of terrorist financing. The continued evolution of money laundering techniques led the FATF to revise the FATF standards comprehensively in June 2003. In October 2004 the FATF published a Ninth Special Recommendations, further strengthening the agreed international standards for combating money laundering and terrorist financing - the 40+9 Recommendations. In February 2012, the FATF completed a thorough review of its standards and published the revised FATF Recommendations, This revision is intended to strengthen global safeguards and further protect the integrity of the financial system by providing governments with stronger tools to take action against financial crime. They have been expanded to deal with new threats such as the financing of proliferation of weapons of mass destruction, and to be clearer on transparency and tougher on corruption. The 9 Special Recommendations on terrorist financing have been fully integrated with the measures against money laundering. This has resulted in a stronger and clearer set of standards.
- 5. Federal Reserve Bank of San Francisco. "Asia Focus: Anti-Money Laundering Reforms and Trends in Asia," by Birgit Baxendale. July 2007.
- 6. For definition of financial stability see Schinasi, Garry J. "Defining Financial Stability", International Capital Markets Department, IMF Working Paper, October 2004, "Financial stability may be defined a state in which the financial system, i.e. the key financial markets and the financial institutional system is resistant to economic shocks to ensure the smooth functions such as the

intermediation of financial funds, management of risks and the arrangement of payments. Financial instability may be caused by a range of different factors such as rapid liberalisation of the financial sector, inadequate economic policy, non-credible exchange rate mechanism, inefficient resource allocation, weak supervision, insufficient accounting and audit regulation, poor market discipline."

- 7. Furusawa, Mitsuhiro "Building Financial Sector Stability to Ensure Asia's Continued Success" Opening remarks for Conference on Banking Supervision and Regulation, September 14, 2015
- 8. Chairman Ben S. Bernanke, At the Federal Reserve Bank of San Francisco's Conference on Asia and the Global Financial Crisis, Santa Barbara, California, October 19, 2009
- 9. Chairman Ben S. Bernanke, At the Federal Reserve Bank of San Francisco's Conference on Asia and the Global Financial Crisis, Santa Barbara, California, October 19, 2009
- 10. Furusawa, Mitsuhiro "Building Financial Sector Stability to Ensure Asia's Continued Success" Opening remarks for Conference on Banking Supervision and Regulation, September 14, 2015
- 11. See ADB's "Second Review of Enhancing the Asian Development Bank's Role in Combatting Money Laundering and the Financing of Terrorism," November 2012
- 12. FATF Interpretive Note to Recommendation 24
- 13. Trusts enable property to be managed by one person on behalf of another, and are a traditional feature of common law. They also exist in some civil law countries or are managed by entities in these countries, and have a wide range of legitimate uses (for example, the protection of beneficiaries, the creation of investment vehicles and pension funds, and the management of gifts, bequests or charitable donations).

The Risk Sharing Philosophy of Islamic Finance Obiyathulla Ismath Bacha and Daud Vicary Abdullah

1. The Risk Sharing Philosophy of Islamic Finance.

Economists typically divide the overall macro economy into two sectors, the real sector and financial sector. The real sector represents the productive capacity of the economy and produces the goods and services that accounts for a nation's GDP (Gross Domestic Product). The financial sector on the other hand serves to provide the financing needed by the real sector to produce the goods and services. Islamic economics requires that all financial returns be anchored in real sector returns. For an economy to function optimally, both the real and financial sectors need to function optimally. Uneven development or neglect of either sector could cause imbalances in a nation's growth trajectory. Yet, as any observer would notice, there appears to be a serious disconnect between the two. First, average returns in the real sector have always been in the double digits, even at troughs, but financial sector returns do not reflect that. Average returns in the financial sector have been in the low single digits and gotten lower over the last several years. Second, the real sector, with science and technology enhancing productivity and growth, is relatively stable and does not go through fits of upheaval seen in the financial sector. While the innovation in the real sector has made it more stable, innovations in the financial sector appear, if anything, to have enhanced its volatility. Over the last four decades, the world has witnessed a recurring series of global financial crises, all emanating from imbalances in the financial sector. The following is a list. i) The Japanese asset price bubble and its bursting (1986 onwards), (ii) Black Monday- DJIA crashes by a about 20% (1987), (iii) The Savings & Loan crisis (late 1980's - 1990's), (iv) The Mexican peso crisis (1994), (v) The East Asian Financial crisis (1997), (vi) The Russian ruble crisis and debt moratorium (1998) leading on to the collapse of Long Term Capital Management (1998), (vii) the Dot com bubble and burst (2002) causing a 75% fall in Nasdaq. (viii) The US Sub-prime mortgage crisis (2007/2008) resulting in the global recession (2008 to present). In all these cases, a financial sector fallout goes on to affect the real sector. It is seldom the other way round. What is it about the financial sector that makes it so vulnerable?

In a now famous study, Rogoff and Reinhart (2010) show that every single financial crisis in the last hundred years has been caused by excessive debt. Debt, according to their study, appears to be at the root of every financial/banking crises. That, governments of not just poor countries but the biggest and mightiest economic super powers have been brought to their knees, shows how risky an overreliance on debt can be. The huge social costs and negative externalities of debt induced crises is now abundantly clear. Notwithstanding the huge costs that societies have had to pay for their excesses with debt, the global addiction to debt appears unabated. In a recent paper, Adair Turner and Susan Lund argue that since the 2008 crisis, global debt has grown by \$57 trillion, a growth rate exceeding GDP growth. Government

debt alone has increased by \$25 trillion with most of it in developed countries. The debt to GDP ratio is higher today than it was on the eve of the crisis in 2007. Worryingly, even in the developing world the buildup in debt is at record levels. This is clearly untenable. In the absence of flexibility on the fiscal side, governments have had to rely on unprecedented monetary easing to avoid a downward tailspin. While we may have avoided the abyss, we have little to show in terms of growth. Slow growth and minimal returns, we are told, may be the new normal.

2. Why the preference for debt?

Funding is typically undertaken through debt or equity. Governments do not and cannot use the equity option as they cannot sell ownership as private firms can. Private entities on the other hand have a choice of using either debt or equity to fund their investments. Yet, the global debt problem is not just a public sector problem. The private sector too is heavily indebted, often even more so than governments. There are two reasons why debt is preferred over equity, cost and dilution.

The biggest advantage of debt is that it leads to no dilution in ownership and therefore of future earnings. Firms with concentrated ownership, such as family owned firms, tend to have higher financial leverage for precisely this reason. Equity being perpetual, leads to dilution in ownership that is also perpetual. By contrast, debt is terminal. The second advantage of debt over equity is its lower cost. It is cheaper mainly because debtholders do not take on the underlying business risk. All business risk is shifted on to the equity holders. Thus, the initial lower cost of debt may not really be an advantage. However, what gives debt its cost advantage is the tax system, which by providing a tax shelter makes the post-tax cost much cheaper. A carryover of history, the tax code of most countries provides a tax shelter to interest expense but not to other expenses or for dividends paid for equity. This gives rise to tax arbitrage, which is the taking on of debt merely to take advantage of the tax shelter. While such use of debt can reduce the overall cost of capital and make a project with a given future cash flow, more valuable, what is often ignored is the increase in risk. A debt financed project is riskier post financing as equity holders who are the owners now face both the project's risk and the financial risk arising from the leverage. From an overall firm viewpoint, the leveraged firm is always riskier than its unleveraged counterpart in the same line of business.

From a financier's viewpoint, there may also be a preference to provide funding under debt rather than equity. This has to do with the several potential benefits that could accrue. First, he does not have to worry about adverse selection or information asymmetries. Second, he does not have to share in the risk of the underlying business. He is 'assured' of a fixed return regardless of the asset's performance. Third, though he does not take any of the business risk, he still has a claim on the assets, should anything go wrong. Finally, unlike equity which is residual in claim and perpetual in time, debt is fixed in claim and time.

With economies full of implicit and explicit guarantees and the incentives for debt from both the demand and supply side, there is an obvious tendency for a build-up of debt. This can veer the economy towards excessive leverage and serious imbalances. Rational economic agents driven by their own profit maximization goals, behave in ways that may be rational individually but lead to irrational outcomes collectively. Rational behaviour leading to an irrational collective outcome is the key lesson that has come out of recent financial crises, in particular the US subprime led crisis of 2007-8. The other lesson being that excessive leveraging indeed has a huge social cost.

3. Can we have growth without debt?

The world now appears to have worked itself into a corner. Further funding with debt does not seem possible, yet the world needs growth to fund development and feed a growing population. Ironically, the compounding nature of interest based debt, requires growth merely to service the debt. As a result, indebted countries come under intense pressure to fully exploit their resources often with ruinous results on their environment.

What the world needs is growth without leverage (debt). For this, we may need new thinking, outside the realm of conventional economics. And this may be where, the risk sharing contracts of Islamic finance can help. Islamic finance which is based on the shariah, abhors interest based debt financing. Thus, the only "debt" in Islamic finance is Qard ul ehsan, a charitable loan with no compulsion on repayment. While Islamic finance does allow for trade financing, Murabaha, which allows for a profit markup for latter payments relative to immediate payments, there is no room for interest based financial loans. What the shariah requires is for funding to be based on risk sharing. That is for the financier to partner the businessman and provide funding that shares in the profits and losses of the business. Accordingly, Islamic finance provides for risk sharing contracts that can be the basis of such financing. Two such contracts are mudarabah and musharakah. Between the two, Mudarabah would be more suited for banking as musharakah requires both parties to jointly invest and work/operate the business. In a Mudarabah, the financier provides funding in return for a share of the profit determined according to an agreed profit-sharing ratio (PSR). A typical PSR is 70/30 or 80/20, with the larger portion going to the businessman and smaller portion to the financier. The PSR would of course vary according to the riskiness of the project/business being funded. Thus, 60/40 or 50/50 PSRs or even higher are possible. The shariah requires that these PSR and associated conditions be transparent, fully disclosed, understood by both parties and honored.

The risk sharing feature is that, like equity dividends there is sharing and payments to the financier occur only if there is a profit. This is unlike debt where interest and principal repayments are compulsory regardless of business performance. The absence of such fixed obligation avoids the leverage and the increased riskiness that comes with debt financing.

4. Mudarabah Financing for Corporations and Government.

To see how Mudarabah could be used by a corporation, we work through a simple example. Assume that a listed IPP (Independent Power Producer) wants to undertake the construction and operation of a new power generation plant in a rapidly industrializing part of country. The total investment needed for the project is RM850 mil. Of these, the company has internal funds to provide RM250 million. The remainder RM600 million will have to be externally financed. An issuance of new equity for RM600 million would substantially dilute existing shareholders ownership and would not be welcome. Note that the resulting new shareholders will have a claim on all existing assets of the firm. Given this constraint, raising RM600 million of debt is usually be the only choice. However, this could seriously increase the firms leverage and make it susceptible to even small downturns in demand and revenue. In the event of trouble, the new debtholders would have a claim on all existing assets of the firm, not just the funded plant.

The IPP could instead choose to fund the shortfall by way of Mudarabah sukuk. The sukuk which is a financial instrument securitizes the financing and can be traded on secondary markets, just like bonds. Just as debt could be borrowed directly from a bank or by bond issuance, mudarabah funding could be raised either privately with banks or through sukuk issuance. The latter has the advantage of being more liquid. The instrument will be terminal and have fixed tenor. The appropriate tenor will depend on a number of factors, (i) the economic life of the project or underlying asset (ii) the cash flows /earnings generated (iii) the profit-sharing ratio (PSR) and (iv) the required return given the riskiness of the project. The tenor should be set such that for a given PSR and required return, the financier can expect to get back his initial investment and required profit return.

Figure 1 below shows a generic Mudarabah sukuk structure. The numbers show the chronology of events. In a typical sukuk structure, the SPV or Special Purpose Vehicle is key. Administered by an independent trustee, the SPV being bankruptcy remote acts to safeguard the interests of the sukukholder. Once the SPV is established, the Mudarabah agreement is used as the basis for the sukuk issuance. The proceeds of the sukuk may be kept in a custodial account under the SPV to be released as progress payment to appointed contractor of the plant.

Mudarabah Agreement (1)(1)(2)(3) Sukuk **Financier** Mudarib (4) \$\$\$\$ (sukukholders) SPV (obligor) (7) Annual Annual (Rab ul mal) **Payments** Payments (6) Use Asset (5) Progressive Payments **New Plant** Contractor

Figure 1: A Generic Mudarabah Sukuk structure.

On completion of construction, the IPP which is the obligor uses the plant and makes annual profit payments as per the agreed PSR. These payments made to the SPV are passed on to the sukukholder. This goes on until the maturity of the sukuk or end of the mudarabah agreement. On full settlement the SPV is dissolved, the mudarabah concluded and the IPP (mudarib) has full ownership of the asset. As in the case of equity and unlike a debt contract, the sukukholder or financier is not certain of his actual returns. While he would have an expectation for returns, actual returns may turn out to be higher or lower, depending on the project's actual performance. Notice that there is no leverage whatsoever to the IPP from mudarabah based funding. The financier shares in the fortunes of the business and receives a return from the specific asset he had funded. The shariah requires that the returns to investment be determined ex post based on actual outcomes and not fixed ex ante, independent of actual outcomes.

4. Funding Development Infrastructure with Mudarabah.

4.1 Revenue Generating Infrastructure.

From a funding viewpoint, development infrastructure can be divided into two broad categories, revenue generating and non-revenue generating. The former, the likes of highways, mass-transit systems, power generation plants, intra city train systems etc., have very long economic lives and stable cash flows. However, the initial costs are high and heavily front loaded. For developing countries undertaking such investments places huge strain on their budgets. Given low domestic capital accumulation, such projects are typically undertaken using foreign currency denominated debt. Aside from the foreign currency risk, such funding raises their debt-to-GDP ratio and quickly uses up their debt capacity/ceiling. Given the usual delays with projects in developing countries, the debt burden increases. These gets much worse if the foreign currency

of borrowing appreciates in value. Often the combined effect of delays and foreign currency appreciation results in such a massive debt burden that the project has to be nationalized, subsidized or bailed out in one way or other at huge expense to the government and nation.

While governments have no course to issuing equity, there is no reason why the above risk sharing mudarabah type funding cannot be used. Since the construction period is longer, the mudarabah sukuk could be issued at different times as outlay needed. The government, for all its inputs and indirect investments in projects also receives its portion of sukuk. Aside from enabling governments to avoid the leverage and currency exposure, there are a number of other benefits that could be reaped. Most revenue-generating infrastructure projects have very stable cash flows over extended periods. Being natural monopolies, there is little competition. As it stands, governments are not able to fully take advantage of the huge benefits surrounding such projects. For example, a stock exchange listing by way of an IPO (Initial Public offer) of the project would enable governments and sukukholders to gain the substantial upside from the revaluation that occurs at IPO. For example, the mudarabah sukuk could be designed to have a convertible feature that would enable it to be converted to listed stock at perhaps the end of year 10. So, during the period in between project completion and IPO, the sukukholders receive their returns as per the PSR. At end year 10, when the project and all its ancillary facilities have been fully developed, the sukukholders and the government receive shares in return for their sukuk. If the project had been executed well, the upside to the original investment would be substantial and the government being a party gets to participate. This upside is lost in the typical PPP (Public Private Partnerships) and BOT (Build, Operate, Transfer) arrangements. The private partner typically gains at the expense of the government.

4.2 Funding Non-Revenue Generating Infrastructure.

While several permutations of the above structure may be possible with revenue generating projects, the funding of non-revenue generating projects has far fewer alternatives. Non-revenue generating development infrastructure would include projects like rural roads, sewage systems, public schools, drainage/irrigation systems etc.. If risk sharing is to be used for such non-revenue generating projects, the sharing has to be based on some other benchmark or asset since the underlying project has no revenue and so no profits to be shared. Since the key in risk sharing is to link the need to pay with the ability to pay, a logical way would be to issue sukuk which will have returns linked to percentage GDP growth or linked to the price of the nation's main export commodity or a price index of its main commodity exports. Both GDP growth and price of a country's main export commodities are reflective of government tax income, particularly in countries with value added tax systems.

As the shariah requires all financial instruments/transactions to be linked to the real sector and have an underlying asset, a government intending to build a network of

rural roads to be funded with risk sharing instrument, could issue a sukuk Ijarah with returns linked to GDP growth. Ijarah is a lease based contract. The structure would essentially be a sale leaseback arrangement with annual lease payments dependent on GDP growth. Figure 2 below shows a typical structure. The government first transfers an asset, perhaps a one or two office blocks that it owns, as per their value relative to the amount to be raised. These assets are transferred to the SPV which then issues sukuk backed by the asset. The proceeds from the issuance is passed on to the government to undertake the project. Every year until the maturity of the sukuk, the government will make payments to the SPV for onward transmission to the sukuk holders. These payments will consist of two things.

Government (1) Transfer Asset (1) Issue Sukuk (1) Proceeds \$\$\$\$

(4) Annual payments

(4) Annual payments

Rural Project

Figure 2: A GDP linked Sukuk Structure.

A principal portion that amortizes the principal and a return portion linked to GDP growth. The return portion could be determined as:

 $R_t = \alpha + \beta (g - \alpha)$ $\alpha = \text{average GDP growth \% over 5 years}$ g = actual GDP growth % for period

In years when $g<\alpha$, the coefficient β could be set to zero. What is happening in this structure is that the repayment amount changes according to GDP performance. In bad years, the repayment would be lower whereas in good years, higher. Effectively tying the requirement to pay, to the ability. The β coefficient could also be adjusted to account for project risk. For risky projects the coefficient could have higher values, closer to 1 whereas for low risk projects, the β could be smaller and closer to zero. Finally, the principal portion too could be made variable if need be. It is obvious that several variants of the model is possible. Such a flexible model avoids the fixed obligation and leverage that comes with debt. It also avoids interest rate risk and minimizes contagion.

5. Conclusion.

The risk sharing mudarabah is a hybrid instrument that has the features of both debt and equity. What makes it particularly suited for today's conundrum is that, it has the risk-sharing features of equity but not the leverage inducing feature of debt. Unfortunately, the mudarabah story has not been well-told. At least, not in a way that will make corporate treasurers see how the debt-equity trade off they have been manacled to, becomes irrelevant with mudarabah. Similarly policy makers in governments are not aware that financing infrastructure without leverage could be possible with mudarabah based sukuk.

Mudarabah financing effectively changes the debt-equity tradeoff, makes debt much less attractive and would be best suited to get the world out its current rut. With returns anchored in real sector returns, they would not just be higher but a lot more stable. Avoiding leverage would also minimize macroeconomic vulnerability and contagion to external shocks. Indeed, in earlier times, in medieval Europe, Italian nation states had adapted mudarabah as commenda, and funded the renaissance. Commenda then evolved and resurfaced in a later form, as venture capital financing in Silicon Valley. Given its risk sharing features, Mudarabah could yet again, offer the world a potential way out.

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Endnotes

1. See Brouwer (2005) and Udovitch, A.L., (1970a,b).

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