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Addressing Market Fragmentation Through the Policymaking Lifecycle

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CONTRIBUTORS

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Asia Pacific is an inherently complex region, and susceptible to fragmentation

APAC capital markets are growing rapidly, and will make up 50% of global activity by 2030

Natural fragmentation exists with regulators from 20+ markets and the lack of a regional coordination body

Regional economic growth and stability relies on capital markets advancement

Structural challenges and vulnerabilities exist today and are increasingly exposed during the current COVID-19 pandemic

DRIVERS OF FRAGMENTATION

EXAMPLES IN ASIA PACIFIC

	Areas of Fragmentation	I Lack of Standards	II Extraterritorial Policies	III Localization & Ringfencing	IV Inconsistent Implementation
Legacy Areas	Derivatives	Low	High	Low	High
	IBOR Transition	High	High		Low
	Recovery & Resolution	Low	Low	High	High
	Capital & Liquidity	Low	Low	High	High
Emerging Areas	Sustainable Finance	High	Low		Low
	Data localization	Low	Low	High	High
	Fin Crime Compliance	Low	Low	High	Low
	Operational Resilience	High	Low		Low

Contribution to fragmentation
High – **Low**

UNINTENDED CONSEQUENCES

- **End-users:** Higher economic and opportunity costs, constraints to market access, limited risk management
- **Market development:** Higher barriers to entry, limited growth of emerging and cross-border APAC financial markets
- **Financial sector, and stability:** Increased complexity of risk management, heightened systemic risk to APAC financial stability

ADDRESSING FRAGMENTATION THROUGH THE POLICYMAKING LIFECYCLE

C BETTER LEVERAGE EXISTING INTERNATIONAL **COORDINATION** STRUCTURES TO ENHANCE TRUST & COLLABORATION

Identify common interests and facilitate enhanced collaboration between SSBs, strengthen involvement of APAC national regulators, and market participants

D CONSIDER MARKET FRAGMENTATION ISSUES DURING **DESIGN** OF REGULATION

Embed consideration of market fragmentation issues as a key consideration during the initial policy development stage, with input from market participants

I INCLUDE MARKET FRAGMENTATION CONSIDERATIONS AND ASSESSMENT IN THE **IMPLEMENTATION** OF REGULATION

Pre-define implementation review processes, develop APAC-specific review cycles and timelines including all relevant jurisdictions

P SYSTEMATIC **POST-IMPLEMENTATION** REVIEW & ASSESSMENT OF REGULATION

Frequent and open assessments of regulation implemented, including market fragmentation with a view to informing both policy adjustments and future policymaking

F ESTABLISH AND MAINTAIN **FEEDBACK MECHANISMS** TO INFORM FUTURE DESIGN AND IMPLEMENTATION

EXECUTIVE SUMMARY

A Framework for Assessing Market Fragmentation

The COVID-19 pandemic provides an opportunity to understand the risks and global impact of regulatorily driven market fragmentation in practice, as well as the value of a more comprehensive approach towards mitigating its impact on financial institutions, markets, and end users. This paper expands upon the existing body of analysis developed on market fragmentation in capital markets by offering a comprehensive framework for analysing fragmentation; identifying its drivers; examining its impact on markets, economies and end-users; and developing holistic solutions to avoid or mitigate fragmentation and its effects in future.

We posit that market fragmentation and its effects must be addressed throughout the policymaking lifecycle, namely through:

1. *Better Leveraging Existing International Coordination Structures (C);*
2. *Considering Fragmentation Issues During Regulatory Design (D);*
3. *Accounting for Fragmentation Concerns in Implementation (I);*
4. *Systematic Post-implementation Review & Assessment (P); and*
5. *Maintaining Robust Feedback Mechanisms (F).*

Specific Recommendations

Through case studies from market participants, we apply the above framework to 'legacy' (i.e. previously identified) examples of fragmentation as well as new, or 'emerging' areas of concern.

Recognising Asia Pacific's inherent complexity and susceptibility to fragmentation, we offer the following practical and meaningful recommendations, demonstrating the framework's robustness and suitability for dealing with fragmentation in other regions and at a global level.

The following chart outlines the critical issues related to market fragmentation in specific sectors and labels them according to the relevant policy lifecycle stages. Across these recommendations, we strongly encourage public sector organisations to see the private sector as a willing partner and to maintain an open dialogue.

Table 1: Summary of Recommendations

SUMMARY OF RECOMMENDATIONS	C	D	I	P	F
Derivatives					
1. Consistent implementation and effective post-implementation monitoring of globally agreed reforms	C	D	I		
2. Encourage and develop efficient processes for international recognition (such as risk-based frameworks)		D	I		
3. Establish bilateral and multilateral coordination to reduce market fragmentation across jurisdictions	C		I		
IBOR & EU Benchmark Regulation					
1. Continue to encourage collaboration on IBOR transition between SSBs, national regulators, industry participants, and trade associations, and bring the good progress achieved in derivatives space to lending and securitisation products	C		I		
2. On EU BMR, there is a need for an industry-wide effort to seek refinement of the regulation to minimise its extraterritoriality, while concurrently developing more efficient processes for recognition of Asia Pacific benchmarks			I	P	F
Recovery and Resolution Planning					
1. Drive greater consistency in implementation of RRP frameworks while allowing for jurisdiction-specific adjustments			I		
2. Monitor and harmonise implementation of TLAC standards			I		
3. Facilitate increased cooperation among resolution authorities across jurisdictions: Firm-specific cooperation	C	D	I		
4. Facilitate increased cooperation among resolution authorities across jurisdictions: Non-firm specific cooperation	C		I		
Capital Requirements & Liquidity					
1. Effective implementation and post-implementation monitoring of agreed reforms				P	F
2. Foster additional collaboration between market participants and regulators	C				
3. Encourage and develop trust among regulators and supervisors	C				

ADDRESSING EMERGING FRAGMENTATION

Sustainable Finance

1. Leverage existing working groups/taskforces to catalyse and develop international standards for sustainable finance focusing on capital markets, involving Asia Pacific jurisdictions

2. Review and compare existing taxonomies with a view to developing a globally-harmonised taxonomy

3. Allow flexibility and adaptability for product innovation and regional nuances
4. Policymakers to work with industry on data requirements and reporting standards

Data Privacy, Localisation & Cybersecurity

1. Ensure that new privacy laws do not create additional areas of fragmentation
2. Review, evaluate and adopt international standards and best practices where possible, and enhance enforceability of such standards across Asia Pacific
3. Provide greater regulatory flexibility on standards and allow exemptions where appropriate during policy development
4. Consult with market participants throughout the policymaking lifecycle
5. Strengthen collaboration between sectoral and national regulators to ensure harmonisation on the country level
6. Consider MOUs, bilateral or multilateral agreements, or deference regimes to foster mutual understanding between regulators

Financial Crime Compliance (*e.g.* AML/CFT/Digital Assets)

1. Call for greater harmonisation in the application of AML/CFT standards and adopt measures to best align to internationally agreed standards
2. Enhance coordination within and across jurisdictions for data sharing, especially of PII where financial crime screening is concerned
3. Advance public-private partnerships and call for cross-sectoral intelligence sharing

Operational Resilience

Recommendation	C	D	I	P	F
1. Foster global coordination through standard-setting bodies	C				
2. Encourage greater collaboration across private / public sectors, jurisdictions, authorities, and industries	C				
3. Call for greater harmonisation of operational resilience standards across jurisdictions and remain flexible to adapt changes aligning to international standards where available		D	I		
4. Provide greater regulatory clarity on standards where appropriate during policy development		D			

Next Steps

Once the current COVID-19 crisis subsides, policymakers and industry have an important opportunity to reflect on the effectiveness and impact of regulations, including their unintended consequences in relation to market fragmentation. For future policymaking, we welcome dialogue on implementing a more holistic approach to assessing fragmentation consistently throughout the policymaking lifecycle by both the international standard setting bodies ("SSBs") and national regulators.

The greatest opportunity for addressing legacy areas of fragmentation lies in reviewing the implementation of policies and standards at the national level and refining policy settings on the basis of reviews and feedback mechanisms, while for emerging areas of fragmentation there is scope to pre-empt fragmentation through coordination and in the design of policy itself.

To that end, we invite SSBs and national regulators to consider our detailed recommendations and look forward to discussing how they can be implemented going forward.

1. INTRODUCTION

This paper offers a comprehensive framework for i) analysing fragmentation; ii) identifying its drivers; iii) examining its impact on markets, economies and end-users; and iv) developing holistic solutions to avoid or mitigate fragmentation and its effects on the functioning of efficient markets, economies, and end-users. The aim of this paper is to expand on the existing body of analysis that has been developed on market fragmentation in the capital markets as a result of differing, conflicting and duplicative regulations.

Through case studies from market participants, we apply the framework to 'legacy' (i.e. previously identified) examples of fragmentation as well as new, or 'emerging' areas of concern. Recognising Asia Pacific's inherent complexity and susceptibility to fragmentation, we offer practical and meaningful recommendations, while demonstrating the framework's robustness and suitability for dealing with these issues in other regions and globally.

1.1. Background

Following the Global Financial Crisis ("GFC"), SSBs introduced policy and regulatory measures aimed at improving the stability, resilience, and transparency of global capital markets and the broader financial system.

As a result, with COVID-19, the global financial system entered this latest crisis with enhanced resilience and, despite an initial period of heightened volatility, the banking sector successfully continued to finance the real economy and, by late March, capital markets were performing their normal functions, despite extremely challenging financial and operational conditions.[1] An unintended consequence of some of these measures, however, has been the increasing level of regulatorily driven market fragmentation, some of which – as this paper outlines – could be minimised through greater coordination and focus on mitigating its effects throughout the policymaking lifecycle.

Recognising the negative impacts of market fragmentation, the 2019 Japanese G20 Presidency named financial market fragmentation as a top priority to be studied and addressed jointly by the Financial Stability Board ("FSB") and the International Organization of Securities Commissions ("IOSCO"). In response, these international SSBs published a number of important official reports examining market fragmentation at a global level ("SSB reports"). These reports assess global market fragmentation across different areas, provide important case studies highlighting the impediments of fragmentation on financial institutions and propose next steps to mitigate market fragmentation.

This paper augments the substantial work done by the SSBs, by conceptualising a broad framework to recognise drivers of regulatorily driven market fragmentation and offer recommended solutions. Although our recommendations are intended to be universal and applicable globally, for the purposes of this paper, we apply the framework to Asia Pacific's capital markets, a region that warrants specific attention with respect to market fragmentation for a number of reasons:

[1] Financial Stability Board. Virtual Meeting on Policy Responses to COVID-19: Introductory remarks by Himino Ryozo, Chair, FSB Standing Committee on Supervisory and Regulatory Cooperation. (26 May 2020). Retrieved from: https://www.fsb.org/wp-content/uploads/S260520.pdf

Growing global importance of Asia Pacific capital markets: Asia Pacific capital markets are projected to grow at three times the pace of the Americas, Europe, the Middle East and Africa, combined, by 2030; at that time Asia Pacific capital markets will account for nearly 50% of global activity.[2] Its sheer scale means that any solution to mitigate market fragmentation is incomplete without addressing the needs specific to the region.

Importance of Asia Pacific capital markets to sustainable regional economic growth: Economic growth in Asia Pacific is expected to result in significant infrastructure and other financing needs for which there is an existing funding gap.[3] This is likely to translate into an increasing shift towards capital markets-led financing in line with the development trajectory of mature economies.[4] A more harmonised, transparent, and liquid capital markets structure is critical to fostering an open and innovative environment that supports sustainable growth.

Vulnerabilities exist today in Asia Pacific's capital markets: The COVID-19 pandemic highlights the need to address market fragmentation with adequate planning, sustained priority, and regional coordination. Markets in Asia Pacific range from very mature to emerging, with the range of risk and hedging solutions more limited in some markets in the region. At the same time, some regulatory settings may constrain banks' ability to play a larger role as liquidity providers.

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[2] New Financial. The New Financial Global Capital Markets Growth Index. (January 2019). Retrieved from: https://www.asifma.org/wp-content/uploads/2019/01/the-new-financial-global-capital-markets-growth-index.pdf

[3] The Asian Development Bank notes an economic infrastructure funding gap of $459 BN per year, and a $907 BN per year funding gap for social infrastructure in Asia Pacific respectively. Asian Development Bank. Closing the Financing Gap in Asian Infrastructure. (June 2018). Retrieved from: https://www.adb.org/publications/closing-financing-gap-asian-infrastructure

[4] 56% of corporate borrowing in developed economies currently stems from bank lending, with the remainder originating from corporate bonds via capital markets. In Asia Pacific, 79% of current corporate borrowing stems from bank lending. New Financial. The New Financial Global Capital Markets Growth Index. (January 2019). Retrieved from: https://www.asifma.org/wp-content/uploads/2019/01/the-new-financial-global-capital-markets-growth-index.pdf

Inherent fragmentation exists: The Asia Pacific region comprises 20+ jurisdictions, representing all stages of economic development. Furthermore, international capital markets participants are particularly prone to extraterritorial regulations from other regions such as the European Union ("EU") and the United States ("US"). As a result, Asia Pacific is inherently more impacted by fragmentation than other regions. It is important to ensure national regulatory responses do not further promulgate market fragmentation with respect to cross-border flows.

1.2. COVID-19 & Geopolitical Tensions

This paper was written at the height of the COVID-19 pandemic. That financial institutions remained operational and stable despite unprecedented disruption caused by COVID-19 reflects the progress made in shoring up the financial system since the GFC.[5] However, the crisis has also shown some unintended consequences of regulatorily driven market fragmentation on markets and end-users, including constraining banks' abilities to act as liquidity providers at this critical time.

Market fragmentation in general constrains the free flow of capital, liquidity and information across borders and stifles potential innovation and development of new capital markets financial technologies, all critical as economies look ahead to a post-COVID-19 recovery. At the same time, any potential for escalation in geopolitical tensions also needs to be considered, with a view to assessing whether international divisions further accentuate market fragmentation.

[5] Financial Stability Board. COVID-19 Pandemic: Financial stability implications and policy measures taken. (15 April 2020). Retrieved from: https://www.fsb.org/wp-content/uploads/P150420.pdf

GLOBAL FRAGMENTATION THROUGH THE LENS OF COVID-19

The COVID-19 pandemic provides an opportunity to understand the risks and global impact of market fragmentation in practice, as well as the value of a more comprehensive approach towards mitigating impacts on financial institutions, markets and end users. While still an evolving situation, SSBs have been unified in responding to the emerging crisis to pre-empt market fragmentation. The pandemic has resulted in a number of unprecedented fiscal, monetary and regulatory measures by national regulators. As each country rightly seeks to address the economic times, it is important for national regulators to minimise any actions that lead to market fragmentation and to coordinate with other regulators.

In the FSB's response to COVID-19, it laid out five principles to guide the official community's rapid response to support the real economy, maintain financial stability and minimise the risk of market fragmentation during onset of the crisis.[6] They included a commitment to greater information sharing, consistent assessments of vulnerabilities on financial systems, and greater coordination on policymaking during the pandemic. SSBs have thus far coordinated deferral of Basel III adoption, adopted consistent interpretation of loan loss provisions, allowed the usage of liquidity and buffers, and delayed implementation of Phases 5 and 6 of Initial Margin Requirements by one year to reduce the possibility of market fragmentation.

In general, the swift and unified regulatory responses from SSBs during COVID-19 are a successful demonstration of the benefits of global coordination.

Nonetheless, the COVID-19 pandemic also saw many national responses to increase the domestic supply of credit and continued support of their economies in this time of stress. Instances of fragmented regulations impacting the functioning of markets include those relating to dividend restrictions, implementation of capital buffer relief, short selling bans, and wet signatures/physical handling of documents.

This report commends the rapid response and scale of efforts of SSBs during the pandemic and calls for further commitment by national regulators to coordinate their responses, even after the crisis subsides. At the same time, COVID-19 offers an opportunity to evaluate the importance of coordination and harmonised approaches, as well as opportunity for a broader assessment of the extent to which regulation since 2008 has impeded banks' ability to act as liquidity providers during crises such as the pandemic experienced and whether policy settings sufficiently offset the procyclicality that Basel III prudential rules amplify, impeding effectiveness of fiscal and monetary policies by constraining banks' ability to extend credit.

In the next stages of the COVID-19 crisis, when solvency stress in the real economy and a heightened need for access to USD funding are anticipated, banks will especially need to be able to deploy capital and liquidity to where it is needed. A financial system with high levels of ring-fenced and trapped capital makes this more challenging. Local shocks may be more likely amplify vulnerabilities throughout the financial system. Fragmentation caused by capital requirements and liquidity is dealt with in more detail in Section 3.1.4.

[6] Financial Stability Board. COVID-19 Pandemic: Financial stability implications and policy measures taken. (15 April 2020). Retrieved from: https://www.fsb.org/wp-content/uploads/P150420.pdf

2. GENERAL FINDINGS AND RECOMMENDATIONS

For the purposes of this paper, we broadly characterise market fragmentation as activities that break markets into smaller segments (by geography, types of products, or market participants) in ways that impede the free flow of resources and information between these segments.[7] The paper outlines a conceptual model for analysing fragmentation including identification and categorisation of drivers; examination of impacts on markets, financial stability, economies and end-users; and development of holistic approaches to mitigate fragmentation.

We apply the framework to eight areas (four 'legacy', four 'emerging') where fragmentation has been identified as a particular concern in Asia Pacific, offering practical and concrete recommendations. In parallel, we demonstrate the frameworks' robustness and suitability for mitigating fragmentation in less diverse regions and at a global level:

LEGACY AREAS OF MARKET FRAGMENTATION:

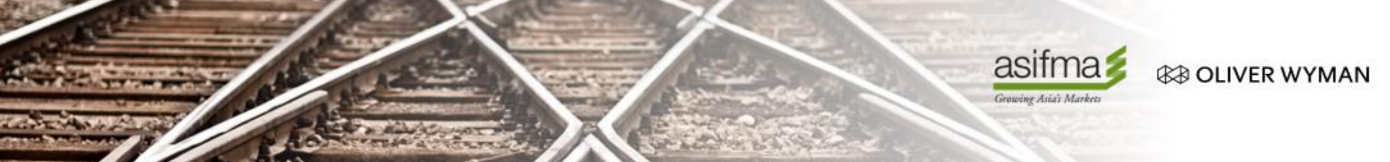
1. Derivatives
2. IBOR & EU Benchmark Regulation
3. Recovery and Resolution Planning
4. Capital Requirements & Liquidity

EMERGING AREAS OF MARKET FRAGMENTATION:

5. Sustainable Finance
6. Data Privacy, Localisation & Cybersecurity
7. Financial Crime Compliance (e.g. AML/CFT/Digital Assets)
8. Operational Resilience

We hope that the section on emerging areas of fragmentation will provide practical guidance on future policymaking.

[7] This paper acknowledges the various views and definitions on market fragmentation shared by international bodies but does not intend to redefine it. For example, the FSB report on Market Fragmentation (4 June 2019) defines market fragmentation as: "global markets that break into segments, either geographically or by type of products or participants"; meanwhile, the Global Financial Markets Association ("GFMA") defines market fragmentation as: "anything that impacts the free flow of resources or information relative to the unfettered supply and demand for those resources or information".



2.1. Key Drivers of Market Fragmentation

A combination of regulatory, socio-economic, and political drivers gives rise to market fragmentation in the Asia Pacific region. This paper focuses on fragmentation caused by differences in supervisory and regulatory policies.

As illustrated in the forthcoming case studies, we identify four key drivers of regulatorily driven market fragmentation:

Lack of or pending global standards: Global standards have not yet been established for emerging areas such as operational resilience, data and sustainable finance. Significant market fragmentation results from jurisdictions independently defining policy objectives, approaches and standards. In other instances, globally agreed standards do not always cater to Asia Pacific market structures and should be adapted, which would resultingly bring them out of alignment with other markets. In more mature markets such as Hong Kong and Singapore for example, large parts of activities are booked to out-of-region entities, which may be adversely impacted by local reporting requirements.

Extraterritoriality of national/regional regulations: Financial institutions and end-users operating across borders face specific challenges when jurisdictions apply rules to parties and activities outside their borders. Asia Pacific is particularly impacted by US and EU requirements, which may undermine local markets and local regulation.

Regulatorily imposed localisation/ringfencing: Policymakers may impose localisation and/or ringfencing requirements to protect their markets, at a cost to the international financial system. Localisation policies may restrict cross-border capital flows directly, such as ringfencing policies imposing capital requirements or restricting activities, or indirectly such as requirements on physical location of supporting infrastructure and activities. This reduces interconnectedness of the host country with the global system, and undermines the efficient deployment of capital, flow of liquidity and information, and overall financial stability.

Inconsistent implementation of standards: Where global policy standards are established, markets can be significantly fragmented when jurisdictions adopt different approaches to implementation. This can range from differences in timelines and supervisory practices, to variations in the interpretation of those standards and approaches to penalties and sanctions. This leads to differing, or even conflicting requirements imposed on market participants, resulting in market distortions and negative consequences for markets and end-users, at times impeding overall policy objectives.

2.2. Consequences and Impacts of Market Fragmentation

Post-financial crisis reforms focused on reducing systemic risk and strengthening financial resilience across markets and within individual jurisdictions.

While some market fragmentation may be appropriate in limited circumstances (for example, the relative isolation of strong regional banking helped limit the severity of the GFC in Asia Pacific), current and emerging regulation introduces market distortions and inefficiencies, undermining financing required to meet Asia Pacific's economic development needs. In addition to reducing market liquidity, fragmentation observed in Asia Pacific also impedes use of global best practice, such as in relation to risk management, data protection and operational resilience. Further, in Asia Pacific, fragmentation is more likely to have a material impact on the real economy's ability to access well-priced financial services – which will be particularly important as the region aims to recover from the COVID-19 global pandemic.

Building on the SSB reports, this paper draws focus on the unintended consequences of market fragmentation and illustrates them using a variety of Asia Pacific-specific case studies shared by ASIFMA members.

Unintended consequences fall under three key categories:

- **Impact on end-users:** Fragmentation creates undesirable impacts on end-users, including end-investors served by the financial system. These include higher fees (pricing reflecting higher cost of operating across fragmented markets) and constraints on access to products and services (*e.g.* limited cross-border lending and risk hedging solutions available in Asia Pacific). Additionally, the extraterritoriality of the EU Benchmarks Regulation ("EU BMR") will significantly curtail access to products that reference Asia Pacific benchmarks for end-users banking with European entities.
- **Impact on market development:** Fragmentation impedes the growth of domestic and cross-border financial markets by raising barriers to entry. In extreme scenarios, fragmentation can lead to market retraction and exit by participants as costs of doing business become uneconomic. In sustainable finance, for example, divergence in disclosure requirements used across Asia Pacific markets today limits the comparability of investment options across jurisdictions for investors, hindering market integrity in this emerging area, and development of deep cross-border markets in sustainable products and investment opportunities.
- **Impact to financial sector and financial stability:** Fragmentation also increases the complexity of risk management across financial markets, heightening overall risk to financial stability. For example, capital ringfencing limits financial institutions' flow of capital across borders, and therefore prevents the effective mobilisation of capital to distressed jurisdictions during stressed events. This in turn heightens financial stability risks.

For the purposes of this analysis, we do not seek to quantify the cost of these impacts at this stage. Aside from the complexity (and subjectivity) of accurately and rigorously costing the aggregate impact of each example of fragmentation, we felt the true value of this research is in providing an account of fragmentation's effects in a region like Asia, through the detailed case studies and illustrative real-life examples provided.

2.3. Addressing Market Fragmentation Through the Policymaking Lifecycle

Several milestone papers have been published in recent years, including SSB reports, proposing principle-based approaches and practical tools to address market fragmentation.[8] In a number of areas, regulators have taken concrete actions to improve collaboration and mitigate market fragmentation.

Extending this body of analysis, this paper explores approaches and solutions for mitigating market fragmentation through five key stages of the policymaking lifecycle.

2.3.1. Better Leveraging International Coordination Structures (C)

A key to mitigating market fragmentation lies in identifying common interests and opportunities to tackle fragmentation while fostering trust to ensure greater information-sharing and collaboration between SSBs, national regulators, and market participants.[9] This is particularly challenging in Asia Pacific because of its inherent economic and political complexity compared with other regions.

To ensure commitments to reduce market fragmentation are translated into enforcement, we recommend Asia Pacific regulators and SSBs undertake comprehensive and formal assessments of market fragmentation with a view to strengthening the attractiveness of Asia Pacific and international firms to conduct business. Market fragmentation should be considered a key criterion for successful subsequent policy development, implementation, and post-implementation assessment.

Deference between regulators, through the use of cross-border regulatory tools and supervisory and enforcement cooperation, have helped mitigate some instances of market fragmentation, however, challenges yet remain in relation to the underlying processes that authorities rely on to make deference determinations. In view of this, IOSCO has identified a number of practices in its June 2020 Report on Good Practices on Processes for Deference, which provides members with helpful guidance on establishing and operating more efficient deference determination processes.[10] Whilst it is recognised that there is no "one-size-fits-all" solution and that the practices' applicability may well vary by jurisdiction and circumstance, these set of practices could nevertheless represent a helpful way of addressing fragmentation issues that arise from the lack of international coordination.

Regulatory and supervisory forums (*e.g.,* Asia Pacific Privacy Authorities Forum), SSB sub-groups (*e.g.*, the FSB Regional Consultative Group for Asia, IOSCO's Asia-Pacific Regional Committee) and other supervisory colleges are effective communication and coordination channels that can be leveraged further to foster trust and collaboration with the aim of systematically mitigating against unnecessary market fragmentation.

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[8] Refer to the appendix for a summary of these reports and their proposed recommendations to addressing various areas of market fragmentation

[9] International Organization of Securities Commissions. Report on Principles for Cross-Border Supervisory Cooperation (May 2010). Retrieved from: https://www.iosco.org/library/pubdocs/pdf/IOSCOPD322.pdf and International Organization of Securities Commissions. Report on Market Fragmentation & Cross-border Regulation (June 2019). Retrieved from: https://www.iosco.org/library/pubdocs/pdf/IOSCOPD629.pdf echo this finding, outlining the importance of enhanced supervisory cooperation and information sharing, without which, reforms would likely prove insufficient.

[10] International Organization of Securities Commissions. Report on Good Practices on Processes for Deference. (26 June 2020). Retrieved from https://www.iosco.org/library/pubdocs/pdf/IOSCOPD659.pdf

To date, supervisory colleges, have positively contributed to greater cross-border information sharing since the GFC, as discussed in the FSB's Report on Market Fragmentation.[11] Their existing scopes and mandates can be further expanded to formally include assessment of cross-border regulatory fragmentation and its effects at both the national and regional level, particularly during the implementation phase of the policymaking lifecycle.

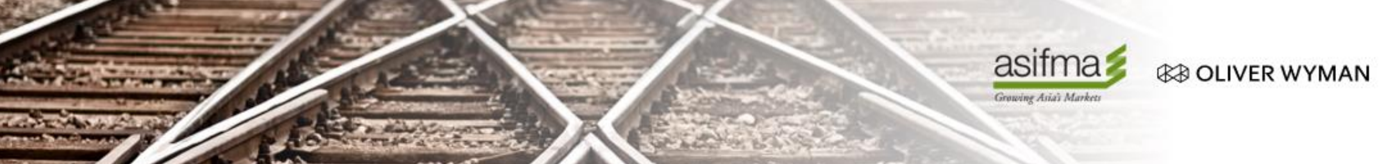
This also allows market participants to effectively and directly voice specific concerns and examples of market fragmentation and creates a mutually beneficial environment for constructive dialogue to understand and mitigate against any effects on markets, economies and end-users. We encourage greater transparency of colleges' findings and conclusions, where appropriate, to promote accountability, open fact finding and continuous improvement of policymaking.

2.3.2. Considering Fragmentation Issues During Regulatory Design Phase (D)

SSBs along with national regulators are encouraged to include the evaluation and mitigation of market fragmentation in the early policymaking process when embarking on global reforms, including considerations regarding its disproportionate impacts in certain markets and regions, when determining criteria for defining policy outcomes sought. Upon commencement of a regulatory development process, for examples, SSBs may convene a committee or working group to take stock of existing regulation, and the likely impacts of new regulations, as well as examples of regulatory mechanisms that minimise unnecessary fragmentation.

During this process, regulators and SSBs can adopt a consultative and iterative approach to policymaking, involving the industry from the onset to ensure reforms are well designed to meet their intent and to pre-empt fragmentation upon implementation. Potential for mechanisms such as substituted compliance and equivalence recognition should be considered at this early stage. The Working Group on Margin Requirements ("WGMR") is a good example of global coordination between markets and prudential regulators during the regulatory design phase. Sustainable finance and operational resilience, on the other hand, are two emerging areas in Asia Pacific that presently lack globally consistent regulations and disclosure requirements. Similarly, regulations with material extraterritorial impact should be discussed and reviewed in relevant forums such as the FSB to ensure original assumptions by policymakers were correct. For example, the EU BMR was drafted with an expectation that other jurisdictions would produce materially similar regimes (as with over-the-counter derivatives ("OTC derivatives") clearing) making the framework for recognition of third-country regimes far simpler.

[11] Financial Stability Board. FSB Report on Market Fragmentation. (4 June 2019). Retrieved from: https://www.fsb.org/wp-content/uploads/P040619-2.pdf



SCHEMATIC 1. Mitigating fragmentation during regulatory development stage

EXISTING EFFORTS BY REGULATORS
• WGMR developed globally consistent initial Margin Requirements • CPMI-IOSCO's harmonisation group developed global technical guidance on trade reporting unique product identifiers ("UPI"), unique transaction identifiers ("UTI"), and critical data elements

STEPPING UP TO…

PROPOSED	
Principles	**Specific Recommendations**
• Embed market fragmentation considerations in developing global reforms and taxonomies • Evaluate, compare, and harmonize existing reforms where possible (to avoid overlapping or conflicting reforms) • Develop risk-based approaches to ensure greater comparability between jurisdictions in parallel with regulation development to ease post-implementation deference and substituted compliance judgements	• Develop complete and globally-recognised sustainable finance and operational resiliency taxonomies • Recognize consequences of data fragmentation and localization during policymaking stage

2.3.3. Accounting for Fragmentation Concerns in Implementation (I)

While the lack of global standards can cause market fragmentation in some instances, another source can be inconsistent implementation of global standards. SSBs and supervisory colleges can play a critical role to support the policy implementation phase, helping to define suitable processes and coordination strategies to ensure harmonised implementation timelines and that the substance of globally agreed reforms is maintained upon implementation, while respecting national sovereignty. There is also an opportunity for building out frameworks specifying principles for minimising fragmentation to guide implementation at the national level to also include and practical issues such as the frequency of and metrics to be included in implementation reviews and monitoring processes in relation to fragmentation, plus roles and responsibilities for conducting them.

Reviews by the Basel Committee's Regulatory Committee Assessment Programme ("RCAP"), IOSCO, the FSB, or the International Monetary Fund's ("IMF") Financial Sector Assessment Programme ("FSAP") could include a wider number of Asia Pacific jurisdictions, while specifying precise review cycles and adherence thresholds. At this stage, mechanisms for cross-border cooperation such as cross-border substituted compliance and equivalence recognition, memoranda of understanding and substituted compliance should be developed. Opportunities to enhance consistent implementation include uncleared margin requirements, Basel capital reforms, and alternate reforms potentially impacted by COVID-19.

SCHEMATIC 2. Mitigating fragmentation during the regulatory implementation stage

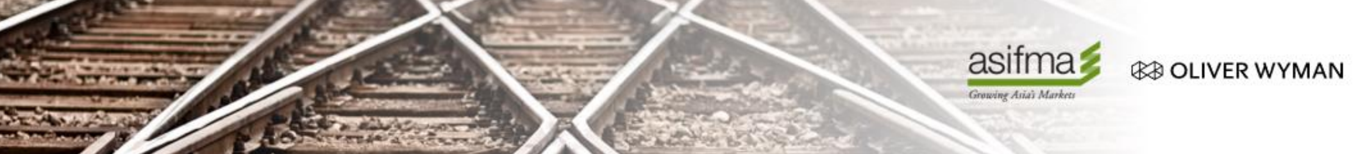
EXISTING EFFORTS BY REGULATORS
• Flexible approach to Fundamental Review of the Trading Book ("FRTB") implementation timelines • Global delay in implementation of Phase 5 and 6 of Initial Margin Requirements in light of COVID-19

STEPPING UP TO…

PROPOSED	
Principles	**Specific Recommendations**
• Pre-emptively design fact-based review and monitoring principles that include a wider variety of Asia Pacific jurisdictions, with clear review cycles and defined principles and metrics • Develop flexible approaches in coordinating timelines across jurisdictions (catering for local variations in readiness)	• Leverage existing peer reviews in the implementation of Initial Margin requirements and Basel reforms • Adopt flexible timelines in light of COVID-19 on implementation of global reforms (*e.g.* Total Loss Absorbing Capacity ("TLAC"))

2.3.4. Systematic Post-implementation Review & Assessment (P)

Post-implementation, SSBs and national regulators should consider conducting frequent and open assessments of implemented regulation including market fragmentation, ideally with quantifiable analysis. Over time, this will help establish a strong fact base to reference against in mitigating future market fragmentation, as well as informing policy adjustments. Opportunities to review implementation include uncleared margin requirements, Basel capital reforms, and reforms potentially impacted by COVID-19.



SCHEMATIC 3. Mitigating fragmentation through rigorous, systematic post-implementation review and assessment

EXISTING EFFORTS BY REGULATORS
• Continuous engagement between FSB industry participants to measure fragmentation (*e.g.* peer review)

STEPPING UP TO…

PROPOSED	
Principles	**Specific Recommendations**
• Incorporate fragmentation in post-implementation reviews that are fact-based and consequences-focused • Develop consensus approaches and overall frameworks for cross-border regulatory cooperation, leveraging existing SSB compliance assessments to advance equivalence recognition processes • Maintain consultative and iterative approach with national regulators and market participants, and remain open to reforming global regulations	• Enhance deference and international recognition or derivative clearing venues • Seek refinement of the EU BMR regulation to minimise extraterritoriality • Develop global mechanisms to enhance data sharing across jurisdictions

2.3.5. *Maintaining Robust Feedback Mechanisms (F)*

Mitigation of fragmentation would be enhanced by commitment by SSBs and regulators to continuously improve policies and regulatory implementation, underpinned by robust mechanisms for fact-based assessment and systematic use of feedback as the basis for identifying and prioritising improvement opportunities in relation to market fragmentation.

2.4. Impact of Recommendations Through Policymaking Lifecycle

With the application of principles recommended in this paper, the greatest opportunities for improvement lie in recognising the inconsistent national implementation of regulation, including where policy development has been globally coordinated. If this is to be targeted, the greatest impact can be achieved by targeting improving coordination of implementation, more systematic and thorough conduct of post-implementation reviews, and establishment of more robust feedback mechanisms to inform improvements to existing implementation and enforcement.

Table 2: Anticipated Impact of Interventions

	DRIVERS OF FRAGMENTATION			
Recommended approaches	Lack of Standards (I)	Extraterritorial Policies (II)	Localisation & Ringfencing (III)	Inconsistent Implementation (IV)
POLICYMAKING LIFECYCLE: C	●●●	●●●	●●●	●●
D	●●●	●●●	●●●	●
I	●	●●	●●	●●●
P	●●	●	●	●●●
F	●●	●	●	●●●
Overall impact on drivers	**Medium**	**Medium**	**Medium**	**High**

3. APPLICATION OF FRAMEWORK TO FRAGMENTATION IN ASIA PACIFIC

3.1. Legacy Examples of Market Fragmentation

3.1.1. Derivatives

Overview

The outstanding notional amount of OTC derivatives exceeds USD 640 TN globally.[12] In the aftermath of the GFC, the G20 initiated development of a set of global reforms for derivatives together with the FSB, IOSCO, and other SSBs. The reforms have made derivative markets safer, more transparent, and more resilient. However, regulatorily driven market fragmentation has since emerged in Asia Pacific. This section identifies three areas of derivatives market fragmentation, highlights the unintended consequences, and outlines proposals to mitigate said fragmentation.

Areas of market fragmentation

There are three key areas of market fragmentation across Asia Pacific derivative markets: clearing location policies, uncleared margin requirements, and trade reporting requirements.

Clearing location policies

Clearing location policies relate to jurisdictions mandating that all (or a certain set of trades) executed be cleared centrally, sometimes at specific central clearing counterparties ("CCPs"). These policies are typically aimed at maximising the stability of markets and ensuring greater national supervision. However, such policies can undermine key aims of reform, such as centralising liquidity and lowering systemic risk. Location policies in Asia Pacific can restrict liquidity, increase costs, and reduce financial stability by breaking up multilateral netting sets for regional clients. As a result, liquidity pools are fragmented and end-users are exposed to increased costs that are associated with higher costs of local CCPs due to lower volumes.

For example, Japan requires yen-denominated interest rate swap trades and local credit default swaps ("CDS") executed within Japan to be cleared at the Japan Securities Clearing Corporation ("JSCC"). This effectively bifurcates liquidity as trades in-scope of the Japanese clearing mandate must be cleared through the JSCC, while others can be cleared at CCPs with liquidity (such as the Chicago Mercantile Exchange ("CME") or London Clearing House ("LCH"). Further fragmentation of liquidity pools may be caused by extraterritorial regulations or those that must adhere to complex processes (e.g. Commodity Futures Trading Commission ("CFTC") regulations mandating CCPs register as Derivatives Clearing Organisations ("DCOs") prior to clearing for US customers).[13] Fragmented liquidity both increases costs to end-users and creates a basis risk between the execution prices at differing CCPs.

[12] Bank of International Settlements. OTC derivatives statistics at end-June 2019. (8 November 2019). Retrieved from: https://www.bis.org/publ/otc_hy1911.htm

[13] Commodity Futures Trading Commission. Exemption from Derivatives Clearing Organization Registration. (23 July 2019). Retrieved from: https://www.federalregister.gov/documents/2019/07/23/2019-15258/exemption-from-derivatives-clearing-organization-registration

Clearing mandates in closed currency markets also create de facto CCP location policies. In general, clearing in small or closed derivative markets is challenging – these jurisdictions are traditionally not able to benefit from the efficiencies of global CCPs, and there are inefficiencies in setting up local CCPs which constrain the development of these markets.[14] As an example, Korea mandated clearing for KRW Interest Rate Swaps ("IRS") via the Korea Exchange ("KRX") in 2014. The resulting high costs of clearing on the KRX moved the majority of the market offshore and created a sizeable non-deliverable market on CME and LCH.[14] The development of such non-deliverable offshore markets directly circumvented local policy objectives, while further fragmenting liquidity. If Korea were to expand the scope of products for mandatory clearing, this could potentially worsen fragmentation.

Related to clearing location, material extraterritorial impact on Asia Pacific markets derives from mandatory clearing requirements proposed by the CFTC and European Market Infrastructure Regulation ("EMIR"). Mandatory central clearing can be a challenge for market participants, especially smaller Asia Pacific firms for whom central clearing is costly. Certain regulation takes account of this: for example, the Australian Securities and Investments Commission ("ASIC") mandates central clearing of AUD interest-rate swaps only if positions meet or exceed the clearing threshold of AUD 100 BN.[15] CFTC requirements, on the other hand, mandate market participants to centrally clear AUD interest-rate swaps via a DCO.[16] In effect, this can fragment liquidity between end-users that transact with financial institutions subject to CFTC requirements, and those not-subject to CFTC requirements, while potentially depriving some end-users from best execution.

CASE STUDY: Extraterritorial impact of CFTC & EMIR mandatory clearing and mandatory trading regulations	
Situation	The extraterritorial impact of EMIR and CFTC mandatory clearing and trading regulations creates market fragmentation. The extraterritoriality of the regulations may lead Asia Pacific clients to cease executing trades via EU and US entities that are subject to home jurisdiction regulations despite operating in host countries. In addition to the example provided above, regulations can also invoke trading obligations which require that specific trades (*e.g.* IRS) be executed on specific, authorised trading venues (*e.g.* via US Swap Execution Facility ("SEF") or EU Multilateral Trading Facility requirements).
Impact	Asia Pacific clients are not always able to gain connectivity to international platforms as a result of the extraterritoriality of regulations. This deprives them of best execution opportunities due to bifurcation of liquidity pools, and occasionally forces them out of the market entirely. Because derivatives are essentially hedging instruments, fragmentation can impede the risk management activities of end-users. Fragmented trading volumes also contribute to slower development of derivative markets, especially in more emerging Asia Pacific jurisdictions. A related example concerns the bifurcation of liquidity between US persons required to trade on SEFs, and non-US persons that are not required and prefer not to trade on SEFs, that has led to less efficient risk management, and arbitrage opportunities. In general, the balkanisation of volumes translates into limited opportunities to collectively mutualise risk, which can impede the underlying risk management benefits offered by derivatives – this has an impact on market development, but also broader financial stability.

[14] International Swaps and Derivatives Association. Clearing in Smaller or Closed Jurisdictions. Retrieved from: https://www.isda.org/a/tsvEE/ITC-Small-Jurisdictions-final.pdf

[15] Australian Securities & Investments Commission: Mandatory central clearing of OTC interest rate derivative transactions. (May 2015). Retrieved from: http://download.asic.gov.au/media/3246916/cp231-published-28-may-2015.pdf

[16] Commodity Futures Trading Commission. CFTC Expands Interest Rate Swap Clearing Requirements. (28 September 2016). Retrieved from: https://www.cftc.gov/PressRoom/PressReleases/pr7457-16

Uncleared margin requirements

The G20 called on the Basel Committee on Banking Supervision ("BCBS") and IOSCO in 2011 to develop consistent global standards to add margin requirements on non-centrally cleared derivatives leading to the jointly-run WGMR. Uncleared margin requirements ("UMRs") were implemented to mitigate risk and indirectly support clearing firms by requiring market participants to increase margin to cover potential adverse changes in values of derivatives transactions. However, despite the consistent global standards proposed by the WGMR, implementation of the standards at the national level has been inconsistent. While a majority of this divergence is most pronounced outside the Asia Pacific region, the extraterritoriality of differing national standards indirectly impacts Asia Pacific markets.

As an example, equity options which require UMR in Japan and Australia have always been out-of-scope in the US. In other regions, varying implementation timelines can be observed: equity options were exempt from UMR in the EU (until January 2021), and Hong Kong (until March 2020 under Hong Kong Monetary Authority ("HKMA") rules, and January 2021 under Securities and Futures Commission ("SFC") rules), and Korea (until September 2020).[17] This heterogeneity in approach to UMR directly increases cost and complexities for participants in derivative markets in Asia Pacific.

Further inconsistencies can be found in the areas of initial margin collateral eligibility, settlement timeframes, treatment of inter-affiliate trades, and requirements for initial margin model test/approval across jurisdictions.[17] Substance-led divergence of the WGMR framework directly increases cost and complexity of cross-border trading for end-users, while splitting up liquidity pools.

Amid the pandemic, the BCBS and IOSCO have taken a positive step to pre-empt market fragmentation while simultaneously preserving liquidity during an illiquid market environment by delaying the implementation of Phases 5 and 6 of the uncleared margin requirements by one-year to 1 September 2021 and 1 September 2022, respectively. Post-pandemic, SSBs should ensure that implementation is coordinated (across timelines and substance) and consider national readiness to implement requirements despite the deferral.

[17] International Swaps and Derivatives Association. Implementation of Margin Requirements and Market Fragmentation. (June 2019). Retrieved from: https://www.isda.org/a/XvkME/Implementation-of-Margin-Requirements-and-Market-Fragmentation.pdf

CASE STUDY: Fragmented implementation of uncleared margin requirements impacts end-users and balkanises liquidity	
Situation	An ASIFMA member noted the lack of global coordination among regulators on UMR has led to market fragmentation. There is substituted compliance in some cases, but overall this is not a perfect solution. Policy approaches taken by national regulators in implementation have diverged from global standards published by the WGMR across eligible collateral, settlement time frames, and treatment of inter-affiliate transactions. The ASIFMA member notes that the current COVID-19 outbreak may create additional divergence in the implementation timing of Phases 5 and 6 of the IM requirements (across APAC nations, and in relation to the EU and US), which evince the need for global collaboration, in light of the one-year deferral.
Impact	Divergence in national implementation of the WGMR framework can limit development of individual derivative markets by increasing the difficulty of operating on a cross-border basis. For example, Asia Pacific counterparties transacting with entities located in the US may find it challenging to post variation margin on a T+1 basis (compared with T+3 basis for Hong Kong and Singapore). Similarly, varying UMR treatments for inter-affiliate transactions reduces market liquidity and balkanises risks within a singular entity, with potential implications for financial system stability. The balkanisation is significantly harsher on institutions with smaller portfolios and impedes efficient and centralised risk management. This downstream translates into increased execution costs for end-users. Additionally, divergence in UMR collateral eligibility requirements directly increases costs and inefficiencies for end-users and end-investors to trade on a cross-border basis, due to the need to build complex processing logic to manage collateral across jurisdictions. Forward-looking, an inconsistent roll-out of Phases 5 and 6 of the IM requirements post-pandemic may see Asia Pacific counterparties shift liquidity away from dealers operating in jurisdictions subject to fragmented regulation, further fragmenting global swap markets.

Trade reporting

Trade reporting requirements (as part of the G20 reform agenda) were designed to improve transparency, mitigate risk, and prevent instances of market abuse. Notwithstanding the FSB's continual monitoring of reform implementation, divergence (both in pace and substance) in trade reporting requirements has emerged across Asia Pacific jurisdictions.[18] While there was a request for staggered initial launch (*e.g.* between Hong Kong and Singapore, to accommodate resource capacity issues in the region), this lack of harmonisation across jurisdictions persists, including in terms of data fields, formats and quality, scope covered, and cross-border access to data. Extraterritorial requirements further add to the unintended consequences.[19]

[18] Financial Stability Board. OTC Derivatives Market Reform: 2019 Progress Report on Implementation. (15 October 2019). Retrieved from: https://www.fsb.org/wp-content/uploads/P151019.pdf

[19] IOSCO's Committee on Derivatives (C7) has looked recently at trade reporting.

The approach to trade reporting has diverged across Asia Pacific. Reporting requirements to the Hong Kong Trade Repository were implemented in two phases, the second of which was completed in 2017 with the introduction of mandatory reporting of OTC derivatives across all remaining asset classes and products not covered in the first phase.[20] Singapore's implementation has been slower: Singapore adopted a phased approach (across asset classes and scope of entities) that will be completed across all key asset classes by October 2021.[21] Separately, the upcoming trade reporting regime stipulated by the Korean Financial Services Commission has been delayed until April 2021. Due to required reporting customisation at a local level, some financial institutions have had to operate separate reporting set-ups, and in the case of Hong Kong and Korea, use onshore trade repositories. This is a costly process for financial institutions that have typically relied on global clearing and reporting platforms and is an example of a lack of harmonisation across jurisdictions with unintended consequences, despite the presence of existing standards.

Additionally, "nexus" reporting, whereby the reportability of a derivative contract is determined by both the "booked-in" location and the "traded-in" location is an area of fragmentation specific to Asia Pacific. Regulations in Hong Kong stipulate that derivative contracts executed by a trader that predominantly performs their duty in Hong Kong fall under local nexus reporting requirements, regardless of booking location. While a similar set of requirements are placed on Singapore-based entities, ASIC rules require trades involving both Australia-based traders and/or salespersons to be subject to reporting.[22] The nuanced and fragmented requirements create operational challenges for financial institutions, the cost of which is often passed on to end-users. This divergence appears to reflect the fact that global standards did not take into adequate account regional nuances such as those in Hong Kong and Singapore.

All jurisdictions require participants to generally report similar information to trade repositories. However, varying timelines and data formats creates additional burdens for all market players, including end-users, by way of higher execution and post-trade costs passed down. From a broader market perspective, different reporting approaches risks weakening the ability to aggregate data, achieve transparency, mitigate risk, and prevent market abuse. While fragmentation within trade reporting is a long-standing challenge, it is critical that these issues are remediated and the lessons learnt are carried forward to pre-empt market fragmentation in emerging areas.

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[20] Hong Kong Monetary Authority. Hong Kong Trade Repository Information Page. Retrieved from: https://hktr.hkma.gov.hk/

[21] International Swaps and Derivatives Association. OTC Derivatives Compliance Calendar (6 January 2020). Retrieved from: https://www.isda.org/a/xlJTE/OTC-Derivatives-Compliance-Calendar-2020-1-1.pdf

[22] Clifford Chance. OTC Derivatives: Reporting exemption for certain foreign entities in Australia. (February 2015). Retrieved from: https://www.cliffordchance.com/content/dam/cliffordchance/briefings/2015/02/otc-derivatives-reporting-exemption-for-certain-foreign-entities-in-australia.pdf

CASE STUDY: Fragmentation in trade reporting requirements across Asia Pacific & EU jurisdictions which creates market execution concentration risk	
Situation	Regulated entities in the US, United Kingdom ("UK"), EU, Hong Kong and India ("affected entities") and their trading counterparties have been subject to legal entity identifier ("LEI") requirements as a prerequisite for their clients' trading activities for a few years to aid counterparty identification and trade reporting. In Asia Pacific, LEIs are not yet mandatory across all jurisdictions. This means that while Asia Pacific institutions in specific jurisdictions are recommended to report with a LEI, they theoretically can continue trading with end-users without fulfilling the requirement. Fragmentation also exists between EU and Asia Pacific regulators on how lapsed LEIs are treated. EU-based regulators provide leeway for reporting with lapsed LEIs, while Hong Kong regulators, as an example, require up-to-date LEIs be used, or else replaced with other identifiers. Other APAC jurisdictions (such as Australia, China and Korea) are reportedly considering implementing renewal requirements in the future.[23]
Impact	Clients that want to continue trading with affected entities are required to obtain and provide a valid LEI during the onboarding process. However, because it is not yet mandated across all Asia Pacific jurisdictions, ASIFMA members have found it challenging to compel all clients to obtain a LEI given the hub-model used by global banks in the region. This is in part due to the perceived onerous process and costs to obtain one, but also the additional trade reporting requirements, for example from MiFID II, on end-users that come with the ownership of a LEI. Market executions may become increasingly concentrated towards non-affected entities, until the regulations are globally mandatory. This is an interim result due to the extraterritoriality and divergent implementation timelines of global reforms across Asia Pacific. Such market concentration creates additional risk to financial stability when executions are performed by a handful of financial institutions within the market. This resembles the impact on swap dealers regulated by the CFTC when the Dodd-Frank Act was first rolled out. Clients shifted away from CFTC-regulated swap dealers due to the additional requirements under Dodd-Frank.

[23] Financial Stability Board. Thematic Review on Implementation of the Legal Entity Identifier. (28 May 2019). Retrieved from: https://www.fsb.org/wp-content/uploads/P280519-2.pdf

3.1.1.1. Key lessons learned

Fragmentation in derivatives markets has long-lasting impacts on all stakeholders. These can range from economic costs and reduced liquidity that impact end-users, to inefficient risk management with potential build-up of risk in the long-term:

- **Impact on end-users:** End-users seek risk management solutions from derivative markets, but market fragmentation creates inefficiencies and increases their cost. These range from direct economic inefficiencies (for example, fragmented liquidity means that spreads are generally wider) to indirect economic inefficiencies passed on through costs to trade. These costs can be material; for example, the basis between CME and LCH for dollar swap contracts represents a daily average opportunity cost of $80 MM for end users.[24] Critical to Asia Pacific, fragmented derivatives markets also deprive end-users and investors from easily accessing risk management solutions and leave them under-hedged and over-exposed, with implications for financial stability.
- **Impact on market development:** Regulatorily driven market fragmentation heightens the barriers to entry for financial institutions. This reduces the levels of competition in markets, impacts market integrity, and risks loss of global best-practices with larger global firms likely to reconsider their presence across various Asia Pacific markets. This lack of competition curtails development of financial markets, and limits product innovation, market sophistication and availability of risk management for end-users and investors.
- **Impact to financial sector and overall financial stability:** Regulatory initiatives within derivatives were commissioned with the intention of reducing systemic risk. Fragmentation reduces the number of market players that can mutualise risk, reducing diversification. This directly reduces the positive impact of market reforms, potentially reducing financial stability.

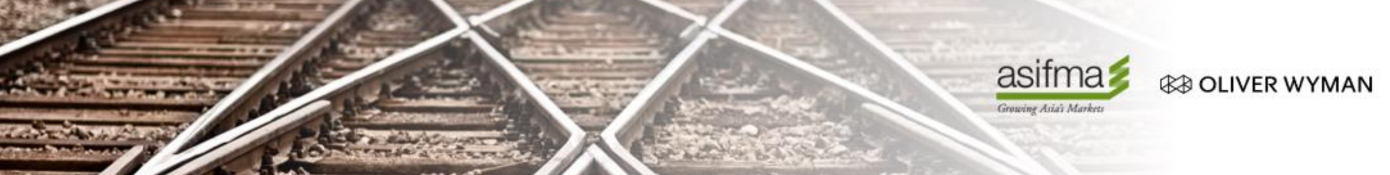
3.1.1.2. Proposals to reduce market fragmentation

Resolving fragmentation within derivatives requires strong collaboration between SSBs, national regulators, and industry participants. Ongoing focus, and regulatory collaboration is needed to remediate post-implementation fragmentation and develop cross-border solutions for recognition.

Consistent implementation and effective post-implementation monitoring of globally agreed reforms: SSBs should enhance their commitment to monitoring implementation of global standards across jurisdictions, as highlighted in the SSB reports. In addition, extension of existing peer reviews (executed by the FSB, Basel, and the IMF) to include reviews of consistency of implementation (*e.g.* LEI requirements) across regions would be beneficial.

The peer-review systems could also benefit from having dedicated and frequent Asia Pacific cycles (given the natural fragmentation in the region) and include a greater number of Asia Pacific jurisdictions. At present, for example, both Malaysia and Vietnam, two of the faster growing Asia Pacific economies, are not included in the scope of FSB peer reviews and Basel's RCAP undertaken by Basel's Supervisory and Implementation Group.

[24] Benos E, Huang W, Menkveld A, Vasios M. The Cost of Clearing Fragmentation. (11 December 2019). Retrieved from: https://www.bis.org/publ/work826.htm



At the bank level, greater completeness of supervisory colleges to include all regulators and supervisors of all significant entities within Asia Pacific would promote effective coordination and collaboration. Supervisory colleges should prioritise regulatorily driven market fragmentation and focus on the cross-border challenges and unintended consequences brought about by fragmentation. Concurrently, SSBs should be encouraged to maintain flexibility to adjust existing regulations and policies, reflecting ongoing consultative efforts with national regulators and the industry with the aim of mitigating market fragmentation.

Encourage and develop efficient processes for international recognition (such as risk-based frameworks): SSBs should establish clear processes and frameworks for cross-border regulatory cooperation which enable national regulators to better evaluate and recognise comparability assessments of national regulatory regimes. This enables national regulators to arrive at equivalence and substituted compliance decisions in a more efficient, predictable, and consistent manner. Ideally, this effort is made in parallel with policymaking so that a truly consultative and collaborative approach among national regulators is achieved.

Risk-based frameworks that standardise the comparability across different jurisdictions can aid in achieving these aims. Within derivatives, the International Swaps and Derivatives Association ("ISDA") has already proposed and drafted a risk-based framework for evaluating comparability of derivatives regulatory regimes in foreign jurisdictions.[25] While currently focused on the cross-border framework introduced by the CFTC, the principles can still be applied in aiding harmonisation on specific regulatory initiatives.[25] International SSBs should use this foundation to design a uniform process accepted by national regulators, committing to more efficient recognition processes.

Establish bilateral and multilateral coordination to reduce market fragmentation across jurisdictions: Bilateral and multilateral coordination (covering aspects such as data sharing, timeline coordination, recognition, etc.) should be pursued among national regulators. Effective tools such as the standard memoranda of understanding ("MOU") produced by IOSCO are relatively underutilised in remediating existing market fragmentation between jurisdictions. National regulators may leverage existing tools as a starting point to proactively pursue data sharing and equivalence recognition, while simultaneously leveraging the frameworks for cross-border regulatory cooperation referenced above.

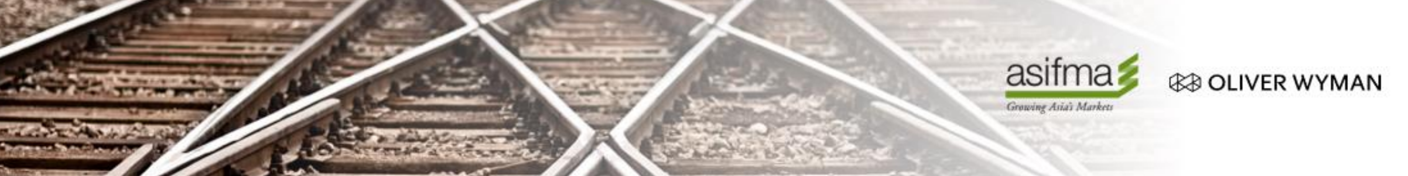
[25] International Swaps and Derivatives Association. Cross-Border Harmonization of Derivatives Regulatory Regimes. (September 2017). Retrieved from: https://www.isda.org/a/9SKDE/ISDA-Cross-Border-Harmonization-FINAL2.pdf

For example, progress has been made between the US and Singapore, through agreement to mutually recognise certain derivatives trading venues. This allows participants from US and Singapore to access deeper pools of liquidity, and use common trading platforms, directly reducing market fragmentation and regulatory arbitrage while allowing for better risk aggregation and management. In effect, the Monetary Authority of Singapore ("MAS") will no longer require trading venues already regulated by CFTC from requirements to be MAS-authorised exchanges, or market operators.[26] A similar equivalence decision was reached with the EU.[27]

The CPMI-IOSCO Harmonisation Group's Technical Guidance on UTIs for OTC derivatives trade reporting served as the bedrock for harmonising UTI requirements between Hong Kong, Singapore, and Australia's regulators and is another positive example. Global efforts to leverage this positive experience is called for in harmonising other aspects of OTC derivatives trade reporting (such as UPIs and critical data elements). In addition to working towards a common set of requirements, the national regulators should continue collectively working to coordinate implementation timelines (both intra-region, and inter-region). Similar collaboration between national regulators is required to mitigate existing fragmentation in Asia Pacific capital markets.

[26] Commodity Futures Trading Commission. Joint Statement of CFTC and MAS Regarding Mutual Recognition of Trading Venues. (13 March 2019). Retrieved from: https://www.cftc.gov/PressRoom/PressReleases/7887-19

[27] Monetary Authority of Singapore. Concurrent Adoption of Equivalence Decision for Derivatives Trading Venues. (1 April 2019). Retrieved from: https://www.mas.gov.sg/news/media-releases/2019/concurrent-adoption-of-equivalence-decision-for-certain-derivatives-trading-venues



3.1.2. IBOR & EU Benchmark Regulation

Overview

Interbank offered rates ("IBORs") serve as fundamental benchmarks and reference rates for financial markets. Due to lower liquidity and incidents of manipulation in 2013, the FSB recommended moving from IBORs to risk-free rates ("RFRs") based on observable market transactions. Given the degree to which IBORs are embedded in the system, this transition is taking time. The Bank of International Settlements' ("BIS") 2019 March Quarterly Review indicated that over $400 TN worth of financial contracts referenced major IBOR benchmarks.[28] The ability to adopt new benchmarks and transition away from IBORs across Asia Pacific capital markets is complex and the implementation risks creating market fragmentation. Aside from the IBOR transition itself, the extraterritorial reach of the EU BMR contributes to market fragmentation by differentiating requirements between EU and non-EU-based end-users active in Asia Pacific markets.

Areas of market fragmentation

Fragmented Asia Pacific IBOR transition

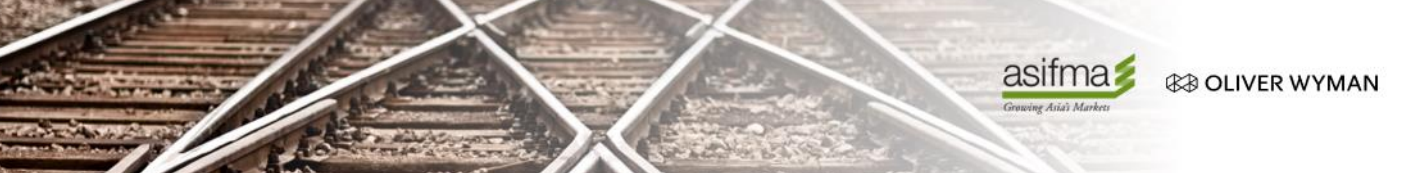
IBOR transition across Asia Pacific risks increasing market fragmentation in three ways: i) Different jurisdictions have adopted different time-frames for implementation; ii) There is a divergence in approach between different jurisdictions in the design for replacement reference rates; iii) Even within markets, there is a divergence in pace and approaches been proposed for different product classes.

Divergence in pace & implementation timing across jurisdictions

Certain Asia Pacific economies, including Singapore, Hong Kong and Japan, have IBOR replacement schedules that are largely aligned with EU and US jurisdictions. However, other Asia Pacific markets have proposed further delayed IBOR transitions. Regional variations in timing create distortions, particularly in cross-currency markets. As an example, under the hypothetical assumption that the USD LIBOR transitions in 2021 and the JPY LIBOR in 2022, one currency's curve will be based on a secured overnight financing rate ("SOFR"), while the other references an IBOR-benchmark for a year longer. Aside from requiring multiple re-statements to existing contracts (for an individual contract, parties could potentially agree to transition for both rates when the first is required, where the second is available), it also introduces additional basis risk for corporate treasurers and risk managers. Further, regional variations in implementation timing for IBOR transition across Asia Pacific may be accentuated due to the COVID-19 pandemic, adding to market uncertainty and potentially limiting availability of key products used by global corporates to manage risks.

Uncertainty on IBOR transition in Asia Pacific jurisdictions is exacerbated where local benchmarks and local currency reference rates are highly correlated or dependent on the USD LIBOR, which is the case for four benchmarks. For example, the SOR, MIFOR, THBFIX and PHIREF are currently pegged to the USD LIBOR by FX forward prices against the USD. Only Singapore and Thailand have a transition plan for the move from USD LIBOR to the SOFR, or a fallback that utilises SOFR in the cases of SORA, while India and the Philippines are still in early stages of consultation. Without a clear transition plan, there may be adverse impacts to the overall market when these benchmarks cease.

[28] Bank of International Settlements. Beyond LIBOR: a primer for new reference rates. (March 2019). Retrieved from: https://www.bis.org/publ/qtrpdf/r_qt1903e.pdf



Divergence in approach and methodology across jurisdictions

Most Asia Pacific jurisdictions are transitioning by both enhancing existing benchmarks and creating new RFRs (a multiple-rate approach). Fragmentation is emerging due to varied approaches and paces of development of such rates (for example, Malaysia has not settled on their final approach), as well as technical challenges such as the construction of a term structure due to limited capacity and ability to create liquidity in RFR markets. The level of potential divergence and complexity is material – the Alternative Reference Rates Committee ("ARRC") notes nine possible models of transition from IBORs to RFRs within derivatives alone.

Divergence across product classes

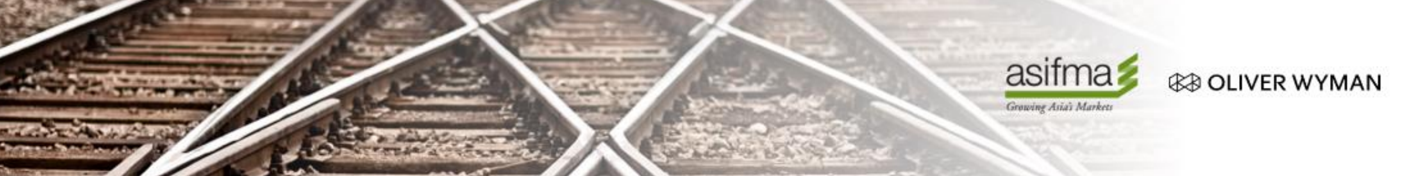
In addition to region-wide fragmentation, divergence at the product level can be observed, both in timing and substance. Derivative markets are likely to transition prior to cash and lending markets, led by ISDA's efforts in consulting on fallback methodologies.[29] Wide ranging consultation efforts, while initiated, have yet to be completed in cash and lending markets.

IBORs are also forward-looking term rates with a term structure, while RFRs are generally backward-looking overnight rates. As a result, the transition to RFRs requires a change in market convention. The inability to know the coupon rate at the beginning of the coupon period is problematic for corporate treasurers who may need to hold additional cash to account for any fluctuations. Interlinkages across products (*e.g.* cash products are interlinked with derivative instruments used to hedge FX or interest rate risk) further create fragmentation as different product classes transition at different times and via different approaches (for example, term vs. overnight rates) – unintentionally creating basis risks due to mismatches between the underlying and the hedges. These circumstances complicate the Asia Pacific corporate treasurer's visibility, needing them to hold additional cash to account for interest rate fluctuations.

IBOR transition will undoubtedly trigger the need for amendment of contracts as jurisdictions transition to various reference rates.[30] The unintended consequences of market fragmentation will be the costs associated with doing this several times, as jurisdictions across Asia Pacific make changes at different times and adopt different methodologies. This risks an adverse impact on the hedge accounting activities of corporates, while also generating additional P&L volatility.

[29] International Swaps and Derivatives Association. Benchmark Fallbacks. (24 February 2020). Retrieved from: https://www.isda.org/2020/01/10/benchmark-fallback-consultations/

[30] Note that while market fragmentation is likely to occur across legal, tax, and accounting dimensions, these are currently out of scope of the current discussion.



EU benchmark regulation

Under the EU BMR, EU regulated entities (including banks and asset managers) are prohibited from using an unregulated third-country benchmark from 1 January 2022.[31] At least 59 Asia Pacific benchmarks are expected to be classified as third-country benchmarks and be prohibited from use by EU entities or for EU end-users.[32] Mitigating this requires non-EU benchmark administrators to obtain registration via equivalence, recognition, or endorsement. An ASIFMA and Herbert Smith Freehills study (from December 2019) suggested that despite the extended transition period for third-country benchmarks, registration still remain a difficult challenge.[33] It is noteworthy that, although recognition and endorsement are put forward as options, neither have been used anywhere in Asia Pacific because it does not appear to be commercially feasible, leaving equivalence as the only feasible option.

While a limited number of Asia Pacific jurisdictions (Singapore, Australia, and Japan) have implemented domestic regulation and have been granted equivalence there is limited advancement in the pace of registration (largely driven by the complexities and ambiguity involved).[33] Even in the cases of Singapore and Australia, only a sub-set of benchmarks were deemed equivalent, with FX benchmarks being excluded from applications (by virtue of not being included in local jurisdiction frameworks).[34] For similar reasons, the draft equivalence decision for Japanese benchmarks only endorses the Yen TIBOR and Euroyen TIBOR as third-country benchmarks for use in the EU.35 This leaves out a number of other widely referenced benchmarks by EU users, such as equities indexes. The aforementioned study notes that only 33% of non-EU benchmark administrators surveyed indicated that their respective jurisdictions would seek equivalence for all rates administered.

[31] The compliance deadline for EU BMR was extended by two calendar years due to the relative unpreparedness of the market to work through the complex transition, across critical and third-country benchmarks. AFME, the Euro RFR Working Group, GFMA, ISDA, FIA, and EMTA led the advocacy efforts for the extension. AFME. High Level Implementation Plan. (13 September 2018). Retrieved from: https://www.afme.eu/News/Views-from-AFME/Details/deadline-extension-for-eu-benchmarks-regulation-is-hugely-welcome

[32] ASIFMA and Herbert Smith Freehills. The EU Benchmarks Regulation and the APAC Region: Keeping Up the Momentum. (December 2019). Retrieved from: https://www.asifma.org/wp-content/uploads/2019/12/the-eu-benchmarks-regulation-and-the-apac-region-keeping-up-the-momentum_.pdf

[33] ASIFMA and Herbert Smith Freehills. The EU Benchmarks Regulation and the APAC Region: Keeping up the momentum. (December 2019). Retrieved from: https://www.asifma.org/wp-content/uploads/2019/12/the-eu-benchmarks-regulation-and-the-apac-region-keeping-up-the-momentum_.pdf

[34] Official Journal of the European Union. Commission Implementing Decision (EU) 2019/127. (29 July 2019). Retrieved from: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019D1274&from=EN

[35] European Commission. Financial benchmarks – recognition of equivalence of Japan's legal and supervisory framework. (06 April 2020). Retrieved from: https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12330-Equivalence-decision-for-a-third-country-Japan-under-the-Benchmarks-regulation-BMR-

While several Asia Pacific geographies (including Korea, India, and New Zealand) that have implemented domestic regulation have reportedly initiated processes for seeking equivalence, this will likely be limited to certain significant local benchmarks only.[36] In Hong Kong, the HKMA and Treasury Markets Association ("TMA") were unable to seek equivalence of FX benchmarks due to the lack of a local regulatory framework. FX benchmarks are arguably of greater importance than local rates to EU firms operating in Asia Pacific due to FX hedging activities provided to multinational clients. The materiality of this change is significant – over EUR 54 BN in assets under management were placed in European-domiciled funds that reference Asia Pacific-administered benchmarks alone.[37] This does not include assets referencing Asia Pacific interest rate or FX benchmarks.

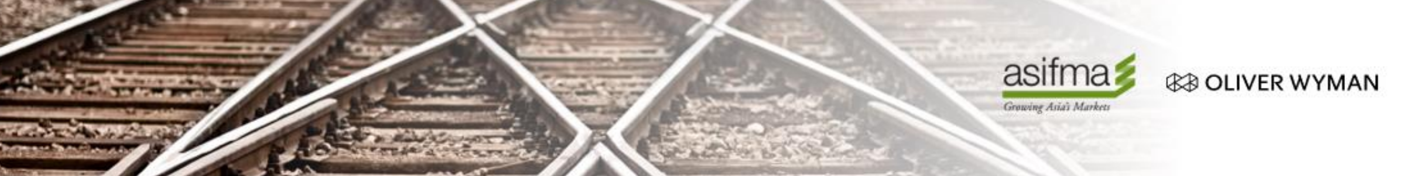
A consequence of the extraterritorial impact of EU BMR is that end-users who access products referencing Asia Pacific benchmarks are likely to: terminate relationships with entities bound by the EU BMR, synthetically replicate Asia Pacific benchmarks (where possible), or altogether cease trading of Asia Pacific benchmarks. All three options are detrimental to end-users by requiring higher trading and execution costs and fragmenting liquidity.

CASE STUDY: Extraterritorial impact of EU BMR on end-users and market development in Asia Pacific jurisdictions	
Situation	The EU BMR mandates that EU supervised entities can only use EU authorised benchmarks. This drives fragmentation by putting a limit on the benchmarks that the entities can use, as many benchmarks will be unavailable for use if not registered in time.
Impact	EU financial institutions (including those operating outside of the EU, but as a branch of an EU domiciled entity) face limited market access if the benchmarks they reference are not registered in time. EU financial institutions will face a reduced product landscape that their end-users can access across equities, rates, credit, and FX. Asia Pacific onshore clients that rely on these local benchmarks are likely to also be most adversely affected by the extraterritoriality of the regulation (by way of lower transaction volumes and liquidity). A number of issues and challenges have been documented by the Executives' Meeting of East Asia-Pacific Central Banks ("EMEAP").[38] As EU end-users are no longer able to access non-registered third-country benchmarks via EU supervised entities, they may opt to synthetically replicate features of the non-EU benchmarks (where possible), which increases execution costs and bifurcates liquidity into smaller pools. Asia Pacific end-users may instead resort to home-based institutions, but nonetheless will suffer from fragmented liquidity. There is also an underlying impediment to Asia Pacific market development with the risk of ceasing referencing to commonly used benchmarks across instrument classes by EU supervised entities, and possibly, their end-users. This would also increase market power and concentration of the "surviving" benchmarks, potentially raising market integrity issues.

[36] In India's case, the following benchmarks have been included: Overnight Mumbai Interbank Outright Rate ("MIBOR"), Mumbai Interbank Forward Outright Rate ("MIFOR"), USD/INR reference rate, treasury bill rates, valuation of government securities, and valuation of state development loans.

[37] Broadridge. European Domiciled Funds Using Asian-Administered Benchmarks. Data as of 31 March 2019. The data does not include direct investment by EU-domiciled investors into the Asia Pacific markets through stocks, bonds or Asia Pacific-domiciled funds.

[38] Executives' Meeting of East Asia-Pacific Central Banks (EMEAP). Working Group on Financial Markets (WGFM). (September 2019). Retrieved from: https://gia.info.gov.hk/general/201909/24/P2019092400316_322344_1_1569306484440.pdf



3.1.2.1. Key lessons learned

The ongoing experience in navigating IBOR transitions and EU BMR have highlighted the wide-ranging impacts of market fragmentation, which can be summarised as follows:

- **Impact on end-users:** IBOR transition will result in the triggering of fallback provisions within existing contracts, leading to potential legal, accounting, and tax-related challenges for end-users. The staggered nature of the transition across different markets in Asia Pacific adds to this challenge, with a need for multi-year client negotiations. The extraterritorial nature of the EU BMR means that existing EU and Asia Pacific end-users banking with EU entities will be limited from accessing products referencing Asia Pacific benchmarks. This will lead to certain capital markets players potentially retracting their Asia Pacific presences or require creation of synthetic products to mimic their intended Asia Pacific positions where possible (which will undoubtedly offer less liquidity, and higher prices).
- **Impact to financial sector and overall financial stability:** The uncertainty, operational complexity, and conduct-related risks associated with IBOR transition are material and exacerbated by the fragmented approach to transition in Asia Pacific. Creation of a subset of acceptable benchmarks under the EU BMR will limit liquidity in certain markets and increase concentration risks in certain non-EU entities. This is likely to reduce liquidity in certain Asia Pacific markets, increasing the bid-offer costs of products critical to the risk management activities of foreign and domestic participants. The complexity and scale of the IBOR transition, if not handled correctly, may have an impact on financial stability. This heightens the overall risk borne by financial markets, financial stability, and their respective players.

3.1.2.2. Proposals to reduce market fragmentation

Continue to encourage collaboration on IBOR transition between SSBs, national regulators, industry participants, and trade associations, and bring the good progress achieved in derivatives space to lending and securitisation products. Relevant SSBs should continue supporting national regulators and individual markets transition towards RFRs as needed. A consultative process with Asia Pacific national regulators and market participants is key to ensuring a well-coordinated transition across substance and timing, and ensuring a harmonised approach across jurisdictions, products, and methodologies.

In July 2020, the FSB and BCBS published a report to the G20 on supervisory issues related to LIBOR transition.[39] While the report focuses predominantly on LIBOR and its findings are broadly in line with our analysis, including the effect of divergent transition timing, approaches across jurisdictions and treatment of different products classes, there remains scope to take a similar approach to the transition of other IBOR transitions impacting the region, and to build greater awareness of these transitions' implications across markets, as well as assist national regulators in making these various transitions as necessary. For example, cross-industry committees led by SSBs could help achieve greater awareness of the various IBOR transitions across jurisdictions and industry participants.

The global nature of the derivatives market and requisite support from ISDA in developing fallback methodologies has allowed for a faster, and more cohesive transition in derivatives. However, there is a need for acceleration in the transition of lending and securitisation markets. This is critical in Asia

[39] Financial Stability Board and Basel Committee on Banking Supervision. Supervisory issues associated with benchmark transition. (July 2020). Retrieved from: https://www.fsb.org/wp-content/uploads/P090720.pdf

Pacific given the strong reliance on cross-border bank lending to fund corporates, as well as the bilateral nature of lending relationships that make them more susceptible to market fragmentation.

To aid the above measures, one practical recommendation is for SSBs to drive harmonisation across national regulators' requests for information on IBOR transitions. Financial institutions are often required to report the status and progress of their IBOR transitions by respective home and host jurisdictions. While commendable, at present, national regulators diverge in the content and focus (*e.g.* different cuts of 'counterparty', 'product type', 'currency'), type of data (*e.g.* netting methodologies), language of survey, and timings (*e.g.* requests for tailored sets of information by multiple regulators at the same time, short turnaround times) of these surveys. This suggests the opportunity for harmonisation to support a more consistent transition approach across jurisdictions. A harmonised approach would aid in stock-taking the progress of IBOR transitions across jurisdictions, market participants, and product classes in an efficient manner.

On EU BMR, there is a need for an industry-wide effort to seek refinement of the regulation to minimise its extraterritoriality, while concurrently developing more efficient processes for recognition of Asia Pacific benchmarks. Continued refinement of EU BMR regulation in light of market fragmentation considerations, and development of efficient processes for international recognition is needed: Asia Pacific national regulators and industry associations (such as the Global Foreign Exchange Division of GFMA, ISDA, etc.), and EMEAP should continue communication with EU regulators and outline the impact on Asia Pacific benchmarks by EU BMR. Focus should be placed on benchmarks that are systematically important, but are at-risk, and for which there is a lack of readily available replacements (*e.g.* certain interest rates, and FX benchmarks). EMEAP's 2019 paper on the "Study on the Implications of Financial Benchmark Reforms" provides a helpful overview of the EU BMR's impact on Asia Pacific jurisdictions, whilst presenting an industry view of the overall 'readiness-to-cope' post-going live.[40]

Since the release of EMEAP's paper and other lobbying efforts, a review of the EU BMR has commenced with greater focus on third-country benchmark administrators. Concurrently, the European Securities and Markets Authority ("ESMA"), in its response to the European Commission's consultation on the BMR review, suggests reducing the extraterritorial scope of the EU BMR by excluding non-significant benchmarks based on regulated-data pursuant to article 3(1)(24) of the text.[41] In addition, there is an opportunity to go further and call for exemption of FX benchmarks altogether, in order to allow EU businesses to continue to hedge their currency risks. This paper encourages greater engagement between Asia Pacific and EU authorities to ensure the continued use of Asia Pacific benchmarks.

Similarly, in efforts to avoid market disruption and limited access to Asia Pacific benchmarks for EU supervised entities, regulators could look to simplify current registration processes and options as part of the current Review and Impact Assessment process. This could take the form of directly simplifying requirements and processes to obtain recognition, or measures, such as substituted compliance in the case of Asia Pacific benchmarks that comply with the IOSCO Principles.

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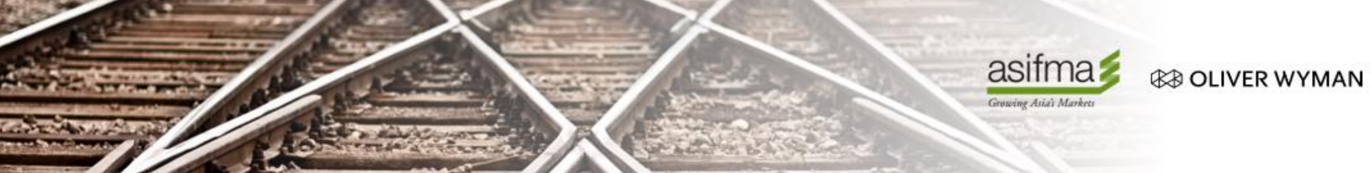
[40] Executives Meeting of East Asia-Pacific Central Banks. Study on the Implications of Financial Benchmark Reforms. (September 2019). Retrieved from: http://www.emeap.org/wp-content/uploads/2019/09/Study-on-the-Implications-of-Financial-Benchmark-Reforms.pdf

[41] European Securities and Markets Authority. Response to the Commission's consultation on the BMR review. (14 February 2020). Retrieved from: https://www.esma.europa.eu/sites/default/files/library/esma70-156-1778_esma_response_on_the_bmr_review.pdf



C D I P F

3.1.3. Recovery and Resolution Planning

Overview

The GFC was marked by high-profile bank failures and intense political backlash to government bailouts of financial institutions. Post-crisis reforms emphasised the need for financial institutions to enhance their recoverability (to avoid failure) and resolvability (to become 'safe to fail') without resorting to the use of public funds. In 2010, the Korean G20 Presidency called on the FSB to address the 'too-big-to-fail' problem through implementing Recovery and Resolution Planning ("RRP") policies, which requires financial institutions to draft recovery and resolution plans and undertake substantial financial, structural, and operational change to be able to wind down in an orderly manner. While progress made is commendable, regulatorily driven market fragmentation stemming from implementation across jurisdictions is prevalent across Asia Pacific.

Areas of market fragmentation

Market fragmentation in Asia Pacific is prevalent across both recovery and resolution planning. Variances in recovery plan regulations (such as the specific granularities of information desired by host regulators) in Asia Pacific persist and have subsequent impacts on enacting recovery plans across borders. However, the absence of proper resolution regimes and jurisdictional variances in TLAC implementation are greater sources of fragmentation, which to some extent counters the goal of ensuring financial stability.

Separately, albeit not directly related to resolution regimes, fragmentation also exists in relation to the insolvency of foreign financial institutions. For example, Singapore prioritises the repayment of local creditors, which impacts the intra-group treatment of claims upon insolvency of international entities, delaying global aggregation of assets in respect of such entities.

Absence of proper resolution regimes across APAC

Resolution regimes across Asia Pacific lack clarity on three counts: i) fragmented implementation of the FSB's Key Attributes, ii) ambiguity over resolution authorities, and iii) the lack of cross-border resolution frameworks. Together, these impact the efficiency end efficacy of RRP.

Fragmented implementation of FSB Key Attributes

Development of bank resolution regimes across Asia Pacific consistently lags and differs from the EU and US. Much of this is because RRP is viewed as a compliance exercise given the relatively limited impact of the GFC in Asia Pacific. Progress is also slower because many Asia Pacific financial institutions are state-owned and, therefore, de-prioritise the need for well-established bank resolution regimes (under the assumption that national governments will step-in and bail-out the troubled institution).

Per the FSB Key Attributes, members were required to introduce resolution regimes by end-2015; however, implementation is still incomplete in most Asia Pacific jurisdictions. In fact, the FSB noted that Hong Kong is the only Asia Pacific member that achieved full implementation, with Singapore and Japan closely following. In the absence of local regulations implementing the FSB Key Attributes, home resolution authorities will have to take a view on the resolution of entities located in as yet non-compliant jurisdictions, making cross-border resolution less efficient.

CASE STUDY: Fragmentation in adoption of stay rules under FSB Key Attributes creates enforcement and financial stability challenges	
Situation	An ASIFMA member referenced stay regulations as another example of fragmentation. The FSB Key Attributes require jurisdictions to include powers for resolution authorities to impose temporary stays in their resolution regimes. To assist with this, ISDA published the 2015 Universal Resolution Stay Protocol enabling parties to amend their contracts to recognise cross-border application of special resolution regimes, but adherence remains voluntary. Fragmentation occurs due to divergence in implementation timings of resolution regimes. Within stay rules, in particular, Japan's stay rules went live in April 2017, US's in January 2019, while Hong Kong and Singapore are in the process of finalisation.
Impact	Because stay rules are linked to local resolution regimes (and therefore vary across jurisdictions), there is no uniform means of compliance. The scope of relevant rules also varies across jurisdictions (*e.g.* Japan's stay rules cover trades entered into by Japanese branches of foreign banks, on top of home stay regulations). In jurisdictions without local stay provisions, end-users were generally unaware of how they worked and attempted to circumvent adherence with complicated and fragmented regulations. Aside from potentially restricting their market access, fragmentation in stay rules also create financial stability risks. Domestic courts enforcing contracts governed by domestic laws could disregard stays imposed under a foreign resolution regime. In this vein, similarly positioned creditors may be treated differently under the various local resolution regimes.

Ambiguity over resolution authorities

There is also a lack of clarity around specific authorities that possess resolution powers in Asia Pacific. For example, it is unclear which specific regulator serves as the resolution authority in China and Korea respectively.[42] In contrast, the HKMA has been empowered under the Financial Institutions (Resolution) Ordinance ("FIRO") as the lead resolution authority for banking entities and cross-sectoral groups in Hong Kong.[43] Similar clarity has also been observed in other jurisdictions – for example, Singapore notes that the MAS will serve as resolution authority for banks, while in the EU, the Bank Recovery and Resolution Directive requires member states to designate a National Resolution Authority.[44]

Lack of cross-border resolution frameworks

Inadequate frameworks for the recognition and enforcement of resolution measures on a cross-border basis persist (beyond crisis management groups ("CMGs") set up for Global Systemically Important Banks ("G-SIBs")).[45] Financial institutions that operate under a single-point-of-entry strategy are most affected, due to their inherent reliance on cross-border regulatory cooperation for successful resolution (for which there are a lack of tools in Asia Pacific). This is intensified due to limited implementation of the Key Attributes and ambiguity over recognition frameworks and resolution authorities in the region. A lack of collaboration between home and host authorities also compounds the challenge.

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[42] In China, it is unclear whether the People's Bank of China or the China Banking Insurance Regulatory Commission serves as the resolution authority. Similarly, it is unclear whether the Financial Services Commission, Financial Supervisory Services, or Korea Deposit Insurance Corporation serves as the resolution authority in Korea.

[43] The Hong Kong Monetary Authority. Resolution Framework. (26 August 2019). Retrieved from: https://www.hkma.gov.hk/eng/key-functions/banking/bank-resolution-regime/bank-resolution-framework/

[44] European Banking Authority. Resolution Authorities. (n.d.). Retrieved from: *https://eba.europa.eu/about-us/organisation/resolution-committee/resolution-authorities*

[45] Crisis management groups ("CMGs") bring together key home and host authorities for each Globally Systemically Important Banks: they typically comprise of supervisory authorities, central banks, resolution authorities, finance ministries, and other public authorities. They establish mechanisms for information exchange, cooperation, and coordination between relevant authorities.

Without cross-border collaboration, for example, through a formal recognition framework, risk to financial stability is to some extent exacerbated. This is a fundamental challenge in Asia Pacific, with most jurisdictions serving as hosts (via subsidiary or branch-models) to large financial institutions. These institutions operating in Asia Pacific are bound by their home jurisdictions' well developed RRP frameworks and are acutely impacted by RRP market fragmentation in the region. Fragmentation in this space can have adverse impacts on a bank's cross-border resolution strategy. Concurrently, by not always being included in discussions on fallouts during systemic events, regional financial stability faces great risks.

Variance in TLAC implementation across jurisdictions

TLAC requirements for G-SIBs is key to ending the 'too-big-to-fail' concern and shifting the onus from public bail-outs to private bail-in of capital. In principle, they bolster the capital of institutions by pre-positioning and ensuring it to be readily deployable (serving as a pre-requisite to application of bail-in resolution).

Fragmentation is evident in two areas as jurisdictions translate the TLAC term sheet into local regulations. The overall effect is an increase in TLAC requirements and costs of running cross-border businesses, which augments inefficiencies and risk of misallocation of financial resources.

Internal TLAC

The TLAC term sheet provides a bounded range of 75%-90% of the hypothetical external TLAC requirements that would apply if the material sub-group were instead a resolution group. Globally, regulators have not taken a uniform approach in calibrating their respective internal TLAC requirements for material sub-groups. Instead, they have compounded each other's capital requirements, such that it is not commensurate with actual level of risks (this is sometimes referred to locally as a sum-of-the-parts problem or super-equivalence).[46]

For example, Hong Kong and Singapore set the internal TLAC requirements on a firm-specific basis, starting at 75%. Outside of Asia Pacific however, the EU & US have set internal TLAC requirements at 90% and 88.9% respectively, regardless of firm-specific factors.[47] Estimates show that the implicit requirements for TLAC for US Integrated Holding Companies ("IHCs") exceed 130% on average – a clear indicator of super-equivalence driven by a lack of international cooperation. [48]

External TLAC

There is also substantial variation across jurisdictions in requirements governing which instruments qualify as external TLAC. For example, instruments with derivatives-linked features are excluded from TLAC eligibility in Hong Kong, but not in Japan. Similarly, Japan prohibits instruments with incentives to redeem (*e.g.* step-up interest rates), but Hong Kong does not.[49] The fragmentation of TLAC roll-out across regions creates challenges for global banks (see case study below) and overall financial stability.

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[46] Super-equivalence refers to the situation where the sum of the internal TLAC is greater than the overall group TLAC requirements, leading to the group carrying more than the intended amount of aggregate group TLAC. This is likely to occur if jurisdictions consistently apply the higher-end of internal TLAC in each sub-group, without adequate coordination among home and host jurisdictions.

[47] Financial Stability Board. Review of Technical Implementation of TLAC Standard. (2 July 2019). Retrieved from: https://www.fsb.org/wp-content/uploads/P020719.pdf

[48] Institute of International Finance. Evaluation of Too-Big-To-Fail Reforms. (5 July 2019). Retrieved from: https://www.iif.com/Portals/0/Files/content/Regulatory/iif_response_to_fsb_07052019.pdf

[49] Financial Stability Board. Review of Technical Implementation of TLAC Standard. (2 July 2019). Retrieved from: https://www.fsb.org/wp-content/uploads/P020719.pdf

CASE STUDY: Fragmentation and super-equivalence of pre-positioned capital requirements across jurisdictions challenges efficient flow of capital during stress scenarios	
Situation	An ASIFMA member suggested that there was evidence of market fragmentation emerging in TLAC caused by i) varying timelines of implementation, and ii) divergences in substance. The member specifically noted the differences in the internal TLAC requirements across jurisdictions, and the definition of "material subsidiary". Individual jurisdictions also applied super-equivalent requirements on top of FSB recommendations. Examples include the IHC requirement for Foreign Banking Organisations in the US, and the Intermediate Parent Undertaking ("IPU") requirements implemented in several EU jurisdictions.
Impact	Varying requirements make achieving resolvability more inefficient, including for the real global economy. Excessive pre-positioning of capital undermines the efficient use and flow of said capital. This is challenging because there is no certainty where resolution scenarios are initiated and localised. Furthermore, jurisdictions that currently require a lower amount of internal TLAC may soon increase requirements to match other jurisdictions. This would be driven by trust issues across jurisdictions around how resolutions are executed, and where resources would be allocated, further undermining flow of capital and the goal of achieving financial stability.

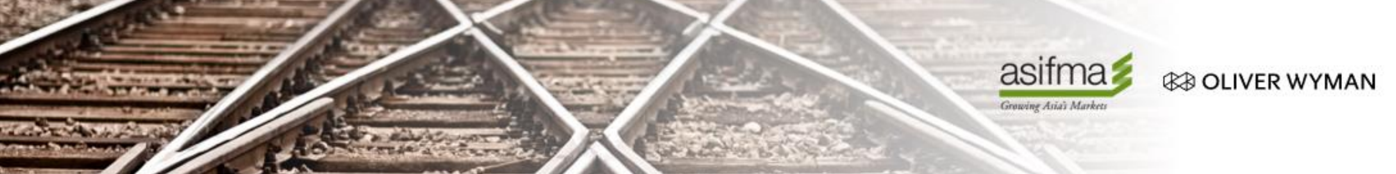
3.1.3.1. Key lessons learned

The ongoing fragmentation within RRP has highlighted the wide-ranging impacts that a lack of collaboration and coordination can have across stakeholders. These include:

- **Impact on market development:** Lack of cooperation between regulators leads to pre-positioning and trapping of capital within national borders or other forms of ringfencing (explored further in Section 3.1.4) and can sometimes impose super-equivalence of regulatory requirements. This segregation of capital may alter the cost-benefit analyses for financial institutions to maintain onshore presences in certain markets. Aside from impeding their ability to take on more business across borders, it also limits the developments of local financial industries from a service provision and knowledge-transfer perspective, impacting investors and end-users of the financial system.
- **Impact to financial sector and overall financial stability:** Fragmented adoption of the FSB Key Attributes and limited development of resolution regimes leads to challenges in cross-border enforcement of resolution plans during systemic events, and makes achieving resolvability more inefficient, with costs for the broader economy. Limited mechanisms for cross-border collaboration dilutes the accountability of each jurisdiction and their associated powers during resolution actions. This correspondingly increases the risk of fallout during systemic events and impedes financial stability.

Forward looking considerations

From a forward-looking perspective on other RRP aspects (including solvent wind down ("SWD"), resolvability assessments, and resolution liquidity execution needs) where Asia Pacific has seen limited development and implementation, it is critical that the region aligns closely with global FSB standards, and leverage guidance from home regulators. For example, on SWD Trading and Derivative portfolios, the industry's view is that any SWD planning should only be applied if proportionate and justified by the significance of the derivatives and trading book activities. Where considered, it should be noted that SWD on a jurisdiction-by-jurisdiction basis may not be feasible, especially so for large cross-border banks that are GSIBs and may run their trading book on a global basis, and host regulators should regard a firm's home resolution plan and compliance with SWD requirements as sufficient to establish compliance with any host's respective requirements.



3.1.3.2. Proposals to reduce market fragmentation

Minimising market fragmentation in Asia Pacific requires stronger cross-border cooperation between regional resolution authorities, and a more Asia Pacific-focused mechanism for monitoring implementation of RRP-related reforms. In addition, greater collaboration between industry participants, regional associations, national regulators and SSBs will be necessary.

Drive greater consistency in implementation of RRP frameworks while allowing for jurisdiction-specific adjustments: SSBs should continue to promote consistency in implementing resolution planning requirements among jurisdictions. This starts with enhancing the current annual assessment of resolution reform implementation via peer reviews by the FSB to include a greater number of Asia Pacific jurisdictions given the unique challenges to this region. The FSB Regional Consultative Group for Asia can lead this effort and ensure greater regional harmonisation of resolution powers and directives.

SSB peer reviews can serve to provide technical guidance to Asia Pacific jurisdictions that are typically new to RRP exercises or have yet to implement them fully. Concurrently, SSBs and national regulators should consider situation-specific aspects in determining RRP frameworks to ensure they remain 'fit-for-purpose'. For example, resolution approaches for Japan and China that are home to G-SIBs are likely to be different from those of Australia, Singapore, and Hong Kong that host global G-SIBs.

Monitor and harmonise implementation of TLAC standards: SSBs should continue to monitor the implementation progress of internal and external TLAC requirements, and its impact on the fungibility of capital across borders in global banking groups, building on ongoing efforts such as the FSB's annual implementation reports.

In determining internal TLAC requirements, national regulators should ensure that the requirements of the consolidated balance sheets of financial institutions do not exceed those beyond FSB recommendations. To aid with this, national regulators should adopt a proportionality and risk-based framework to calibrate pre-positioning requirements (including TLAC) to ensure they avoid misallocation of risk and super-equivalence. SSBs can consider issuing additional guidance and prescription to encourage global cooperation and harmonisation.

Facilitate increased cooperation among resolution authorities across jurisdictions:

Firm-specific cooperation

National resolution authorities should look to improve firm-specific cross-border supervisory and regulatory cooperation (*i.e.* through ensuring adequate recognition frameworks between home and host jurisdictions). In principle, enhanced cross-border supervisory and regulatory cooperation can be achieved through bilateral and multilateral forums, agreements to improve information sharing, and give confidence to home and host authorities under both a single-point-of-entry or multiple-point-of-entry resolution strategy.

While CMGs are a core forum for cooperation between home and host authorities for G-SIBs, they typically do not include all host authorities where the G-SIB operates in.[50] Additional arrangements should be explored for host authorities not participating in CMGs and hosts of non-G-SIBs. This is critical to ensure that these jurisdictions are given access to firm recovery and resolution plans to understand the impact on their jurisdictions, and that there are concrete recognition frameworks between home and all relevant host jurisdictions. To ensure greater inclusion of host authorities that do not participate in CMGs in discussions on resolution actions, home authorities can alternatively develop regional subgroups or other bilateral mechanisms for cooperation and information sharing.

For example, the Swiss Financial Market Supervisory Authority ("FINMA") maintains an Asia Pacific focused regional college that provides a forum for non-CMG hosts to engage on recovery and resolution of Swiss G-SIBs operating in Asia Pacific.[51] The regional college is also used to inform non-CMG hosts of the developments within the group CMG, while adhering to an Asia Pacific focus. Additionally, FINMA augments the regional college with multilateral cooperation agreements with relevant Asia Pacific jurisdictions, thus being an example of a well-coordinated single-point-of-entry resolution strategy for Swiss G-SIBs that have strong but not material Asia Pacific presence.

Separately, for banks that are not G-SIBs, firm-specific arrangements for cross-border coordination are nascent largely because resolution regimes for non-G-SIBs are underdeveloped globally.[52] Regulators should begin using MOUs, regional forums, and supervisory colleges to support exchange of resolution-related information between home and host authorities and enhance cross-border collaboration on resolution-related matters. The Trans-Tasman Council on Banking Supervision is a positive example of Australian and New Zealand authorities addressing general cross-border crisis management and resolution-issues for non-G-SIBs operating in both jurisdictions, which may potentially serve as a model to be replicated.[52]

Non-firm specific cooperation

Asia Pacific national regulators should also be encouraged to participate in multilateral non-firm specific arrangements to further strengthen cross-border cooperation and information sharing. To that end, the EMEAP established the Focused Meeting on Resolution ("FMR") in 2018 to develop a greater regional focus on resolution work to improve information exchange and cooperation within the area. The FMR was attended by central banks, supervisors, and resolution authorities from all 11 EMEAP member jurisdictions. The FMR currently focuses on knowledge-sharing, capacity-building, and improving enforceability of cross-border resolution issues in Asia Pacific. However, it can further serve as a platform for dialogue with market participants as well, allowing local G-SIBs and D-SIBs to share their perspectives and suggestions.[53]

[50] The FSB's 2019 review highlights that a singular G-SIB currently includes eight jurisdictions at most. Financial Stability Board. Eighth Report on the Implementation of Resolution Reforms. (14 November 2019). Retrieved from: https://www.fsb.org/wp-content/uploads/P141119-3.pdf

[51] Bank of International Settlements. FSI Insights on Policy Implementation. (January 2020). Retrieved from: https://www.bis.org/fsi/publ/insights22.pdf

[52] Financial Stability Board. Thematic Review on Bank Resolution Planning. (29 April 2019). Retrieved from: https://www.fsb.org/wp-content/uploads/P290419.pdf

[53] Bank of International Settlements. FSI Insights on Policy Implementation. (January 2020). Retrieved from: https://www.bis.org/fsi/publ/insights22.pdf

National regulators can also engage in bilateral cooperative agreements and information sharing and be supported by formal agreements such as MOUs when appropriate. A positive example is the Philippine Deposit Insurance Corporation, which found "bilateral engagement and understanding the home authorities' approaches to resolution planning" useful when developing its local requirements.[53] Other non-firm specific activities can include crisis simulation exercises to test Asia Pacific cross-border cooperation (in association with key home jurisdictions) and workshops and trainings – these are effective mechanisms in strengthening the capacity of emerging APAC markets in developing concrete resolution regimes.

3.1.4. Capital Requirements & Liquidity

Overview

Post-crisis reforms have substantially increased capital and liquidity requirements for financial institutions and have also strengthened the financial system by increasing its ability to withstand financial shocks.[54] Whilst some deviation from timelines may be warranted (*e.g.* delaying Net Stable Funding Ratio ("NSFR") during the height of the COVID-19 pandemic), the inconsistent implementation of Basel requirements across jurisdictions exacerbated market fragmentation across Asia Pacific capital markets. Global deviations also include calculation of leverage ratio.

Furthermore, the lack of jurisdictional trust and collaboration has prompted jurisdictions to implement greater pre-positioning of capital and ringfencing, and constraints have been put in place on development of internal capital markets within groups (*e.g.* regional hubs).[55] Altogether, these mechanisms have contributed to increased capital being tied up, instead of being used in the real economy, as well as increasing the costs and complexity for financial institutions in providing cross-border services and offerings. A holistic review is needed to ensure banks can be liquidity providers in times of economic stress as recently seen in the pandemic.

Areas of market fragmentation

Jurisdictional ringfencing of capital & activities

A lack of trust and collaboration between jurisdictions leads to additional pre-positioning of capital and ringfencing. Often aimed at foreign banks operating in host jurisdictions, ringfencing looks to adjust the structure of a bank's operations. Activity ringfencing carves out certain activities from others (such as separating out retail banking from investment banking), while geographic ringfencing typically requires subsidiarising onshore operations with locally maintained capital or requiring capital to be maintained locally for branches. Regardless of the specific mechanism applied, ringfencing aims to enhance the resolvability of entities, protect domestic creditors, and improve the robustness of domestic financial systems. National regulators seek to insulate their financial systems by requiring subject to host jurisdiction controls such as capital and liquidity resources being held locally – all while fragmenting cross-border financial markets.

Ringfencing has historically been more common in the EU and US via IPUs and IHCs respectively but remains prevalent and increasingly emerging in Asia Pacific. Singapore implemented activity-related

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[54] Between June 2011 and June 2019, the combined Common Equity Tier 1 Capital held by 106 of the world's largest international banks increased by 98% to $4.22 TN.

[55] AFME. CRD 5: The new Large Exposures Framework. (February 2017). Retrieved from: https://www.afme.eu/portals/0/globalassets/downloads/briefing-notes/2017/afme-prd-le-non-technical-paper.pdf

ringfencing and incorporation of retail operations that affected at least three foreign banks.[56] Similarly, according to its Scheme for Setting up Wholly Owned Subsidiaries ("WOS"), the Reserve Bank of India ("RBI") reserves the right to require a subsidiary instead of a branch, in certain circumstances, when dealing with foreign banks.[57] India has since provided a transition plan and incentives for existing foreign banks to convert from a branch-banking model to a WOS model.

In effect, ringfencing exacerbates market fragmentation without necessarily improving the resilience of financial systems and creates unintended consequences for both national regulators and end-users. A 'prisoners dilemma' situation involves individual jurisdictions reciprocating each other's ringfencing efforts to prevent being unprotected during a systemic event.[58] The excessive segregation of capital then reduces the resilience of financial systems by trapping much needed capital within geographic borders and inhibiting the flow of resources when needed elsewhere (known as misallocation risk). A Brookings Institution study outlines that the likelihood of bank systemic failure increases between 5-15 times if ringfencing becomes widespread, compared with integrated banking structures supported by fully mobile capital.[59] AFME additionally notes that ringfencing imposes considerable costs on the economy and weakens financial stability.[60]

Concurrently, ringfencing's impact on market fragmentation also poses challenges to financial institutions themselves and their end-users. When there is ringfencing, financial institutions will often need to cede one-bank efficiencies and lock down additional capital to maintain onshore presences. This can alter the cost-benefit analysis of maintaining onshore presences, potentially leading to retractions in customer service provision, if not exiting the market altogether.[61] A Bank of England study also suggests that every 1% increase in capital requirements results in a 5.5% contraction in cross-border lending at the bank level, due to the separation of the bank's balance sheets from their parent's.[62]

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[56] Reuters. Singapore central bank lists seven systemically important lenders. (30 April 2015). Retrieved from: https://www.reuters.com/article/singapore-banks-regulations/singapore-central-bank-lists-seven-systemically-important-lenders-idUSL4N0XR5ZR20150430

[57] Reserve Bank of India. Scheme for Setting up of WOS by foreign banks in India (commenced 2013). (n.d). Retrieved from: https://m.rbi.org.in/Scripts/bs_viewcontent.aspx?Id=2758

[58] The Japanese FSA recently commented that they might be compelled to reciprocate ringfencing measures by EU, US, and other Asia Pacific regions.

[59] Brookings Institution. Understanding 'ring-fencing' and how it could make banking riskier. (7 February 2018). Retrieved from: https://www.brookings.edu/research/understanding-ring-fencing-and-how-it-could-make-banking-riskier/

[60] AFME. The European banking system: tackling the challenges, realising the opportunities - Achievements and next steps in the reform programme. (July 2019). Retrieved from: https://www.afme.eu/Portals/0/DispatchFeaturedImages/afme_eurobankingsystem2019_08_lr.pdf

[61] As an example, after the US Federal Reserve enhanced capital requirements for Foreign Banking Organizations ("FBO"), $761 BN of FBO broker-dealer assets were withdrawn. From a markets' perspective, asset withdrawal means lower credit provision, lower liquidity in US capital markets, and additional volatility. Institute of International Finance. Value of Cross-Border Banking and the Cost of Fragmentation. (November 2019). Retrieved from: https://www.iif.com/Portals/0/Files/content/Regulatory/11132019_iif_regulatory.pdf

[62] Bank of England. The international transmission of bank capital requirements: evidence from the United Kingdom. (April 2014). Retrieved from: https://www.bankofengland.co.uk/-/media/boe/files/working-paper/2014/the-international-transmission-of-bank-capital-requirements-evidence-from-the-uk.pdf

In practice, international banks operate hubs in larger Asia Pacific economies and rely on flexible deployment of their balance sheet and capital across the region. End-users in Asia Pacific equivalently also rely on cross-border regional lending, and hence, the detrimental impact of market fragmentation (via ringfencing) is evident. Simultaneously, financial institutions may also pass down direct costs incurred as a result of capital and activity ringfencing to end-users. In more extreme scenarios, financial institutions may limit their commitment to specific jurisdictions, thereby slowing onshore financial market development.

CASE STUDY: Varying banking structure requirements across Asia Pacific, and impact on servicing real economy and stability	
Situation	An ASIFMA member noted that significant variations persist in the structures that foreign banks can use for their local banking operations across Asia Pacific. The member also noted that these requirements are continuing to evolve, and even the basic models of branch vs. subsidiary used to mandate local incorporation are not standardised across Asia Pacific jurisdictions. For example, newly Qualifying Full Banks in Singapore are required to be incorporated in order to establish a physical presence of up to 25 locations.[63] Meanwhile, incorporation is only mandatory for foreign banks that operate a material retail operation in Australia. Separately, the RBI's move to encourage the shift from branch-based banking to WOS-structures means that foreign lenders will receive 'near national treatment' which also requires a nearly three-fold increase in up-front capital requirements.
Impact	Variations in structural requirements for foreign banks seeking presences in Asia Pacific limits the scale of their operations, both legally and commercially. The semi-permanent nature of equity capital limits the flexibility of banks to provide additional liquidity, capital, and funding capacity to onshore operations, and therefore the real economy. For example, smaller onshore balance sheets impact the overall ticket-sizes of transactions given the large exposure limits, while generally limiting lending appetite. This directly reduces the sources of funding available to the real economy, and limits market development. Furthermore, structural ringfencing traps core financial resources within a country limiting the ability to deploy them across borders, which is especially challenging during stressed situations and accentuates the risk to financial stability.

Basel reforms

The implementation of the final Basel III reforms has diverged across jurisdictions and has simultaneously resulted in market fragmentation. While all 24 FSB jurisdictions have implemented the core elements of Basel III (*i.e.* Risk-Based Capital and Liquidity Coverage Ratios) to-date, other aspects of the Basel III final reforms are lagging behind. Most Asia Pacific jurisdictions generally implement Basel reforms per-agreed timelines, and sometimes front-run US and EU jurisdictions.[64] On NSFR that had an implementation deadline of January 2018, all Asia Pacific jurisdictions have draft regulation published (with only Japan and India delaying final implementation), while Mexico and the US are yet to publish draft regulation.[65] In their latest review of implementation of G20 reforms, the FSB underlined that the main reasons for implementation delays include: concerns over the global pace of implementation (where front-running puts jurisdictions at a 'disadvantage'), complexity of standards and difficulty in translating to domestic rules, and operational challenges in implementation.[66]

[63] Monetary Authority of Singapore. Speech by DPM Tharman Shanmugaratnam. (28 June 2012). Retrieved from: https://www.mas.gov.sg/news/speeches/2012/ensuring-strong-anchors-in-our-banking-system
[64] Financial Stability Board. Implementation and Effects of the G20 Financial Regulatory Reforms. (16 October 2019). Retrieved from: https://www.fsb.org/wp-content/uploads/P161019.pdf
[65] Basel Committee on Banking Supervision. Seventeenth progress report on adoption of Basel regulatory framework. (October 2019). Retrieved from: https://www.bis.org/bcbs/publ/d478.pdf
[66] Financial Stability Board. Implementation and Effects of the G20 Financial Regulatory Reforms. (16 October 2019). Retrieved from: https://www.fsb.org/wp-content/uploads/P161019.pdf

The staggered implementation timelines of the final Basel III reforms produce a patchwork of un-harmonised global standards (and therefore market fragmentation) which create challenges for financial institutions to operate across borders. Financial institutions that operate across several Asia Pacific jurisdictions are likely to be most affected by ongoing fragmentation as they face higher implementation risks due to the fragmentation of reforms across their home and host jurisdictions.

Additionally, inconsistent implementation timing may also expose non-compliant jurisdictions to risks by having less prudent regulatory standards. Elsewhere, there are also instances of jurisdictions that seek leniency in implementing the full extent of Basel reforms. For example, the EU put through proposals that stop-short of complete implementation of the Basel reforms (after initial impact assessments highlighted a significant impact of reforms on banks' balance capital requirements).[67] Substance-led divergence also contributes to exposing jurisdictions with less prudent regulatory standards to additional risk.

Recently, policymakers have provided relief to mitigate the prudential impact of COVID-19. While the industry welcome initiatives by the FSB to coordinate global efforts and statements by the Basel Committee on the drawdown of capital buffers and the decision to defer Basel III reforms, approaches to relief have varied widely among jurisdictions.[68] There have also been procyclical effects experienced with respect to Basel III prudential rules, which will need to be reviewed at the international level to identify where adjustments are necessary.

Upon solvency stress in the real economy, financial institutions need to be able to deploy capital and liquidity to where it is needed. Regulatory uncertainty regarding how buffer drawdowns should be used in practice or are shared between home and host, and potentially more localized efforts to ring-fence capital and liquidity, may emerge. From the perspective of banks, a financial system with high levels of ring-fenced and trapped capital also makes the banks themselves unnecessarily brittle. Local shocks will be more likely to amplify vulnerabilities throughout the financial system. FSB statements about buffer sharing and resource mobility expectations can be important in setting the right framework. In addition, given the importance of the US Federal Reserve Board in global liquidity, its action and statements will have a major impact. It is important to agree policy early – before specific situations crystalize into "haves and have-nots" and make negotiations harder.

[67] Bank of International Settlements. The European financial market after Brexit. (11 March 2020). Retrieved from: https://www.bis.org/review/r200312c.pdf

[68] Basel Committee on Banking Supervision. (17 June 2020). Retrieved from: https://www.bis.org/press/p200617.htm

The agility and well-intentioned actions from central banks and national regulators are aimed at increasing credit supply in domestic markets and boosting liquidity. Over $492 BN in capital has already been freed up, providing lenders with additional capacity to extend nearly $5 TN in loans globally.[69] As part of the pandemic recovery process, it is important to ensure continued or increased cross-border activities, international capital flows, and sustained global liquidity. Appropriate remediation and harmonisation of global standards across all facets of capital requirements, not limited to Basel capital requirements, but including the G20 OTC reforms, should be a policy focus post-pandemic particularly in ensuring banks can play their role as liquidity providers to the real economy.

3.1.4.1. Key lessons learned

Market fragmentation of capital requirements impacts end-users, in addition to the broader efficiency and stability of markets, as illustrated below.

- **Impact on end-users:** Increased cost burdens and impeded flow of capital exert pressure on banks to consolidate their operations. In particular, smaller banks without the benefit of scale are likely to become more selective in the types of activities they undertake amid smaller appetites. This causes end-users to bear higher costs for products and services, or even lose access altogether.
- **Impact on market development:** Similarly, increases in cost and complexity of operations may prompt global banks to reconsider their business footprint and retreat from jurisdictions that are not strategic priorities. This may reduce their onshore investments in nations that rely on such investments to support economic development. In addition, the FSB Report on Market Fragmentation describes how differences in Basel implementation may impede trade finance and wholesale banking.[70] In effect, fragmentation would limit the development of cross-border financial markets, whilst simultaneously impacting Asia Pacific economies that rely heavily on trade finance.
- **Impact to financial sector and overall financial stability:** Ringfencing limits financial institutions' flow of capital across borders and therefore prevents effective mobilisation of capital to distressed jurisdictions during stressed events and enhances misallocation risk. This undermines financial stability and intensifies risk borne by individual markets. Market fragmentation through inconsistent implementation of global reforms may also create opportunities for regulatory arbitrage. Jurisdictions that inconsistently implement regulations (and fail to achieve 'compliant' statuses via Basel RCAPs) can be at risk of having less prudent and robust regulatory standards temporarily.

[69] Financial Times. Regulators free up $500bn capital for lenders to fight virus storm. (6 April 2020). Retrieved from: https://www.ft.com/content/9a677506-a44e-4f69-b852-4f34018bc45f

[70] Financial Stability Board. FSB Report on Market Fragmentation. (4 June 2019). Retrieved from: https://www.fsb.org/wp-content/uploads/P040619-2.pdf

3.1.4.2. Proposals to reduce market fragmentation

Collaboration between market participants and regulators can minimise the impact of existing market fragmentation. Below are some proposals to reduce market fragmentation.

Effective implementation and post-implementation monitoring of agreed reforms: SSBs could expand existing mechanisms for implementation and post-implementation monitoring (*e.g.* peer reviews by FSB, Basel's RCAP, and IMF) to focus on Asia Pacific markets, with an emphasis on mitigating the negative consequences of market fragmentation in developing nations. To achieve this, the FSB could consider establishing a dedicated task force under the Standing Committee on Standards Implementation to focus on identifying and mitigating fragmentation in Asia Pacific markets.

These review processes should occur at the appropriate frequency to enable timely interventions and support a proper diagnostic of root causes underlying fragmentation at the jurisdictional and regional level. This includes an assessment of the overall preparedness of individual jurisdictions' capabilities in implementing large-scale global reforms. These measures will minimise divergence in substance and timeline of global reforms, support greater regional harmonisation and reduce global market fragmentation (*e.g.* continental front-running of reforms).

Review mechanisms will be especially critical in light of the COVID-19 global pandemic, where national regulators are independently relaxing capital and liquidity regulations to increase domestic supply of credit. Post-pandemic, there will be a need to remeasure market fragmentation across jurisdictions with a view to ensuring regional and global harmonisation. While the FSB has already called for a coordinated effort to unwind these temporary measures post-pandemic, there is an opportunity to leverage this commitment further and mitigate market fragmentation that may have been created through ringfencing and unaligned implementation of the final Basel reforms.

Foster additional collaboration between market participants and regulators: As suggested by the FSB's June 2019 Report on Market Fragmentation, supervisory colleges and relevant forums should prioritize market fragmentation in upcoming sessions and draw additional focus on remediation going forward at both the bank and country levels.[71] These colleges and forums should include all relevant Asia Pacific jurisdictions where financial institutions have a significant presence, or where the institution is considered material by the jurisdiction. Colleges and forums can articulate the impediments that fragmentation has on cross-border activities, and promote greater transparency on coordination, leading to increased facilitation of bilateral and multilateral arrangements.

Evidence of regional Asia Pacific collaboration is already prevalent. National regulators in Asia Pacific are collaborating to mitigate market fragmentation and to resolve inconsistencies in global implementation of reforms. For example, in certain APAC jurisdictions, such as Hong Kong, Singapore, and Australia, that are host to a number of global banks, national authorities have considered delaying implementation of the FRTB in order to avoid front-running other major jurisdictions such as the US and EU.

[71] Financial Stability Board. FSB Report on Market Fragmentation. (4 June 2019). Retrieved from: https://www.fsb.org/wp-content/uploads/P040619-2.pdf

Supervisory colleges can play an effective role in supplementing such efforts by garnering industry feedback to national regulators, allowing them to consolidate accordingly. For these efforts to be successful, firm-level supervisory colleges should be better structured and more inclusive by including all relevant Asia Pacific regulators, whilst also refocus existing discussions to include market fragmentation considerations.

Encourage and develop trust among regulators and supervisors: Fundamentally, ringfencing measures are understood to arise out of limited trust and collaboration amongst national regulators, which was evident during the GFC where national regulators sought to control local entities. At the time, there was no pre-positioned gone-concern capital (TLAC resources) or specific resolution authorities empowered to manage bank failure.[72] The FSB's Key Attributes conceived since, aim to protect both home and host jurisdictions by triggering appropriate resolution mechanisms to ensure financial institutions are safe to fail supported by living wills.

In principle, greater trust and collaboration supported by the implementation of adequate resolution measures (explored in Section 3.1.3) can alleviate the need for ringfencing of capital for market protection without the drawback of constraining cross-border banking and capital flows. Doing so can increase the adoption of MOUs (or relevant secured support agreements) between home and host regulators of global banks, assuring home regulators that there are legally protected guarantees that ensures the adequate flow of financial resources to their jurisdictions during stressed events.[73]

Existing supervisory colleges, CMGs, or regional subgroups can also play a key role in ensuring that resolution strategies adequately satisfy the needs of both home and host jurisdictions of financial institutions, as well as enable adequate and consistent supervision across jurisdictions. Fostering trust and collaboration between national regulators will be especially critical during the current COVID-19 pandemic, where national regulators are more likely to apply ring-fencing safeguards to better insulate their jurisdictions.

In addition, steps could be taken to enhance more upstream cooperation amongst supervisors. The FSB should establish a group alongside or under its existing standing committees with the task of enhancing cooperation on supervisory policy and practice.

[72] Brookings Institution. Understanding 'ring-fencing' and how it could make banking riskier. (7 February 2018). Retrieved from: https://www.brookings.edu/research/understanding-ring-fencing-and-how-it-could-make-banking-riskier/

[73] Secured support agreements have become the" tool of choice" in the US, providing a collaterized legal agreement that ensures solvency and liquidity for a 'needy subsidiary in the event of stress'. JP Morgan Chase. 2017 Resolution Plan Public Filing. (2017). Retrieved from: https://www.jpmorganchase.com/corporate/investor-relations/document/resolution-plan-2017.pdf

3.2. Emerging Examples of Market Fragmentation

3.2.1. Sustainable Finance

Overview

The role of sustainable finance in global capital markets continues to grow as investors increasingly channel funds towards investments that deliver measurable non-financial benefits and address environmental, social, and governance ("ESG") issues without compromising on long-term financial returns. Asia Pacific continues to expand in the field of sustainable finance, especially in green bond issuances with total regional green bond issuance amounting to nearly $50 BN in 2019.[74] China leads the region with nearly half of the issuance volume, while Southeast Asia and South Korea serve as the fastest growing markets in Asia Pacific.[75]

Investors are increasingly scrutinising companies' practices with an ESG lens, drawing focus on their practices towards human capital and society. Concurrently, the pandemic also creates opportunities for COVID-focused sustainable products, such as sustainable bonds that can help raise proceeds to implement mass-scale virus testing or purchase new ventilators – this is evident in the near $13 BN in pandemic-related bond issuances as of April 2020.[76] Despite Asia Pacific being one of the faster growing markets for sustainability-related products, challenges arising from fragmentation serve to be a constraining factor on the scalability of sustainable finance in the region and abroad, especially as different countries start the process of developing their own standards and taxonomies.

At this critical juncture, it is evermore imperative for policymakers and regulators to coordinate internationally to achieve greater alignment and harmonisation across the different taxonomies and disclosure standards. Not only would this further build investor confidence and increase flows towards 'green' and 'sustainable' projects and activities, it is vital for there to be a concerted effort in the overall transition to a global low-carbon economy, especially given that the impact of climate change is an international phenomenon – this would further help to pre-emptively mitigate uneven cost-bearings of any single jurisdiction as a result of fragmentation.

Areas of market fragmentation

Standards for sustainable finance have been proposed by several countries (with developed markets generally at the forefront of policy development); however, there is yet to be a globally adopted standard. In fact, there is still a lack of a globally harmonised taxonomy defining what 'green' is, in addition to inconsistent disclosure requirements and varying approaches to supervisory oversight on financial institutions adopted by jurisdictions. In the case of the EU Taxonomy, the next step would be to expand the scope with respect to social criteria, whilst there is also a likelihood that the taxonomy will be expanded to include 'neutral' and ''brown' activities. Globally, similar divergence appears to be emerging in relations to climate-related risk management.

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[74] Climate Bonds Initiative. ASEAN Green Finance: State of the Market 2019 (April 2020). Retrieved from: https://www.climatebonds.net/files/reports/cbi_asean_sotm_2019_final.pdf

[75] Refinitiv. Global Green Bonds: Full Year 2019 Review. (17 January 2020). Retrieved from: https://esg.theasset.com/ESG/39561/global-green-bonds-2019-full-year-review

[76] BMO Capital Markets. Sustainable finance in a COVID world. (22 April 2020). Retrieved from: https://capitalmarkets.bmo.com/en/news-insights/covid-19-insights/sustainable-finance/sustainable-finance-in-a-covid-world/

According to IOSCO's April 2020 report, 40% of industry participants observed cross-border challenges related to ESG disclosures or sustainability reporting, with key common cross-border challenges being 'the need for standardisation of standards/disclosure frameworks and the variances in local disclosure requirements. Other impediments identified include the 'lack of reliable and credible data and the lack of standards that promote comparability between sustainable investments. Some respondents believe that challenges around comparability may result from the different levels of development and maturity in markets, the lack of common definitions, and the lack of standardised frameworks.[77]

The table below, drawn from ASIFMA's March 2020 Sustainable Finance white paper, illustrates a growing dichotomy between the 'developed' markets and 'emerging' markets in terms of the development of standards and integration of sustainability-related risks within regulatory frameworks – such divergence will likely further contribute to market fragmentation, and may hinder the development of sustainable finance in emerging markets.[78]

Table 3: Summary of sustainable finance standard development across key APAC jurisdictions

	Taxonomy framework	Disclosure	Prudential regulations	Green stress-testing
Developed markets				
EU	●	●	●	●
UK	●	●	●	●
China	●	●	●	○
Hong Kong		●	○	○
Singapore		●	○	○
Japan		●		
Australia		●		
New Zealand		●		
Emerging Markets				
Indonesia		●		
Malaysia	○	●		
India		●		
China		●		

○ *Proposal is still under considerations (rules expected to come into force)*

[77] International Organization of Securities Commissions . Sustainable Finance and the Role of Securities Regulators and IOSCO – Final Report. (April 2020). Retrieved from: https://www.iosco.org/library/pubdocs/pdf/IOSCOPD652.pdf
[78] ASIFMA, Herbert Smith Freehills. Sustainable Finance in Asia Pacific – Regulatory State of Play. (March 2020). Retrieved from: https://www.asifma.org/wp-content/uploads/2020/03/sustainable-finance-in-asia-pacific.pdf

Lack of a common taxonomy and diverging 'green' standards

A sustainable finance taxonomy and classification system provides the basis for determining whether an economic activity is environmentally sustainable, that is whether it is 'green' or not. Currently multiple sets of standards, definitions, and taxonomies in sustainable finance exist across jurisdictions. However, a globally-adopted standard has yet to be developed, which makes it challenging for market participants to identify products that are 'green,' compared with those that are 'brown' across jurisdictions. In this way, the inconsistent definitions of 'green' and 'brown' standards across the different taxonomies hinders cross-border capital flows into sustainable finance products, as investors are increasingly faced with the difficulty of determining products held to differing definitions.

Augmenting the challenge, different countries continue to develop their own taxonomies. As of the writing of this paper, EU, China, and Malaysia have all set out draft taxonomies. A high-level analysis from ASIFMA's April 2020 response letter to the Bank Negara discussion paper on *Climate Change and Principle-based Taxonomy,* comparing key areas across the three taxonomies is presented in the table below.[79]

Table 4: Summary comparison of EU, China, and Malaysia sustainable finance taxonomies

	EU	**China**		**Malaysia**
	EU Sustainable Finance Taxonomy	NDRC Green Industry Guiding Catalogue	PBoC Green Bond Endorsed Project Catalogue	BNM Climate Change and Principle-based Taxonomy
Users	Financial market participants, mainly investors	Policymakers and investors	Green bond issuers	Financial market participants, mainly banks, insurers, takaful operators, and investors/asset management companies
Classification	Nomenclature of Economic Activities, the European statistical classification of economic activities	No specific industry classification system	Industrial Classification and Codes for National Economic Activities	Country specific industry classification system into 6 categories

[79] ASIFMA. ASIFMA Response to Bank Negara Malaysia's Discussion Paper on Climate Change and Principle-based Taxonomy. (April 2020). Retrieved from: https://www.asifma.org/wp-content/uploads/2020/04/asifma-response-to-bnm-climate-change-taxonomy-dp-v20200331-final-draft-clean4.pdf

	EU	China		Malaysia
	EU Sustainable Finance Taxonomy	NDRC Green Industry Guiding Catalogue	PBoC Green Bond Endorsed Project Catalogue	BNM Climate Change and Principle-based Taxonomy
Screening criteria	Principles to define economic activities with substantial contribution to environmental objectives Specific and quantitative carbon emission thresholds Metrics: Methods by which environmental performance is measured Excludes fossil fuel activities without carbon capture	No principle to define eligibility of the industries No carbon emission thresholds Does not exclude fossil fuels	No principles to define projects aligned with environmental objectives No carbon emission thresholds Does not exclude fossil fuels No systematic approach to defining green objectives and criteria No overall guiding criteria, but certain sector-specific ones have been with thresholds	Principles to define economic activities with substantial contribution to environmental objectives, in particular GHC emission No carbon emission thresholds
Noteworthy observations	Macroeconomic impact assessment of taxonomy after implementation (*e.g.* liquidity risks of assets and potential distortions in competition) Financial reporting of revenues and expenditures Reduction of building GHG emissions	Originally developed to encourage financing of certain projects and activities	More of an exhaustive list compared to NDRC's Covers bond issuer non-environmental requirements	Includes Firm's Commitment and Willingness' (categories 2-4 of BNM's paper); not included in any other papers

Inconsistencies in disclosure standards and requirements

Transparency of reporting disclosures is equally critical for the development of sustainable finance markets. Firms should have adequate ESG disclosures that allow investors to compare disclosures across different firms, sectors, and jurisdictions to identify selected targets that match their investment criteria. While various standards and principles exist, inconsistencies between these remain, given that they are not developed in a coordinated way. For example, the UN Principles for Responsible Investing ("PRI"), the Equator Principles, the Global Reporting Initiative ("GRI"), the Sustainability Accounting Standards Board ("SASB"), and the Taskforce on Climate-related Finance Disclosures ("TCFD") have all introduced broad principles and standards for climate-related disclosures.

The plethora of standards and their non-binding nature, coupled with the varying maturities of different sustainable finance markets, translates into inconsistent applications of standards across jurisdictions and sectors. In Asia Pacific, only China mandates all listed companies and bond issuers to disclose a complete account of their ESG risks. Other jurisdictions, such as Hong Kong, Malaysia, and India, that are increasingly placing greater focus on developing sustainable finance markets, are still in the process of reforming guidelines on ESG-related disclosure requirements.[80] Furthermore, even firms within the same jurisdiction could be subject to different international agreements and/or standards. For example, an energy firm and a manufacturing firm could apply different methodologies in reporting greenhouse gas ("GHG") emissions, rendering the comparability of these two firms asymmetrical and challenging.

In summary, different disclosure requirements (across jurisdictions and sectors) results in the presentation of different formats of information, which prevents investors from easily comparing investment opportunities across sectors and jurisdictions. In addition to directly diminishing the principles of transparency that the disclosure is meant to deliver (akin to the challenge of non-harmonised OTC derivatives trade reporting), variance in disclosure requirements hampers cross-border and cross-sectoral flows.

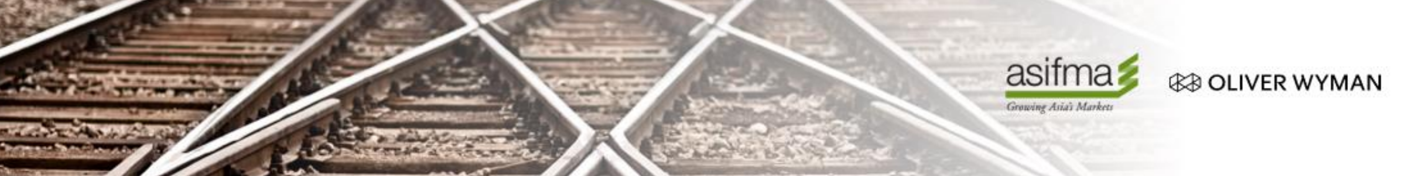
Varying approaches in supervisory oversight of Financial institutions

Approaches taken by national jurisdictions with regards to supervisory oversight of financial institutions also exhibits a certain level of disparity that further adds to the fragmentation debate. For example, in December 2019, the HKMA issued a consultation on risk management and stress testing with the aim to ensure authorised institutions ("AIs") are prepared to manage climate and environment related risks.[81] In February 2020, the Australian Prudential Regulation Authority ("APRA") announced similar plans to develop prudential practice guides focused on climate-related financial risks.[82] While the efforts made by national regulators to develop standardised guidance are commendable, the siloed approach to test design, assessment criteria, scope of examined exposures, and granularity of analyses across markets may unintentionally create fragmentation, as well as limit the effectiveness and comparability of these mechanisms across borders.

[80] The Hong Kong Exchange recently updated their ESG reporting rules that places greater responsibility on the board of directors of listed companies and requires corporates to focus on how they manage their overall ESG strategy in relation to core businesses within the ESG reports. The Hong Kong Exchange. ESG Guide Consultation Conclusions. (18 December 2019). Retrieved from: https://www.hkex.com.hk/News/News-Release/2019/191218news?sc_lang=en

[81] The Hong Kong Monetary Authority. Common Assessment Framework on Green and Sustainable Banking. (31 December 2019). Retrieved from: https://www.hkma.gov.hk/media/eng/regulatory-resources/consultations/Common-assessment-framework_31Dec2019.pdf

[82] Australian Prudential Regulation Authority. APRA outlines plans for climate risk prudential guidance and vulnerability assessment. (24 February2020). Retrieved from: https://www.apra.gov.au/news-and-publications/apra-outlines-plans-for-climate-risk-prudential-guidance-and-vulnerability



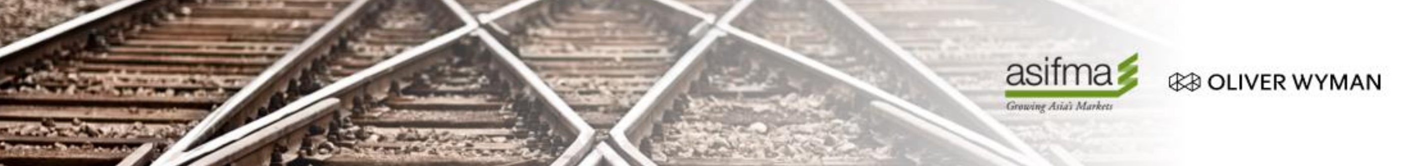
3.2.1.1. Key lessons learned

Fragmentation in sustainable finance has direct implications on end-users and prevents the sustainable finance market from developing further.

- **Impact on end-users:** As a result of fragmented standards across jurisdictions and sectors, issuers of green bonds and loans may need to commission external reviews and audits to ensure that the financial instruments are 'green' in accordance with relevant standards in other regions. For example, for a green bond issued in China, issuers may need to obtain external reviews to certify that these are in fact 'green' per EU standards to give confidence to EU investors and encourage cross-border investing. For green bond certification, these reviews can range between US$10,000 to US$100,000.[83] The costs of these reviews are likely passed down to end-investors and thus impedes the global push to converge investment costs between traditional and sustainable finance products. In effect, the lack of consistent disclosure requirements and practices undermines investors' comparability assessment and confidence of investing in green products, while concurrently raising the cost of investing in these products in the first place.
- **Impact on market development:** A recent IIF-EBF Global Climate Finance Survey highlighted that 65% of institutions found 'green' regulatory market fragmentation to be a big source of concern and suggested it would have a material impact on the market for sustainable finance.[84] This is acutely challenging in emerging markets with only 37% of financial institutions following TCFD recommendations (compared with 70% in developed markets). While ongoing efforts are underway to develop harmonised principles and guidelines, most existing standards focus on green bonds and loans, which are opt-in rather than mandatory. This impedes the establishment of an efficient marketplace, and limits transparency and tradability of all sustainable asset classes.

[83] OECD, ICMA, CBI, GFC of the China Society for Finance and Banking. Green Bonds: Country Experiences, Barriers and Options (September 2016). Retrieved from: http://unepinquiry.org/wp-content/uploads/2016/09/6_Green_Bonds_Country_Experiences_Barriers_and_Options.pdf

[84] IIF-EBF Global Climate Finance Survey: A Look at How Financial Firms Are Approaching Climate Risk Analysis, Measurement and Disclosure (January 28, 2020). Retrieved from: https://www.iif.com/Publications/ID/3731/IIFEBF-Global-Climate-Finance-Survey-A-Look-At-How-Financial-Firms-Are-Approaching-Climate-Risk-Analysis-Measurement-And-Disclosure



3.2.1.2. Proposals to reduce market fragmentation

In recent years, sustainable finance has emerged as an increasingly important area in capital markets, presenting policymakers and regulators with a unique opportunity to work together to pre-emptively ensure that further market fragmentation is not created. This ever growing focus on global sustainability issues has led IOSCO to establish its Sustainable Finance Network ("SFN") in October 2018, to provide a forum for securities regulators to exchange ideas on various sustainability issues, including the role they can play in addressing the challenges in coordination and alignment of standards and approaches. In April 2020, IOSCO published its report on 'Sustainable Finance and the Role of Securities Regulators', acknowledging the obstacles created by fragmentation within sustainable finance, and identifying a number of areas where improvements can be made and articulates the need for IOSCO to play a key role in this area.[85] In light of this, it remains critical for securities and prudential regulators to demonstrate greater leadership and coordination in driving consistency and shaping global standards. The following section contains several recommendations that policymakers and regulators should consider when developing standards and regulations regarding sustainable finance. These recommendations may need to be revised as appropriate as the field continues to evolve:

Leverage existing working groups/taskforces to catalyse and develop international standards for sustainable finance focusing on capital markets, involving Asia Pacific jurisdictions: The efforts of sustainable finance working groups and taskforces have traditionally focused on sustainable finance in banking rather than in capital markets (with the notable exception of green bonds).[86] There is an increasing opportunity to leverage the work done on banking in sustainable finance across its capital markets. IOSCO also noted in their April 2020 report that 'there could be an increased alignment of disclosures through international discussions and coordination on standards, metrics and indicators. Furthermore, promoting a better common understanding of cross-border approaches to labelling of ESG products could encourage efficiencies for issuers operating across borders and assist in the mobilization of capital in this area.[87] The International Platform on Sustainable Finance (IPSF) was launched on 18 October 2019 to enhance international harmonisation of taxonomies, standards and labels and disclosure. Its members are public authorities from Argentina, Canada, Chile, China, India, Indonesia, Kenya, Morocco, Norway, Switzerland, and the European Union. [88] Recent signatories include Indonesia, Singapore and New Zealand.

[85] International Organization of Securities Commissions. Sustainable Finance and the Role of Securities Regulators and IOSCO. (April 2020). Retrieved from: https://www.iosco.org/library/pubdocs/pdf/IOSCOPD652.pdf

[86] Multiple taskforces already exist, including the TCFD within the FSB; the EU's Technical Expert Group ("TEG") on sustainable finance; the Sustainable Banking Network ("SBN"). Various groups have also emerged to promote collaboration in developing best practices, disclosure and effective benchmarking of sustainable finance initiatives in emerging markets, supported by the International Finance Corporation ("IFC").

[87] International Organization of Securities Commissions. Sustainable Finance and the Role of Securities Regulators and IOSCO – Final Report. (April 2020). Retrieved from: https://www.iosco.org/library/pubdocs/pdf/IOSCOPD652.pdf

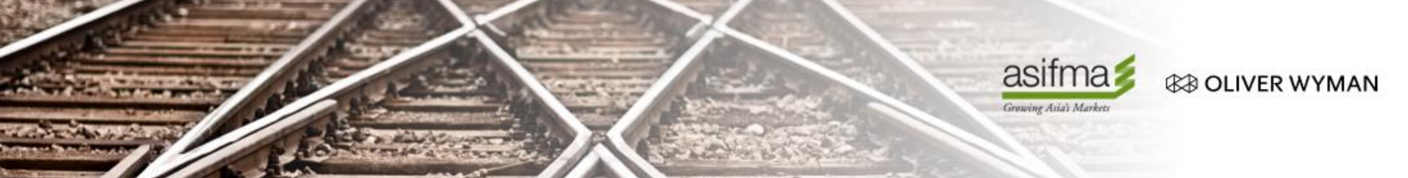
[88] Factsheet: International Platform on Sustainable Finance (IPSF). Retrieved from: https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/200325-international-platform-sustainable-finance-factsheet_en.pdf

Review and compare existing taxonomies with a view to developing a globally-harmonised taxonomy: We recommend policymakers and regulators to work together at the international level to develop a harmonised taxonomy to support the development of the sustainable finance market. While efforts to develop taxonomies are still underway, we note that they are being developed solely from the perspective of the individual locality, which creates obstacles in comparability.[89] We further recommend SSBs to leverage the existing work being carried out by working groups and taskforces to conduct a global stock-take of all existing taxonomies (such as those in the EU and China) to aid in the development of globally harmonised standards. Asia Pacific jurisdictions should be involved in this process, given the critical financing role that capital markets play across the region and the rapid growth in sustainable bond issuance in the region. We therefore recommend Asia Pacific's policymakers and regulators to engage assertively in open dialogue with other jurisdictions in regional and international fora in efforts to develop a harmonised global taxonomy framework that also considers the needs of both developed and emerging markets in this region.

Allow flexibility and adaptability for product innovation and regional nuances: Sustainable finance will continue to evolve especially in Asia Pacific, with new tradable instruments, such as transition bonds and loans with ESG-linked pay-outs. In order to ensure that willing investors in sustainable finance are always connected with those seeking sustainable financing, regulators and market participants should work together during design and implementation of regulations to provide an adaptive regulatory environment that supports product innovation and incremental development of the sustainable finance market. We also recommend flexibility for regional specificities including the different needs of developed and emerging markets, as well as flexibility for different interpretations of sustainability provided there is sufficient transparency for informed comparisons by investors and market participants.

Policymakers to work with industry on data requirements and reporting standards: Where data is not available in relation to certain ESG criteria, there is a risk of under-representation of certain environmentally sustainable sectors, with potential to distort markets and skew investment decisions at this important early stage. One example would be the effort to track the specific risk profiles of 'green' or 'brown' assets. In the absence of data, the benefit of tracking such assets would be limited as it would not allow for general comparability. Reliable assessments also require robust and historical data, depending on the product type. ESG data reporting and disclosure requirements should be enhanced to help address data availability and comparability issues, and consideration should be given to align private and public taxonomies for transparency and better usage of data. In light of the consultation on the review of the Non-Financial Reporting Directive ("NFRD") which seeks to address ESG disclosure and data quality challenges, we recommend policymakers and regulators to work closely together with the industry to advance mutual understanding of data requirements and reporting standards needed to enable actionable, reliable, harmonised disclosure standards to support informed, long term investment decision making.

[89] Existing efforts to develop a comprehensive taxonomy include the EU's 'Green Taxonomy' initiative, and the Green Bond Endorsed Project Catalogue developed by the PBoC.



3.2.2. Data Privacy, Localisation & Cybersecurity

Overview

Modern financial services infrastructure is increasingly dependent on technology and big data. As a result, regulatory focus on effective management and mitigation of risks related to data ownership, confidentiality, and cybersecurity has also intensified. Asia Pacific is no exception, where a multitude of related regulations have been introduced across jurisdictions. While the target of these regulations is retail banking and wealth management, many of the requirements apply to capital markets as well.

Areas of market fragmentation

There are two drivers of market fragmentation across data privacy, localisation and cybersecurity. This includes divergences in approaches to privacy laws and differences in regulatory requirements relating to data localisation, cloud usage, and vendor requirements.

Divergence in approaches to privacy and cybersecurity laws

In May 2018, the EU General Data Protection Regulation ("GDPR") came into force and served as a single regulation binding all EU jurisdictions and eliminating regional market fragmentation, while prompting a shift in how companies think about personal data. Albeit an EU-focused regulation, GDPR served as a calling for Asia Pacific jurisdictions to assess and reform their own data regulation frameworks. In doing so, Asia Pacific jurisdictions have often leveraged GDPR as a starting point to design, or update and reform their data privacy frameworks. However, the siloed approach taken by Asia Pacific jurisdictions means that the breadth and depth of data privacy legislation now varies across the region, creating fragmentation. In this regard, the two most salient areas with respect to data protection rules are the definition of personal data, and the usage and transfer of data.

The definitions of personal data under personal data protection laws (or their equivalent) differ across Asia Pacific jurisdictions. For example, Malaysia's Personal Data Protection Act does not directly specify whether financial data is considered personal or sensitive personal data but, rather, adopts a broad view of whether the 'data subject' is identifiable from the information in question.[90] This contrasts with India's Personal Data Protection Bill ("PDPB") which explicitly includes financial data under the remit of sensitive personal data.[91]

Circumstances under which the usage and transfer of data is permitted under personal data protection laws (or their equivalent) differs across Asia Pacific jurisdictions. Variations persist in the specificities of information that can be transferred across borders, and the required procedures before data processing and sharing. For example, information deemed as critical personal data (for which categories have not yet been identified) under India's PDPB may only be transferred outside under very specific situations.[91] Separately, some jurisdictions' data privacy regulations require explicit consent as the basis for data processing and sharing. Repeatedly procuring consent increases the operational burden on processes that make use of such data (*e.g.* fraud detection, credit decisioning, debt collection).

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[90] Attorney General's Chambers of Malaysia. Act 709 Personal Data Protection Act. (15 June 2016). Retrieved from: http://www.agc.gov.my/agcportal/uploads/files/Publications/LOM/EN/Act%20709%2014%206%202016.pdf

[91] Lok Sabha, Government of India. Bill No. 373 of 2019 The Personal Data Protection Bill, 2019. (05 December 2019). Retrieved from: http://164.100.47.4/BillsTexts/LSBillTexts/Asintroduced/373_2019_LS_Eng.pdf

As such, financial institutions that rely on the use of such data face a considerable compliance burden as they seek to operate across multiple jurisdictions. This challenge is exacerbated in jurisdictions that have multiple supervisors overseeing data regulation compliance. Fragmentation in data privacy protection rules therefore impedes data processing and sharing, and also reduces efficiency in provision of financial services across borders.

Data localisation, cloud usage, and vendor requirements

Many Asia Pacific jurisdictions require firms to store, process, or handle data onshore.[92] In these jurisdictions, onshore data infrastructure or mirror servers are a prerequisite to business operations. However, specific requirements vary on the type of data subject to localisation requirements; the circumstances wherein offshore storage may be permitted; the requirements for transferring data out of the jurisdictions; and the stringency and punitiveness of enforcement.[93]

Across Asia Pacific, this creates an inconsistent and fragmented regulatory landscape. The challenges faced by financial institutions are more acute, as regulators often impose additional restrictions on data owned by the financial sector. For example, the revised GR71 in Indonesia removed headline requirements for localisation but permits financial services regulators to issue further localisation measures in implementing regulations. The recently issued POJK13 is an example of this.

Data localisation requirements also extend to use of cloud services, which has seen a widespread increase in global adoption especially during the current COVID-19 situation. Requirements regulate the use of cloud services in addition to selection of service providers and they are managed. The SFC, for example, recently issued a circular to licensed corporations on the use of electronic data storage providers ("EDSP") which includes cloud providers.[94] Under the mandate, cloud providers must consent to sharing the licensed corporations' information upon request by the SFC without notifying the licensed corporations in the first place.[95] Because Hong Kong is often used as a booking centre for capital markets positions, the current stipulation raises concerns of breaching extraterritorial application of confidentiality agreements with regulators from other jurisdictions.

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[92] Vietnam, Indonesia, Brunei, Malaysia, China, India, Australia, Korea.

[93] For example, China and Indonesia have restrictions mandating that certain types of data be stored locally, where Malaysia and South Korea provide exemptions for cross-border transfer of data upon receiving consent from data owners. Malaysia has additionally developed a whitelist of jurisdictions for which it does not require prior consent for data transfer; in Asia Pacific, Australia, Japan, Korea, China and Hong Kong are part of this list.

[94] Securities and Futures Commission. Circular to Licensed Corporations: Use of external electronic data storage. (31 October 2019). Retrieved from: https://www.sfc.hk/edistributionWeb/gateway/EN/circular/intermediaries/supervision/openFile?refNo=19EC59

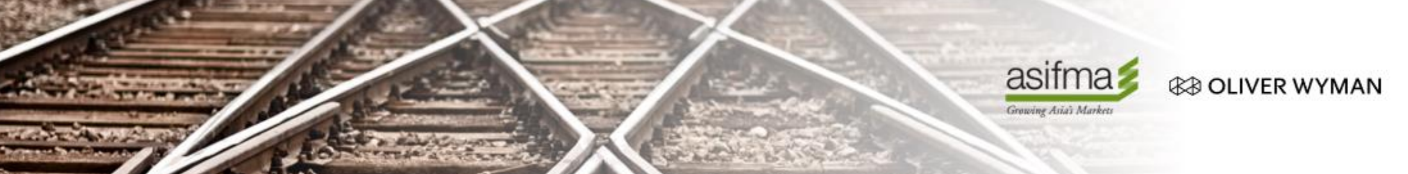
[95] Appendix 1 Clause 1(i) of the SFC circular suggests that the SFC may mandate EDSPs to provide and transfer "any or all of the Company's data" without "giving the Company any notification about such requirement".

Financial institutions typically consolidate their systems in a single global hub, which offers services to the rest of the firm. In contrast, data localisation policies require discrete technological builds in specific jurisdictions and further segregate local systems from global hubs. In effect, this exposes market participants to greater cybersecurity risks by creating additional 'entry points' that need to be safeguarded, which further inhibits information sharing across borders. The potential development of technology localisation further limits the effectiveness of central oversight.[96] In jurisdictions with stricter requirements, institutions are mandated to work with data centres that maintain an onshore, localised presence. This again leads to separation of systems and limitation of central oversight.

CASE STUDY: Data localisation inhibits centralisation of critical data and conflicts with home country requirements	
Situation	An ASIFMA member noted challenges related to China's data localisation regime, highlighting that the situation remains work-in-progress and therefore ambiguous and uncertain. The ASIFMA member noted challenges in: centralising all personnel data globally, undertaking global transformation projects, and supporting internal investigations, both supervisory and client-facing. The member has previously resorted to consolidating all personnel data (including personal information, pay-slips, bank account details, etc.) in their home jurisdiction to comply with data protection requirements; however, the current regulatory climate brings uncertainty as to whether personnel data can be transferred out of China and centralised together with data from other regions.
Impact	The nascency in China's data localisation regime has sometimes conflicted with the member's management of data in compliance with home country requirements. Aside from creating challenges in complying with home jurisdictional requirements, it also reduces the security of data by opening multiple entry points (as explored previously), limits internal and customer-facing data analytics, and inhibits the one-bank approach to risk management.

CASE STUDY: Varying privacy standards and localisation requirements create challenges for service customers effectively and efficiently	
Situation	An ASIFMA member with clients based in Europe has an outsourced Global Service Centre (for customer service) and data processing/tech solutions centre in India. Prior to the introduction of the India's PDPB, client servicing teams processed client's data from India, which was then shared back to the headquarters in Europe. However, when PDPB came into effect, the ASIFMA member became subject to additional localisation requirements, as financial data is classified as sensitive under the PDPB. As a result, the member faces challenges in extracting data for their EU-based clients, as multiple verifications are now required for accessing and sharing the data stored in India – even though their clients might not be transacting with any counterparties in India.
Impact	Data localisation requirements prevented the bank from providing seamless services to end-users. It is expected that such fragmentation would also affect many other market participants with outsourcing functions in India or other countries with similar data privacy requirements. The European Union also commented that the data localisation requirements proposed by India would create "unnecessary costs, difficulties and uncertainties that could hamper business and investments".[97] With recent industry lobbying efforts with the regulator, it is noted that there may be exemptions for outsourcing model and requirements; however, any revisions are expected to take considerable time.

[96] Technology localisation entails developing regulations mandating financial institutions to use specific encryption keys for local jurisdictions that diverge from global solutions, and therefore require standalone local builds.
[97] Economic Times. GDPR-loving EU says India's data localisation unnecessary. (21 November 2018). Retrieved from: https://economictimes.indiatimes.com/tech/internet/gdpr-loving-eu-says-indias-data-localisation-unnecessary/articleshow/66725579.cms



3.2.2.1. Key lessons learned

The intention of regulators in prescribing data regulations is to protect data privacy, enhance data security, and promote the appropriate use of technology and big data. However, regulatorily driven fragmentation across jurisdictions results in less resilient data protection, hinders the development of technology in financial services, and affects the provision of service to end-users.

- **Impact on end-users:** According to the IIF, data localisation "limits a bank's ability to leverage group solutions and rich data insights combining different sources of data to service the client".[98] Under data localisation constraints, an asset manager, for example, may be unable to aggregate and construct effective global portfolios for their client which limits the end users' investment and risk management capabilities. Inconsistent and overlapping cybersecurity requirements cause legal uncertainty and resources to be diverted from maintaining and improving cybersecurity to managing unnecessary complex compliance issues.
- **Impact on market development:** Allowing free flow of data is a catalyst for product development and effective risk management, especially given natural fragmentation in Asia Pacific capital markets. Research conducted by The European Centre for International Political Economy ("ECIPE") indicated that economy-wide data localisation laws could potentially drain between 0.7% and 1.7% from national GDP, and negatively impact market development and undermine economic growth.[99] While larger sized firms are often better equipped with capabilities and resources to comply with data localisation requirements, small to medium sized enterprises and start-ups are likely to be less so, presenting barriers these firms to participate in the market and limiting the formation of a vibrant ecosystem.
- **Impact to financial sector and overall financial stability:** Barriers to cross-border information flow and systems and limitations on data sharing inhibit firms' ability to aggregate data and have full oversight of service provision to clients and risk management. For example, data silos impose challenges on financial crime monitoring and investigation. Multiple data storage requirements of duplicated data also increase cyber risks.

3.2.2.2. Proposals to reduce market fragmentation

Harmonisation and improved effectiveness of global and regional coordination is essential to the continued adoption of modern approaches in Asia Pacific to support data protection. Potential approaches include:

Ensure that new privacy laws do not create additional areas of fragmentation:
Personal financial information should be avoided from the definition of sensitive personal data, as this would create increased restrictions around processing and cross-border transfer. However, such inclusion is currently being proposed in India, Indonesia and the Philippines. In contrast, GDPR does not include financial information within the category of sensitive personal data.

[98] Institute of International Finance. Data flows across borders: overcoming data localization restrictions. (March 2019). Retrieved from: https://www.iif.com/Portals/0/Files/32370132_iif_data_flows_across_borders_march2019.pdf

[99] European Center for International Political Economy (ECIPE). The Costs of Data Localization: A Friendly Fire on Economic Recovery (May 2014). Retrieved from: https://ecipe.org/wp-content/uploads/2014/12/OCC32014__1.pdf

Regulators should not create an overreliance on consent as a basis for processing. Requiring consent in almost all instances makes processing for fraud, credit decisions, and debt recovery highly impractical and resource intensive. Consistency with other laws is needed by providing additional bases for processing such as "legitimate interest".

Additional requirements in privacy laws should be avoided. These include requirements for data controllers to hand over anonymised or non-personal data to government agencies for social purposes (as in the case of India's PDPB), as well as for the delivery of services, and making of evidence-based policy.

Review, evaluate, and adopt international standards and best practices where possible, and enhance enforceability of such standards across Asia Pacific: Coordination on standards and approaches are emerging globally and regionally. The Osaka Track initiative intends to standardise rules in global movement of data flows with better protection in personal information, intellectual property and cybersecurity, between 78 members of World Trade Organisation ("WTO"). Further adoption and alignment to international best practices such as BCBS 239 and ISO/IEC 27701 (2019) could pave the path forward to harmonising and strengthening data standards. For cybersecurity, the Financial Services Sector Coordinating Council ("FSSCC") led development of a standardised Cybersecurity Profile, offering a common approach to cybersecurity and assessment.[100]

Regionally, The Asia Pacific Economic Cooperation ("APEC") Privacy Framework provides a set of principles and implementation guidelines to establish efficient privacy protections that mitigate barriers to information flows in Asia Pacific. Subsequently, the APEC Cross-Border Privacy Rules ("CBPR") was created to provide certification for companies that meet internationally recognised data privacy protection. At present, CBPR is currently voluntary and therefore not nationally legislated, and requires financial institutions to divulge confidential information on their internal processes to the Accountability Agent without clear perception of tangible benefits on the improvement to cross-border business processes. For this reason, adoption by financial institutions has been limited. Elsewhere, the cross-border data flow mechanism contained in the ASEAN Framework on Digital Data Governance seeks to maximise cross-border data flows in the region but must propose a framework which is workable for financial institutions if it is to meet its objective.

To resolve this challenge, SSBs, regional forums (such as the Asia Pacific Privacy Authorities Forum), and national regulators are encouraged to work collaboratively in proposing cross-border data standards specifically for financial institutions. This will further ensure adequate cross-border recognition and enforceability of data standards that prevent market fragmentation without circumventing the flow of data.

[100] Global Financial Markets Association. Financial Services Sector Cybersecurity Profile. (October 2018). Retrieved from https://www.gfma.org/industry-unveils-cybersecurity-profile-to-help-financial-institutions-develop-and-maintain-cyber-risk-management-programs/

Provide greater regulatory flexibility on standards and allow exemptions where appropriate during policy development: National regulators are encouraged to allow exemptions on data not collected from domestic citizens. India's data localisation requirements, for example, have an overreaching impact on their ability to be an effective outsourcing hub for global firms. The Philippines on the other hand, successfully exempted data processors from compliance with domestic data protection laws if the data has been lawfully collected from residents of foreign jurisdictions (*i.e.* those outside of the Philippines). This retains the attractiveness of Philippines as an outsourcing hub for global firms without major ramifications on local citizens.

Consult with market participants throughout the policymaking lifecycle: From a pure data security perspective, data localisation is a means, not an end, to data protection. During the end-to-end policymaking process, regulators should consider the unintended consequences brought about by fragmentation of data and seek to reduce localisation requirements where appropriate. This process can entail reviewing existing regulations related to data handling, cyber security, and data privacy. National regulators should engage in a consultative process with market participants (supported by SSBs) to develop fact-based analyses to understand the consequences of proposed regulatory policies, both domestically and internationally. India's approach to revising the draft of the National E-Commerce Policy in 2019 is a positive example of industry consultation and involvement during the policymaking process.

Strengthen collaboration between sectoral and national regulators to ensure harmonisation on the country level: National regulators are encouraged to coordinate and work with sectoral regulators to ensure harmonisation and reduce any fragmentation at a country level. For example, the People's Bank of China ("PboC") in China recently published new data protection guidelines for financial institutions to harmonise fragmentation caused the presence of multiple supervisory authorities – the Cyberspace Administration of China ("CAC") covers cybersecurity-related regulations on a national level, while PBoC and China Banking and Insurance Regulatory Commission ("CBIRC") administer regulations related to banks and general financial services.

Consider MOUs, bilateral or multilateral agreements, or deference regimes to foster mutual understanding between regulators: SSBs and national regulators should further explore the use of bilateral agreements or deference regimes to allow for rights of access and inspection within agreed timeframes and allow data to continue to flow. Japan is the only Asia Pacific jurisdiction to receive a 'data adequacy decision' from the EU, signalling that data transfers to Japan will be treated as intra-EU transmissions.[101] Commendably, the Singapore and the US issued a joint statement on financial services data connectivity, which serves as another model for national regulators pursuing equivalence and interoperability to address cross-border data and cybersecurity issues.[102] Similarly, Australia has also focused on bilateral agreements with other Asia Pacific jurisdictions to allow for cross-border data sharing. Other Asia Pacific national regulators should consider adopting bilateral agreements with relevant authorities to ensure connectivity and free flow of data across borders.

3.2.3. Financial Crime Compliance (e.g. AML/CFT/Digital Assets)

Overview

Addressing financial crime has long been a priority among supervisory bodies; however, the industry continues to face this challenge. Growth in the volume of cross-border fund flows, greater integration between global economies, and increasing sophistication of financial crimes all contribute. According to the United Nations Office on Drug and Crime ("UNODC"), the equivalent of 2-5% of global GDP is laundered annually, translating to yearly proceeds of approximately US$800 BN – US$2TN.[103] Financial institutions face challenges in navigating divergent regulatory frameworks in Asia Pacific. This reduces the effectiveness of such important measures, while increasing 'cost-to-serve' and diminishing end-user experience.

Areas of market fragmentation

There are three areas of market fragmentation related to financial crime compliance ("FCC"). First, the fragmentation of data undermines compliance and raises surveillance challenges. Secondly, there are differing guidelines and approaches to enforcement of anti-money laundering ("AML") and counter financing of terrorism ("CFT") across Asia Pacific. Third, decentralised supervisory bodies and agencies have shown limited coordination, including within jurisdictions. All three risks impede the effective supervisory oversight to maintain financial stability and market integrity.

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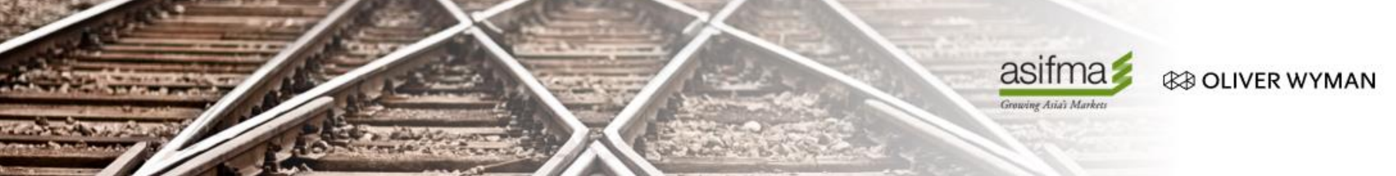
[101] Other Asia Pacific jurisdictions including South Korea, Philippines, and Taiwan are working towards obtaining similar deference decisions.

[102] Monetary Authority of Singapore. United States-Singapore Joint Statement on Financial Services Data Connectivity. (February 2020). Retrieved from https://www.mas.gov.sg/news/media-releases/2020/united-states-singapore-joint-statement-on-financial-services-data-connectivity

[103] United Nations Office on Drug and Crime. Estimating illicit financial flows resulting from drug trafficking and other transnational organized crimes (October 2011). Retrieved from: https://www.unodc.org/documents/data-and-analysis/Studies/Illicit_financial_flows_2011_web.pdf



Fragmentation of financial intelligence due to data regulations

As explored in Section 3.2.2, varying data privacy and data localisation regulations lead to information silos. This inhibits implementation of effective surveillance measures and controls. The increasingly cross-border nature of trading further complicates this. With limited capability to investigate incidents with cross-jurisdictional elements, it becomes challenging to trace the origins of orders and payments, verify the underlying end-users and identify trade patterns across borders. Having data and intelligence stored in a singular data pool in a compatible and consistent manner allows financial institutions and law enforcement agencies to obtain a holistic view of client information, in addition to underlying ownership structures and transaction patterns.

CASE STUDY: Data silos impose challenges for trade surveillance under complex booking model	
Situation	The global and complex nature of transactions often involves multiple parties, which is exacerbated by the challenge that information is not shared freely across financial institutions and national agencies across markets. In addition, there are no reporting obligations required by law to understand end-users, leading to fragmented capabilities and surveillance that is largely dependent upon banks' due diligence and controls. One ASIFMA member shared an example of a challenging situation for its private banking activities. For example, if a client onboarded in Taiwan wants to trade in the Hong Kong market, the order and funds will be routed via the Taiwan entity through an omnibus account to the Hong Kong entity, which has the license to execute the trade. However, given Taiwan does not allow sharing of Suspicious Activity Reports ("SAR") across borders and even internally with other branches/subsidiaries, the private bank entity in Hong Kong does not have full visibility on the underlying client and source of funds; it only sees the Taiwan entity on an aggregate level, making it challenging for the bank to conduct Know Your Customer ("KYC"), monitor transactions across borders, and report concerns to Hong Kong supervisory bodies.
Impact	This is a typical example of challenges in trade surveillance of due to data silos. Data fragmentation not only creates friction for end-users where onerous KYC and onboarding processes are needed but, more importantly, it affects the wider ability of financial institutions and authorities to detect and prevent financial crime. An effective regime needs more than the application of a set of rules; it also requires collaboration and transparency across borders to ensure the controls are effective.

CASE STUDY: Data silos creates loopholes for market-abuse practices, such as wash trading via mirror trade	
Situation	Money launderers exploit the opaque nature of trade routing and limited visibility on underlying clients across legal entities and jurisdictions, engaging in market-abuse practices such as mirror trades to transfer funds between jurisdictions without being detected.
Impact	An incomplete picture of transactions and client profiles make it very challenging for financial institutions and authorities to apply required levels of oversight of trade patterns and identification of market-abuse concerns. With the financial system highly interconnected, missing informational links inhibit firms' ability to detect and prevent financial crimes, resulting in financial losses and/or spurring criminal activities, impacting the financial sector as a whole. For the benefit of the financial industry and regulators, information-sharing and transparency are crucial.

Different AML/CFT standards and stringency of enforcement across jurisdictions

Despite uniform AML/CFT standards developed globally by the Financial Action Task Force ("FATF"), national implementation differs across jurisdictions. Ambiguities in international financial crime regulations leave room for national interpretation, leading to fragmentation between jurisdictions.

For example, there are different standards and requirements for KYC, SAR-filing rules, definitions and approaches to the establishment of Ultimate Beneficial Ownership ("UBO"), and Politically Exposed Persons ("PEP") registries, in addition to various lists of sanctioned entities across regimes.

Furthermore, while many internationally endorsed standards focus on prescribing onboarding and end-user due diligence requirements, there is a lack of clarity and detailed standards in areas such as the definitions of a client as opposed to a trading counterparty. For example, there may be differences between what constitutes a 'client' for AML purposes in a cross-border booking model from a Japanese AML perspective as compared to peer regulators. In areas where international guidelines and standards are absent, banks are often forced to design and apply their own controls, which is sub-optimal for combatting and monitoring financial crime in a globally cohesive manner.

Divergent standards also create information asymmetry where supervisory bodies and financial institutions cannot easily aggregate information, creating challenges in the application of process automation and analytics. The case study provided on the complex booking model involving clients across multiple jurisdictions illustrates this challenge. As a result, this can create loopholes that may be exploited by malign actors and create challenges for effective oversight.

Decentralised supervisory bodies with limited collaboration with jurisdictions

Lack of coordinated and centralised intelligence from multiple agencies within a jurisdiction also creates concerns for AML/CFT oversight. For instance, according to the evaluation report from FATF, China's decentralised financial intelligence unit ("FIU") arrangement (which consists of China Anti-Money Laundering Monitoring and Analysis Centre ("CAMLMAC"), Anti-Money Laundering Bureau ("AMLB"), and 36 provincial branches under the PBoC) results in incomplete access to data by the FIU.[104] This leads to fragmented analyses and limits development of a holistic view.

[104] Financial Action Task Force (FATF). Mutual Evaluation Report: Anti-money laundering and counter-terrorist financing measures People's Republic of China (April 2019). Retrieved from: https://www.fatf-gafi.org/media/fatf/documents/reports/mer4/MER-China-2019.pdf

3.2.3.1. Key lessons learned

Despite increasing global and regional efforts in fighting against financial crime, research from the European Union Agency for Law Enforcement Cooperation ("EUROPOL") suggests that only about 1% of criminal proceeds are annually confiscated in the EU.[105] The current global framework for fighting financial crime is not as effective as it could be. Fragmentation across different jurisdictions in managing financial crime compliance is both undesirable to end-users and challenging for the financial stability and system integrity.

- **Impact on end-users:** Varying KYC requirements across jurisdictions have led to onerous KYC processes and lengthy on-boarding durations, especially for clients that operate across different markets. A survey from Thomson Reuters suggests that 89% of end-users have negative KYC experiences, while 13% changed their financial institution relationship as a result of poor end-user experience.[106] In addition, to navigate the complex regulatory landscape across markets and avoid any potential breaches, banks may limit their presence in markets or limit provision of certain goods and services to end-users.
- **Impact to financial sector and overall financial stability:** Fragmented supervisory oversight and information sharing leads to challenges in identifying, monitoring and preventing financial crimes. Given the borderless nature of financial crimes, criminals can exploit potential regulatory arbitrage opportunities with jurisdictions where standards and enforceability are relatively weak. Fragmentation in AML/CFT standards and practices, supervisory oversight, and intelligence sharing affect the financial sector as a whole.

3.2.3.2. Forward looking considerations

Lessons learned from the previous section may shed light on how AML/CFT regulations might be applied in emerging sectors, such as virtual assets offerings.

Virtual assets lack unique identifiers at the instrument level and offer anonymity to the underlying trading client, hindering trade surveillance. Unclear regulatory implications for AML/CFT requirements and divergent stances on virtual assets by different jurisdictions reduce appetite for banks to be involved. A more regulated environment with consistent rules and guidelines would enhance visibility and create a safer environment for the sector to develop and thrive.

Lack of clarity on AML regulations regarding virtual assets can be observed in special licensing requirements for Virtual Currency Exchanges ("VCE"); classification of digital assets; and uncertainties on whether initial coin offerings are covered by securities laws or equivalent regulations with AML regulatory implications.[107] In addition, regulatory responses in Asia Pacific diverge – jurisdictions such as Singapore and South Korea adopt a more welcoming approach to virtual assets, whereas China, India and Bangladesh ban such transactions.

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[105] EUROPOL. Does Crime Still Pay? (July 2016). Retrieved from: https://www.europol.europa.eu/newsroom/news/does-crime-still-pay

[106] Thomson Reuters: Know Your Customer Surveys Reveal Escalating Costs and Complexity (2016). Retrieved from: https://www.thomsonreuters.com/en/press-releases/2016/may/thomson-reuters-2016-know-your-customer-surveys.html

[107] Lexis Nexis. White Paper: AML Issues for Virtual Assets in Asia Pacific: A Regulatory View (2019). Retrieved from: https://risk.lexisnexis.com/global/-/media/files/financial%20services/white-paper/ln_virtual%20assets-aml_whitepaper-nxr12690-01-0319-en-us.pdf

The recently published "Guidance for a Risk-Based Approach – Virtual Assets and Virtual Asset Service Providers" by FATF (June 2019) can assist private entities in complying with AML/CFT obligations related to virtual asset activities. While this helps market development, concerns regarding market fragmentation remain in relation to variations in individual jurisdictions' implementation and attitudes toward virtual assets.

3.2.3.3. Proposals to reduce market fragmentation

The increasing sophistication of financial criminals leveraging technology to facilitate money laundering makes global efforts to combat financial crime more complex. Collaboration at the international, regional, and national levels is critical to identifying potential threats and stemming the flow of illicit finance. Tools have been developed to establish global standards and address fragmentation under the leadership of the FATF. The industry would also benefit from further coordination among SSBs, global and national regulators, and private sector participants.

Call for greater harmonisation in the application of AML/CFT standards and adopt measures to best align to internationally agreed standards: Greater harmonisation and consistent implementation of AML/CFT standards is required on a global basis to effectively curtail money laundering and terrorism financing activities. For example, the European Banking Federation ("EBF") has called for greater harmonisation of AML standards in Europe, as the current AML framework largely consists of directives that are interpreted differently across EU members states.

Asia Pacific regulators are encouraged to review effectiveness of the implementation of FATF standards and guidance in their jurisdictions and, where appropriate, harmonise their requirements with internationally agreed standards. For instance, extensive reviews have been undertaken by multiple regulators, including MAS and Bank Negara Malaysia to implement more stringent AML laws and surveillance in response to the 1MDB scandal, during which misappropriations took place in six countries by malign actors taking advantage of regulatory loopholes.

Enhance coordination within and across jurisdictions for data sharing, especially of PII where financial crime screening is concerned: Mitigation of interconnected financial crimes requires data sharing between banks and among regulators within and across jurisdictions, underpinned by effective communication mechanisms and a collaborative environment. Greater supervisory and regulatory coordination can be executed via firm-specific supervisory colleges (that have already been successful in enhancing cross-border information sharing) and alternative multilateral arrangements led by national regulators.

On a regional level, the EU has moved to require their member states set up a central register on UBO and PEP to ensure greater consistencies and transparency across jurisdictions and is considering making the information accessible to the general public in 2020.

On a national level, effective coordination across regulatory bodies is crucial to ensure a robust oversight for jurisdictions that adopt a multi-agency approach for AML/CFT. Alternatively, local policymakers can consider setting up a central body as a financial intelligence unit and AML/CFT regulator, with the Australian Transaction Reports and Analysis Centre ("AUSTRAC") in Australia setting a good example.

Advance public-private partnerships and call for cross-sectoral intelligence sharing: Financial institutions, law enforcement agencies, and the regulatory community could consider establishing Public-Private Partnerships ("PPPs") to tackle financial crime in a concerted effort.

Remarkable progress has been made in the region to date – Hong Kong, Singapore, Australia and recently Malaysia, have already established PPPs to exchange financial information among financial institutions and public sector agencies to identify threats. In Hong Kong, the Fraud and Money Laundering Intelligence Taskforce ("FMLIT") restrained HK$1.9 million worth of assets and contributed to the arrest of 65 persons within its first four months of operation.[108]

To ensure such partnerships continue to work effectively, Asia Pacific regulators and policymakers should encourage participations from private sectors and create a supportive information sharing framework to detect and curtail financial crime.

3.2.4. Operational Resilience

Overview

Operational resilience has recently been defined by the UK regulators as "the ability of firms and the financial sector as a whole, to prevent, adapt, respond to, recover and learn from operational disruptions".[109] Over time, the concept has evolved from initially being defined more narrowly as business continuity planning, disaster recovery, and physical recovery to now covering a wide range of risks including data and cybersecurity, IT failure, and third-party risk management to emphasise the wider scope required to prevent disruptions from happening. With the exception of a few jurisdictions, Asia Pacific regulators have not really turned their attention to operational resilience. The rapid spread of COVID-19 globally has tested organisations' business continuity management and the overall resilience of the financial sector. This presents an opportunity for Asia Pacific jurisdictions to develop thoughtful policy from the outset, reflecting lessons learnt elsewhere including in relation to fragmentation.

[108] Royal United Services Institute for Defence and Security Studies (RUSI). The Role of Financial Information-Sharing Partnerships in the Disruption of Crime (October 2017). Retrieved from https://rusi.org/sites/default/files/201710_rusi_the_role_of_fisps_in_the_disruption_of_crime_maxwwell_artingstall_web_4.2.pdf

[109] The Bank of England ("BOE"), the Prudential Regulation Authority ("PRA"), and the Financial Conduct Authority ("FCA") together published a series of consultation papers on operational resilience in 2019

In 2019, GFMA and IIF published Discussion Draft Principles Supporting the Strengthening of Operational Resilience Maturity in Financial Services, embodying five distinct principles:

1. The global financial industry should embrace the importance of operational resilience.
2. Operational resilience is a global effort that will require the adoption of an international common approach by the public and private sectors.
3. The industry will seek to work with regulators to establish a global common lexicon to promote consistency and alignment across all markets.
4. The approach to operational resilience for the financial industry should be principles and risk-based, reflecting each participant's respective risk profile, appetite, and tolerances.
5. Dependencies and connectivity between the financial sector, utilities, critical infrastructure, and critical shared services must be transparent.[110]

At the same time, it is important for policymakers not to assume the industry participants are starting from a completely new base; the industry has, in fact, developed a number of its own standards and requirements in relation to cybersecurity and business continuity.

Areas of market fragmentation

There are two broad drivers that may potentially lead to market fragmentation within the operational resilience space: i) the lack of global coordination for consistent definitions and implementation, and ii) overlapping, conflicting, and/or inconsistencies between existing standards.

Lack of global coordination for consistent definitions and implementation

There currently exists an open question regarding which authority should ultimately take responsibility for operational resilience at the global level. The Basel Committee established the Operational Resilience Working Group ("ORG") in 2018 and is currently developing Principles for Operational Resilience, while at the same time, the FSB is leading on the cyber resilience front, an area that constitutes part of a firm's overall operational resilience strategy.

As authorities in different jurisdictions seek to establish frameworks managing operational resilience, there is a risk that national level approaches begin to diverge and become inconsistent. For example, the UK regulators are at the forefront of developing a top-down, integrated approach by synthesising relevant components of resilience under the umbrella 'operational resilience' in the mid-2018. The joint discussion paper developed by the UK regulators provides a holistic framework in managing operational resilience with specific standards and expectations. On the other hand, US regulators have taken a more bottom-up approach to resilience, building on existing guidelines and identifying areas that require additional guidance. Regulators in the EU, Hong Kong, Singapore, and Australia have also adopted a similar approach to addressing different components and focus areas of operational resilience through individual regulations.[111]

[110] GFMA and IIF. Discussion Draft Principles Supporting the Strengthening of Operational Resilience Maturity in Financial Services (October 2019). Retrieved from https://www.gfma.org/wp-content/uploads/2019/10/discussion-draft-iif-gfma-operational-resilience-principles-october-2019.pdf

[111] For example, APRA developed CPS 234 Information Security standards in 2018, and MAS' Technology Risk Management Guidelines was issued in June 2013 and Business Continuity Management Guidelines was issued in June 2003, with proposed changes to MAS's Business Continuity Management Guidelines released for consultation in 2019

Compared to the UK, the aforementioned jurisdictions provided less prescriptive requirements, notably in the defining of critical business services and allowance for more discretion to be taken by local firms. The challenge with the lack of global coordination also manifests in the inconsistent application of terminologies, taxonomies, definitions, and requirements across markets. For example, in a 2019 consultation, the MAS proposed defining 'business function' as a service provided in to customers of an FI, whereas UK authorities have defined 'business services' as an end-to-end set of business processes. While our intention is not to nit-pick on the particular phrasing, and it is important to note the MAS is still finalising its definition, the point we are making is that small divergences in what is considered a 'service' or a 'process' may pose substantial impacts for firms in practice.

In addition to the diverging frameworks, inconsistencies in standards and approach also arise out of each component of operational resilience. For example, there are no global standards developed for third parties beyond outsourced services, which implies different scopes of regulation and supervisory actions. With respect to cybersecurity, the majority of regulators require entities to establish a framework or policy for prevention, detection, response, and recovery activities, including incident reporting, however specific requirements vary across supervisory authorities. Such differences might unnecessarily increase the complexity of the regulatory landscape and limit firms' ability in developing a truly effective operational resilience framework subjected to diverging standards and approaches across jurisdictions.

Overlapping, conflicting, and/or inconsistencies between existing standards

Operational resilience is a broad, umbrella term that encompasses many different components. Many firms are already subject to a wide range of regimes that are complementary to strengthening operational resilience. These include, but are not limited to, risk appetite, enterprise risk management, business continuity planning, cyber security, disaster recovery, third-party vendor management, and recovery and resolution planning. This leads to fragmentation due to duplicative and/or conflicting regulatory standards and supervisory oversight. For example, the UK regulators committed to facilitate greater resilience and adoption of the cloud. However, use of cloud services is restricted in some jurisdictions, in particular when it comes to cross-border data transfer. The case below highlights how data localisation requirements limit firms achieving operational resilience during extraordinary events.

CASE STUDY: Challenges to remain operational and maintain stable client services in times of challenging events compromised by data localisation requirements	
Situation	An ASIFMA member shared concerns with data localisation policies that limit the bank's capability to maintain business resilience when coping with challenging events like natural disasters or global pandemic situations (COVID-19). The global bank has strong presence in Europe and Asia, with some of its critical functions such as data processing centres and service centres located in India and China to service the global market. However, as countries such as India and China started to announce lockdowns for social distancing during COVID-19, data centres and IT service providers were closed or only operating partially to provide emergency services. Restrictions to move data across borders undermine banks' ability to rebalance workload and risk profiles across markets less impacted by the COVID-19 situation, to ensure client servicing is not disrupted in an adverse event.

CASE STUDY: Challenges to remain operational and maintain stable client services in times of challenging events compromised by data localisation requirements	
Impact	In today's commercial landscape and interconnectedness of global economies, business continuity largely depends on the efficient and uninterrupted flow of data and work across an organisation. However, data localisation and limited use of cloud makes this challenging. In certain jurisdictions, prior approval from regulators is required to transfer the data out of the country, making it more challenging during a crisis as regulatory response may not be timely. This may lead to greater challenges in terms of operational resilience, compromised customer trust and servicing quality, ultimately resulting in financial loss to customers.

3.2.4.1. Key lessons learned

Regulators have the unique opportunity to shape the regulatory agenda and develop a common standard and framework for operational resilience, as there is yet to be an overarching set of global standards in place. Continued fragmentation in operational resilience requirements limits the effectiveness of management by financial institutions. Such implications could be significant:

- **Impact on end-users:** Business disruptions would have wide-reaching impact on consumers, including the failure to serve clients and investors, financial loss to consumers, impact to consumer confidence, trust with the institutions, and breaches of data privacy in the case of cyber incidents.
- **Impact to financial sector and overall financial stability:** Operational disruptions and the lack of critical business services would potentially threaten the viability of firms and cause instability in the financial system. Given the interconnectedness of the financial sector, an operational failure in one firm might have potential knock-on consequences on other market participants, particularly for systemically important financial institutions or those that provide financial market infrastructure. Without global coordination, the resulting fragmentation might result in inefficiencies or confusion that may exacerbate the cross-border impacts of operational disruptions and affect the soundness of broader economies and market.

3.2.4.2. Proposals to reduce market fragmentation

In the absence of global standards around operational resilience today, regulators could ensure greater cooperation during policy development, and pre-empt market fragmentation by implementing the following recommendations:

Foster global coordination through standard-setting bodies: A common understanding among jurisdictions regarding operational resilience is crucial to ensuring compatibility of concepts and key terms. Clear responsibilities for overseeing and establishing holistic operational resilience guidance at the global level is of paramount importance to coordination. For example, the BCBS ORG could take the lead by producing international standards, coordinating with different Asia Pacific national regulators, and promoting alignment across jurisdictions that complement industry initiatives to operationalise these concepts.

Encourage greater collaboration across private / public sectors, jurisdictions, authorities, and industries: Given the dynamic nature and interdependency of operational resilience, a continuous dialogue led by cross-jurisdictional public and private sector participants is critical to effectively achieving sector-wide operational resilience.

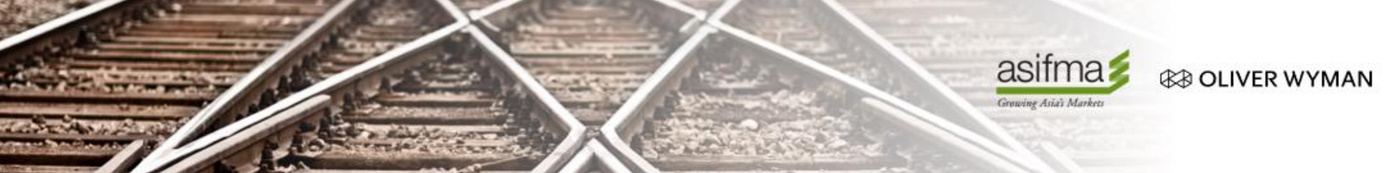
Coordination via SSB sub-groups, supranational bodies, existing roundtables, or other fora are helpful to ensure a globally consistent approach and common understanding on granularity and specificity of the regulations. Establishment of an effective feedback structure is also essential to support continuous dialogue between authorities and industry, in order for the two sides to exchange feedback during policymaking, as well as during post-implementation to strengthen resilience over time.

The financial sector is highly dependent and connected to industry utilities, critical infrastructure, and shared services including cloud providers. Authorities such as data regulators and financial regulators can engage in early and continuous dialogue to reduce the risk of regulatory divergence and avoid conflicting approaches.

Call for greater harmonisation of operational resilience standards across jurisdictions and remain flexible to adapt changes aligning to international standards where available: Currently, some jurisdictions develop national level approaches on operational resilience in silos. SSBs and national regulators could collaborate to develop new policies to address gaps as markets evolve and build upon existing processes. Among jurisdictions where certain standards already exist, it would be helpful for regulators to be open and flexible, to the extent possible, in adapting necessary changes to ensure closer and clearer alignment to international standards.

Another approach would be for national regulators to work together and facilitate cross-jurisdictional equivalence recognition and substituted compliance. As an example, in terms of cybersecurity, this can support harmonisation and avoid duplicated assessments if the firm can demonstrate that it meets industry standards such as the National Institute of Standards and Technology ("NIST"), and Cybersecurity Framework and Federal Financial Institutions Examination Council ("FFIEC") Cybersecurity Assessment Tools. Specifically, financial institutions could also leverage the Financial Sector Profile ("FSP"), which is an extension of the NIST Cybersecurity Framework and tailors the controls specifically to the financial sector. Alignment will greatly increase comparability across the industry globally and regionally and avoid confusion or unnecessary complexities that increase costs to the financial system.

Provide greater regulatory clarity on standards where appropriate during policy development: Industry participants have already identified and pointed out areas of concern in relation to consultation papers from different national regulators. Greater clarity and communication would aid industry participants in defining and determining 'impact tolerance' and 'consumer harm' in principles set out by UK authorities, which is not widely understood within the industry. This would reduce confusion and uncertainty which can lead to the effective implementation of enterprise-wide operational resilience frameworks.



4. CONCLUSION AND NEXT STEPS

Building on other work and analysis by international bodies dealing with global market fragmentation, we hope to have shed light in this paper on how market fragmentation affects Asia Pacific capital markets, and its unintended consequences for end-users, market development, and financial stability. Our analysis of eight key areas where regulatorily driven market fragmentation is prevalent (supplemented with real-life examples) highlights its widespread nature and impact across the region's markets, whilst providing transformational practical solutions.

While the current COVID-19 pandemic has impacted Asia Pacific capital markets, it also accentuates the need to minimise market fragmentation and potentiate market growth and development. SSBs and national regulators have thus far demonstrated great efforts to pre-empt market fragmentation during this crisis and are strongly encouraged to continue to tackle this issue through future extensive collaboration.

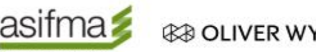
4.1. Next Steps

Tackling market fragmentation affecting Asia Pacific and capital markets more specifically requires a concerted effort from global SSBs, supervisory colleges, national regulators, and industry participants. Due consideration of the impacts throughout the entire policymaking lifecycle is of paramount importance in future. Equally, managing emerging areas of fragmentation earlier in the policymaking lifecycle will mitigate and avoid long-term negative effects.

As noted in Table 3, with the application of principles recommended in this paper, the greatest opportunities for improvement lie in recognising the inconsistent national implementation of regulation, including where policy development has been globally coordinated. If this is to be targeted, the greatest impact can be achieved by targeting improving coordination of implementation, more systematic and thorough conduct of post-implementation reviews, and establishment of more robust feedback mechanisms to inform improvements to existing implementation and supervision. For emerging areas of fragmentation, there may be additional opportunity to take more pre-emptive action, with regulators and SSBs adopting a consultative and iterative approach to address fragmentation earlier in the policymaking cycle, and developing frameworks and processes to identify and address it in later stages including implementation and post-implementation.

Once the current COVID-19 crisis subsides, policymakers and industry participants also have a key opportunity to reflect on the effectiveness and impact of regulations, including unintended consequences of response to the crisis in relation to market fragmentation.

In addition to the overall framework set out in this paper, we invite SSBs and regulators to consider the specific recommendations put forward in each of the eight areas of concern for the Asia Pacific region. ASIFMA calls for ongoing dialogue on fragmentation and welcomes additional opportunities for discussion around this report.



APPENDIX

Summary of Reports Published by International Bodies

Below is an analysis of key reports by international bodies in recent years. The reports focus mostly on US and EU, and on areas we have defined as 'legacy' examples of market fragmentation (*i.e.* derivatives, capital and liquidity requirements, and EU BMR). These international bodies have developed a range of principle-based recommendations for market fragmentation. This paper adds an Asia Pacific perspective, as well as identifying emerging areas of concern and providing a holistic approach for policymakers and industry to deal with regulatorily driven market fragmentation in future.

	✗ **IOSCO** Task Force on Cross-Border Regulation (September 2015) & Market Fragmentation & Cross-border Regulation (June 2019) ** Paper published in 2019 is a follow-up work to 2015's publication*	✗ **IIF FSB** Addressing market fragmentation: The need for enhanced global regulatory cooperation (January 2019)	✗ **FSB** Report on Market Fragmentation (June 2019)	**IIF** The value of cross-border banking and the cost of fragmentation (November 2019)	✗ **BIS** Fragmentation in global financial markets: good or bad for financial stability? (October 2019)
Definition of market fragmentation	Global markets that break into segments, either geographically or by type of products or participants	A divergence in regulatory frameworks, which could impede the development and diffusion of beneficial innovations in financial services, and limit the effectiveness of efforts to promote financial stability	Generally used to refer to markets that fragment either geographically or by type of product or participant	Inhibition or restriction of cross-border activities, which reduces their associated economic and resilience benefits	N/A
Proposed recommendations	• In the Paper Task Force on Cross-Border Regulation, IOSCO proposed important toolkits on: – National treatment: Treats foreign persons, entities, and products	Specific recommendations to address market fragmentation • Refine monitoring of implementation of internationally agreed standards	• Development and implementation of international standards • Consider possible fragmentary effects of regulation more systematically	• Take stock of current market fragmentation and develop an international framework to monitor it over time – *E.g.* FSB to continue its direct engagement with	• Greater consistency in the implementation of international standards • A three-step approach to evaluate how fragmentation can be

	IOSCO Task Force on Cross-Border Regulation (September 2015) & Market Fragmentation & Cross-border Regulation (June 2019) ** Paper published in 2019 is a follow-up work to 2015's publication*	IIF FSB Addressing market fragmentation: The need for enhanced global regulatory cooperation (January 2019)	FSB Report on Market Fragmentation (June 2019)	IIF The value of cross-border banking and the cost of fragmentation (November 2019)	BIS Fragmentation in global financial markets: good or bad for financial stability? (October 2019)
	in the same manner as domestic ones in terms of market access and ongoing requirements; provides regulatory accommodations and conditional exemptions for foreign entities – Recognition: unilateral or mutual recognition to permit activities from recognised jurisdictions to take place in domestic jurisdictions – Passporting: Permits market access between jurisdictions covered by passporting regimes based on a common set of rules; enables supervision of a single/common authority to facilitate supervisory coordination • Standardised globalised standards • Harmonisation of requirements ex ante and	• Encourage greater comparability of regulatory regimes through mutual recognition and equivalence rather than line-by-line comparability • Anticipate the extent and impact of national discretions. • Promote impact assessments and include stakeholder involvement • Ensure consistency of regulatory and supervisory frameworks across the new competitive environment Specific recommendations to enhance international cooperation among authorities • Formulate specific objectives towards greater cooperation among regulators and policymakers • Facilitate increased trust among supervisors,	• Provide clarification of specific technical aspects of standards where appropriate • Consider market fragmentation as part of implementation monitoring and reform evaluation • Ongoing cross-border communication and information sharing • Discuss issues around fragmentation regularly in existing international fora • Seek dialogue on planned measures that are likely to affect fragmentation • Use supervisory fora to align and improve data collections • Comparability of regulatory regimes and efficiency of deference and recognition processes • Promote the adoption of agreements to support supervisory cooperation	financial industry participants to understand how regulatory fragmentation is affecting them • Enhance, and increase accountability for, regulatory and supervisory cooperation and information-sharing (including standardising data sharing) • Encourage greater understanding and comparability of regulatory regimes – Encourage fair and proportionate regulatory and supervisory treatment of foreign subsidiaries of financial groups, to enable them to compete on a level playing field with local competitors • Reconsider and avoid jurisdictional ring-fencing and required pre-	related to financial stability and systemic risks – Consider the scope for beneficial complementary or conflicting relations between private and regulatory objectives at the micro level – Carefully consider the benefits and costs of fragmentation, static and dynamic alike Consider the benefits and costs of further global harmonisation and integration

	IOSCO Task Force on Cross-Border Regulation (September 2015) & Market Fragmentation & Cross-border Regulation (June 2019) ** Paper published in 2019 is a follow-up work to 2015's publication*	**IIF FSB** Addressing market fragmentation: The need for enhanced global regulatory cooperation (January 2019)	**FSB** Report on Market Fragmentation (June 2019)	**IIF** The value of cross-border banking and the cost of fragmentation (November 2019)	**BIS** Fragmentation in global financial markets: good or bad for financial stability? (October 2019)
	agree on common framework • Greater granularity in the specification of the international standards • Establish a common principal-based, technical assessment framework for providing exemptions/information sharing Ongoing dialogue & communication	especially around resolution • Promote information and data sharing among regulators • Enhance transparency and accountability of international bodies developing rules and regulations • Enhance accountability in adoption of previously agreed global standards Place additional emphasis on supervision and promote supervisory coordination among home and host countries	• Enhance the efficiency of deference and recognition processes	positioning of financial resources by international banks – Reviews the impact of regulation on the overall allocation of loss-absorbing capacity (capital and bail-in debt) and liquidity within banking group – *E.g.* The FSB final TLAC Principles and Term Sheet was perhaps the first international document to tackle this theme in designing a regulatory requirement • Promote fuller impact assessments that account for the allocation of resources within banking groups Within the euro area, complete the European Banking Union to provide hosts with a solid financial backstop	

	✘ **IOSCO** Task Force on Cross-Border Regulation (September 2015) & Market Fragmentation & Cross-border Regulation (June 2019) ** Paper published in 2019 is a follow-up work to 2015's publication*	✘ **IIF FSB** Addressing market fragmentation: The need for enhanced global regulatory cooperation (January 2019)	✘ **FSB** Report on Market Fragmentation (June 2019)	**IIF** The value of cross-border banking and the cost of fragmentation (November 2019)	✘ **BIS** Fragmentation in global financial markets: good or bad for financial stability? (October 2019)
Drivers of market fragmentation	• Social-economic factors (*e.g.* market-led practices, investor preferences) • Domestic legislation that is not related to financial services (*e.g.* taxation) • Regulatory driven – Differences in jurisdictions' implementation of financial sector reforms consistent with international standards, where these standards exist – Differences in timing of implementation – Lack of international standards and harmonisation Lack of ability or authority to defer	• Local supervisory measures and ring-fencing • Divergence in implementation of international standards by jurisdictions that differ in substance or timing • Extraterritoriality • Obstacles to Cross-Border Cooperation and Information Sharing	• Socio-economic factors (*e.g.* investor preference, home bias, differences in development of the capital markets) • Domestic policies (*e.g.* taxation, competition, capital controls) • Regulatory driven – Differences in the substance and timing of national implementation of international – National policies with extraterritorial effects – Jurisdictions' regulations that are additional to international standards Legal barriers to information sharing	• Divergence and inconsistencies in regulatory and supervisory frameworks National policies that have extraterritorial effects	• Natural barriers (*e.g.* set up of financial intermediation across market, home bias on location of investment) • Market forces (*e.g.* investor preferences on trading venues) • Policy interventions other than financial regulations (*e.g.* taxation) • Regulatory driven – Inconsistencies in both the timing and the substance of the implementation of internationally agreed financial sector reforms – Implementation of national reforms that have extraterritorial effects and impacts on market participants Incompatibilities between home and host regulatory requirements

	IOSCO Task Force on Cross-Border Regulation (September 2015) & Market Fragmentation & Cross-border Regulation (June 2019) ** Paper published in 2019 is a follow-up work to 2015's publication*	IIF FSB Addressing market fragmentation: The need for enhanced global regulatory cooperation (January 2019)	FSB Report on Market Fragmentation (June 2019)	IIF The value of cross-border banking and the cost of fragmentation (November 2019)	BIS Fragmentation in global financial markets: good or bad for financial stability? (October 2019)
Topics and examples of market fragmentation	• Trading and clearing of derivatives – Clearing activities and locations for CCPs – Margin requirements – Trade reporting • Data privacy and data location requirements – Legal uncertainties of data sharing across border – Adoption of cloud technologies • Other examples – MIFD II provisions for reception or payment of inducements – Oversight in audit standards (*e.g.* IFRS vs. US GAAP) • Potential future areas of fragmentation – Brexit – EU BMR – Emerging sectors (*e.g.* crypto-assets, initial coin offerings)	• Trading and clearing of derivatives – Scope and applicability of OTC derivatives trading rules – Margin requirements – Trade reporting • Capital and liquidity – Ringfencing activities – Basel implementation (*e.g.* NSFR) – FRTB • IBOR transition and EU BMR – Regulatory unclarity on the transition – Prohibition of unregulated third-party benchmark • Resolution – Varying internal TLAC requirements • Data privacy and localisation – Asian countries adoption of localisation rules – GDPR	• Trading & clearing of OTC derivatives – Differences in scope of contracts/counterparties covered by central clearing/trading mandates) – Clearing activities and locations for CCPs – Trade reporting • Capital and liquidity – Ringfencing (*e.g.* variation in minimum leverage ratio) – Differences in substance and timing of Basel implementation in local market • Data privacy and localisation and cybersecurity – Legal barriers to move data across border (*e.g.* secrecy laws) Duplicative reporting and testing of banks' critical systems	• Segmentation along geographic lines of OTC derivatives' trading and clearing (US, EU, Japan) – Trade reporting – Central clearing – Trading on exchanges or electronic trading platforms – Margining of non-centrally cleared derivatives • Prudential requirements – Enhanced prudential requirements for FBOs in US in 2012 – EU's Intermediate Parent Undertaking (IPU) requirements • Banking integration within the euro area – Limited financial integration within the euro area – Insufficient risk-sharing mechanisms Consequential policies such as the ability to ring fence	• Securities and derivatives market A. Fragmented markets and multiple trading platforms B. Implementation of global reforms of trading and central clearing of OTC derivatives 2. Banking A. Ability to move resources within banking groups became more restricted after the GFC 3. Asset prices A. Deviations from the law of one price – for instance, divergences from the covered interest rate parity (CIP) condition 4. Macroprudential rules A. Surcharge on G-SIBs to purposely treat this group differently 5. Recovery and resolution

	IOSCO Task Force on Cross-Border Regulation (September 2015) & Market Fragmentation & Cross-border Regulation (June 2019) ** Paper published in 2019 is a follow-up work to 2015's publication*	**IIF FSB** Addressing market fragmentation: The need for enhanced global regulatory cooperation (January 2019)	**FSB** Report on Market Fragmentation (June 2019)	**IIF** The value of cross-border banking and the cost of fragmentation (November 2019)	**BIS** Fragmentation in global financial markets: good or bad for financial stability? (October 2019)
	Derivatives and infrastructure (e.g. EMIR CCP supervision amendments and location policy)	– Varying cybersecurity schemes • Financial crime compliance (AML/CFT) – Limitation of information sharing • Others Extraterritorial impact of Volcker Rules & MIFID II		local subsidiaries of European banks	A. Country-specific resolution framework and ringfencing activities 6. Volcker rule Fragmentation between financial activities at the domestic level through separating some of the activities of banks into distinctly structured and capitalised entities or subsidiaries

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