



Regulatory Driven Transformation

April 2020



Introduction

KPMG believes that technology is at the heart of keeping pace with ever-increasing regulatory change. As regulators across the world – and in the ASPAC region – demand more stability and transparency, they likewise demand more information and greater accountability from financial institutions and their leaders.

We are pleased to present our views on a number of key regulatory themes and the KPMG technologies that can help financial institutions address the challenges they face in meeting these regulatory requirements. Our solutions have recently been deployed locally in Hong Kong and across ASPAC, providing holistic, tangible answers applied in a practical manner. We combine our technology specialists with our deep risk and regulatory subject matter experts, while leveraging our wealth of credentials and strong regulator relationships, to provide you with a strategic, adaptable way of meeting current and future regulatory challenges.

Jianing Song

Partner
RegTech Co-Lead



James O'Callaghan

Partner
RegTech Co-Lead



Marie Gervacio

Partner
Regulatory Compliance
SME



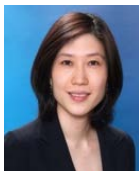
Tom Jenkins

Partner
Regulatory Compliance



Alva Lee

Partner
Regulatory Compliance



Michael Monteforte

Partner
Financial Risk



Rani Kamaruddin

Partner
Financial Crime Compliance



Mary Wong

Partner
Financial Crime Compliance



Marcos Chow

Partner
IT Consulting



Isabel Zisselsberger

Partner
Customer & Operations



Adam Stuckert

Partner
IT Consulting



Robert Choi

Director
IT Consulting



Vinayak Mohan

**Associate
Director**
IT Consulting



Lang Lang Xu

Partner
Head of Digital
Development



Gaurav Mehra

Partner
Digital & Emerging
Technology



Ryan Zhou

Partner
China Banking



Giselle Er

**Associate
Director**
Regulatory Compliance



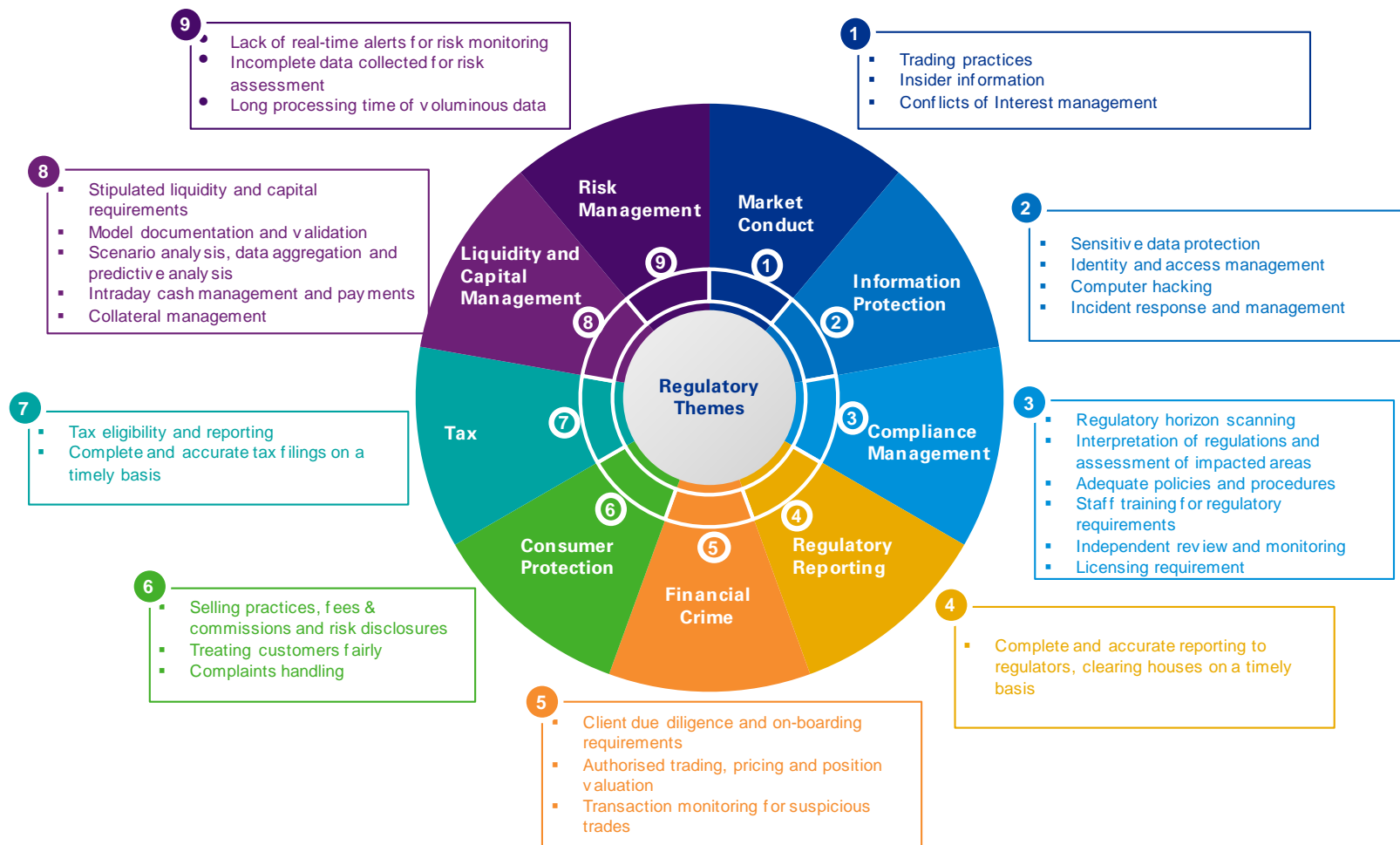
Alison Ip

Manager
Regulatory Compliance





A Universe of Regulatory Themes

While different jurisdictions and markets across the globe present a range of regulatory requirements, we have seen certain key themes emerge which are increasingly the focus of almost all regulators. Given that each jurisdiction will have unique compliance expectations, the need to efficiently and effectively manage these rules across all operating locations has brought urgency for financial institutions to employ Regulatory Technology ("RegTech") solutions.



Key Drivers for Technology Use

The identification and application of appropriate RegTech begins with an assessment of the current challenges faced by financial institutions in meeting key regulatory requirements. Below is a summary of these challenges and the potential benefits presented through the use of RegTech.

	 CURRENT CHALLENGES	 REGTECH BENEFITS
MARKET CONDUCT	<ul style="list-style-type: none"> • Difficulty in uncovering trade exceptions and trading behaviour • Voluminous trade data (structured and unstructured) • Lack of visibility of data independence 	<ul style="list-style-type: none"> • Unravel sales activity patterns and insights • Surveil and review all relevant information from customer interaction record
INFORMATION PROTECTION	<ul style="list-style-type: none"> • Identify and protect sensitive information in unstructured data • Manage complex identity and access of services and data • Manage third party security risk under open banking 	<ul style="list-style-type: none"> • Automated sensitive data discovery and protection • Built-in multi-factor authentication & fraud monitoring across enterprise applications • Share threat intelligence across common third parties
COMPLIANCE MANAGEMENT	<ul style="list-style-type: none"> • Inability to manage rule changes across jurisdictions • Delayed assessment of area affected due to change of regulation / internal process 	<ul style="list-style-type: none"> • Automated identification of potential compliance deficiencies • Catalogue of regulatory requirements • Real-time update and alerts on rule changes
REGULATORY REPORTING	<ul style="list-style-type: none"> • Unstructured data for regulatory reporting • Difficulty in tracing data source • Ineffective risk-data aggregation / calculation 	<ul style="list-style-type: none"> • Automated risk-data aggregation process • Risk metrics creation and monitoring • Customised regulatory report template
FINANCIAL CRIME	<ul style="list-style-type: none"> • Repetitive due diligence for same customers • Inability to identify deceptive report of suspicious customer activity • Delayed transaction monitoring 	<ul style="list-style-type: none"> • Automated classification of red flags • Reduced burden and costs • Sophisticated data analysis and holistic client profile
CONSUMER PROTECTION	<ul style="list-style-type: none"> • Inaccurate assessment of investors' risk appetite and tolerance • Delayed update or refinements to risk profile and portfolio 	<ul style="list-style-type: none"> • Unravel sales activity patterns and insights • Surveil and review all relevant information from customer interaction record
TAX	<ul style="list-style-type: none"> • Tax historically comprised of advisory and production functionalities - in many organisation inefficiency / legal infrastructure issues contribute to high running costs with advisory resources. 	<ul style="list-style-type: none"> • Leveraging our existing managed service infrastructure and tax technology developments across US, UK and China, our integrated platform provides low cost high value tax production services that enable bank finance and tax teams to focus on higher value advisory tasks.
LIQUIDITY & CAPITAL MANAGEMENT	<ul style="list-style-type: none"> • Inadequate data quality to meet granular modelling requirements • Lack of focus on model validation and on-going monitoring • Inconsistency on risk-specific stress testing and firm-wide capital stress testing 	<ul style="list-style-type: none"> • Enhanced data quality and granularity • Model governance workflow including roles & responsibilities, on-going monitoring, model usage tracking, etc. • Integration of stress testing through scenario generation engine
RISK MANAGEMENT	<ul style="list-style-type: none"> • Lack of real-time alerts for risk monitoring • Incomplete data collected for risk assessment • Long processing time of voluminous data 	<ul style="list-style-type: none"> • Drillable process node and tracking of patterns • Continuous stress testing / portfolio simulation

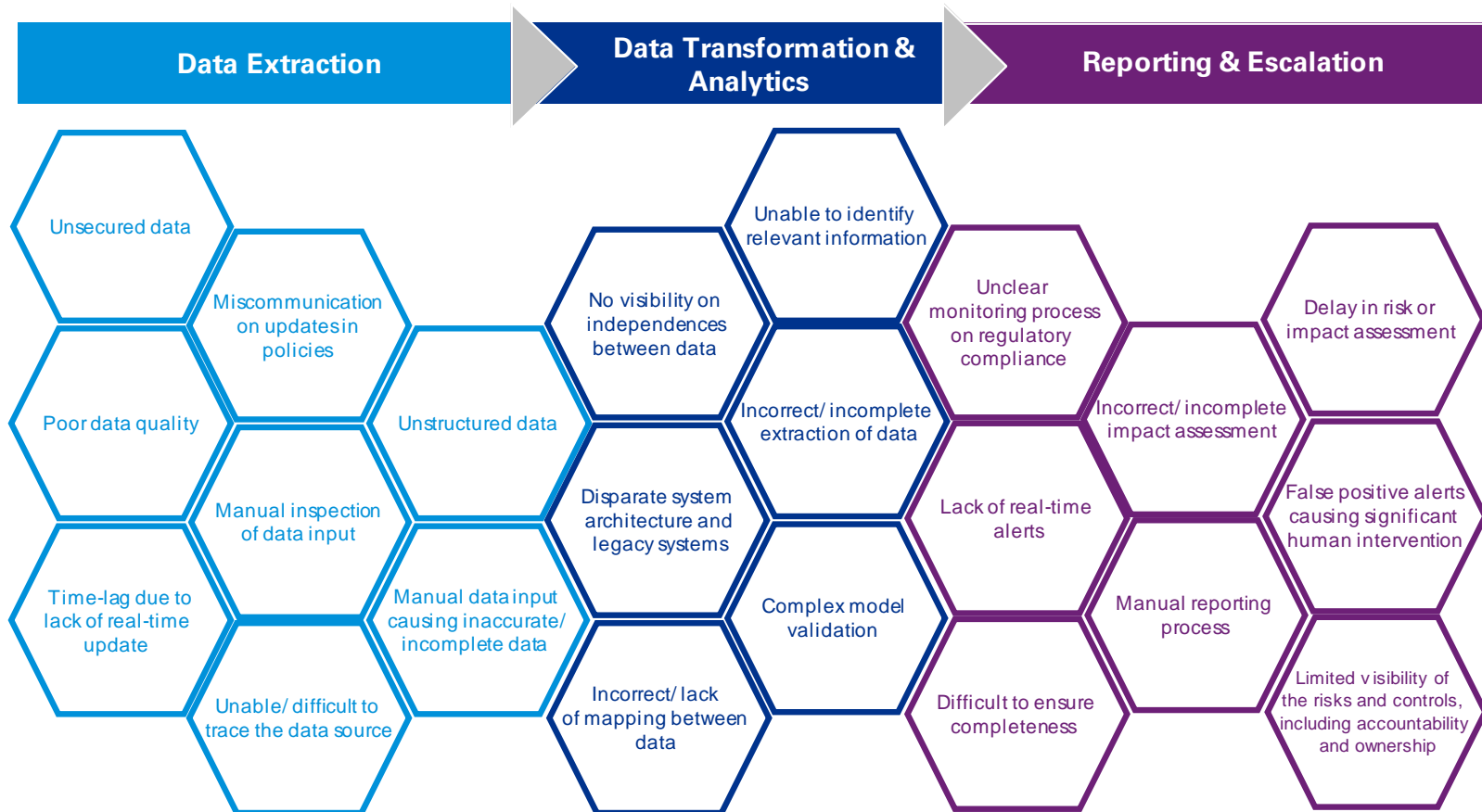
Our RegTech Solutions across Regulatory Themes

The following is a summary of our current RegTech solutions aimed at addressing specific regulatory themes/requirements:

Key Regulatory Themes	RegTech Solutions	Market Conduct	Information Protection	Compliance Management	Regulatory Reporting	Financial Crime	Consumer Protection	Tax	Liquidity and Capital Management	Risk Management
Financial Crimes Solutions Suite	Sanctions Alert Classifier			✓		✓				
	Pre-investigation Profiling			✓		✓	✓			
	Automated Transaction Monitoring System Tuning			✓		✓				
	Customer Activity Dashboard			✓		✓				
	Trade Compliance Analytics			✓		✓				
Third Party Risk Management (TPRM)	TPRM Assessment and Compliance Hub (KaVACH)				✓					✓
Model Validation	Credit Model Validation Tools									✓
	AI in Control									✓
Cognitive Contract Management	Cognitive Contract Analysis									✓
AI Powered Automation	AI Powered Automation - Voice to Text and NLP Analytics	✓				✓	✓			
Governance, Regulatory & Compliance (GRC) Management	Integrated Analytics for GRC			✓						
	Performance and risk monitoring solution (K-PRISM)			✓						✓
Tax	Automatic Exchange of Information (AEOI) Reporting Tool for FATCA and CRS				✓			✓		
Treasury	Digital Treasury Country Guides								✓	✓

Solution Implementation: Common Challenges

Based on our experience with a number of RegTech solution implementations, challenges that have arisen can be categorised into three main areas: data extraction, data transformation & analytics, and reporting & escalation.





RegTech Solutions

Sanctions Alert Classifier

Driven by geopolitical and economic indicators, the sanctions compliance landscape is forever changing. Financial institutions are struggling to keep up with the pace, particularly when it comes to ensuring that their screening systems are appropriately tuned and calibrated, and threshold settings are clearly documented. Over the next year, the transaction volumes being processed by financial institutions will increase and so will the volume of alerts: out of a typical daily volume of 1.5 million payment messages, 100,000 messages generate approximately 150,000 – 200,000 alerts. Typically, 95% of the alerts are deemed to be false positives, generated due to poor system testing and tuning. Inaccurate data could also result in alerts not being generated when they should, which is a more concerning problem.

Common Market Challenges

- Zero-tolerance on sanctions breaches, therefore all alerts generated must be reviewed
- Volume of sanctions alerts increases with the volume of transactions with majority deemed to be false positives
- Poor data quality impacts the ability to generate good quality alerts

Key Benefits



Protection

The automated decisioning at ensures a systematically consistent and more accurate review of all alert, protecting the institution from sanctions breaches



Customer Centricity

Faster processing of cross-border payments



Cost Effectiveness

Fully automated to reduce cost of human operations



Growth

Indirectly contribution

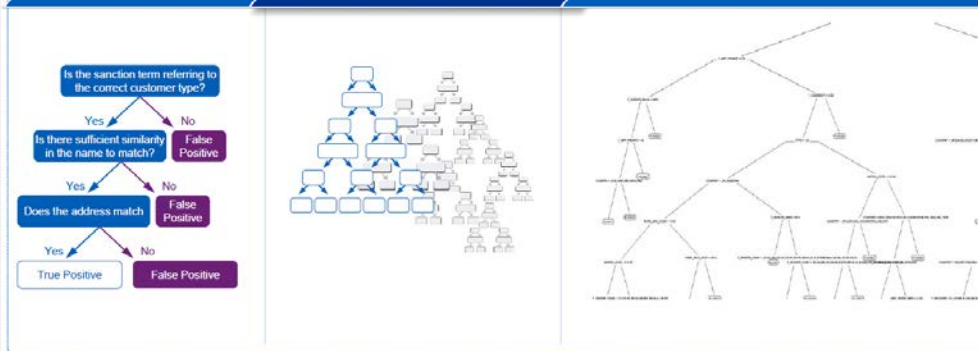
Key Features

The KPMG Sanctions Alert Classifier is built and trained using tens of millions of historical alert decisions, covering multiple jurisdictions and regions. It comprises a suite of algorithms built using open source coding. The key algorithm is Random Forest, a weighted decision trees result in a True/False decision:

Typically a human uses 30-40 data points to inform their alert review decision

The KPMG Sanctions Alert Classifier uses over 300 data points to build approx. 10,000 decision trees

The KPMG Sanctions Alert Classifier decision trees can be printed out and reviewed providing transparency of decision making



Performance metrics:

Accuracy of decisions:
99.98%

Consistency:
0.001%

Timeliness:
45seconds per alert

Auditability:
Fully auditable

Contact Us



Rani Kamaruddin
Partner, Financial Crime Compliance
Risk Consulting
KPMG China

+852 2140 2815
rani.kamaruddin@kpmg.com



Mary Wong
Partner, Financial Crime Compliance
Risk Consulting
KPMG China

+852 2685 7576
mary.wong@kpmg.com



Patrick O'Boyle
Manager, Financial Crime Compliance
Risk Consulting
KPMG China

+852 2826 7173
patrik.oboyle@kpmg.com



Neha Parmar
Associate Director, Financial Crime Compliance
Risk Consulting
KPMG China

+852 2140 2856
neha.parmar@kpmg.com



Cathy Zhou
Partner, Financial Crime Compliance
Risk Consulting
KPMG China

+021 2212 3289
c.y.zhou@kpmg.com



Pre-investigation Profiling

Transactions that are identified as potentially suspicious should be reviewed thoroughly to understand the customer's past transactions in conjunction with the customer's nature of business, purpose of the relevant transaction, past transactions, the counterparties with whom the customer has had transactions, and other data points to understand if the alerted transaction is commensurate with the understanding of the customer.

This process of information gathering is critical to determining if the alerted transaction might be suspicious. The process for gathering this information is time consuming and labor-intensive. KPMG's Pre-investigation Profiling technology establishes customer profiles based on the bank's static data and transaction data and aggregates information on customer counterparties, transactions, and alerts to facilitate an optimised workflow on case investigations.

Common Market Challenges

- Time consuming and unthorough review of background information that may be relevant for investigations of relevant transactions
- Inadequate analysis of data that is available in the institution's systems

Key Benefits



Protection

Ensures systematic gathering of data from various systems in the bank to create a complete profile of the customer based on which to commence investigations



Cost Effectiveness

Indirect cost reduction, as the solution will reduce man-hours from 4-6 hours to approximately 20 minutes

Key Features

The Pre-investigation Profiling solution has the ability to gather the information from various source systems of the bank to create a profile for the customer, reducing manual processes from an average of 4-6 hours to 20 minutes. Using a systematic methodology, it ensures that the data in the profile is complete, aiding investigators with the information they need to commence investigations of potentially suspicious transactions on the basis of complete information.



Contact Us



Rani Kamaruddin
Partner, Financial Crime
Compliance
Risk Consulting
KPMG China

+852 2140 2815
rani.kamaruddin@kpmg.com



Mary Wong
Partner, Financial Crime
Compliance
Risk Consulting
KPMG China

+852 2685 7576
mary.wong@kpmg.com



Patrick O'Boyle
Manager, Financial Crime
Compliance
Risk Consulting
KPMG China

+852 2826 7173
patrik.oboyle@kpmg.com

Automated Transaction Monitoring System Tuning

Financial institutions are expected to have an adequate understanding of their obligations under the AML regime, which includes the reporting of any suspicious activity. Ongoing monitoring, tuning and testing should be conducted on all aspects of the transaction monitoring system to ensure that the system is effective and efficient in detecting potentially suspicious activity in the account for review and investigation and eventually determining the filing of a suspicious transaction report.

Poor scenario coverage or customer segmentation impacts the ability to detect suspicious behaviour, whereas poor thresholds and parameter settings impacts the ability to generate “good quality” alerts as alerts are generated without consideration of historical data patterns.

Common Market Challenges

- Technical difficulties to set an effective transaction monitoring system, i.e., safeguards the interests of detecting potentially suspicious transactions and manages the alert volumes
- Large cost and time implication in performing appropriate system tuning

Key Benefits



Protection

Ensures that transaction monitoring system settings are effective to detect potentially suspicious transactions



Customer Centricity

Better understanding of customer transactions



Cost Effectiveness

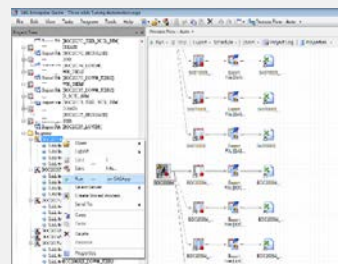
Reduces costs for ongoing monitoring, tuning and testing of the transaction monitoring system

Key Features

The Automated Transaction Monitoring System Tuning automates the threshold and parameter testing tool based on the bank's transaction monitoring system tuning methodology.

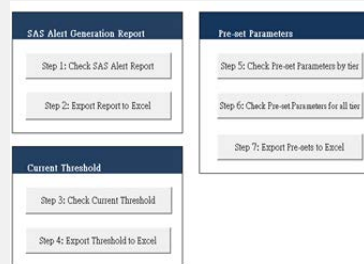
Technical setup of the frame

Set-up of the threshold tuning mainframe based on the bank's transaction monitoring methodologies



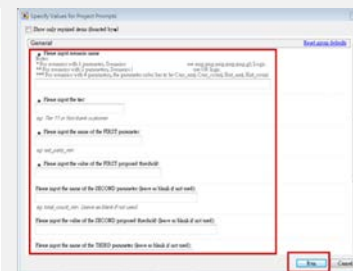
Automated threshold tuning

Upload the existing threshold settings for recalibration, tuning and testing.



Validation and confirmation

Perform validation of new threshold settings and confirm new settings.



Contact Us



Rani Kamaruddin
Partner, Financial Crime
Compliance
Risk Consulting
KPMG China

+852 2140 2815
rani.kamaruddin@kpmg.com



Mary Wong
Partner, Financial Crime
Compliance
Risk Consulting
KPMG China

+852 2685 7576
mary.wong@kpmg.com



Patrick O'Boyle
Manager, Financial Crime
Compliance
Risk Consulting
KPMG China

+852 2826 7173
patrik.oboyle@kpmg.com



Neha Parmar
Associate Director,
Financial Crime
Compliance
Risk Consulting
KPMG China
+852 2140 2856
neha.parmar@kpmg.com

Customer Activity Dashboard

While Compliance monitors customer transactions to identify potentially suspicious activity that should be reported to authorities, the monitoring happens at a transaction level and seldom provides a thorough understanding of the customer activity with the institution as a whole. When the customer relationship is reviewed, the lens applied to the review of the customer relationship is often fragmented, i.e. sole focus on AML, when fraud could also be at play. The Customer Activity Dashboard provides a visualisation of the historical activity in the accounts that belong to the same customer, and is agnostic of any risk view. Based on the visualisation of the activity across the customer's accounts, insight can be derived not only to understand the risks identified by the account activity, but also to identify opportunities with the customer.

Common Market Challenges

- Reviews performed on transactional activity do not draw the right insights due to organisation in silos as well as pre-existing data silos
- Understanding of the client's transactional behaviour is restricted to checking transaction, not whether the transaction in relation to the rest of the activity at a holistic level raises any concern on risk, or an opportunity for account growth
- Insights on customer activities are not effectively/efficiently shared between client relationship managers and Compliance

Key Benefits



Protection

A holistic review of customer account activity ensures that anomalies can be detected across risk views



Customer Centricity

Insights on customer's risk appetite on investments can be generated which can be used to identify opportunities for client



Cost Effectiveness

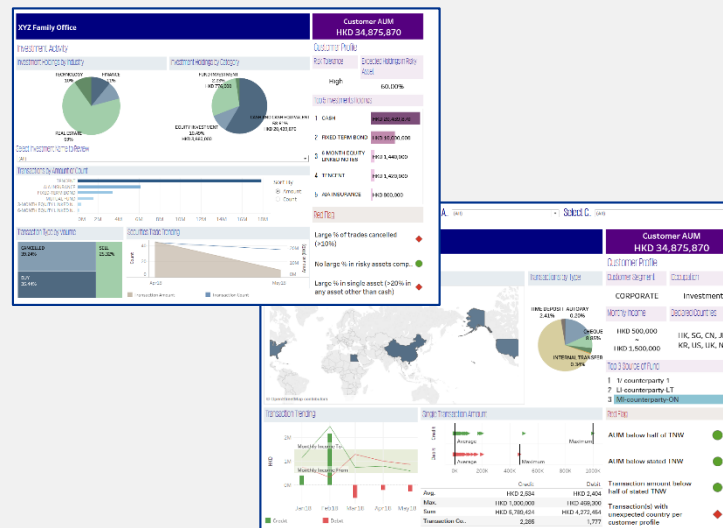
Reduction of cost of compliance



Growth

Identify opportunities for client account growth based on insights from clear transaction data patterns

Key Features



- Aimed to provide insight to relationship managers who own the financial crime risk of the customer relationship.
- Risk view may be expanded to cover broader range of risks including fraud, bribery/corruption, tax evasion.
- Same information on transactions generate insights on customer risk appetite on investments, changes in investment strategy by product/market, generating opportunities for growth.
- Red flag indicators can be customised to provide views interesting to the relevant user.
- Dashboard views can be changed to suit the first/second/third line of defense.

Contact Us



Rani Kamaruddin
Partner, Financial Crime
Compliance
Risk Consulting
KPMG China

+852 2140 2815
rani.kamaruddin@kpmg.com



Mary Wong
Partner, Financial Crime
Compliance
Risk Consulting
KPMG China

+852 2685 7576
mary.wong@kpmg.com



Patrick O'Boyle
Manager, Financial Crime
Compliance
Risk Consulting
KPMG China

+852 2826 7173
patrik.oboyle@kpmg.com



Thomas Tsang
Manager, Financial Crime
Compliance
KPMG China

+852 2140 2826
thomas.tsang@kpmg.com

Trade compliance analytics

With increased focus on conduct and insider trading, regulators have taken stringent actions on financial institutions and individuals, including hedge fund managers and professional staff who fail to safeguard insider information and undermine the integrity of capital markets. Our “**Trade Compliance Analytics**” solution has been developed to assist financial institutions to actively monitor and review insider trading compliance. Through the use of advanced data analytic techniques over several internal and external data sources, such as trade logs and communication logs, the solution helps identify red flags that indicate potential access or misuse of any insider information also referred to as MNPI (Material Non-Public Information).

Common Market Challenges

- Lack of surveillance on fund managers who usually gain access to MNPI on regular basis through extensive research and communication with clients and market analysts
- Ineffective identification of red flags that requires review and investigation
- Significant time required by investigators and legal teams to perform manual reviews of trades and communications

Key Benefits



Protection

Event correlation developed within the solution helps identify possible instances of access to Material Non-Public Information (MNPI) and follow-up events that indicate higher risk of insider trading activity



Cost Effectiveness

Significantly reduces the cost of reviews carried out by investigators, who can now focus on the specific time periods and trades highlighted by the solution

Key Features

Data Ingestion

- Automated data extraction and processing of internal data sets available within the financial institution:
 - Trade Logs
 - Communication Logs (Email and Phone conversations)

External data Processing

- Collection of stock price movement data from external sources (i.e. Bloomberg)
- Extraction of company announcements from stock exchanges and company websites

Event Correlation

- Processing of multiple data sources and develop a correlation between these events to identify red-flags that may indicate access to MNPI / insider information

Reporting

- Provides intuitive dashboards through the use of Tableau software (Visual analytics software) representing the correlated events for the reviewer / investigator

Review Platform

- The Tableau dashboard provides a capability to the reviewer to perform the complete investigation through the access of associated data (i.e. trade logs, communication logs etc.) within the platform

Contact Us



Mark Bowra
Partner,
Forensic Services
KPMG Hong Kong

+852 2140 2323
mark.bowra@kpmg.com



Ravindranath Patil
Director,
Forensic Technology
KPMG Hong Kong

+852 2826 7295
ravindranath.patil@kpmg.com



Krishna K Pandala
Associate Director,
Forensic Technology
KPMG Hong Kong

+852 2143 8752
krishna.pandala@kpmg.com



Mary Wong
Partner, Financial Crime
Compliance
Risk Consulting
KPMG China

+852 2685 7576
mary.wong@kpmg.com



Paul Cheng
Director,
Risk Consulting
KPMG China

+852 2847 5075
paul.cheng@kpmg.com



TPRM Assessment and Compliance Hub (KaVACH)

Regulators have been increasingly concerned about – and focused on – third party risk management (TPRM), and specifically how organisations ensure that risks are identified and management appropriately when relying on third party vendors. This technology offers vendor assessments based on specific lifecycle and industry compliance standards, provides a detailed analysis of assessment done, and helps to register issues and remediation plans, as well as maintaining evidence of vendor assessments in a centralised repository.

Common Market Challenges

- Third party on-boarding: limited third party coverage, contract clauses do not reflect TPRM requirement and right to audit, absence of dynamic risk based vendor profiling, and inadequate coverage of risk domains
- TPRM execution: checklist driven approach with minimal validation and remediation, no clear ownership, partial assessments and inability to track resolution of observations, and low / inexperienced operational capability
- On-going due diligence: lack of ability to demonstrate the right oversight and controls to regulators; and inability to assess the scope of third party vendors

Key Benefits



Protection

Provides clear and complete risk management of third party relationships that eliminates static information and achieves ongoing compliance with TPRM requirements



Customer Centricity

Provides deeper insights into vendor efficiencies and benefits that could be passed onto clients



Cost Effectiveness

Reduces manual effort and redundancy of activities in 3rd party assessment process

Key Features

Compliance Library

- Upload all existing Applications and Controls in bulk.
- Maintain a many to many relationship between Applications and Controls
- Update libraries (add/ modify/ delete) as and when needed

Automated Communication

- Audit log of workflow comments
- Email notifications
- Email reminders
- Escalations

Automated Workflows

- Pre-defined workflows between Auditors, Management and APP Owners
- Standard responses at each stage of workflow. E.g. Approve, Reject, Cancel
- Standard fields to capture Control Responses

Reports & Dashboards

- On-screen dashboards for each user based on role
- Management ready PDF downloadable dashboards
- Tabular reports

Evidence Repository

- Able to upload evidences for each control
- Support for .jpg, .pdf, .xls, .msg etc.
- Ability to download evidences

Contact Us



Gaurav Mehra
Partner,
Management Consulting
KPMG China

+852 2685 7571
gauravmehra@kpmg.com



Edna Wong
Partner,
Risk Consulting
KPMG China

+852 2143 8693
edna.wong@kpmg.com



Vanessa Huschle
Manager,
Management Consulting
KPMG China

+852 2978 8295
vanessa.huschle@kpmg.com



Rohan Padhi
Executive Director,
Management Consulting
KPMG India

+91 99302 24081
rohanpadhi@kpmg.com

Credit Model Validation Tools

With regulators increasing their focus on governance, controls, and testing of internal models, there is a critical need to have automated data feeds, role-based user experience, automated validation procedures, standardisation and traceability, improved efficiency of model validation units (MVU) and automated report generation. KPMG's Credit Model Validation Tool automates the model validation procedures for bank credit models, increasing the efficiency of MVU and standardising credit model validation across the organisation. This is a standalone tool operating on SAS with a Microsoft front-end.

Common Market Challenges

- Limited resources or no separate independent model validation unit limits the scope of models that go through independent validation
- Model validation resources focusing on performing core validation testing and unable to spend time on more insightful analysis and review
- A lack of standardised model validation procedures and validation thresholds
- No common form for reporting the results of model validation procedures
- A lack of best practice model validation tools and software (i.e., third party statistical packages)

Key Benefits



Protection

Ensures consistent, methodical validation of models for ongoing risk management and regulatory compliance



Customer Centricity

Reduction of customer and/or market-facing errors from inaccurate or non-compliant models



Cost Effectiveness

Reduction in errors and manual validation effort

Key Features



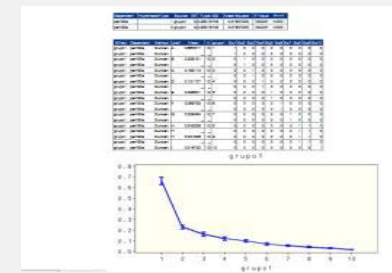
Interactive dashboard

One source for data management, validation procedures, and report generation



Digitised model validation

Programme incorporates customised tests and validation thresholds



Reporting

Meaningful metrics and agreed thresholds in integrated, holistic, and visually rich formats for monitoring and management reporting

Contact Us



Michael Monteforte
Partner,
Risk Consulting
KPMG China

+852 2847 5012
michael.monteforte@kpmg.com



Connie Kang
Associate Director,
Risk Consulting
KPMG China

+852 3927 4619
cs.kang@kpmg.com



Carl Chan
Associate Director,
Risk Consulting
KPMG China

+852 2143 8517
carl.chan@kpmg.com



James Philpott
Manager,
Risk Consulting
KPMG China

+852 3927 5828
james.philpott@kpmg.com



AI in Control

As organisations implement data and analytics and other advanced technology, the need for better practices of how organisations develop, train, and monitor their AI solutions has emerged. KPMG's AI In Control implements a model to help guide organisations along the AI evolutionary lifecycle from strategy through to execution and evolution, and includes methodologies and tools for an AI program to drive better business outcomes through: a) design and set-up criteria for building and continuously monitoring AI solutions and their performance, b) diagnostic reviews of AI solutions, and risk assessments of control environments to determine organisational readiness for effective AI control, and provides methods and tools to evaluate business-critical algorithms, puts testing controls in place, and oversees design and implementation of AI programs to help AI challenges around integrity, explainability, and fairness.

Common Market Challenges

- C-suite executives and the public question the trustworthiness of data and analytics and other advanced technology
- Lack of senior management oversight of key risks and controls from AI solutions which links to regulators expectations on individual accountability
- The governance and assessment of algorithms is still in its infancy
- Limited understanding of explainability of model decisions by business users and decision subjects

Key Benefits



Protection

Strengthen internal and external assurance mechanisms and develop standards to provide guardrails for all organisations



Cost Effectiveness

Enables effective governance over more transparent algorithms and methodologies and supports the creation of professional codes for data scientists



Growth

Modernise regulations to build regulator confidence in data & analytics, reducing commercial barriers and encouraging growth

Key Features

Resilience

- Continuous protection & governance of feedback data and model metrics
- Evaluation and testing of models for adversarial attacks and security testing

Integrity

- Understanding provenance / lineage of data, features, models etc., incl actions.
- Continuous monitoring of models for metrics and concept drift

Fairness

- Need for design – time evaluation of bias and imbalance in data
- Ensure use of only allowed features and no proxies

Explainability

- Explainability of model decisions for business users and decision subjects
- Understanding model changelog, data used, and evidence profiles

Contact Us



James O'Callaghan
Partner,
Management Consulting
KPMG China

+852 2143 8866
james.ocallaghan@kpmg.com



Jee Eu Tan
Associate Director,
Risk Consulting
KPMG China

+852 2847 5182
Jeeeu.tan@kpmg.com



Bradley Scheepers
Associate Director,
Management Consulting
KPMG China

+852 2847 5023
bradley.scheepers@kpmg.com



Jianing Song
Partner,
Risk Consulting
KPMG China

+852 2978 8101
jianing.n.song@kpmg.com



James Philpott
Manager,
Risk Consulting
KPMG China

+852 3927 5828
james.philpott@kpmg.com

Cognitive Contract Analysis - LIBOR Use Case

As the market transitions out of the use of LIBOR and other IBOR rates by the end of 2021, market participants are faced with a number of **common market challenges**:

- **Volume:** All contracts for products with an interest rate reference must be reviewed for references to LIBOR and other IBORs;
- **Complexity:** When a reference to LIBOR/IBOR is found, the Reset and Determination mechanism must be extracted and assessed, as well as and backup language; and
- **Scale:** Across a portfolio of loans, swaps, repos, etc., firms will need to characterise LIBOR/IBOR exposures, reconcile discrepancies with systems of record, identify anomalies and outliers, and prioritise transactions for remediation strategies.

Financial institutions must be able to tackle contract analysis and amendment challenges in a manner that is accurate and complete, with outputs that ensure a consistent approach to client outreach.

KPMG's Cognitive Contract Analysis is a collection of AI-powered cognitive contract management and smart analytics technology that



Reviews and assesses contracts' compliance with a number of industry regulations;

Rapidly parses, interprets, and analyzes a high volume of contracts with a high degree of confidence delivering predictable and accurate results; and

Supports dashboarding of all contract data for management reporting and project management tracking, including quantification of exposures by product, suggested replacement language, and other impact analysis requirements to underpin transition implementation across the organisation.

Key Benefits



Protection

Accurate and complete identification of affected contracts, and consistent amendments across product types



Customer Centricity

Proactively and strategically engage in contract repapering and negotiation



Cost Effectiveness

Efficient processing of high volumes of contracts to enable focus on remaining specific, complex contracts

Key Features



Document Ingestion & Detection



Completeness Checking & Error Handling



Contract Assessment & Amendment Generation



Contract Language Amendment Execution & Approval Workflow



Contract Negotiation Process Tracking



System of Record Updates



Dashboards, Reporting, and Controls

Dashboards providing insight and analytics to enable management oversight and control

Contact Us



Marie Gervacio
Partner,
Risk Consulting
KPMG China

+852 26857880
marie.gervacio@kpmg.com



Lang Lang Xu
Partner, Head of Digital
Development
KPMG China

+86 10 8508 5432
langlang.xu@kpmg.com



Robert Choi
Director,
IT Advisory
KPMG China

+852 3927 3121
robert.choi@kpmg.com



Desmond Yu
Associate Director,
Risk Consulting
KPMG China

+852 2913 2591
desmond.yu@kpmg.com



Connie Kang
Associate Director,
Risk Consulting
KPMG China

+852 3927 4619
cs.kang@kpmg.com

AI Powered Automation - Voice-to-Text and NLP Analytics

We have observed that the financial services industry has been encountering growing pressure to enhance client centricity and improve operational effectiveness, while continually complying with increasingly complex regulations. KPMG has developed an AI solution that leverages best-in-class voice-to-text translation technology, then uses AI trained with KPMG industry expertise and insights to understand the sentiment of the dialogue. This then enables identification of exceptions across the complete client conversation population. Once the voice recordings are transcribed and classified using natural language processing, use cases such as regulatory compliance surveillance, can be identified and integrated with internal systems.

Common Market Challenges

- Manual inspection of large data volumes with only partial population coverage, prohibitively high costs, and lack of scalability in complex and fragmented Asian market
- Increasing regulatory requirements on sales conduct, including market surveillance, sales suitability, order taking, pricing and disclosure
- Technical difficulties in implementation including volume, quality and distribution of available data to train and test AI solutions
- Lack of expertise and understanding of the limitations in data labelling process and mixed languages challenges
- Fragmented and inconsistent adoption across organisations, teams, divisions, and/or regions

Key Benefits



Protection

Significantly increased population sample sizes, real-time monitoring of voice disclosure requirements, and better/faster controls with higher levels of accuracy result in dramatic reduction of misconduct incidents



Customer Centricity

Enhance customer experience through customised communications and other outreach



Cost Effectiveness

Efficient, full surveillance coverage enhance governance while significantly reducing manual labor costs

Key Features

Capture

- Assisting in structuring and mapping voice data
- Assisting in rule/criteria setting for automatic speech recognition

Auto Speech Recognition

- Leveraging risk & regulatory expertise to implement and customise automatic speech recognition engine, analytics engine and prediction engine linked with voice data

Fine-tuning of rules

- Seamlessly integrating risk & regulatory requirements to underpin continuous rule-setting amendments
- Centralizing rule-based platform
- Implementing and categorising rules engines

Persistence/API

- Assisting in implementing API in linkage to the client's database platform

Output

- Assisting in visualizing the analytics results (e.g. client advisor scorecard, exceptions reports, improvement advice on KPIs and metrics) into different output platforms in form of report and dashboard

Contact Us



Jianing Song
Partner,
Risk Consulting
KPMG China

+852 2978 8101
jianing.n.song@kpmg.com



Lang Lang Xu
Partner, Head of Digital
Development
KPMG China

+86 10 8508 5432
langlang.xu@kpmg.com



Alison Ip
Manager
Risk Consulting
KPMG China

+852 2847 5175
alison.ip@kpmg.com



Paul Cheng
Director,
Risk Consulting
KPMG China

+852 2847 5075
paul.cheng@kpmg.com



Bradley Scheepers
Associate Director,
Management Consulting
KPMG China

+852 2847 5023
bradley.scheepers@kpmg.com

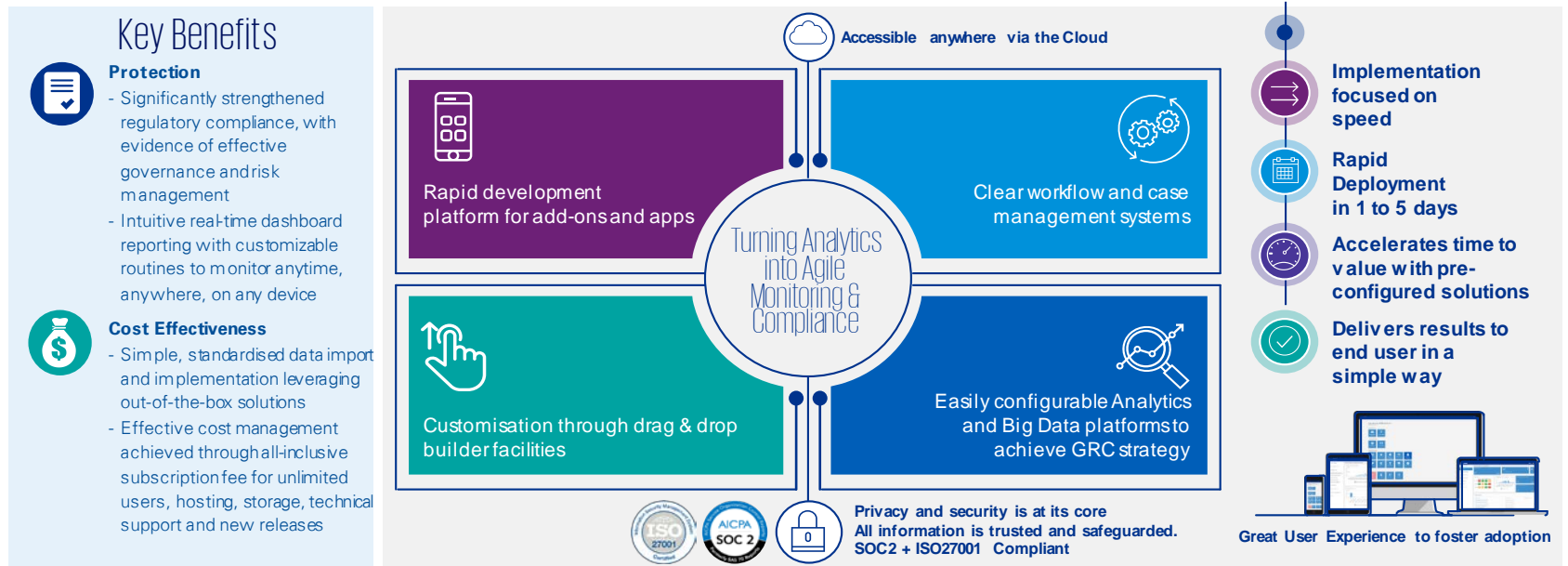


Integrated Analytics for Governance, Risk & Compliance (GRC)

Successful operation of GRC strategies maximise the effectiveness of an organisation's control framework whilst driving consistency, transparency and efficiency across the 3 Lines of Defence. KPMG's integrated analytics suite of tools ("Sofy") is a platform offering advanced, configurable, and ready-to-use data analytics to allow better business decisions, risk management, and improved performance. Sofy is accessible anywhere via the Microsoft Azure cloud platform, delivering in-depth insights through real-time notifications and alerts, making data easy to monitor, evaluate, and mobilise. KPMG's Sofy platform was designed with deep GRC competencies, and exceptional user experience in mind to help realise GRC strategies.

Common Market Challenges

- Manual and infrequent inspection of large data volumes with only partial population coverage, prohibitively high costs, and lack of scalability
- Difficulty collecting, analysing, and visualising data that is easy to understand, quick to prepare, and configurable for different business needs and users
- Challenges articulating your GRC vision to a GRC vendor, often resulting in scope limitations, budget overruns, and implementation delays
- Inability to continuously update and expand the GRC solution to align with evolving business needs and developing GRC frameworks



Contact Us		Jeffrey Hau Partner, Risk Consulting KPMG China +852 2685 7780 jeffrey.hau@kpmg.com
		Susanne Steyn Director, Risk Consulting KPMG China +852 2140 2317 susanne.steyn@kpmg.com
		Paul Cheng Director, Risk Consulting KPMG China +852 2847 5075 paul.cheng@kpmg.com
		Christopher Ingle Associate Director, Risk Consulting KPMG China +852 2685 7807 christopher.ingle@kpmg.com
		Grace Yuen Manager, Risk Consulting KPMG China +852 2685 7501 grace.yuen@kpmg.com

Performance & Risk Monitoring Solution (K-PRISM)

Risk and control information is often static, with maintenance and reviews requiring highly time-consuming manual exercises. The KPMG performance and risk monitoring solution (K-PRISM) performs advanced data analytics based on predefined business logic, enabling automated controls testing and risk monitoring across various business processes, covering the entire population of data within the end-to-end process and empowering the second and/or third line of defense to achieve continuous monitoring of risks and controls within all businesses and functions.

Common Market Challenges

- Limited testing coverage when performing risk-based periodic reviews of a selection of processes
- Limited resources with appropriate capacity and/or skillset to perform thematic or targeted monitoring
- Lack of effective monitoring metrics
- Extraction and analysis of data required for management reporting is time consuming and inconsistent

Key Benefits



Protection

Clear and complete monitoring data to support regulatory compliance and anticipate incidents before they occur



Cost Effectiveness

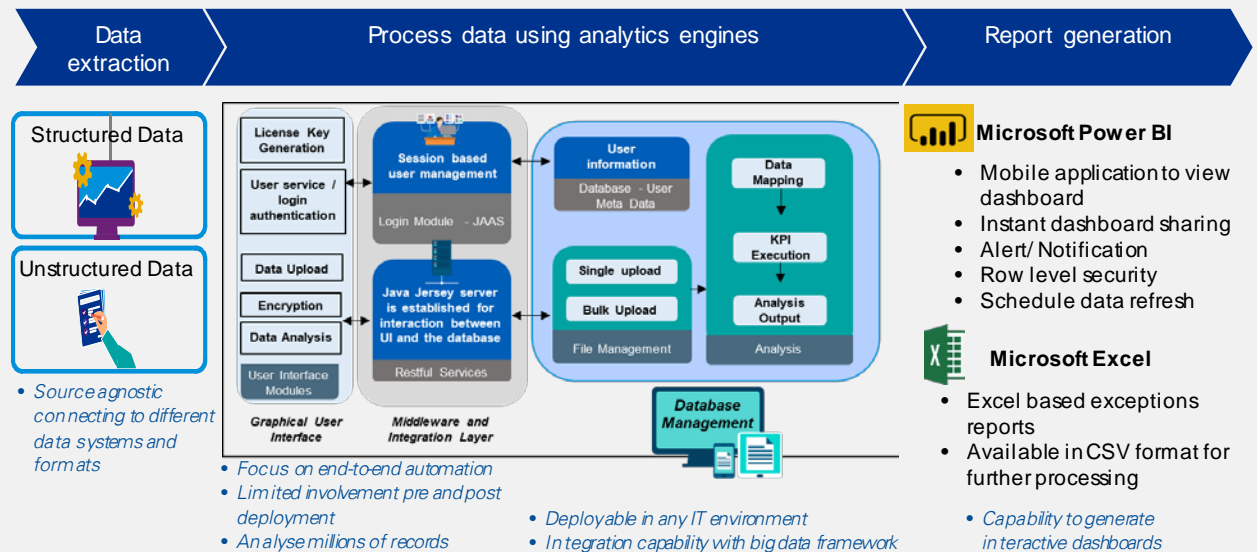
Achieve 100% monitoring of the operating effectiveness of controls with reduced resources; enable efficient decision support through analytical tasks



Growth

Focused risk insights can serve to support new business strategies and opportunities

Key Features



Contact Us



Alva Lee
Partner,
Risk Consulting
KPMG China

+852 2143 8764
alva.lee@kpmg.com



Gaurav Mehra
Partner,
Management Consulting
KPMG China

+852 2685 7571
gauravmehra@kpmg.com



Paul Cheng
Director,
Risk Consulting
KPMG China

+852 2847 5075
paul.cheng@kpmg.com



K G, Purushothaman
Partner,
GRC Services
KPMG India

+91 2261349523
purushothaman@kpmg.com



Jee Eu Tan
Associate Director,
Risk Consulting
KPMG China

+852 2847 5182
jeeeu.tan@kpmg.com



AEOL Reporting Tool for FATCA and CRS

With the Foreign Account Tax Compliance Act ("FATCA") and Common Reporting Standard ("CRS") now in force across more than 100 jurisdictions, and with increasing volume and complexity of reportable information and obligations, there is a need for a solution to convert comprehensive and relevant data for all reportable accounts across multiple jurisdictions with a clear and correct format in a short period of time to meet regulatory deadlines. Our reporting solution to meet Automatic Exchange of Information ("AEOL") requirements runs diagnostics and data logic to detect discrepancies and provide guided remedial actions, reducing the chance of failed submissions and regulator follow-up.

Common Market Challenges

- Ineffective processes for regulatory intake, compliance interpretation, and IT coding leading to difficulty in incorporating schema changes and remapping data points
- Lack of data privacy controls on large quantity of confidential customer data
- Complex schemas and specific data requirements increase risk of incorrect reporting
- Return submission is in XML, which is not a familiar format for many users
- Insufficient governance over AEOL reporting with limited segregation duties and monitoring in place

Key Benefits



Protection

Strengthen compliance through 24/7 access to data cleansing and return submission / resubmission



Customer Centricity

Limit incidents of repeat customer outreach from incomplete or inconsistent data



Cost Effectiveness

Reduce cost through digitisation of validation, conversion, and submission process



Growth

Ability to accommodate a growing number of reportable accounts as business expands

Key Features



Latest updates (schema, reporting deadlines, notices)

- One-way cloud delivery ensures rules and country information stay correct and up-to-date at all times when using the Tool.



Customer privacy and data security

- Keeps confidential customer data secure within user environment.
- Has data encryption capabilities to satisfy submission requirements.



Data validation and health check

- Has more than 700 data validation rules.
- Prevents rejection of returns by tax authorities.



Conversion of reporting data into XML

- Converts system data into the required XML format.
- Removes the need for users to have an in-depth understanding of XML or schemas.



Workflow and dashboard

- Allows segregation of duty via user roles and authorities configuration.
- Logs reporting progress and changes to data.
- Tracks reporting status across all group entities

Contact Us



Jeffrey Hau
Partner,
Risk Consulting
KPMG China

+852 2685 7780
jeffrey.hau@kpmg.com



Eva Chow
Director,
Tax Advisory
KPMG China

+852 2685 7454
eva.chow@kpmg.com



Edward Choi
Associate Director,
Risk Consulting
KPMG China

+852 2143 8569
edward.choi@kpmg.com



Larissa Law
Manager,
Risk Consulting
KPMG China

+852 3927 3092
larissa.law@kpmg.com

Digital Treasury Country Guides

Corporate banking clients are increasingly demanding more bespoke support, including the need for a holistic understanding of the jurisdictions in which they have financial interests. Digital Treasury Country Guides cover a spectrum of corporate treasury areas to facilitate such bespoke discussions and allow your clients to access the requested information in an easy and transparent way, including country information, regulatory requirements, taxation, payment instruments and systems, cash management, electronic banking, trade finance, and useful contacts.

Common Market Challenges

- Manual work-arounds and time-consuming workflows for report generation and information collection
- Missing information about possible centralisation options, as cash pooling or payments on behalf can hinder treasurers to raise capital in efficient ways
- Managing exposure to volatile FX market and fluctuating interest rates under current regulations in respective countries
- Growing use of technology significantly increases vulnerability to security breaches and internal fraud
- Stringent regulatory requirements to strengthen governance and improve how organisations manage / report on their financial health

Key Benefits



Protection

Higher visibility for treasurers to stay up-to-date on payment, tax, and regulatory updates



Customer Centricity

Demonstration of bespoke service capability through deeper understanding of the customer's risks and opportunities



Cost Effectiveness

Reduced time and effort to search and compare various sources of information and country specific treasury requirements



Growth

Easily adapted to the growing regulatory requirements and treasury management processes

Key Features



Provide current and pertinent information

The content can be tailored to your business and frequency of update based on your needs.

On-demand and mobile



Latest payments, tax and regulatory updates especially for trade finance, foreign exchange and cash management are just one click away.



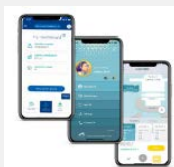
Global Coverage

Solution can be applied to your branches or subsidiaries at APAC, EMEA and AMER countries.

Simple to use, understand and digest



RAG flag indicating the permissibility and restrictions of the treasury management process



Category	Sub category	Title	Level 1 details	Level 2 details
Regulatory Requirements	Payments	Reporting	Restricted	- Hong Kong conducts the mandatory Survey of External Claims, Liabilities and Investments under the Census and Statistics Ordinance (Chapter 316 Q), for balance of payments statistics (transactions with mainland China are included in Hong Kong's balance of payments statistics). - All transactions between residents and non-residents must be reported on a quarterly basis. The Census and Statistics Department samples companies on individual basis, no automatic reporting is required.
	Exchange Controls	Type of Exchange Controls	No Restrictions	- Hong Kong does not apply exchange controls. - The forward exchange markets operate on private sector initiatives, and the government has no official role. The HKMA does not intervene in the forward FX market.

Sample

Contact Us



Tom Jenkins
Partner,
Risk Consulting
KPMG China

+852 2143 8570
tom.jenkins@kpmg.com



Tatjana Schaefer
Associate Director,
Risk Consulting
KPMG China

+852 3927 5735
tatjana.schaefer@kpmg.com



Paul Cheng
Director,
Risk Consulting
KPMG China

+852 2847 5075
paul.cheng@kpmg.com



James O'Callaghan
Partner,
Management Consulting
KPMG China

+852 2143 8866
james.ocallaghan@kpmg.com



Adam Stuckert
Partner
Management Consulting
KPMG China

+852 2847 5163
adam.stuckert@kpmg.com





kpmg.com/socialmedia

The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

© 2020 KPMG Advisory (Hong Kong) Limited is a Hong Kong limited liability company and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity. All rights reserved. Printed in Hong Kong.

The KPMG name and logo are registered trademarks or trademarks of KPMG International.