ECB’s Targeted Review of Internal Models (TRIM) - Webinar
Agenda

1. Trends and the market outreach
2. Common themes and learnings across TRIM banks
3. Addressing the problem
1. Trends and the market reach
Industry Growing Demand with Model Risk

A need for credible and adequate internal model framework

Regulatory Pressure
One of the most persistent and important drivers for model risk management across financial services is regulatory pressure.

Stakeholder Pressure
Stakeholders are paying closer attention to the process of managing risk, especially the use of risk models and the management of business volatility.

Managing Reputation
Firms realize that model failures could cause significant reputational damage and want to be able to include reputation as part of model risk assessment.

“Targeted Review of Internal Models (TRIM) is aimed at enhancing the credibility and confirming the adequacy and appropriateness of approved Pillar I internal models permitted for use by significant institutions when calculating own funds requirements.”

(ECB, Guide for the Targeted Review of Internal Models, 2017)
Market outreach: pain points

Targeting and address the problems

Banks main pain points

- **Lack of data** for estimation, in particular for LDPs
- Uncertainty around model conceptual soundness and design
- Disperse and costly model governance framework
- Need for model inventory concerns over model misuses and implementation errors
- Challenging regulatory assessment and RWA impact

Addressing the problem

- Industry leading datasets across default, recovery and financial information
- European wide benchmark models, especially for the Low Default Portfolios as per CRR Art185c
- Advanced technologies for data and model governance over the model life-cycle
- Advisory expertise and experience with model validation of LDPs
Data – Expand Coverage for Risk Governance

Tackle the lack of data challenge from the beginning

**Financial information**
Moody’s Analytics (MA) are able to cover the largest European dataset of ownership structures and largest number of granular financial statements

**Promote industry models**

**Default & Recovery**
DRD provides the largest historical default and recovery dataset for Corporate/Sovereign/Structured Finance as well as focused Data Consortia for Private Firms, European CRE, Project Finance, Asset Finance

**Expand data coverage and quality**

**Consortia and pool models**
MA consortia and pool data models enable a granular assessment of model design choices and their RWA impacts

**Gather industry and peer insight**
Data for Low Default portfolios

Leveraging data for broad asset class coverage

**Commercial & Industrial**
- Data Range 1980 – 2017
- Customers 19.8M, Statements 100.4M, Defaults 2.9M, Countries 33

**Commercial Real Estate**
- Data Range 2009 – 2017
- Total Balances $319B+, Total Loans 41,000+, Total Properties 64,200+, Defaults 1,500+, Mainly US but expanding over geographies

**Project Finance**
- Data Range 1983 – 2018
- Total Loans 6,389, Defaults 460, Countries 153

**Asset Finance**
- New consortium in rapid expansion
Validation of Internal Estimates via Benchmarking (CRR Art. 185 c)

Moody’s Analytics providing the services to facilitate internal rating model benchmarking via Challenger Models and comparisons with relevant external data sources.

1. Model Selection
- Mapping of the Bank’s asset classes to Moody’s Analytics (MA) proprietary internal rating models for PD and LGD estimations
- MA proprietary models “Challenger Models” will be considered, such as, RiskCalc for Corporates and Banks, Project Finance Scorecards and Commercial Real Estate Scorecard.

2. Data Submission
- The Bank will share its internal rating grades including PiT and TTC PD and LGD estimates for selected counterparts and facilities
- The Banks will provide the necessary ratios and inputs required into Moody’s models
- Alternatively, the Bank will provide the last three (3) years’ worth of credit files for selected counterparts and facilities.

3. Benchmark Assessment
- MA will conduct the benchmark assessment for selected obligors and facilities from the Bank’s portfolio, using its proprietary credit risk models
- The outcome of the benchmark, comparison between internal PD/LGD to Challenger, includes:
  - Correlation and Discriminatory Power if possible
  - Comparison of PD and LGD levels
  - Comparison of Model Stability through time

4. Findings/Recommendations
- Where deviations in PD and LGD values between Internal and Challenger Models are significant MA will investigate the reason for the deviation and assess it’s significance.
- MA will provide recommendations to remediate any detected problems.

5. Documentation & Annual Update
- MA will document the outcome of the benchmarking
- MA can provide an annual update service or provide the Benchmarking tools via the Collaborative Analytics Platform (CAP)
**TRIM Low Default Portfolio - Model Refinement and Validation**

### Task Description

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Conceptual Soundness Review</td>
<td>Model purpose and use, model framework, assumptions &amp; limitations, model methodology, variables and comprehensiveness</td>
</tr>
<tr>
<td>Data, Inputs and Sources</td>
<td>Data quality and integrity, segmentation review, sampling process and applicability</td>
</tr>
<tr>
<td>Model Replication</td>
<td>Variable selection &amp; model estimation, model performance and testing</td>
</tr>
<tr>
<td>Outcome Analysis</td>
<td>Model outputs review, scenario and sensitivity analysis, review of benchmarking and back testing if applicable, mapping and calibration</td>
</tr>
<tr>
<td>Implementation Testing &amp; Governance</td>
<td>Implementation inputs, implementation outputs, consistency with credit policies and guidelines</td>
</tr>
<tr>
<td>Documentation</td>
<td>Documentation of review process, finding and recommendations</td>
</tr>
</tbody>
</table>
Technology – Manage the models lifecycle & data

Robust data architecture and integrated platforms

Define structured models monitoring and change process leveraging on RW impact analysis

Link each model with the associated business process

Automated writing and storage of documentation

Collaborative Analytics Platform

Enrich your development and validation datasets

Define structured process flows and leverage on MA Pooled data models and methodologies

Ongoing validation frameworks leveraging on MA consortium solutions for immediate benchmarking
2. Common themes and learnings across TRIM banks
Current Challenges observed

Feedback from clients

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timeliness</td>
<td>Timely availability of the data and the documentation requested</td>
</tr>
<tr>
<td>Materiality</td>
<td>Data specific to Low Default Portfolios, specific asset classes</td>
</tr>
<tr>
<td>Regulation</td>
<td>Impact of finalisation of Basel III (“Basel IV”)</td>
</tr>
<tr>
<td>Execution</td>
<td>Approach to TRIM review of the portfolios PMO and Administrative focus</td>
</tr>
<tr>
<td>Risk differentiation</td>
<td>Reduce the risk differentiation</td>
</tr>
<tr>
<td>Data (specifically on LGD)</td>
<td>Usage of proxies from certain portfolios.</td>
</tr>
</tbody>
</table>
Proposals and updates

Comments from the market on communication to/from ECB

Proposals

1. Data templates not fitting internal model structures (in terms of granularity)
   a. Adjust templates
   b. Release early

2. Provide path to reviews, timelines a lot earlier on

Update/Feedback

1. Model and Risk Governance focussed

2. Materiality and relevance of data

3. Update to the TRIM guidelines
Data – Expand Coverage for Risk Governance

Tackle the lack of data challenge from the beginning

**Financial information**
MA cover the largest European dataset of ownership structures and largest number of granular financial statements

**Promote industry models**

**Default & Recovery**
MA DRD provides the largest historical default and recovery dataset for Corporate/Sovereign/Structured Finance as well as focused Data Consortia for Private Firms, European CRE, Project Finance, Asset Finance

Expand data coverage and quality

**MA approach**

» Assess portfolio coverage, internal data gap analysis, model landscape and complement with MA data sets

» Provide data integration for model estimation and validation

» Data management solutions to establish a reliable framework in line with relevant regulatory requirements (e.g. TRIM, BCBS 239)

» Support fine-tuning and validation processes with respect to best practices and data consortia solutions

**Consortia and pool models**
MA consortia and pool data models enable a granular assessment of model design choices and their RWA impacts

**Gather industry and peer insight**

With MA data
Banks data

MA approach

» Assess portfolio coverage, internal data gap analysis, model landscape and complement with MA data sets

» Provide data integration for model estimation and validation

» Data management solutions to establish a reliable framework in line with relevant regulatory requirements (e.g. TRIM, BCBS 239)

» Support fine-tuning and validation processes with respect to best practices and data consortia solutions

**With MA data**

Banks data

**Consortia and pool models**
MA consortia and pool data models enable a granular assessment of model design choices and their RWA impacts

**Gather industry and peer insight**

**Financial information**
MA cover the largest European dataset of ownership structures and largest number of granular financial statements

**Promote industry models**

**Default & Recovery**
MA DRD provides the largest historical default and recovery dataset for Corporate/Sovereign/Structured Finance as well as focused Data Consortia for Private Firms, European CRE, Project Finance, Asset Finance

Expand data coverage and quality

MOODY’S ANALYTICS

ECB’s Targeted Review of Internal Models (TRIM)
Models – Model Risk Management

A TRIM framework leveraging Models, Data and insights

Key components

Key elements to model management approach is structured over 5 relevant milestones:

- Model Governance
- Data
- Model design
- Model performance
- Documentation

Data

- Integrate datasets and data consortia for both good and bad years according to default and recovery data needs, especially for LDPs.

Estimation

- Leverage established methodologies to understand portfolio/pools/class parameters TTC/PiTness given industry specific discovery of the credit cycle or to calibrate specific models.
- Leverage on different approaches to estimate PD/LGD components or benchmark/backtest specific modeling assumptions.

Calibration

- Leverage on external models and perform CET1/RWA sensitivity analysis.

MoC

MA experience

Through experiences across European Tier1/Tier2 banks through full development or refinement of specific model components for both HDPs and LDPs.
Models – Model Risk Management

Main data related challenges

**Data Quality Framework**
- Understanding of data quality issues with respect to (a) completeness (b) accuracy (c) consistency (d) timeliness (e) uniqueness (f) validity (g) availability/accessibility (h) traceability

**Integration**
- Integration of external sources of historical series (estimation/calibration) reflecting banks portfolio/experience
- Evaluation of alternative set of risk indicators
- Collection of shadow/expert ratings
- Analysis of country/segment specific workout periods
- Collection of 20 years of economic indicator historical data

**Comparison**
- 1 year / long run PDs (LGDs) Vs DRs (LRs)
- Build portfolio for out of sample/time performance analysis

**Credit Cycle**
- Identification of the credit cycle for specific segments
- Downturn scenarios
- PiT / TTC mapping tables

MA provides **Data Analytics insights** leveraging on established methodologies aimed to assess backward and forward looking credit risk estimates.

Low data context can leverage on **MA data consortium initiatives**
Models – Model Risk Management

Main estimation related challenges

**Data**

- Homogeneity of default definition
- Impact of changes in lending practices
- Reflection of the long run experience
- Bias introduced by the sampling criteria
- Performance of representativity analysis
- Relevance of model segmentation
- Identification of overlapping / non-overlapping samples
- RDS assessments

**Estimation**

- Backing up of expert based judgement
- Relevance of the predictive power
- Assessment of risk differentiation across segments and rating buckets
- Identification of economic indicators dependencies for subportfolios

**Calibration**

- MA provides **Data Analytics insights** leveraging on **established methodologies** aimed to assess backward and forward looking credit risk estimates.

**MoC**

- MA support banks through **asset specific expertise**
Models – Model Risk Management

Main calibration related challenges

- **Calibration criteria**
  - Definition of a suitable historical series over economic cycles
  - Identification of the central tendency
  - Understanding of the risk grades classification
  - Performance of the PD calibration criteria
  - Predictability of the default rates
  - Homogeneity of the default definition
  - Identification of overlapping / non-overlapping windows
  - Downturn estimation (e.g. Macroeconomic / reference)

- **Calibration philosophy**
  - Relevance of the migration across risk grades
  - Granular identification of yearly default rates
  - Understanding of the overall rating model PiT/TTCness through scenario sensitivity analysis
  - Relevance of the dynamics and volatility of capital requirements

MA provides Data Analytics Insights leveraging on established methodologies aimed to assess backward and forward looking credit risk estimates.
Models – Model Risk Management

Main MoC related challenges

Data

Prudential components

» Assessment of sensitivities of risk parameters estimates to main model inefficiencies

» Identification of appropriate adjustments and associated MoC

» Setting up of a MoC framework aimed to manage the model risk ongoing

Estimation

Use of MA models in order to calibrate MoC components

Leverage on MA expertise in order to identify model adjustments

Calibration

MoC

Prudential components

PD | LGD | LGD in-default | EAD
---|-----|----------------|-----
Model design approach
Segmentation criteria
Default Definition
Historical dataset
Estimation Sample
Estimation criteria
Module estimates / Additional components
Prudential components / Downturns
Calibration
MoC

Alternative / stressed design

Benchmaking
Model – In-depth Validation framework

Country and model agnostic perspective

Datasets

» Use specific external Risk Datasets to:
  – Structure alternative validation samples
  – Assess the degree of availability and up-to-date nature of necessary inputs
  – Challenge model assumptions
  – deep dive on model errors

Consortia

» Leverage on Data Consortia
  – Obligor/Segment level consistency checks with 90+ partnering financial institutions
  – Benchmarking the risk parameters excess/unexpected volatility with series from 1990
  – Deep diving on consensus estimates across asset types (e.g. C&I, SME, CRE, PF, ..), especially LDPs

Model challenge

» Leverage on Pool data models to assess consistency across:
  – Segmentation criteria
  – Data treatments and drivers selections
  – Representativity analysis
  – Full benchmarking

» Leverage on external PD & LGD models to compute:
  – Segment-specific correlation analysis
  – Advanced backtesting
  – Credit/recovery cycle backtesting

Outcomes

MA experience

Through experience across a large panel of European Tier1/Tier2 banks through full validation and benchmarking of specific model components for HDPs and LDPs
Backtesting framework

LDP backtesting is tackled through alternative perspectives

- **Parameters/Components comparison**
  Leverage on MA advanced/alternative approaches to calculate the DR/RR and the related backtesting acceptance/rejection intervals

- **Granular comparison**
  MA data driven insights help institutions to identify homogenous sub-samples in order to conduct adjusted backtesting analysis

- **Out-of-data**
  Integrate MA data based synthetic portfolios to enrich/form validation samples with out-of-time / out-of-samples data

- **Parameters/Components modeling**
  Exploit MA models (and underlying model designs) benchmarking in order to leverage on already backtested models and estimates
3. Addressing the problem
Technology – Collaborative Analytics Platform

Use case

Model Governance
- Track all modeler actions
- Replicate model runs and results
- Monitor model performance
- Collaborate across teams
- Publish models as APIs & calculators
- Integrate easily with MA solutions
- Compute with scalability

Model Development & Deployment
- Leverage Models-as-a-Service
- Utilize data & modeling assets

Centralized Access to Data & Models
Data, risk models, processes and resources

Model Risk Management Governance
- Interaction with other regulatory requirements (e.g. CRDIV, CRR, RTS, SREP)
- Independent MRM Regulatory Best Practices
- Alignment of IRB with Capital planning and Pillar II

Data Analytics
- Data Quality Framework (DQF)
- Data set for model development, representative of the current obligors or positions
- Benchmarking of internal model outputs
- Back-testing, as per Article 185(b) of the CRR

Model Enhancement / Remediation
- Address ECB’s IRB generic or TRIM specific remediation
- LGD Facility-specific Modelling, including down-turn scenarios, economic indicators and ELBE
- Integration with lending policies: Credit Policies, Credit approval review

Support on Execution
- Temporary or permanent resources
- Econometric Modelling techniques
- Onshore, near shore, offshore deployment

Infrastructure
- Model governance, including top-down view
- Modelling & Reporting Platform
- RAROC / Pricing tools
- Origination & Lending Platform

Ongoing Monitoring and Deep-dive
- Ongoing Portfolio Monitoring via EWS and portfolio checks
- Validation, on an annual basis, general risk assessment of all aspects of the rating systems in order to define the appropriate internal audit work plan
- “Deep-dive” in cases of increased risk
© 2017 Moody’s Corporation, Moody’s Investors Service, Inc., Moody’s Analytics, Inc. and/or their licensors and affiliates (collectively, “MOODY’S”). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY’S INVESTORS SERVICE, INC. AND ITS RATINGS AFFILIATES (“MIS”) ARE MOODY’S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MOODY’S PUBLICATIONS MAY INCLUDE MOODY’S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES. MOODY’S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS AND MOODY’S OPINIONS INCLUDED IN MOODY’S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY’S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY’S ANALYTICS, INC. CREDIT RATINGS AND MOODY’S PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND CREDIT RATINGS AND MOODY’S PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. NEITHER CREDIT RATINGS NOR MOODY’S PUBLICATIONS COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY’S ISSUES ITS CREDIT RATINGS AND PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY’S CREDIT RATINGS AND MOODY’S PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY’S CREDIT RATINGS OR MOODY’S PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY’S PRIOR WRITTEN CONSENT.

All information contained herein is obtained by MOODY’S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided “AS IS” without warranty of any kind. MOODY’S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY’S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY’S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing the Moody’s publications.

To the extent permitted by law, MOODY’S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY’S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial information is not the subject of a particular credit rating assigned by MOODY’S.

To the extent permitted by law, MOODY’S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY’S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY SUCH RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY’S IN ANY FORM OR MANNER WHATSOEVER.

MOODY’S Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody’s Corporation (“MCO”), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MOODY’S Investors Service, Inc. have, prior to assignment of any rating, agreed to pay to MOODY’S Investors Service, Inc. for appraisal and rating services rendered by it fees ranging from $1,500 to approximately $2,500,000. MCO and MIS also maintain policies and procedures to address the independence of MIS’s ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moodys.com under the heading “Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy.”

Additional terms for Japan only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY’S affiliate, Moody’s Investors Service Pty Limited ABN 61 003 395 570 AFSL 38969 and/or Moody’s Analytics Inc. (as applicable). This document is intended to be provided only to “wholesale clients” within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY’S that you are, or are accessing the document as a representative of, a “wholesale client” and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to “retail clients” within the meaning of section 761G of the Corporations Act 2001. MOODY’S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors. It would be reckless and inappropriate for retail investors to use MOODY’S credit ratings or publications when making an investment decision. If in doubt you should contact your financial or other professional adviser.

Additional terms for Japan only: Moody’s Japan K.K. (“MJKK”) is a wholly-owned credit rating agency subsidiary of Moody’s Group Japan G.K., which is wholly-owned by Moody’s Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody’s SF Japan K.K. (“MSFJ”) is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization (“NRSRO”). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain benefits under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any rating, agreed to pay to MJKK or MSFJ (as applicable) for appraisal and rating services rendered by it fees ranging from JPY200,000 to approximately JPY350,000,000. MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.