KPMG

LIBOR Transition

Planning the transition
to new risk free rates

November 2018

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TAXI

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SECTION

01

Introduction

Background

> Our intention is that, at the end of this period (2021), it would no longer be necessary for the FCA to persuade, or compel, banks to submit to LIBOR.
>
> It would therefore no longer be necessary for us to sustain the benchmark through our influence or legal powers."

Speech by Andrew Bailey
Chief Executive of the FCA
at Bloomberg London
27 July 2017

Why Libor is decommissioned

More than a year after the Financial Conduct Authority's (FCA) Chief Executive Andrew Bailey announced that the FCA would no longer compel banks to submit data to the London Interbank Offered Rate (LIBOR) after 2021, more light is shed on the direction of travel to move from the one of the world's most important benchmark to alternative rates.

The LIBOR scandal in 2011 raised concerns on the future of LIBOR. In addition, the volume of the unsecured interbank funding markets decreased rapidly after the financial crisis underpinning (L)IBOR submissions with a lower number of transactions further questioning the sustainability of LIBOR.

Atransition from this key benchmark to new reference rate will in any case impact a broad range of contracts and products in a number of activities and areas.

Scale of the problem

There is no doubting the significance of the shift away from IBORs. The volumes at stake are enormous.

The Financial Stability Board estimating that than USD $370 trillion worth of notional contracts used IBOR as a reference rate.

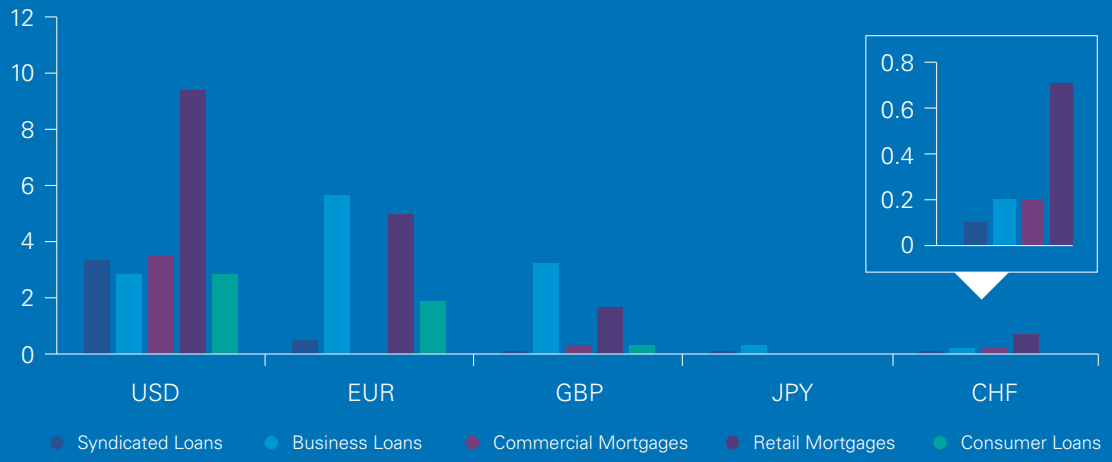
The IBOR benchmark rates are embedded in a wide range of credit products. For CHF LIBOR, the largest part is linked to retail mortgages (USD 0.7tn) followed by commercial mortgages and business loans (USD 0.2tn).

In addition, IBOR rates have become widely referenced in derivatives. Notional volume of OTC derivatives such as interest rate swaps, FRA's or cross currency swaps linked to CHF Libor rate amounting to USD 6.1 trillion.

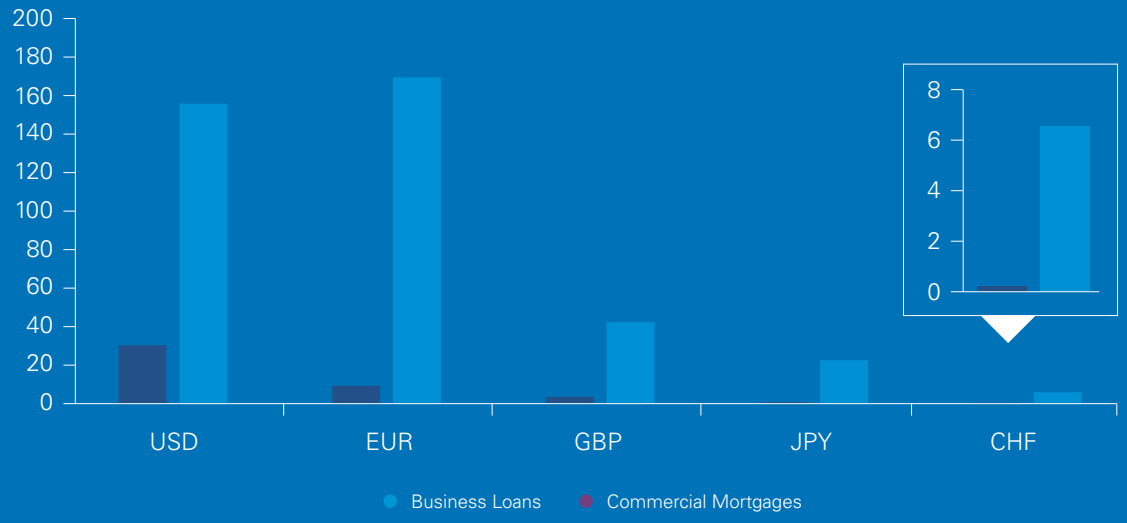
It is therefore not excessive to say that this represent one of the most profound developments in financial markets for years to come or in other words:

It's a $370 trillion problem!

Selected credit products linked to reference rates, in USD trillion



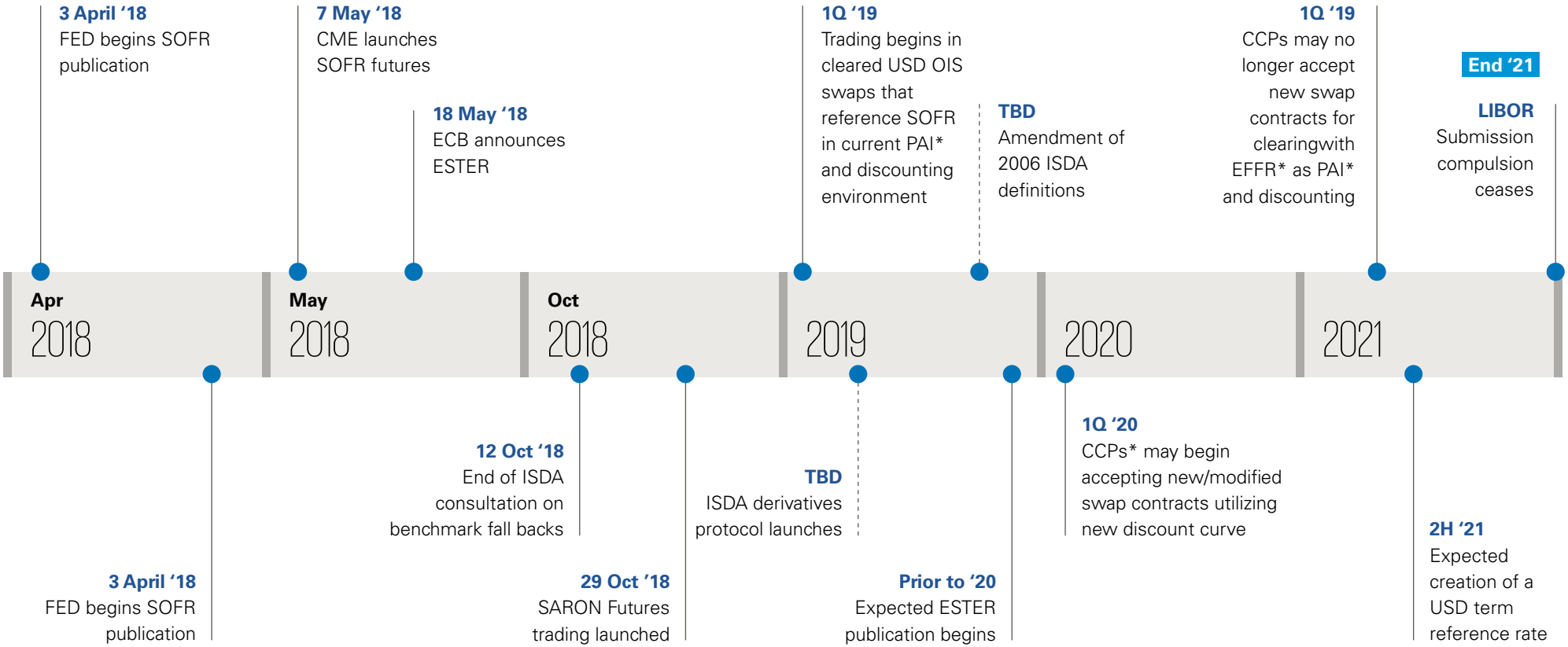
Selected Derivatives linked to reference rates, in USD trillion



Transition timeline

Planning for the LIBOR transition is currently underway with the expected transition to be completed by the end of 2021. More granular timelines are being developed, however there are going to be variations across jurisdictions.

LIBOR transition timeline:



Working groups

While there are various national or supranational working groups in place, it is assumed that the market is going to transition at different times for the different currencies.

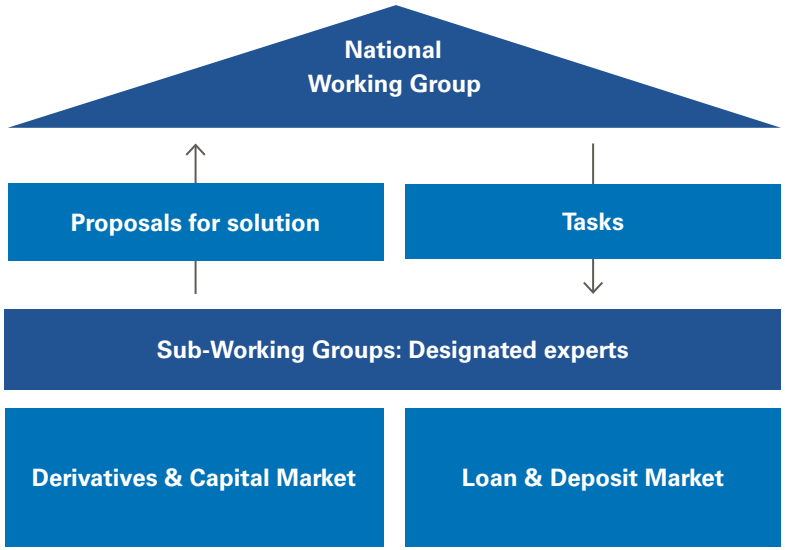
Working groups have been set up and different rates and methodologies are being proposed and discussed. However, issues are expected in particularly for cross-currency swaps or multicurrency facilities as certain reference rates are secured and others unsecured.

Currency	Working Group	Alternative Rate	Description of Alternative Rate	Publication Date
CHF	**National Working Group on CHF Reference Rates (NWG)**	Swiss Average Rate Overnight (SARON)	• Secured (overnight repo rate) • Fully transaction-based	August 2009
USD	**Alternative Reference Rates Committee (ARRC)**	Secured Overnight Financing Rate (SOFR)	• Secured (covers multiple overnight repo segments) • Fully transaction-based • Robust underlying market	April 2018
GBP	**Working Group on Sterling Risk-Free Reference Rates**	Reformed Sterling Overnight Index Average (SONIA)	• Unsecured and overnight • Fully transaction-based • Robust underlying market	April 2018
JPY	**Study Group on Risk-Free Reference Rates**	Tokyo Overnight Average Rate (TONAR)	• Unsecured and overnight • Volume weighted average of transactions	December 2016
EUR	**Working Group on Risk-Free Reference Rates for the Euro Area**	Euro Short-Term Rate (ESTER)	• Unsecured and overnight • Reflects the wholesale euro borrowing costs of euro area banks	Projected prior to 2020

The Swiss National Working Group

Established initially in 2013 to reform TOIS fixing, the Swiss National Working Group is the key industry forum in Switzerland to steer the CHF Libor transition to an alternative interest rate.

The group consists of two sub groups with key objectives such as the identification of affected products and stakeholders, benchmark evaluation or the set-up of transition plans for derivative & capital market as well as for loan and deposit products.



https://www.snb.ch/de/ifor/finmkt/fnmkt_benchm/id/finmkt_reformrates

2018

04 June 2018
NAG publishes recommended specifications of SARON futures and survey as a basic for discussions

19 December 2017
Termination of TOIS fixing

2017

05 October 2017
NAG recommends SARON as alternative to CHF LIBOR. Two sub-working groups are created to examine details of the transition for loan & deposit as well as derivative & capital markets separatly

15 November 2016
TOIS-administrator ACI Suisse officially announces end of TOIS fixing by December 2017

2016

13 January 2016
Trials to reform TOIS failed. NAG made the decision to focus on SARON instead of TOIS

11 June 2012
Foundation of NAG. Initial purpose is TOIS fixing

2013

Industry problems

While significant efforts globally are under way to come up with solutions for the transition of IBORs to alternative benchmark rates, there is a number of significant industry problems that will need to be tackled:

Liquidity
Alternative RFRs (risk-free reference rates) are planned to be based on real transactions to represent the real cost of funding. However, the creation of liquidity required to support the hedging, risk management and issuance of new products based on the new RFRs is yet to be developed.

Term structure
The new RFRs are overnight indices and currently have no term structure (unlike IBORs). Further, secured RFRs (e.g. SARON) exclude the credit spread embedded in IBORs (term rates), which affects pricing of e.g. LIBOR based mortgages.

Regulatory, tax & accounting issues
Effects on capital or liquidity ratios as well as hedge accounting can create conflicts with existing regulations such as EMIR and Dodd Frank.

Differences between the IBORs
There are significant differences and approaches to the transition. For instance the transition plan for LIBOR USD to SOFR has already an outlined path while the ECB has only recently convened its working group.

Fall back approaches
Fall back approaches need to be developed which determine on how legacy contracts can be treated. This may expose institutions to litigation risk and reputation risk if contracts details have to be renegotiated (especially with non-professional clients).

Differences in methodology
Some proposed RFRs are secured (e.g. SARON) while others are unsecured. This may cause problems particularly for cross-currency swaps or multicurrency facilities until the RFRs in each relevant currency are identified and underpinned with sufficient liquidity.

SECTION

02

Transition Challenges

Transition challenges along the value chain

Business & Front Office

Which processes and products are affected?

- Identification of all processes and products (across currencies, market participants and geographic locations) related to IBOR
- Client outreach, communications and education
- Impact and risk assessment
- To maintain flexible product offering, advertise new IBOR-products (maturing beyond 2021) only with appropriate fall back language/provisions.

Treasury

Which impact does the reform have on ALM?

- Identification of implications and adjustment of ALM
- Changes to issuance and hedging programs
- Identification of transfer pricing (FTP) implications and need for adjustment

Valuation & Risk

How do valuation and risk methodologies need to change?

- Valuation of legacy positions (e.g. calculation of new secured/ unsecured curves)
- Adjustment of different market data

Legal

What are possible fall backs for contract arrangements to minimize legal risks?

- Identification of all contracts with exposure to IBOR
- Develop new fall back language/ provisions
- Renegotiating/ Rewriting legacy contracts
- To maintain flexible product offering, include new fall back language into new IBOR-products (maturing beyond 2021).

Compliance

How can reputational and compliance risks be minimized?

- Regulatory tracking and identification of implications
- Different regulatory requirements/ treatment of RFRs across jurisdictions
- Assess reputational risk of renegotiating legacy contracts.

Accounting & Tax

What impact does the reform have on the (hedge) accounting treatment?

- Calculation of fair-value adjustments
- Recalculation of hedge-accounting
- Positions (e.g. hedge effectiveness)

Which taxable profits/ losses can be expected?

- Taxation effects in the course of close-outs & fair-value adjustments

Operations

What impact does the reform have on operations?

- Adjustment of collateral management
- Adjustment of back-office processes (Confirmation/ Settlement Cash Flows)
- Identification and update of internal and vendor applicable systems, multiple processes, controls, and tools with IBOR references which will require changes.

IT & Infrastructure

Which adjustments to systems and interfaces are required?

- Identification of internal and external IT dependencies
- Adjustment of data management (e.g. historical data)
- Process adjustments
- Adjusting / Introducing relevant support systems

SECTION

03

Actions required

Actions along the LIBOR transition timeline

LIBOR
Submission
compulsion ceases

End '21

LIBOR Transition Timeline

Phase 1
Q42018
Raise Awareness

Phase 2
2019
Impact assessment & project planning

Phase 2
2019 – 2020
Implementation and preparation

Phase 4
2021 onwards
Product transition and readiness

1

Raise Awareness
Obtain an in-depth understanding of the key aspects as well as potential impacts and raise awareness within the institution to lay the foundation for a smooth transition.

2

Perform impact assessment, develop Transition Plan & Implementation Office
Mobilize and organize firm for successful project completion, perform impact assessment along the value chain and set up project plan.

3

Identify affected products/contracts
Collect and analyse products/contracts that are directly and indirectly related to LIBOR and identify approach for use of alternative rate for each product type.

3

Client outreach and education
Identify timeline and begin client negotiation and outreach.

3

Adopt alternative rate
Assess implications of the new rate (e.g. rate curves) and across the organization (e.g. tax implications).

4

Post transition Activities
Update books and records to reflect the impact of the new rate and perform post transition validation across the organization.

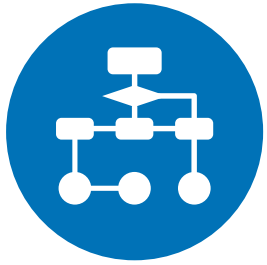
KPMG Services

Phase 1

Training sessions and education

Awareness Workshops	Insights on industry challenges and regulatory developments
Training Sessions	Education of key stakeholders on impacts along the value chain
Round Tables	Participation in round tables with peer group

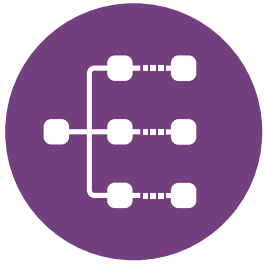
Phase 2



Impact assessment & project plan

Program Setup	Create Steering Committee across the organization
Governance	Setup of governance framework, structure and reporting cadence
Project plan	Design of project plan including milestones, responsibilities and committee involvement
Impact	Perform high-level assessment of the entire value chain

Phase 3 | Phase 4



Management of transition / implementation

Inventory	Inventory of impacted contracts (entire population) by key parameters
Transition plan	Compilation of product prioritization list as well as definition of required actions
Client actions	Definition of client actions as well as compilation of client outreach lists
Processes	Aid with process management and in the areas of valuation and risk management
Client education	Development of education materials for clients
Testing	Performance of Go-Live readiness testing and remediation tasks

SECTION

04

Leveraging artificial intelligence for LIBOR transition

Managing the transition

Leveraging artificial intelligence for LIBOR transition

KPMG AI/Ignite is a well-suited solution to solve the evolving challenges resulting from the impending LIBOR replacement.

Efficient processing

Challenge

High Volume Processing

All contracts must be reviewed for potential references to LIBOR

- ISDA masters/CSAs/confirms, loans, leases, credit agreements, IMAs, repos, etc.

Results orientated

Challenge

Complex Analysis

Where reference to LIBOR is found, the Reset and Determination mechanisms must be extracted and assessed, as well as any fallback language.

Less prone to error

Challenge

Scale of Impact

Across a portfolio of loans, swaps, repos, etc., characterize LIBOR exposures, reconcile discrepancies with systems of record, identify anomalies and outliers. Prioritize transactions for remediation strategies.

Efficient processing

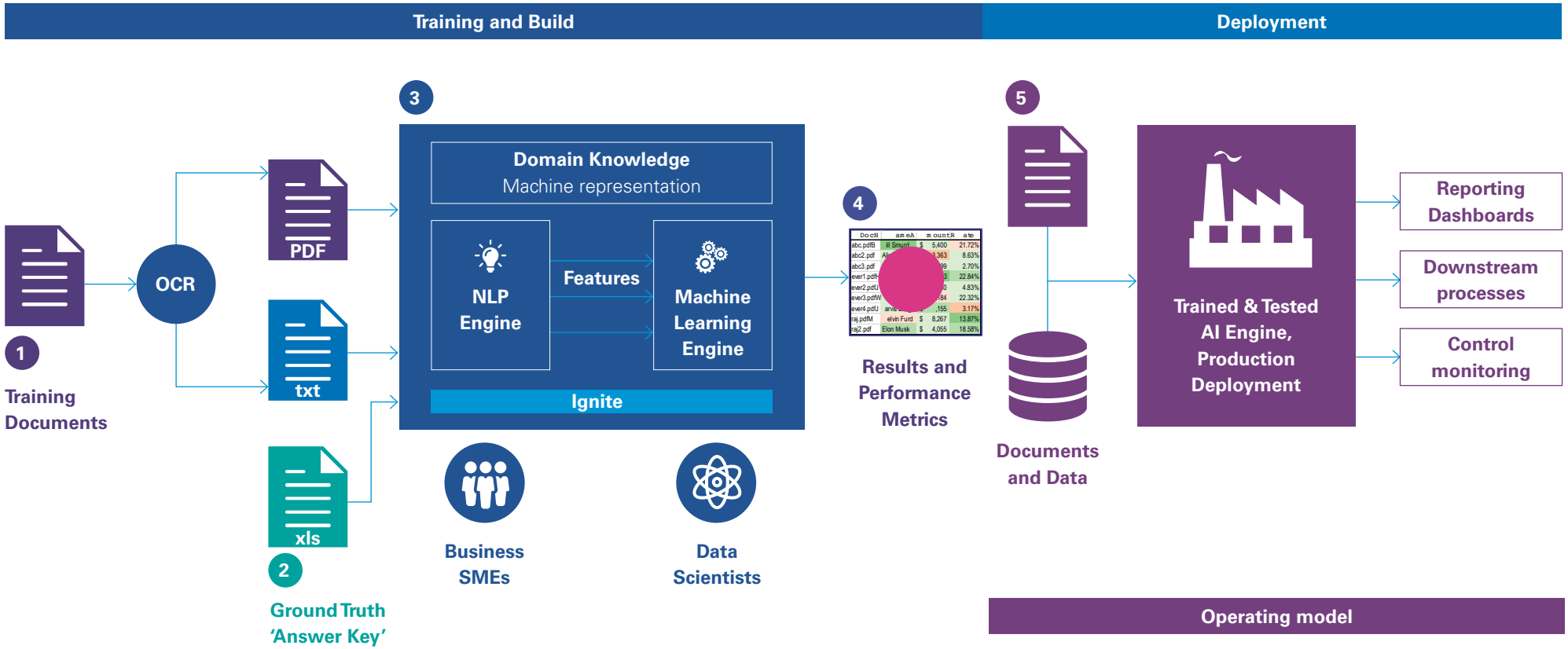
KPMG AI Solutions allow clients to:

- Adopt automated processing engine to read and assess contracts and agreements with LIBOR references and extract terms to a structured format
- Interpret reset, determination, and backup language to prioritize challenging and non-standard deals
- Identify floating rates tied to other indices, e.g. SOFR, OIS, EONIA, etc.
- Assess all documents with floating rate indices, including: derivatives confirms, commercial loans, repurchase agreements, retail loans, etc.
- Trace rate reset and determination mechanisms across related documents. For example ISDA master agreement + swap confirms + ISDA standard definitions, etc.
- Test and validate contract changes at scale

KPMG Services

Project structure and phases

After performing an initial scoping and estimation of business requirements, the Ignite solution will go through a training and custom build phase to ensure a successful delivery.



1

Training Documents

Client provides ~500* sample documents which would be scanned, extracted and processed into structured files (80% will be used for training and 20% used for testing).

2

Ground Truth 'Answer Key'

For each sample document type, client and KPMG work together to determine an "answer key" containing the correct determination for each desired item, piece of information, and interpretation.

3

Domain Knowledge

KPMG Data Science team along with business SME's trains Ignite NLP and ML engines in context of policy, rules, regulations and business objectives specific to use-case and measures accuracy.

4

Results and Performance Metrics

Review open questions, insights from sample set of documents, validate initial patterns and anomalies observed, verify reporting dashboard and visualizations meet business requirements.

5

Operating model

Deployment phase would depend on the operating model the client is most comfortable with.

NOTE: *If the documents are in segments (by business, purpose, etc.) a larger, more precisely-constructed sample will be needed

SECTION

05

Appendix

Appendix

Credit Products that reference Interest rate Benchmarks

Loans

- Commercial loans
- Syndicated loans
- Floating rate bank loans
- Term loan market
- Leveraged facilities
- Intercompany loans
- Agricultural loans
- Student loans
- Credit card loans
- Home equity loans
- FHLB advances

Structured products

- Asset backed securities (ABS)
- Mortgage backed securities (MBS)
- Commercial mortgage backed securities (CMBS)
- Collateralised loan obligations (CLOs)
- Collateralised mortgage obligations (CMOs)
- Hybrids and synthetics

Short term money markets

- Foreign office deposits
- Time deposits
- Checking accounts
- Money market deposit accounts
- Demand deposit products
- CDs
- Commercial paper
- Medium-term notes (MTNs)
- Securities lending

Appendix

Credit Products that reference Interest rate Benchmarks (cont.)

Bond and others

- Corporate bonds
- Auction rate securities
- Agency notes
- Exim bonds
- Affordable housing bonds
- Trust preferred securities
- Covered bonds
- Solvency II liabilities reference rate definition
- Subordinate debt
- Liquidity facilities
- Penalty rates
- Senior notes
- Capital leases
- Trade finance
- FA-backed notes
- Direct fund agreements
- Commercial leases
- Interest calculations on I/C
- Accounts of group companies
- Pricing and accounting of money
- Market, debt and derivatives
- Benchmarks for asset management mandates

Derivative Products that reference Interest rate Benchmarks

- Swaps
- Swaptions
- Options
- Forward rate agreements
- Swap futures
- Interest rate futures and options

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