BBVA Creating Opportunities

EU policy and regulatory challenges over the next decade

A view from the financial sector

Frankfurt, February 13th

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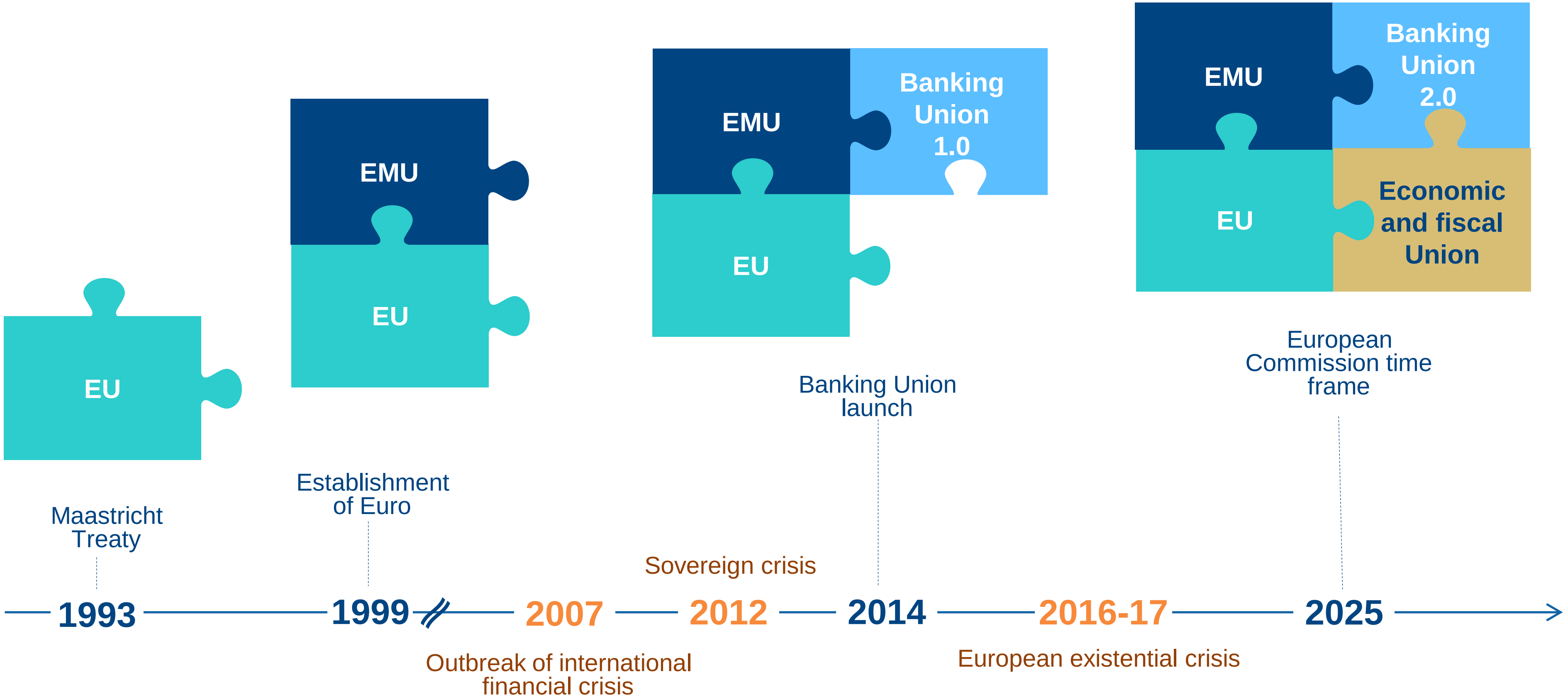
Executive Member of the Board
Head of Global Economics and Public Affairs, BBVA

Creating Opportunities

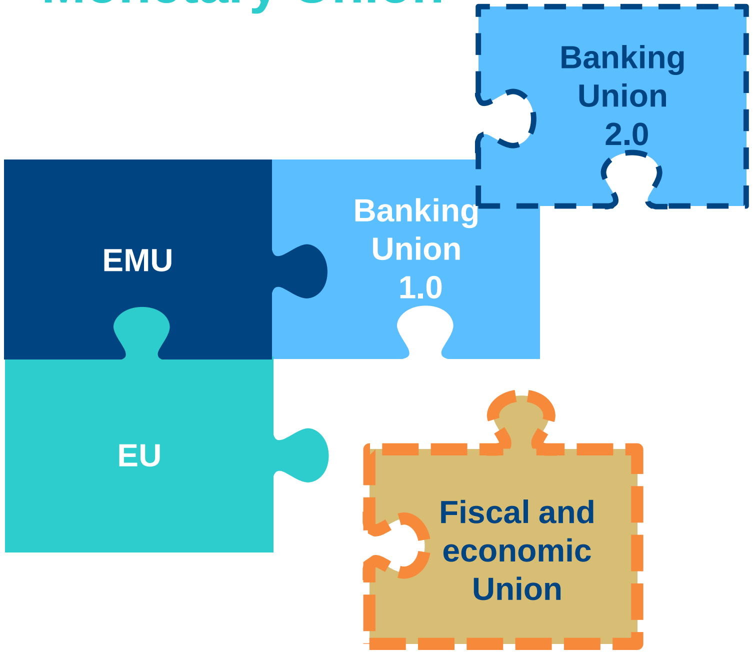
European challenge:

Fostering Banking Union and Capital Market Union will enhance the robustness of the EU financial sector and the European economy

The European architecture has evolved since Maastricht in the light of political momentum and crises



The solution is to move towards a genuine Economic and Monetary Union



- Complete the Banking Union
- Finalize the Capital Markets Union

- Move towards a Fiscal Union
- Achieve Economic Union
- Propel the single and common institutional framework in the EU

This approach requires a balance between ***risk sharing*** and ***risk reduction***

<u>Global challenges:</u>

Digital disruption and climate change will shape the world as we know it

Convergence of sectors in the 4th Industrial Revolution

4th Industrial Revolution

—

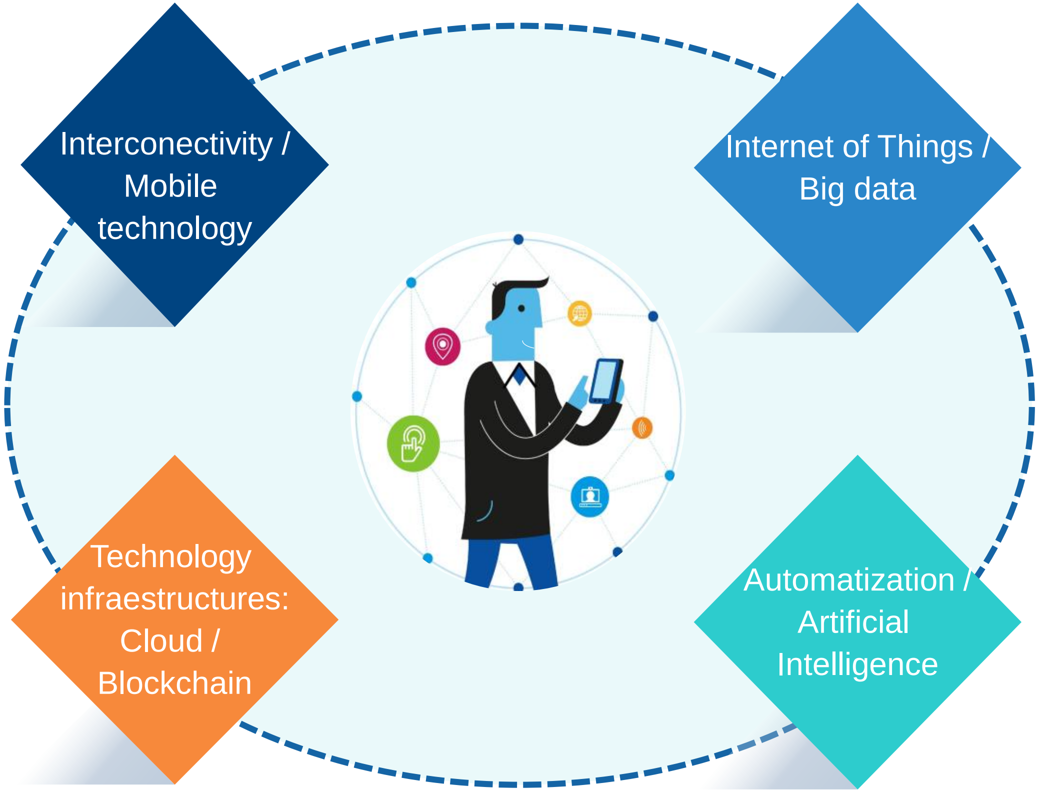
New Technologies

—

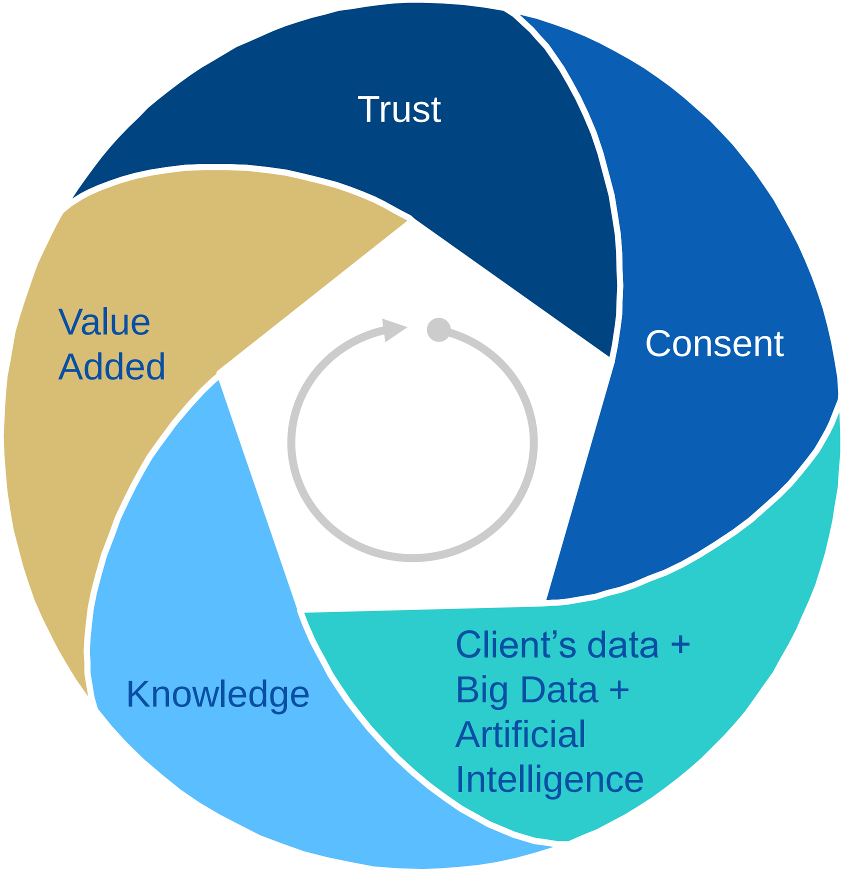
Shifting Customers and Needs

—

New business Models



Trust is the cornerstone of the digital economy



*“Without **trust** there is no data, without **data** there is no creation of value and without **creation of value** there are no **opportunities** for people”*

Determinants of the change and adapting to a new environment

Internal vision of the company

- Strategic vision
- Cultural change
- Technology development
- Finance capability

&

Role of the authorities

> *Regulators and supervisors can act as key **drivers** or **brakers** in the industry transformation*

The transformation of companies requires a **radical change** of entities, but also a **new approach** by the authorities

Benefits and challenges from the transformation of financial services entails a new regulatory response

Efficiency

+ Automation of processes
+ Disintermediation (blockchain)
+ Flexible & scalable IT infrastructure
+ Increased competition
+ Lower operational cost

Financial Stability

– New operational IT risks
– New providers subject to laxer controls
– volatility & procyclicality
+ New tools to manage risks (Regtech)

Consumer protection

– New security risks
– Risks from automated tools
– access to & use of data
– New providers with laxer rules
+ Control & traceability of customer interactions

Integrity

– Anonymity crypto currencies
– Greater speed of payments
+ New tools to monitor & analyse transactions (Regtech)
? Digital methods of identity verification

New regulatory framework is needed:

Importance of data

The importance of user data is rising. A new EU Regulation providing comprehensive user data sharing framework.

Properly address the risks and to ensure fair competition

Same regulatory treatment for activities involving similar risks and no unnecessary barriers to fair competition.

Global and cross-sectoral response

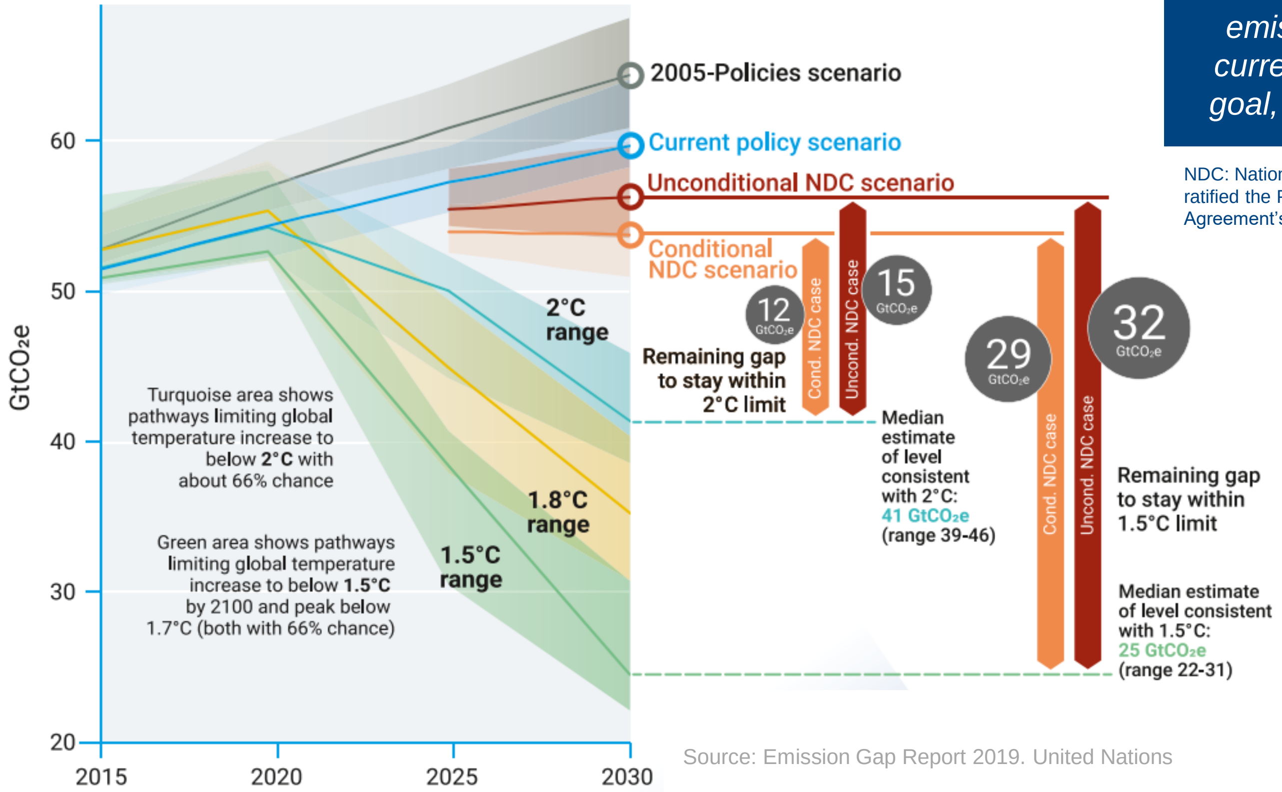
Digital technologies are blurring the boundaries that separate, not only countries, but also industries.

Climate change is one of the greatest **business disruption** humankind has ever faced

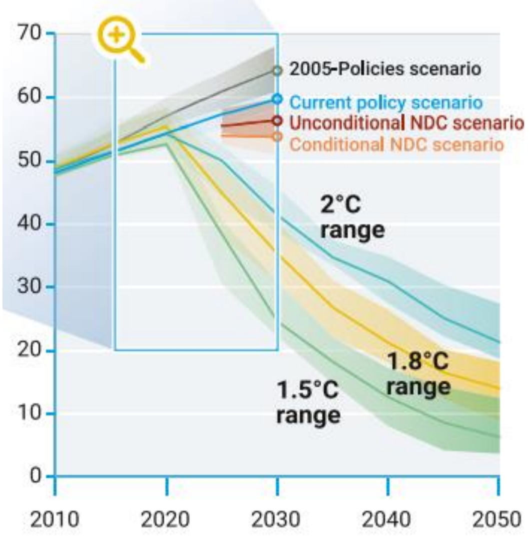
Global GHG emissions under different scenarios and the emissions gap by 2030

***The emissions gap is large**. In 2030, annual emissions need to be 15 GtCO2e lower tan current unconditional NDCs imply for the 2ºC goal, and 32 GtCO2e lower for the 1.5ºC goal*

NDC: Nationally Determined Contribution. Submissions by countries that have ratified the Paris Agreement which presents their national efforts to reach the Paris Agreement's long-term temperature goal of limiting warming to well below 2°C.



Source: Emission Gap Report 2019. United Nations



The world is increasingly concerned about climate change

Consumers

- WEF Global Shapers Community—WEF's younger community—ranks **environmental issues as the top risks**
- Spaniards are **willing to pay more** for greener products (*)

(*) "Los españoles ante el cambio climático". Real Instituto Elcano (Julio 2019)

Companies

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

Investors

- **€260bn** annual investment gap in Europe (*)
- The size of the **ESG bond market has reached $694 billion** (only 0.7 % of all bonds in circulation on a global scale)
- In 2019, **$250bn of bonds were issued** (47% growth over 2018)

(*): EU Green Deal - Dec'19 and BBVA

Public Institutions

SUSTAINABLE DEVELOPMENT GOALS

COP21 · CMP11
PARIS 2015
UN CLIMATE CHANGE CONFERENCE

NGFS
Central Banks and Supervisors Network for Greening the Financial System

Climate change entails significant risks

Physical Risks | **Transition risks**

Economic impacts

Reconstruction/ Replacement

Energy prices

Business disruption

Change value chain

Stranded assets

Migration

Transmission cannel to financial sector

Lower property and corporate value	Lower household wealth	Lower corporate profits	Lower growth and productivity
Market losses (equities, bond)	*Credit losses*	*Liability risks*	*Operational risks*

There are some recent examples of this happening already (although other reasons also at play in each example):

- **Repsol**: €5 Bn write-off on gas related assets in 2019. €240 Bn investments in 10 years to finance transition.
- **Endesa**: €1.3 Bn write-off on carbon related assets in 2019. €14 Bn on investments on renewables in the coming years.
- **Naturgy**: €4 Bn write-off on carbon related assets in 2018.
- **Pacific G&E**: Its bankruptcy could partially allocated to due to the impact of catastrophic wildfires that occurred in California.

Sustainability timeline

2019

Taxonomy

The creation of an effective and flexible taxonomy is a fundamental first step. The key to its success will be achieving the right balance in providing clarity and meaningful guidance to the market, while avoiding undue rigidity and prescriptiveness

Phase 1

Disclosure

Essential to provide a clearer picture to investors of climate related risks and opportunities facing companies

Phase 2

Stress test

Assessment of the resilience to the physical and transition risks associated with different posible climate scenarios

If needed

Capital requirement

Green factor vs Brown factor

Conclusions

BBVA
Creando Oportunidades

1. **Digital disruption and climate change** will shape the world as we know it

2. **Trust and cultural transformation** in organizations and workers are critical factors to benefit from the new digital area

3. Climate change entails significant risks, so **consumers, enterprises, investor and public institutions need to be getting ready**

EUROPEAN
DATAWAREHOUSE

EUROPEAN LENDING AT THE TURN OF THE DECADE

11 FEBRUARY 2020

A UNIQUE ORGANISATION

ED was created in 2012 as part of the implementation of the European Central Bank ABS Loan Level Initiative. ED became fully operational in January 2013 and is funded and owned by a mix of market participants. ED operates as a utility to respond to the need for improved transparency to investors and other market participants in ABS.

SUPERVISORY BOARD: Consists of currently 13 representatives and is responsible for the strategy and monitoring ED's operations as a market initiative.

PRICING COMMITTEE: Consists of currently 8 members from the ABS industry and is responsible for setting the fee structure for ED clients. The fees are set in line with ED's utility approach

SHAREHOLDER MEETING
17 SHAREHOLDERS

SUPERVISORY BOARD
13 MEMBERS

PRICING COMMITTEE
8 MEMBERS

CHAIRMAN
PROFESSOR JOSÉ MANUEL GONZÁLEZ-PÁRAMO

ED MANAGEMENT
CEO – CHRISTIAN THUN

17 SHAREHOLDERS

BBVA, "la Caixa", BNP PARIBAS, TRUE SALE INTERNATIONAL, UBI Banca (UNIONE DI BANCHE ITALIANE), UniCredit, SOCIETE GENERALE, INTESA SANPAOLO, MOODY'S, CRÉDIT AGRICOLE, CRÉDIT FONCIER, Sapient Global Markets, DBRS, Creditreform Rating Agentur, Santander, DSA, ICO Instituto de Crédito Oficial

KEY FIGURES

Basic statistics of European DataWarehouse database of Public deals by asset class

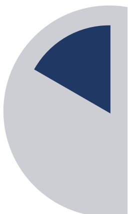
Asset Class	Active	Redeemed or Amortised[1]	Total	Number of loans[2]
RMB	406	313	719	15.67
AUT	101	141	242	15.22
SME	55	137	192	1.85
CMR	66	44	110	24.27
LES	16	31	47	0.60
CRE	10	2	12	17.69
CMB	0	5	5	12
TOTAL	**654**	**673**	**1327**	**75.31**

[1] Upload of loan level data has discontinued, typically due to bond redemptions
[2] based on only the latest LLD submissions (numbers in Millions)
[3] based on only the latest LLD submissions (numbers in Millions)
[4] Number of loan sponsors in whole numbers

EUROPEAN LENDING AT THE TURN OF THE DECADE

STATE OF THE EUROPEAN BANKING INDUSTRY VS. ITS PEERS

Europe



- Many banks is still rationalising their business
- ROC at 10.21%
- Market fragmentation limits profitability
- Oversaturation in key economies
- Zero/negative interest environment did not contribute to profits

US

- US banking industry remains strong
- ROC at 18%
- Tax cuts and higher Fed rates contributed profits
- Consumer borrowing exceeded pre-crisis levels

Asia

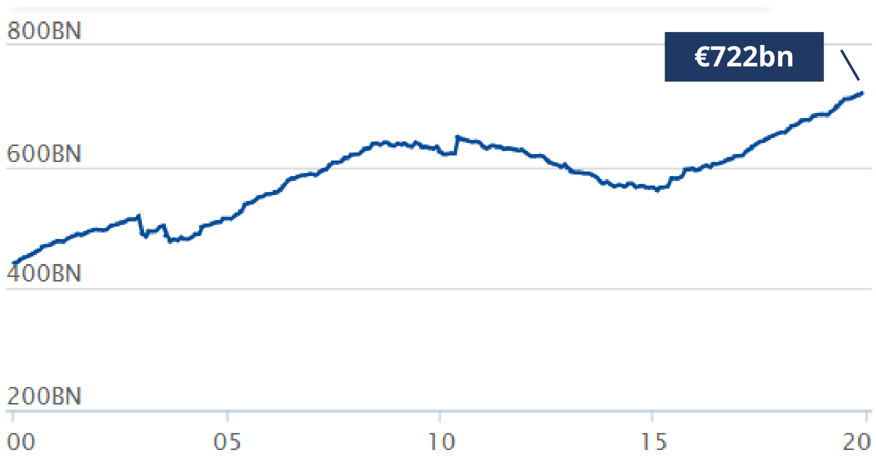
- Chinese banks continue to get bigger
- ROC at 14.4%
- US/China trade dispute slowed asset growth
- Japanese banks suffer from low growth and aging population
- ROC at 5.8%

Source: Deloitte - 2020 banking and capital markets outlook

CONSUMER LOANS TO HOUSEHOLDS IN EUROPE

Stocks and growth rates from 2000 until 2019

Stocks of loans to households



Growth rates of loans to households

Source: Euro Area Statistics, Banks balance sheets - Loans

CONSUMER LENDING – CHALLENGES & OUTLOOK

Today's challenges

- High cost of short-term consumer credit
- Credit granting through mobile applications
- Poor creditworthiness assessment
- Over-indebtedness and arrears situations
- Customers accept dismal user experience as the norm
- Legacy IT system present a huge impediment to transformation

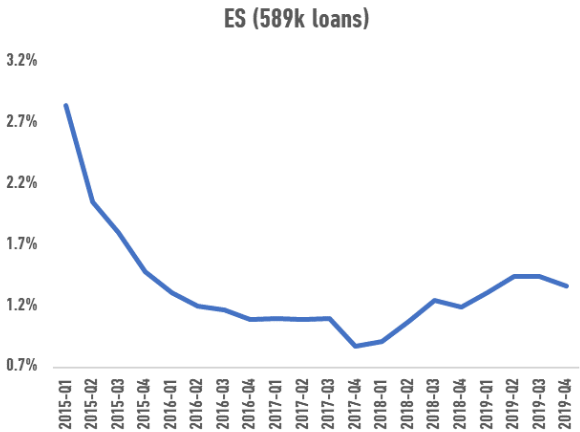
Outlook 2020 and beyond

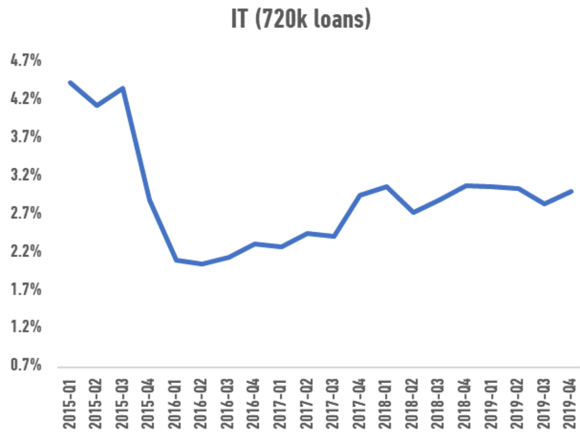
- Consumer lending market in Europe is expected continue to grow
- The high levels of indebtedness pose a problem in a downturn
- Policymakers aiming at financial stability could tighten the limits in household indebtedness
- Technology, analytics, data and efficiency will decide about the success
- Big technology companies and large merchants will challenge incumbent market players
- Incumbents need to build a digital offering and leverage their low-cost funding

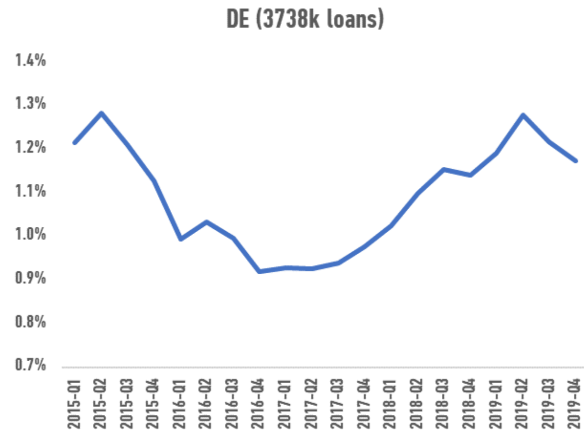
Sources: EBA Consumer Trends Report 2018/19 (Feb 2019); Deloitte, The Future of Credit | A European perspective (Apr 2019); PwC | European Economic Outlook 2020

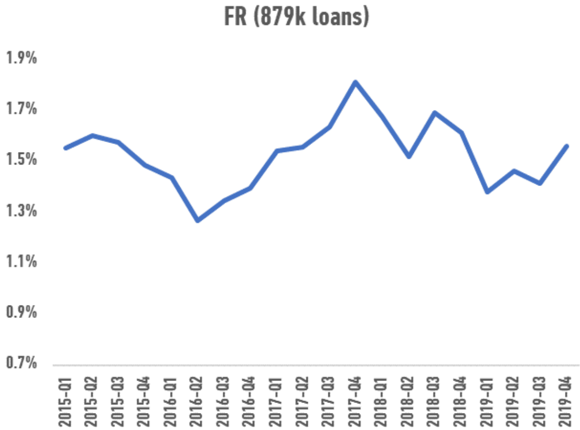
AUTO LOANS

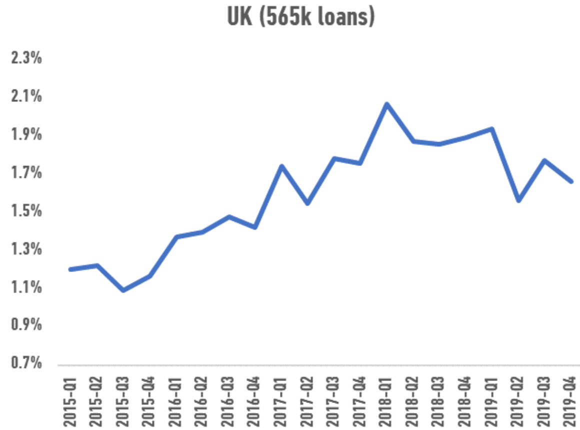
Percentage of Active loans that are either in Arrears or Default











Source: European DataWarehouse

AUTO LOANS - GERMANY

Percentage of Active loans that are either in Arrears or Default by Federal State

	2015-Q1	2015-Q2	2015-Q3	2015-Q4	2016-Q1	2016-Q2	2016-Q3	2016-Q4	2017-Q1	2017-Q2	2017-Q3	2017-Q4	2018-Q1	2018-Q2	2018-Q3	2018-Q4	2019-Q1	2019-Q2	2019-Q3	2019-Q4
Baden-Württemberg	1.22%	1.32%	1.21%	1.13%	1.02%	1.03%	1.04%	0.98%	0.95%	0.97%	0.95%	1.08%	1.04%	1.17%	1.20%	1.25%	1.20%	1.29%	1.20%	1.24%
Bavaria	1.36%	1.46%	1.23%	1.12%	0.96%	1.08%	1.00%	0.98%	0.97%	0.94%	0.95%	1.02%	1.03%	1.16%	1.14%	1.19%	1.20%	1.32%	1.16%	1.22%
Berlin	1.66%	1.95%	1.64%	1.54%	1.38%	1.45%	1.49%	1.39%	1.40%	1.35%	1.35%	1.49%	1.46%	1.53%	1.57%	1.74%	1.61%	1.80%	1.63%	1.77%
Brandenburg	0.75%	0.90%	0.82%	0.76%	0.68%	0.69%	0.70%	0.78%	0.74%	0.71%	0.71%	0.72%	0.78%	0.85%	0.89%	0.92%	0.87%	0.95%	0.87%	0.96%
Bremen	1.05%	1.22%	1.07%	0.87%	0.86%	0.91%	0.92%	1.01%	1.00%	0.78%	0.92%	0.95%	0.93%	1.18%	1.12%	1.22%	1.12%	1.19%	1.56%	1.37%
Hamburg	1.58%	1.57%	1.64%	1.43%	1.14%	1.24%	1.22%	1.06%	1.23%	1.14%	1.05%	1.21%	1.19%	1.37%	1.37%	1.50%	1.41%	1.51%	1.52%	1.53%
Hesse	1.25%	1.47%	1.14%	1.07%	1.03%	1.02%	1.02%	0.98%	0.95%	0.95%	0.95%	1.04%	1.05%	1.13%	1.14%	1.23%	1.25%	1.37%	1.26%	1.31%
Mecklenburg-Vorpommern	0.91%	0.99%	0.90%	0.87%	0.84%	0.86%	0.79%	0.84%	0.80%	0.79%	0.77%	0.77%	0.82%	0.89%	0.91%	1.00%	0.96%	0.97%	0.94%	0.99%
Lower Saxony	1.19%	1.25%	1.05%	1.02%	0.89%	0.96%	0.97%	0.98%	0.97%	0.96%	0.90%	1.05%	1.02%	1.06%	1.07%	1.17%	1.06%	1.12%	1.06%	1.18%
North Rhine-Westphalia	1.21%	1.31%	1.19%	1.14%	0.99%	1.04%	1.08%	1.04%	1.00%	0.98%	0.95%	1.07%	1.05%	1.16%	1.12%	1.21%	1.14%	1.20%	1.13%	1.23%
Rhineland-Palatinate	1.13%	1.28%	1.18%	1.12%	1.10%	1.08%	1.10%	1.09%	1.01%	1.01%	0.99%	1.05%	1.06%	1.20%	1.20%	1.22%	1.22%	1.30%	1.17%	1.20%
Saarland	1.16%	1.31%	1.23%	1.03%	1.00%	1.06%	1.08%	1.03%	0.93%	1.03%	1.05%	1.10%	1.05%	1.10%	1.23%	1.21%	1.14%	1.30%	1.16%	1.23%
Saxony	0.77%	0.92%	0.80%	0.73%	0.71%	0.76%	0.72%	0.73%	0.65%	0.64%	0.65%	0.72%	0.68%	0.73%	0.76%	0.81%	0.76%	0.79%	0.80%	0.79%
Saxony-Anhalt	0.82%	0.92%	0.85%	0.84%	0.77%	0.78%	0.75%	0.74%	0.72%	0.72%	0.73%	0.78%	0.76%	0.84%	0.88%	0.91%	0.91%	0.95%	0.90%	0.92%
Schleswig-Holstein	1.16%	1.22%	1.04%	0.94%	0.92%	0.96%	0.90%	0.97%	0.87%	0.89%	0.87%	0.96%	0.93%	1.10%	1.03%	1.11%	1.08%	1.18%	1.09%	1.14%
Thuringia	0.82%	0.98%	0.83%	0.76%	0.68%	0.76%	0.73%	0.73%	0.65%	0.65%	0.71%	0.72%	0.72%	0.77%	0.78%	0.82%	0.80%	0.81%	0.77%	0.83%

Source: European DataWarehouse

CONSUMER LOANS

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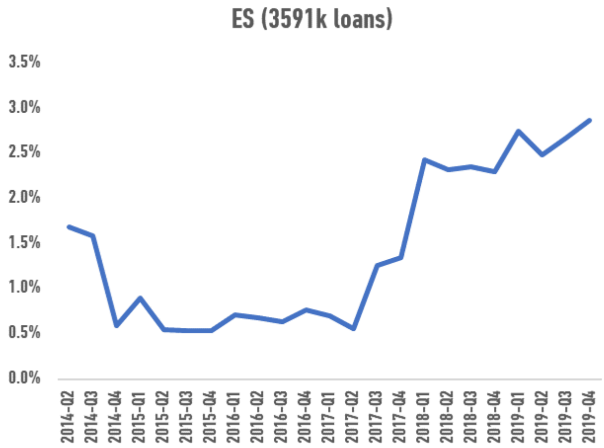
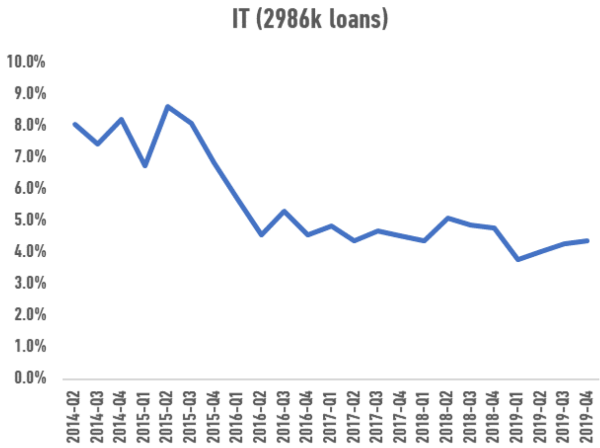
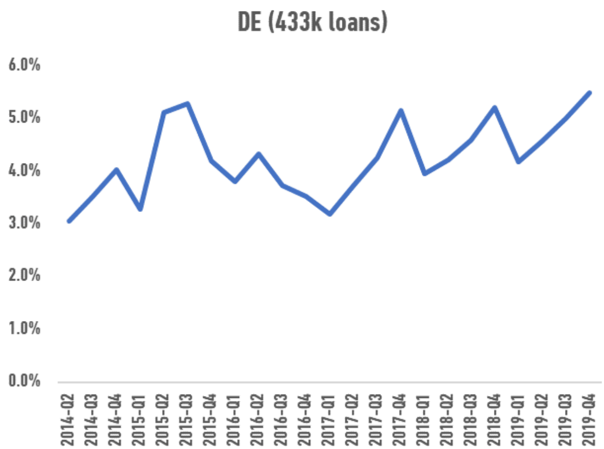
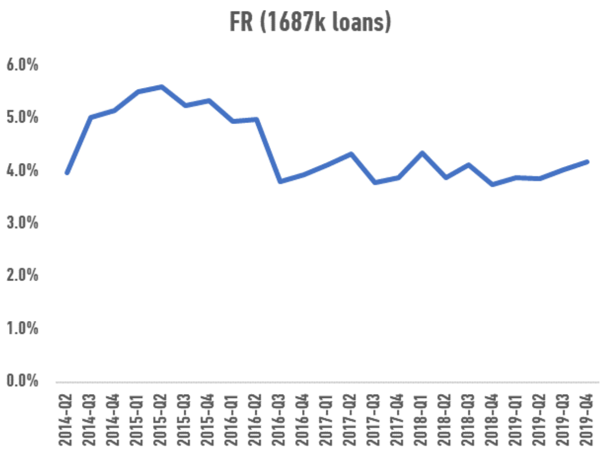






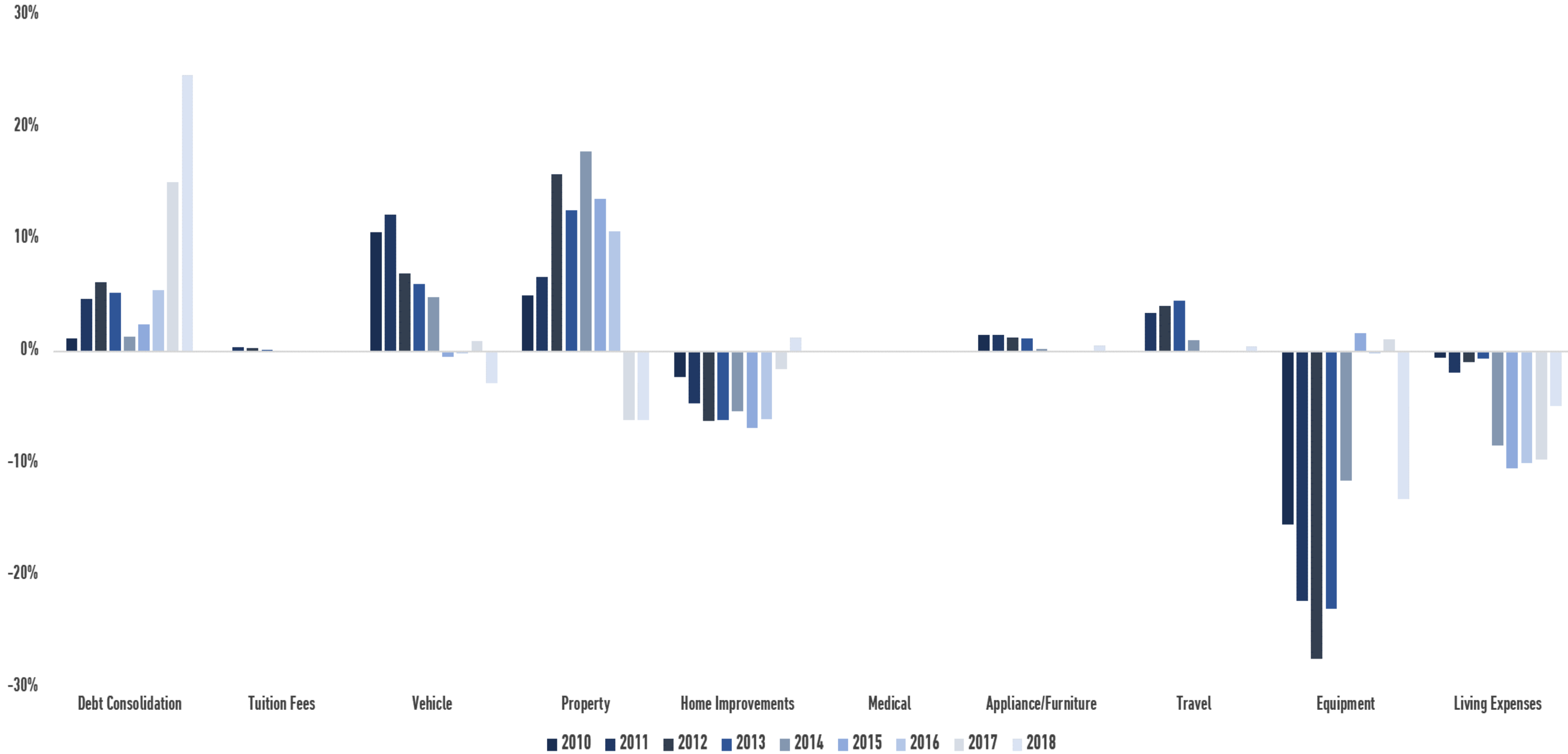


Source: European DataWarehouse

CONSUMER LOANS

The difference in the composition of loans by their purpose in the last decade (2010-19) compared to the average in the decade before (2000-09)

FRANCE



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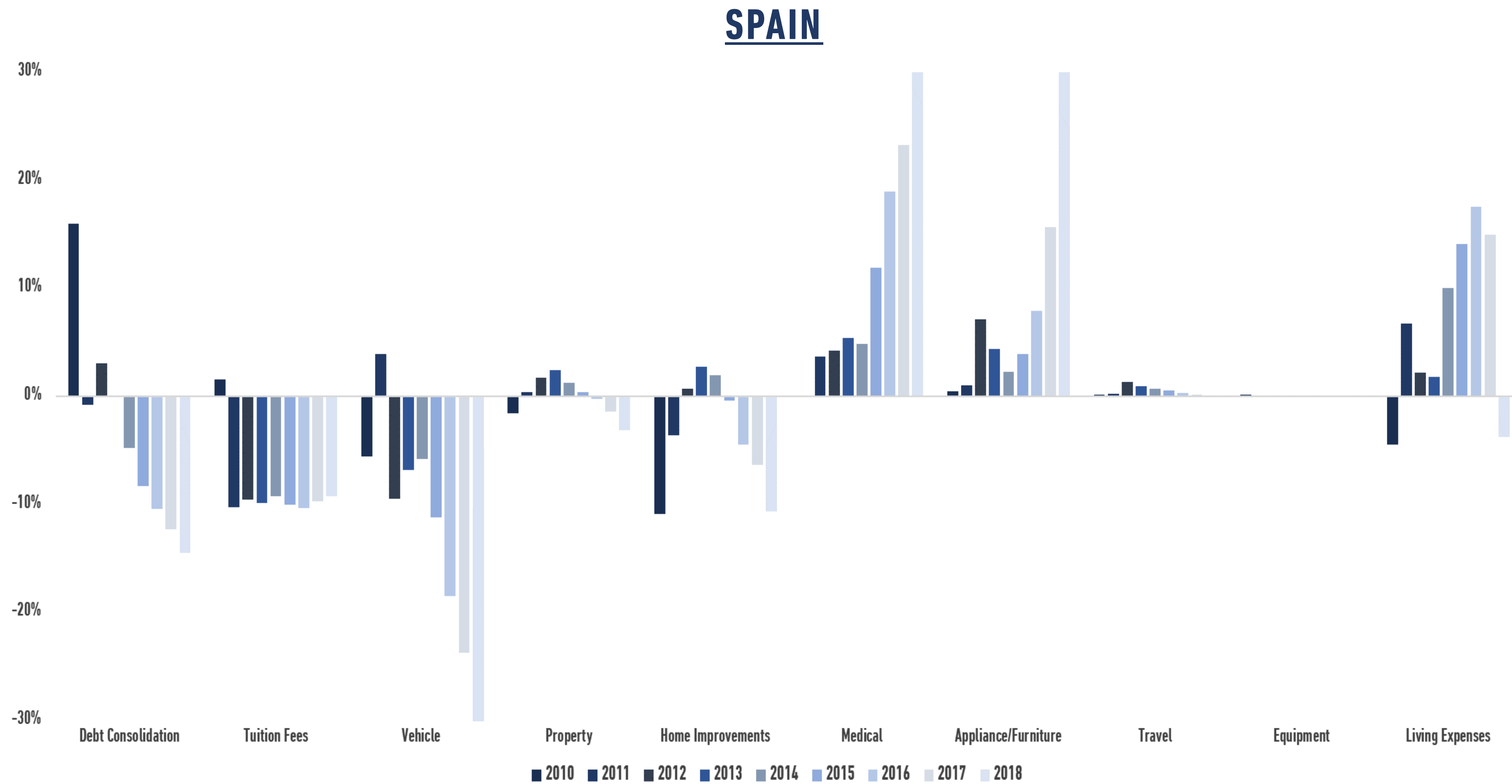

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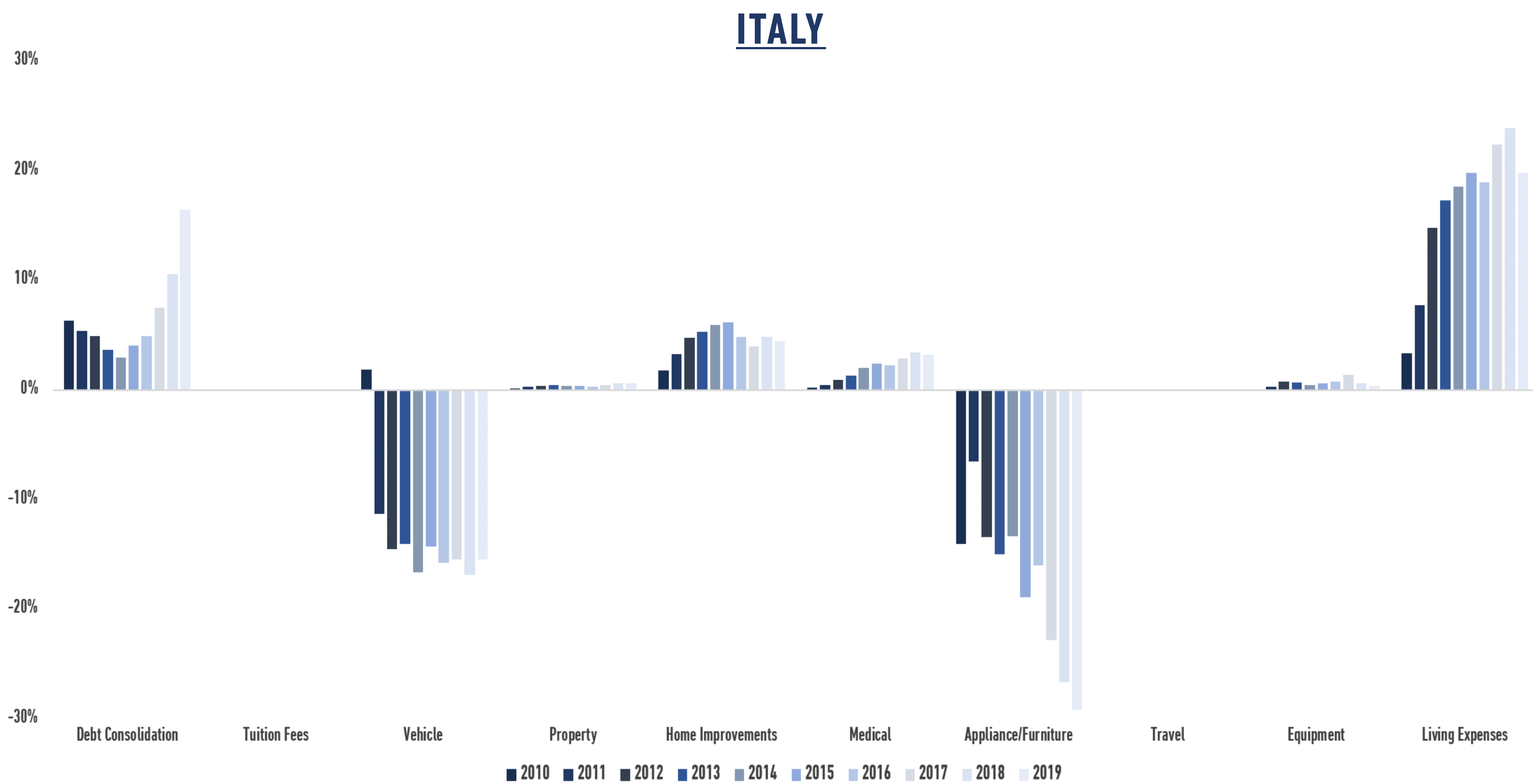

Source: European DataWarehouse

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Lunch & Learn

An overview of key trends and the EU regulatory outlook for 2020

Michael Huertas
Dentons Frankfurt, February 11, 2020

Banking Union - what risks are on the horizon ahead?

ECB-SSM's risk prognosis for the Banking Union

The ECB-SSM identifies the key drivers of risk affecting BUSIs and the Eurozone banking system between 2020 and 2023 as (in no specific ranking):

- **Economic, political and debt sustainability challenges in the Eurozone** – Which the ECB-SSM concludes that these have increased since its 2019 outlook
- **Business model sustainability** – Specifically prolonged low interest rates, increased intense competition and rising expenses – with half of BUSIs generating a return on equity which is below the estimated cost of equity)
- **Cybercrime and IT deficiencies** – Which the ECB-SSM also highlights in the context of growing interconnectedness with non-regulated third-/fourth-party providers of services opening the door to operational resilience

These key drivers of risks are followed by (in no specific ranking):

- **Execution risks** – Attached to bank strategies for non-performing loans/exposures
- **Easing lending standards** – Which the ECB-SSM warns could lead to a renewed build-up of NPLs that have been reduced through Banking Union driven rules and principles being copied and expanded into EU-wide requirements
- **Repricing in financial markets** – Given heightened volatility and possible asset price bubbles
- **Misconduct, money laundering and terrorist financing** – An area that the ECB-SSM has begun to consider in its SSM-run SREP
- **Brexit** – With the EU-UK transition period set to last to at least December 31, 2020 this puts pressure on the SPoRs and firms compliance with these issues

Banking Union - what lies ahead?

Key ECB-SSM Supervisory Priorities besides making Single Rulebook more single

1. Continuing balance sheet repair

- **Follow up on NPL Guidance and Addendum with individual BUSIs** – but note that the EU Commission's approach to rolling out the ECB-SSM's rules to the whole of the EU will also be of importance
- **Follow-up on internal ratings-based models** – building on the ECB-SSM's Targeted Review of Internal Models (TRIM) exercise
- **Trading risk and asset valuations** – including onsite missions focusing on trading and market risk aspects notably with respect to complex products marked at fair value – Supervisors are expected to step-up the use of on-site inspections, possibly with a preceding "deep dive" to focus the onsite mission

2. Strengthening future resilience

- **Credit underwriting criteria and exposure quality** (e.g. real estate, leveraged finance)
- **Improvement of BUSI's ICAAP and ILAAP approaches** and further integration into SREP
- **Business model sustainability** – including:
  - ECB-SSM concerns on business model sustainability are primarily attributable to the risk drivers of low interest rates, higher costs and the threat of digitization, as well as NPLs. This means that firms will want to consider how to document contingency planning, optimization scenarios and testing of resilience of financing lines, given that the SSM's views on business models directly affect BUSI's SREP scores
  - As part of on-going supervisory dialogue and on-site inspections, senior management and key business area leads ought to be prepared to answer more intrusive questions on actual versus projected business model sustainability, including digitization and new entrants, as well as more general strategic steering by BUSIs

DENTONS

Banking Union – what else lies ahead?

2. Strengthening future resilience

- **Assess IT and cyber-risk** – Prepare for on-site work on IT risks and step up internal training and awareness, including "ownership" at governance level (through a non-executive director) as well as executive level through improved outcomes that Chief Information Security Officers are required to meet
- **EU-wide (biennial) and/or ECB stress test exercises** – But note proposed changes on methodology
- **Governance and "strategic steering"** – Review and focus on strengths and shortcomings of BUSI's governance frameworks, from the operation of the board and executive functions to internal control functions (across each of three lines of defense) and data quality, as well as the ECB-SSM's focus on what is being termed "non- financial risk" management and operational resilience. Historically, conduct of business issues were outside the primary prudential mandate of the SSM, but due to "governance" being a CRR and thus, in turn, a SSM consideration, they have become areas the ECB is increasingly focusing on

3. Activities comprising "other" priorities

- **Follow-up on Brexit work** – While this has been a priority area since 2017 there are activities planned for 2020 and likely beyond through 2021, which include: Monitoring and implementation of a BUSIs "Brexit planning" and compliance with the SPoRs
- **IFRS 9** – While this has been an area that has not been carried over as a formal priority during 2020, it does:
  - mark a thematic area that carries over in the ECB-SSM's work and therefore merits consideration
  - mean that the ECB-SSM is expected to take a further interest in benchmarking BUSI's impairment charges against peers and in assessing whether individual firms are looking to game their results to keep their credit costs and risks comparable with peers
  - merit BUSIs assessing whether their justifications for specific IFRS 9 calculations and assumptions are sufficiently robust and explainable.
- **Climate change** – should be read in conjunction with ECB's Strategic Review
- **Benchmarks Regulation and IBOR transition**

How the ECB (-SSM) makes its rules

- ECB-SSM and Central Banks plus NCA in SSM are still building a common culture
- ECB-SSM rulemaking via:
  - soft law – “Guidelines” qua Rulebooks
  - roll out of rules from direct ECB-SSM supervised BUSIs to indirect supervised entities
  - mirroring of rules to non-BUSIs
  - “conduct creep” of prudential supervision based on policy grounds
- Move from home versus host state to “on-shore” v “off-shore” capabilities
- Focus on supervisory convergence/elimination of national options and discretions
- Greater use of on-site inspections and thematic reviews + together with greater coordination with other EU authorities but also national competent authorities that are more coordinated and comfortable in powers being used
- Greater pressure on BUSIs’ remediation efforts as whole new flock set to joint ca. 120 direct ECB-supervised firms and 5,000+ firms that are indirectly ECB supervised

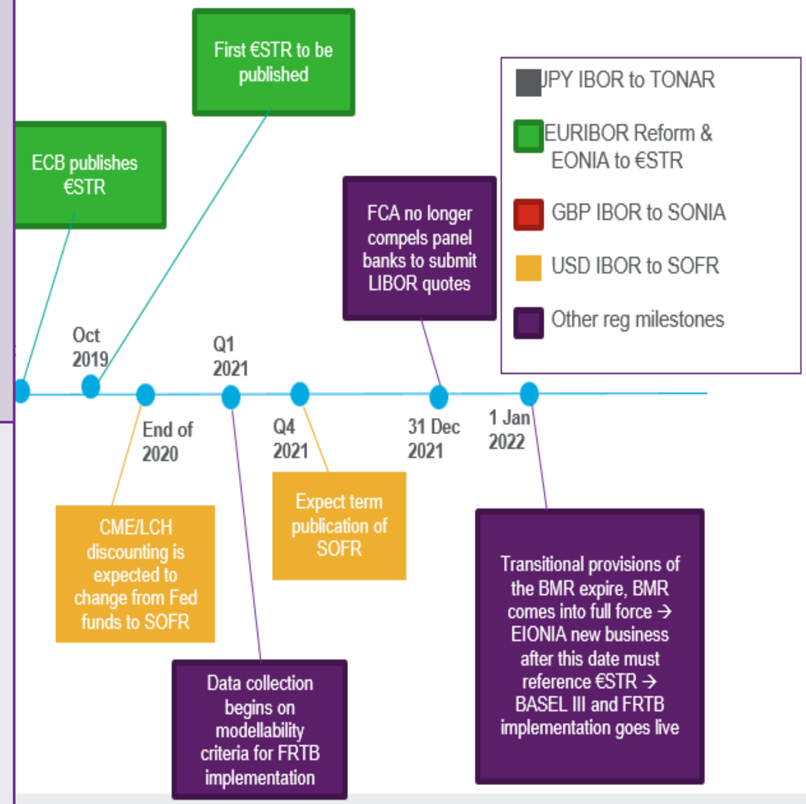
EU Benchmarks Regulation

- Regulation on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds ((EU) 2016/1011). In force since June 30, 2016
- Majority of provisions have applied from January 1, 2018 (i.e. contingency planning)
- Transitional provisions apply until latest 2022 regardless of whether administrators are located in the EU or a “third-country”
- Since January 1, 2018, a supervised entity may only make use of a benchmark within the EU if the reference value or the administrator of that specific benchmark is entered in an ESMA register pursuant to Article 36 of the BMR, subject to transition period relief
- Subject to transitional arrangements, third country benchmarks (that is, benchmarks provided by administrators located outside of the EEA) can only be used in the EEA if they qualify under the BMR third-country regime
- There are three ways in which a third country benchmark may qualify for use in the EEA: equivalence, recognition or endorsement
- Race to move to replacement rates as well as risk free rates (RFRs) started in earnest. €STR launched on October 2, 2019
- Questions remain on term-structures and how to model these

EU Benchmarks Regulation – who needs to comply with what and what next on timeline?

	Benchmark Administrators	Benchmark Contributors	Benchmark Users
Who is caught? It does not apply to central banks, public authorities providing benchmarks for public policy purposes nor media persons for “journalistic” purposes nor “innocent bystanders”	A natural or legal person with control over the administration of the benchmark. Which includes: • Administrating arrangements for determining a benchmark • Collecting, analyzing or processing input data for the purposes of determining a benchmark • Determining a benchmark through the application of a formula or other method of calculation, or by an assessment of input data to that benchmark	A natural or legal person contributing input data which is: • is not readily available to the administrator • required in connection with the determination of a benchmark and is provided for that purpose	A natural or legal person who: • issues financial instruments which reference a benchmark • is party to a contract which references a benchmark • determines the amount payable under a financial instrument or financial contract by referencing the benchmark • measures the performance of an investment fund through the use of an index

Requirements?	• Authorization or (less onerous) registration (preferential for regulated entities) for BMR purposes plus complying with governance arrangements and controls on benchmark integrity – degree depends on type of benchmark provided
	• Proportionate controls in light of classification of benchmark
	• Governance and control - i.e. BMR compliant policies/procedures
	• BMR compliant outsourcing / licensing arrangements
	• Observance of BMR methodology and transparency obligations;
		• Follow administrator’s code of conduct (in compliance with BMR);
		• Supervised Contributors are required to:
		  • prevent conflicts of interest
		  • co-operate in auditing and supervision of benchmarks
		  • maintain records and make these available
			• May only use authorized benchmarks
			• Is required to produce robust action plans if a benchmark materially changes or ceases to be produced (to be reflected in contractual documents) – this requires fallbacks



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EU Benchmarks Regulation – size (volume) and location matter

Critical	Significant	Non-significant	Third-country
EUR 500 billion in volume of financial contracts referenced; or Supervisors' discretion	• EUR 50 billion to 500 billion in volume of financial contracts referenced; or • Low impact or few substitutes.	Less than EUR 50 billion	Can be: 1. Equivalent; 2. Recognized; or 3. Endorsed.
Mandatory contribution from Administrators Set procedure for cessation of benchmark	Proportionate application of BMR's rules in the form of limited exemptions for requirements relating to: • governance and conflicts of interest systems and controls; • compliance oversight of input data and controls; • shorter-form of BMR-compliant "code of conduct". In order to avail of these reliefs the BMR relevant administrator must adopt comply or explain approach. Regulator may overturn administrator's decision.	Further proportionate relief and exemptions for: • governance and conflicts of interest systems and controls; • compliance oversight and systems and control frameworks; • accountability framework; • input data controls; • transparency of benchmark methodology; • reporting of BMR infringements; • simplified code of conduct; and • less(er)-stringent controls for contributors. Explanation as to why each requirement is inappropriate to be included in compliance statement. May be appropriate forum for proprietary indices (WARNING: not available for interest or commodity indices).	**Equivalent** • Only applicable when the Commission has made a positive equivalence decision in respect of the relevant third country (taking into account whether the legal framework ensures compliance with the IOSCO principles) and an MoU is in place between ESMA and third-country authority • The third country administrator must be authorized or registered, and subject to supervision, in the third country • The administrator must have notified ESMA of the identify of its regulator and the administrator's consent to the use of its benchmarks in the EEA **Recognized – mostly when equivalence decision is pending** • Recognition provided by the regulator in the administrator's Member State of reference (**MSoR**) and maintaining legal representative in MSoR • Regulator must confirm the administrator's compliance with standards equivalent to the Regulation, taking into account compliance with the IOSCO principles – subject to audit/certification **Endorsed** A third country benchmark can be endorsed by an EEA regulator at the request of an EEA administrator who is authorized or registered under BMR and has verified compliance and can monitor compliance and has regulatory ownership /BMR compliance responsibility

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EU Benchmarks Regulation - Key factors to be aware of in each IBOR and risk-free reference rate

Jurisdiction	Benchmark IR	Admin	Reformed IBOR include waterfall approach?	Alternative RFR	Alternative RFR Administrator	Transaction based?	Overnight rate?	Secured/ Unsecured	Underlying Transactions	Rates published
Japan	JBA TIBOR EUROYEN TIBOR	JBA TIBOR Administration	Yes	TONA	Bank of Japan	Yes	Yes	Unsecured	Money Markets	July 1985
	JPY LIBOR	ICE Benchmark Administration (IBA)	Yes			Yes				
EU	EONIA/EURIBOR	European Money Markets Institute (EMMI)	Yes	Euro short-term rate (€STR) Reformed EURIBOR	European Central Bank (ECB)	Yes Partly	Yes (€STR)	Unsecured	Money Markets	October 2019 (€STR)
UK	GBP LIBOR	ICA Benchmark Administration (IBA)	Yes	Reformed sterling overnight index average (SONIA)	ICE Benchmark Administration (IBA)	Yes	Yes	Unsecured	Money Markets	23 April 2018
US	USD LIBOR	ICE Benchmark Administration (IBA)	Yes	Secured overnight financing rate (SOFR)	Federal Reserve Bank of New York (FRBNY)	Yes	Yes	Secured	Repo Transactions	3 April 2018
Switzerland	CHF LIBOR	ICE Benchmark Administration (IBA)	Yes	Swiss average rate overnight (SARON)	Swiss National Bank (SNB) and SIX Swiss Exchange	Yes	Yes	Secured	Repo Transactions	25 August 2009

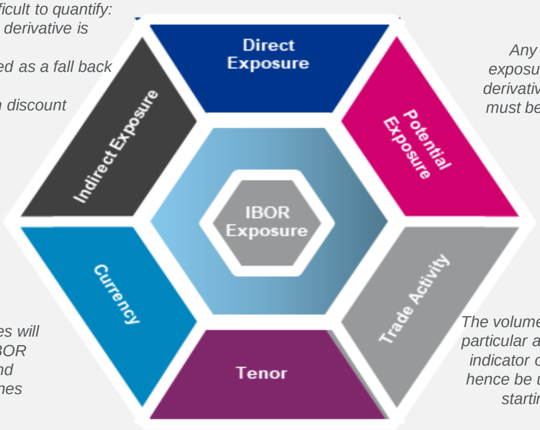
EU Benchmarks Regulation – Taking inventory

Product	Key Examples	Identifying Linked Exposures	Measures
Derivatives	• Interest rate swaps • Cross Currency swaps • Commodity swap • Credit default swap • Interest rate futures • Interest rate options	• **Direct vs. Indirect Exposure –** *IBOR can be directly or indirectly referenced (the latter is more difficult to quantify)* • **Linear vs. Non-Linear –** Derivatives can have a linear and non-linear payoff. A non-linear derivative will have a payoff that changes with time and may have additional sensitives to IBOR (such as deep in and out of the money positions) • **Exchange traded vs. OTC** – *there would be differences owing to Price Alignment Interest and OIS discounting*	• Notional • MTM • DVO1 • Additional Greeks for Options
Cash	• **Bonds** – *Corporate, Floating Rate Notes, Covered bonds, Perps, Agency notes, Leases, Trade Finance* • **Loans –** *Syndicated, Securitised, Business Loans, Real Estate Mortgages* • **Securitised products** – *Collateralised bond obligation, Collateralised loan obligation, Mortgage backed security* • **Short term products** – *CPs, Money markets, Repos and Reverse repos* • **Retail** – *Loans, Mortgages, Pensions, Credit cards, Overdraft and late payments*	• **Trading vs. banking books** - *Cash products booked in the trading book are regularly traded while those booked in the banking book are expected to be held to maturity*	• Notional • Committed undrawn amount • MTM • DVO1

Once product inventory has been identified it is important to accurately measure the impact across products on an ongoing basis

A complete assessment of the current exposure to IBOR must be undertaken across products

Where IBOR is indirectly referenced, it becomes more difficult to quantify:
- *Underlying of a derivative is linked to IBOR*
- *IBOR is specified as a fall back rate*
- *IBOR is used in discount curves*



Any indirect exposure through derivative positions must be quantified too

Different currencies will have different IBOR alternatives and transition timelines

The volume of trades in a particular area is a useful indicator of activity and hence be used potential starting points

It is important to understand how far current IBOR exposures extend too – particularly those that extend past the 2021 deadline and will need to be repapered

EU Benchmarks Regulation – mapping impact

Investment Bank – Capabilities

Primary Impacts

Front Office

Sales & Trading

- Trading Mandates
- Current Positions
- CVA / FVA / XVA Calculations
- Hedging Strategies
- Curve Management

Legal

Documentation

- Contract Review
- Fallback & Restrike Language
- Industry Template Language

Middle Office

Credit Risk

- Exposure Models (PFE & CE)
- Margin Models (IM & VM)
- Counterparty Credit Risk Models

Market Risk

- Risk factor / time series
- VaR Models
- Stress Test and Sensitivity Models

Treasury

- Hedging Strategy
- FTP Methodology
- Unsecured Funding
- Secured Funding
- Asset & Liability Management

Secondary Impacts

Back Office

Operations

- Data Management
- Collateral Management
- Trade Processing & Confirmation
- Settlements
- Asset Servicing
- Reconciliations

Finance & Tax

- Balance Sheet Valuation
- Reval. of Assets & Liabilities
- Tax Reporting
- Internal Price Verification
- Hedge Accounting
- PnL Calculation

Other Bus. Areas

Corporate Banking

- Structured Finance
- Loans
- Treasury services
- Derivatives
- Underwriting

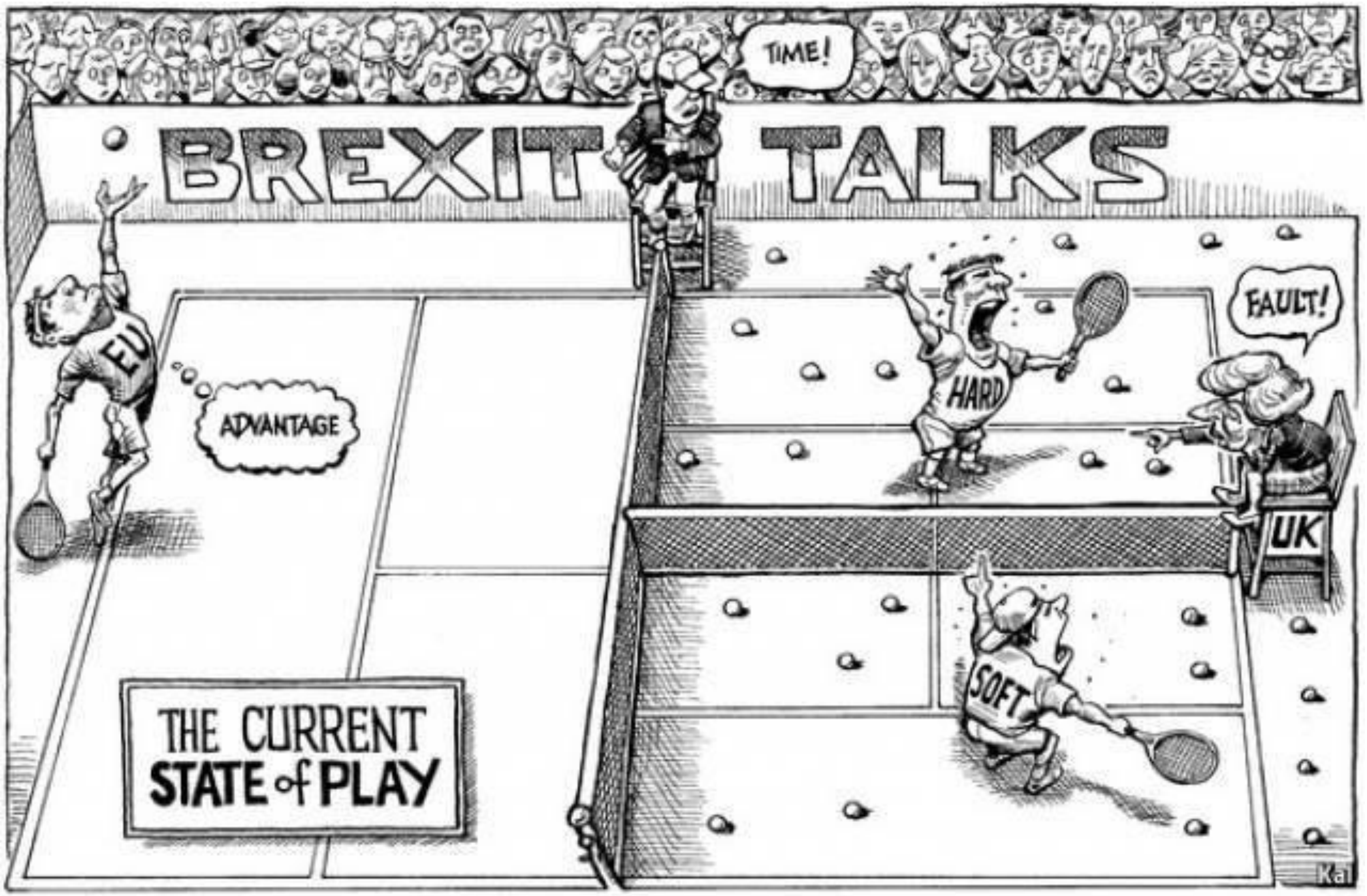
Asset Management

- Funds
- ETFs
- Derivatives

Retail Banking

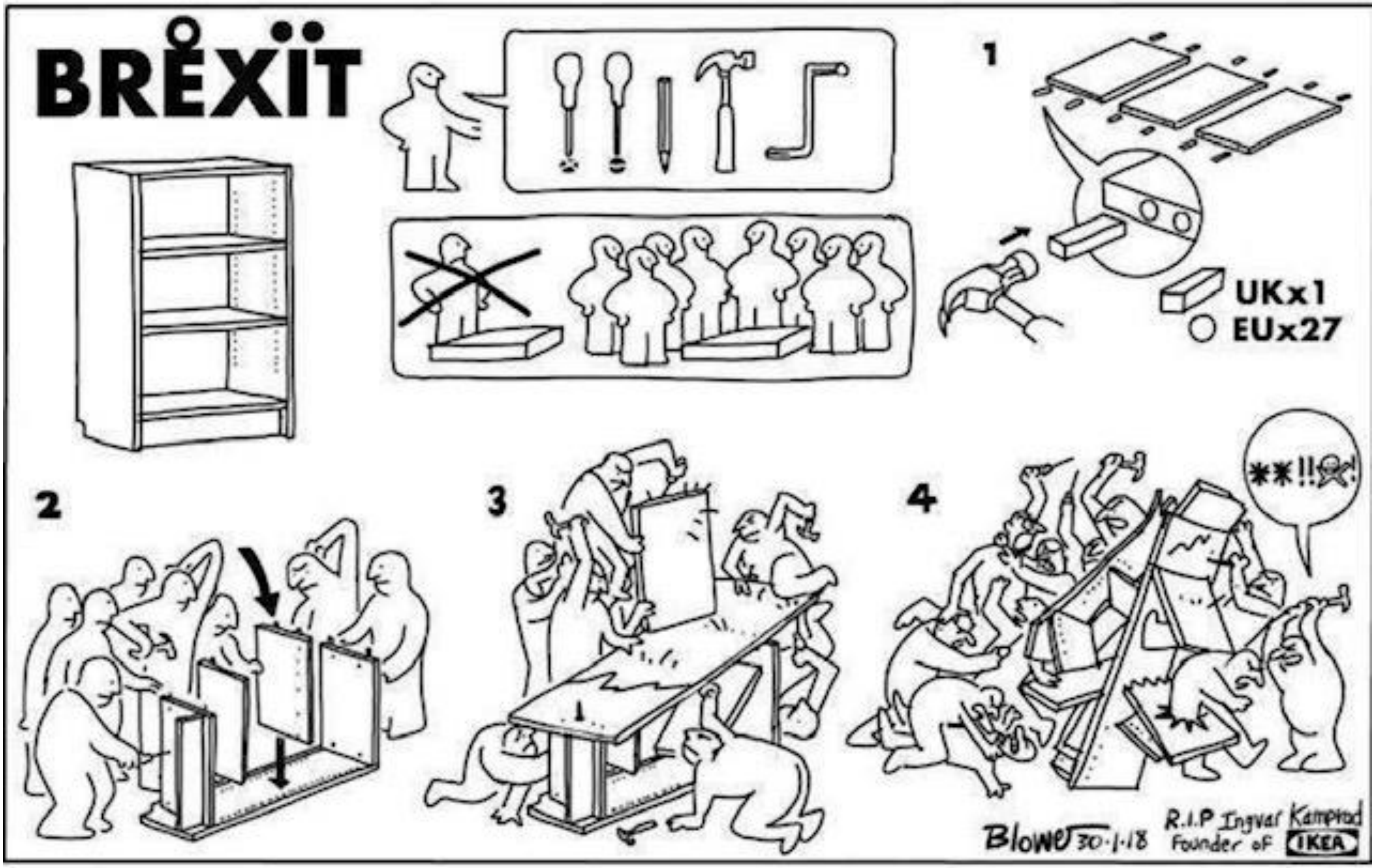
- Retail Mortgages
- Credit Cards
- Consumer loans
- Student loans

What now? The UK has withdrawn but same problems persist…



Economist.com

Same tools for same deal?



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Chambers Europe 2017

A Spotlight on our Eurozone Hub

For new or existing market participants in the EU and/or the Eurozone, the pace and depth of change and supervisory engagement matters, especially as rulemaking and supervision of financial services is now led by EU rather than national authorities. This is especially the case in respect of payments.

As a multinational, multijurisdictional team with multi-disciplinary and multi-asset class experience our Eurozone Hub offers dedicated specialist advice that empowers clients to stay ahead of the curve, to navigate challenges and seize opportunities in the evolving EU-27 and Eurozone-19 regulatory, supervisory and monetary policy landscape.

Our Frankfurt based "Eurozone Hub" together with the wider **"Eurozone Group"** brings together our local-market insight and capabilities with specialist EU and Eurozone regulatory, monetary policy and transaction expertise. This provides clients and their business and control functions with a single consistent point of contact allowing for greater efficiency in the management of client-specific and system-wide developments affecting stakeholders when engaging with counterparties and supervisors. **We support a wide range of clients** with the legal, regulatory and tax structuring, negotiation, implementation, documentation, execution, governance and review of their:

- Regulatory (conduct, risk governance and prudential), supervisory and monetary policy driven projects in particular with a focus on Banking Union and ECB-SSM compliance running from "*build the business*" through to "*run the business*", "*change the business*", "*change the compliance*" workstreams and the requite documentation and legal entity optimisation assistance to "BREXIT-proof" business operations and related projects
- Policy, processes, people both across the firm and in relation to specific product lines as well as explaining and defending files/processes
- Financial transactions and products across all master agreement framework and product documentation types
- Financial market infrastructure issues in particular custody
- Eurozone monetary policy and Banking Union specific needs re compliance with rules and supervisory expectations including specifically around NPLs, internal model governance, treatment of FinTech and cyber-resilience as well as monetary policy driven purchase programmes and collateral eligibility

Eurozone Hub – running Eurozone compliance like clockwork

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Your presenter

Today's speaker and your lead Eurozone Hub contact

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Michael Huertas is a partner in our Frankfurt office and the Co-Head of our Financial Institutions Regulatory in Europe Sector Group. Michael leads our Eurozone Hub and the wider Eurozone Group of multi-disciplinary, multi-jurisdictionally qualified and multi-lingual professionals who help our clients navigate and realize the opportunities in the EU—and in particular the Eurozone's regulatory, supervisory and monetary policy framework. Michael specifically advises on the Eurozone's Banking Union, the European Central Bank's monetary policy activity and the EU's Capital Markets Union priorities, along with the regulatory and supervisory workstreams of the European Supervisory Authorities.

His structured finance practice focuses on derivatives, securities financing transactions, structured notes and securitisations. Michael also has experience advising on conduct of business and governance arrangements (in particular, the managing of non-performing assets) and financial market infrastructure (including CCPs), collateral and custody arrangements as well as helping clients to optimize their regulatory capital treatment under CRR/CRD IV.

Michael has a wealth of in-house experience, specifically in relation to designing, drafting, implementing and monitoring compliance with regulatory as well as risk driven policies, procedures, governance and control measures for a range of global financial institutions, funds, financial market infrastructure providers across a breadth of business models. Michael has also lead on and project managed new as well as extension of licences on a multi-jurisdictional basis. He has also drafted and project managed the implementation of "customer journeys" and the interrelation with new product processes as well as treasury and collateral management needs for various firm types with diverse distribution models.

Michael was also seconded during 2014-2015 to the ECB, where he was responsible for the legal design, implementation and running of the ABS Purchase Programme, contributed to the legislative and technical drafting of the Securitisation Regulation as well as the ECB's NPL Framework. He is a frequent speaker at industry events and frequent publisher in trade and industry publications.

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