

Collateral Management

MANAGE AND UNDERSTAND COLLATERAL MANAGEMENT
ISSUES TO ANTICIPATE BUSINESS AND REGULATORY EVOLUTIONS

Aurexia (
CONSULTING

STRATEGY & MANAGEMENT CONSULTING
PARIS • LONDON • LUXEMBOURG • ASIA

- This presentation is an introduction to our study on Collateral and Clearing Management and related opportunities within the following areas of expertise:
 - Capital Markets
 - Securities Services
 - Asset Management
- We are available to present you our study:



Dominique HERROU
Partner
Tel: +33 (0)6 77 94 48 14
dominique.herrou@aurexia.com



Dalil KEBAILI
Manager
Tel : +33 (0)6 63 14 22 41
dalil.kebaili@aurexia.com

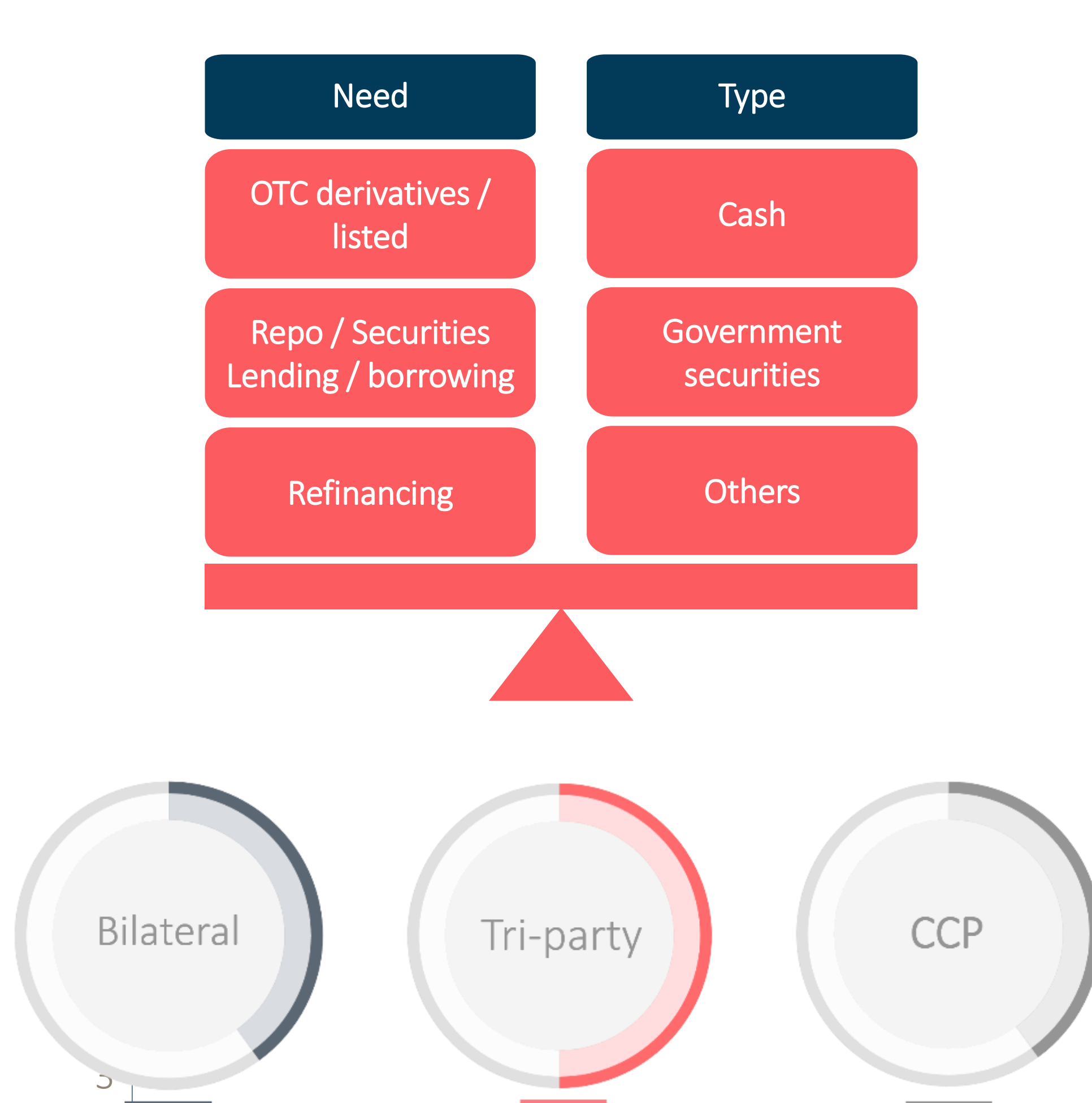


1. Collateral management overview

How to define and anticipate any business model change within your activity

Collateral is used to provide security against the possibility of payment default by the opposing party in a trade. There is a wide range of possible collaterals used to collateralise different credit exposure.

The speed regulatory changes and related high implementing costs are proving a challenge to banks, broker-dealers and asset managers.



Pre-Crisis

Collateral management processes were considerably lower than today and were considered as a back office function.

No clear vision about where assets are held and collateral quality choice was not a major concern.

Transition

A wide range of measures have increased the demand of collateral sourcing, funding and mobility. Many regulatory changes have been implemented as part of the collateral management transformation for a better follow up of risks and liquidity.

New trends

Collateral has become a dedicated function and a business concern within financial institutions in the global securities and derivatives market around:

- Collateral segregation and centralisation
- Optimisation of costs of collateral

1. Collateral management overview

Optimisation, cost, constraint and risk

Collateral Optimisation

• Liquidity

- **Basel Accords** require banks to hold a certain level of highly-liquid assets to meet short-term liquidity needs (Liquidity Coverage Ratio).
- **Bank context** for overall need for high-quality liquid assets to respond to quality constraints imposed by clearing houses in terms of collateral eligibility + non cleared derivatives trades.
- **The Basel III:** Liquidity requirements also define which assets can be considered high-quality assets. The highest quality collateral assets comprise cash, and government bonds or guaranteed bonds with a credit rating of at least AA-.
- **Other assets** such as **government bonds** with a slightly lower rating (up to BBB-), covered bonds and equities can also be included in the stock of high-quality liquid assets, but only under some strict conditions and with a higher haircut.

• Funding

- Higher funding requirements.
- Higher collateral costs due to generalisation of IM and systematic same-day collateralization.
- **Lost of benefits of exposure** netting at portfolio level (trades executed with a counterparty will be transferred to a clearer, under a clearing contract (non-eligible trades will remain bilateral, under a collateral agreement)).
- **Fragmentation of the collateral requirements** across multiple clearers and bilateral counterparties.

Costs & Constraints

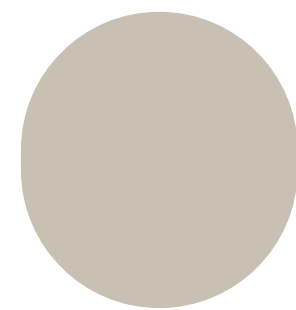
- **Bilateral Agreement:**
 - OTC trades cleared refer to clearing agreements (while bilateral OTC trades still refer to ISDA Credit Support Annex)
 - Need to be organized appropriately to deal with several types of agreements
 - Nearly all non cleared trades are collateralised according to ISDA though collateral availability is decreasing
- **CCPs Eligibility Rules:**
 - Collateral requirements will become more complex and will ultimately rise due
 - Stricter rules to all counterparties for eligibility => Mainly cash and highly rated bonds for IM and restrict VM to very liquid collateral (cash only)
- **Concentration Risk:**
 - Operational risk concentration in one central counterparty in one CCP
 - CCPs' risk management methods and systems are not widely known
 - Clearing members need to be accordingly capitalized in case of a member's default
- **Corporate Action Risk:**
 - Any bonds pledged/received for collateral purposes could be subject to OST/Corporate action

Risks

- **Collateral Protection:**
 - CCP separation of account
 - IM separation on the bilateral
 - Third party custodian holding
- **New ratio impacts:**
 - Basel III – Liquidity Ratios
 - Asset Encumbrance Ratio (AER)
 - ...
- **Operational and regulatory risks**

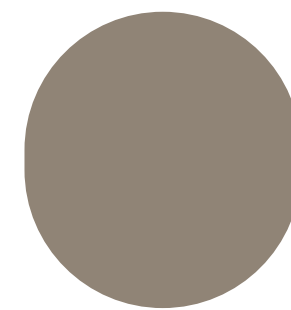
1. Collateral management overview

Overview of collateral related regulations



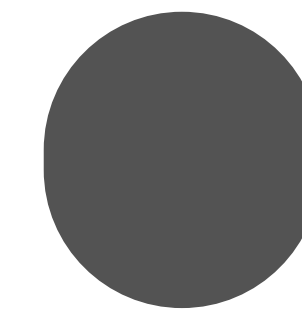
EMIR/DFA

- Cleared exchange of collateral between trading entities and CCPs including IM/VM/IA.



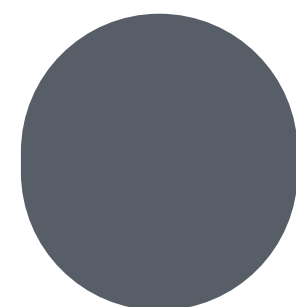
BCBS IOSCO

- Collateral exchange obligation on uncleared derivatives.
- Bilateral exchange of VM /IA & Segregated exchange of IM on custodian's pledged accounts.



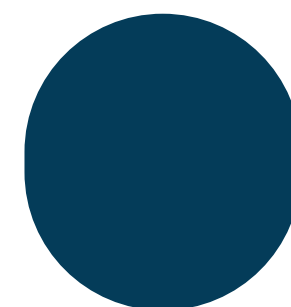
LCR / NSFR

- High Quality Liquid Assets requirements (HQLA) / strict eligibility criteria.



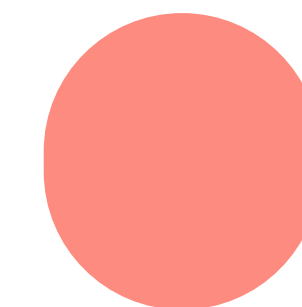
MIFID II

- Bring other markets into the transparency regime making excellence in the collateral management a must.



Securities Financing Transaction Regulation

- Improve transparency and express consent from, and disclosure of risks to counterparties entering into rights of use and title transfer collateral arrangements in relation to securities.
- Reporting obligation of assets used as collateral, their types, quality and value.



T2S

- Auto collateralization service on T2S platform.

2. BCBS IOSCO Margin requirements

Objectives, scope & requirements

OBJECTIVES	SCOPE
<ul style="list-style-type: none">• Mitigate systematic risk by ensuring availability of collateral to cover losses in case of a counterparty default• Promote central clearing: margin requirements are meant to reflect higher risks, and therefore discourage usage of un-cleared OTC derivatives• Bilateral posting of Initial Margin on a gross basis• Initial Margin: collateral exchanged to cover potential future exposures when entering an un-cleared OTC derivatives position	<ul style="list-style-type: none">• Products: all un-cleared products except physically settled FX Forwards and swaps• Covered entities: financial firms and systematically important non-financial entities (except sovereigns, central banks, BIS and multilateral development banks)• A threshold not to exceed EUR 50 million on a consolidated group basis• A Minimum Transfer Amount not to exceed EUR 500,000• A derivative portfolio of EUR 8 billion to be required to post Initial Margin

Major Requirements

IM Calculation Methodologies	Collected IM Treatment	Eligible Collateral	Intra-group Transations
<ul style="list-style-type: none">• Quantitative Margin Models:<ul style="list-style-type: none">✓ Stressed VaR✓ Models must be approved by the relevant supervisory authority• Standardized Margin Schedule:<ul style="list-style-type: none">✓ % calculated on the Notional Exposure	<ul style="list-style-type: none">• Re-hypothecation of customer collateral authorized, subject to strict conditions:<ul style="list-style-type: none">✓ Allowed only for hedging client's derivatives position✓ Only one re-hypothecation permitted✓ Pledger should be notified and insured against losses✓ Collateral should be segregated	<ul style="list-style-type: none">• Cash• High-quality government and central bank securities• High-quality covered / corporate bonds• Equities of major stock indices• Gold	<p>The determination of Initial Margin requirements for un-cleared derivatives between affiliates is the responsibility of national regulators.</p>

2. BCBS IOSCO Margin requirements

Main topics & impacts

Current Challenges

Since the entry into force of the first phase of the regulation on September 1st:

- Have the **eligibility criteria and scope** been completely covered and answer the regulatory requirement?
- Have your organisation put in place all the custodian reconciliations on **IM positions**?
- Are your FO/BO/ Collateral management systems able to deal with **multi regulation requirements**?
- Is your BO system able to settle netted VM of **old CSA** (before September 1st) and **new CSA** (under new ISDA templates)?
- **Tri-party management**: does your agent provide all IM basket securities details for LCR calculation?

Main impacts

Business

- New requirements
- Reduced profitability
- Collateral optimisation
- Intragroup transactions

Counterparty relationship

- Update client documentation
- Increased scope for disputes

Risk Management IT systems and infrastructure

- Sophisticated calculations for internal models
- set up of a complex business and risk management system
- Governance process for risk models and IT framework

Organisation, processes and controls

- Revise daily collateral management process and controls
- Set up a margin framework
- Adapt /strengthen organisation

3. Clearing management overview

Objectives

Objectives?

- Transfer the more subjective and intangible counterparty risk into a more manageable and quantifiable variable.
- Substitute the counterparty risk to the issuer of the collateral such as both the issuer and the counterpart would need to default in order to realize a loss.

Counterparty risk

Risk of decrease of the value of a derivatives portfolio due to the default of a counterparty

Market risk

Risk of decrease of an OTC contract's valuation due to adverse market conditions on the contract's underlyings (interest rates, currencies, equity prices, credit spreads...)

Liquidity risk

Risk of liquidity fall, implying bid/offer spreads widening or mispricing due to unobservable market data

Operational risk

Risk incurred by the lack of automation (STP), lack of standardisation...

Increase of complexity of collateral management procedures (Bilateral & CCP):

- OTC trades cleared refer to clearing agreements while remaining bilateral OTC trades still refer to ISDA Credit Support Annex.
- Higher Collateral costs due to generalization of Initial Margin requirements and systematic same-day collateralization.
- Lost benefits of exposure netting at portfolio level.
- Fragmentation of collateral requirements across multiple clearers and bilateral counterparties.

Main stakes?

- OTC contracts generate higher funding requirements while liquidity remains scarce (IM requirements).
- Adaptation of systems and workflows to clearing constraints.
- Growth in processing volumes.
- No more flexible approach in terms of collateral for clearing.
- Stricter eligibility rules.

4. Collateral management trends

Segregation & Tri party management



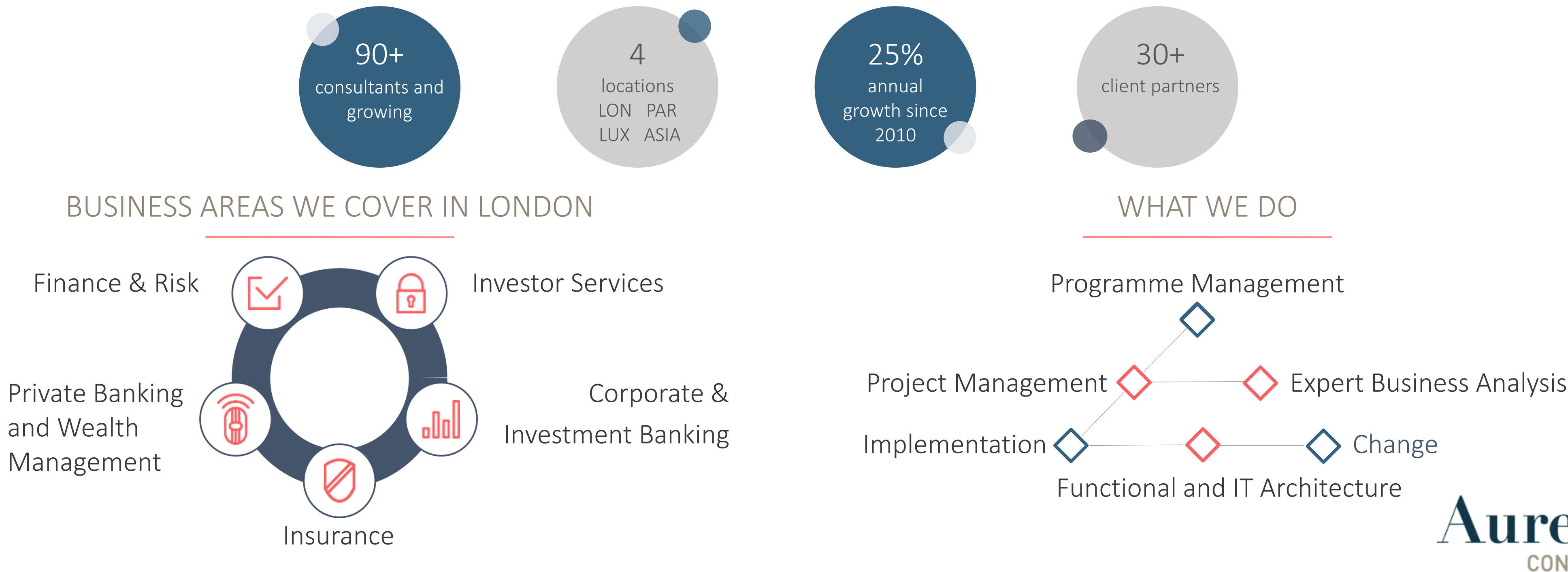
A consultancy solely focused on financial services

OUR STORY

Aurexia was founded in Paris in 2006 on the belief that the financial services industry needed more than pure management consulting skills from its service providers.

Coming from leading consultancies, Aurexia founders supplemented deep domain knowledge with pragmatism and practicality to partner with clients in the delivery of key transformation programmes. This approach has led to Aurexia partnering with the top 5 investment banks in Europe.

Aurexia has matured in to a global consultancy opening its London office in 2014, followed by Luxembourg in 2015 and Asia (Singapore and Hong Kong) in 2016. This strategic growth has allowed Aurexia to be better positioned to support historical clients' needs and broaden its client base to more industry leaders.



Aurexia consultants at the core of our business

OUR PEOPLE

What makes Aurexia special is a unique blend of industry expertise, a solution oriented mind-set and best in class transformation skills. Aurexia consultants are decisive in scoping, launching and implementing their clients' projects. They all possess the necessary soft skills to integrate into client teams delivering as a single unit.

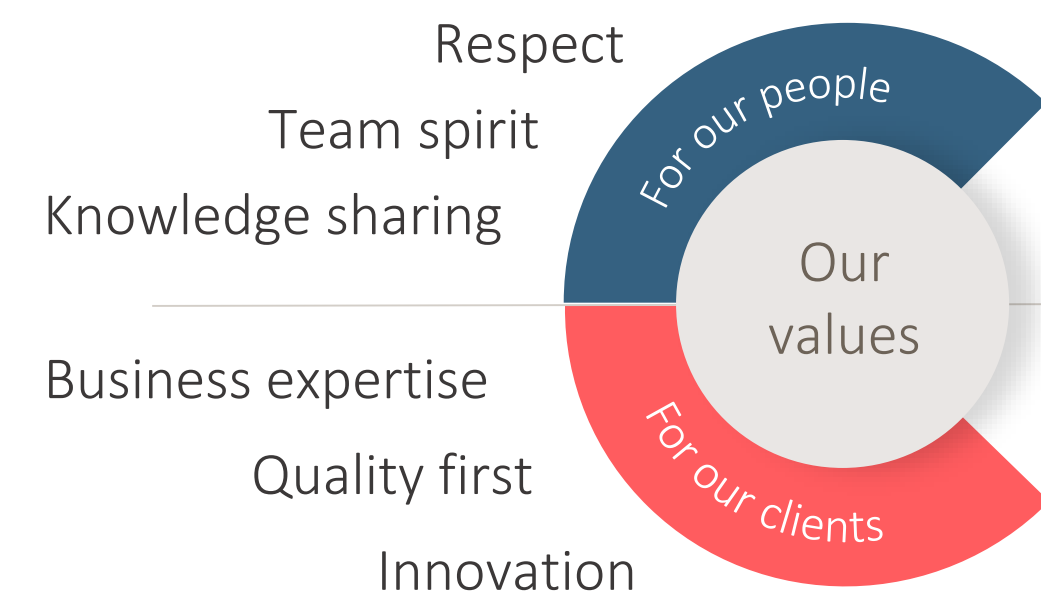


We have built an internal framework that ensures each Aurexia consultant has a forward looking vision of our industry challenges and opportunities. Throughout their career at Aurexia, consultants actively participate in the company's industry review and thought leadership.

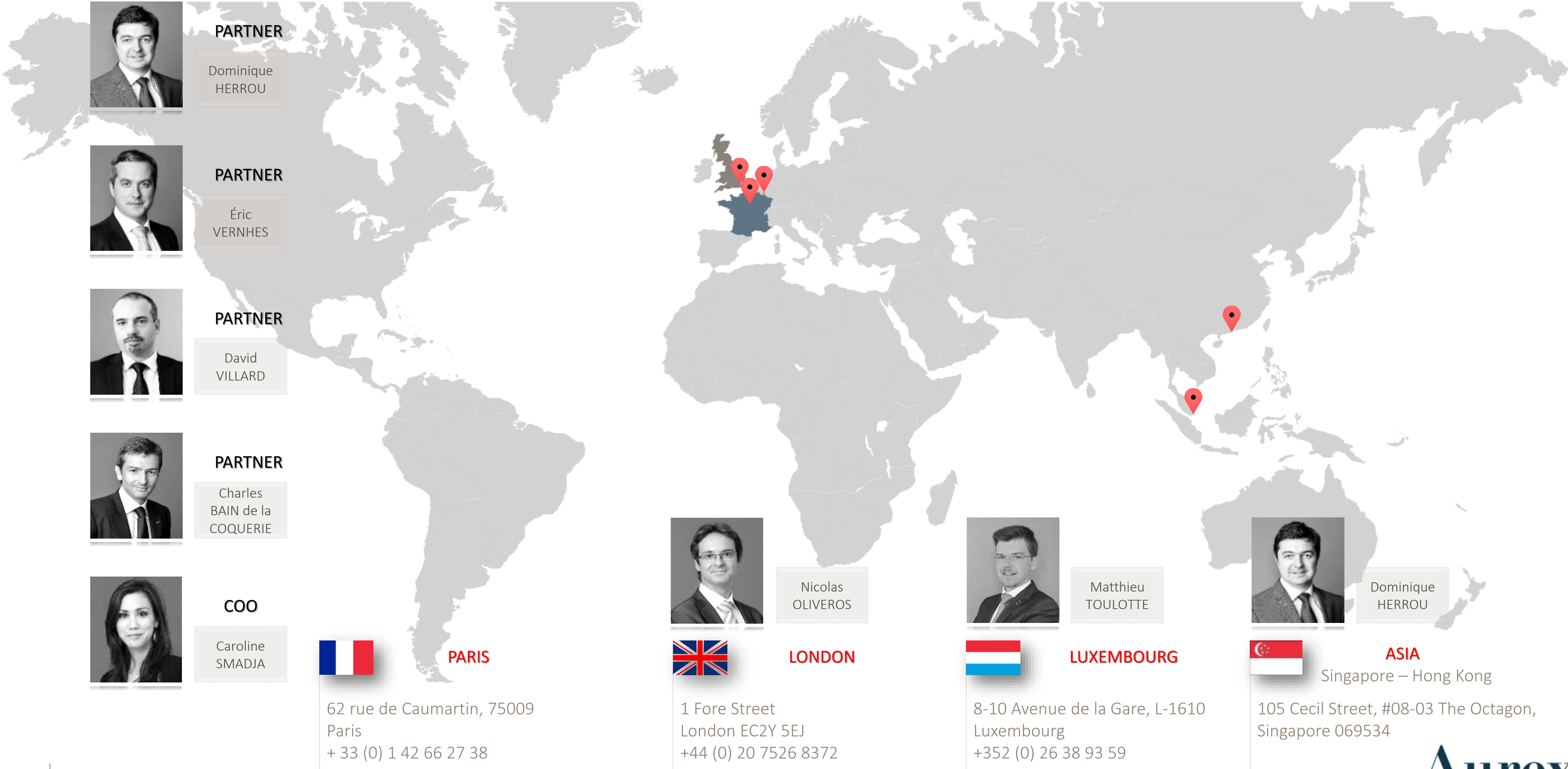
OUR CULTURE

We support and encourage an entrepreneurial outlook and independent thinking. Aurexia is not about hierarchy and organisational charts, we believe in a flat structure empowering all employees to feel that this is their firm to own and run. This leads to plenty of opportunities for cross learning, working on projects that make a real contribution to client success and personal development.









OUR VALUES



Our Offices



A world map with a light gray background. Red location pins are placed in Paris, London, Luxembourg, and Asia. Below the map, four office locations are detailed with portraits, names, titles, flags, and contact information.

Office Location	Portrait	Name	Title	Flag	Address	Contact
PARIS		Dominique HERROU	PARTNER		62 rue de Caumartin, 75009 Paris	+ 33 (0) 1 42 66 27 38
LONDON		Nicolas OLIVEROS			1 Fore Street London EC2Y 5EJ	+44 (0) 20 7526 8372
LUXEMBOURG		Matthieu TOULLOTTE			8-10 Avenue de la Gare, L-1610 Luxembourg	+352 (0) 26 38 93 59
ASIA		Dominique HERROU			Singapore – Hong Kong 105 Cecil Street, #08-03 The Octagon, Singapore	069534

Aurexia Institute

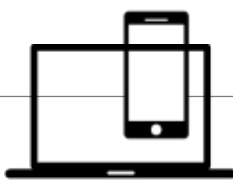


The Aurexia Institute is our focal point for study and analysis of the latest issues, challenges and opportunities within our industry. Detailed research combined with industry leading knowledge from our consultants, clients and affiliates allows us to produce thought provoking insight across the financial service spectrum which we communicate through a variety of channels.

<http://www.aurexia.com/en/aurexia-institute/>



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www.aurexia.com/en





Partners

Dominique Herrou

+33 (0) 6 77 94 48 14

dominique.herrou@aurexia.com

Eric Vernhes

+33 (0) 6 86 51 54 76

eric.vernhes@aurexia.com

Charles Bain de la Coquerie

+33 (0) 6 80 37 32 15

charles.baindelacoquerie@aurexia.com

David Villard

+ 33 (0) 6 75 53 19 47

david.villard@aurexia.com

Offices

Paris Office

62 rue Caumartin, 75009 Paris, France

+ 33 (0) 1 42 66 27 38

London Office

1 Fore Street, London EC2Y 5EJ, United Kingdom

+44 20 7526 8372

Luxembourg Office

8-10 Avenue de la gare L-1610 Luxembourg

+352 (0) 26 38 93 59

Asia Office

105 Cecil Street, #08-03 The Octagon

Singapore 069534

WWW.AUREXIA.COM/EN



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