

Discovering asset management & AXA IM



Marc LANDON

Your trainer

53
Years old

20+
Years of training

12 Guitars

10,000+
People trained

1 Wonderful wife

3 Marvelous kids

CEO & co-founder of We Figure, trainer, carpenter, climber and father

He has over 20 years of experience in the training field.

He uses digital tools to make training more interactive and fun.

He strongly believes that dry subject matter can easily be taught with a touch of laughter, even if it is serious.

Marc has created and facilitated induction, junior and graduate programs for major French banks and asset management companies, which took him to New York, Hong Kong and London.

He has also led conferences on bank organization and risk. He is known for his ability to make complex things understandable to a wide audience.

He worked at Société Générale and First Finance before creating his own training company: We Figure

His topics: Risk, Asset Management, CIB.

As a child, he lived in the United States and France, then studied in the United Kingdom.



We Figure

Let's figure it out!



Expertise

Humanities / Interpersonal skills

- Management
- Behavioral skills development

Technical expertise

BFI

- Investment Banking
- Capital markets
- Structured finance
- Global Markets
- Banking transaction

Asset management

Other topics

- Regulatory
- Risks
- Back office
- Tech / data



Formats

Conferences

Seminars

- Face-to-face
- Distance
- Blended

Excellence programs

Upskilling

One-to-one for top managers

Graduate & Junior Programs

Induction days



Teaching methods

Reverse class

Expert interventions

Scenario, case studies

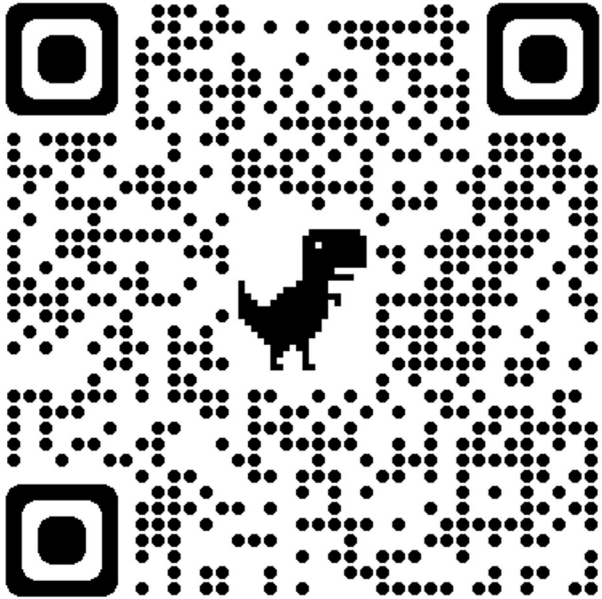
Collective work

Gamification

Quiz

Pre & post training support (long time)

Documentation & quizz



www.we-figure.com/axa-im

<< The slides



The program 2x ½ day

Part 1 : Basics

What is asset management?
Mandates vs. collective asset management
What is a fund?
Balance sheet of a fund
Clients
How does an asset manager make money?
The workflow: from investor 'money to NAV calculation
The other players of the AM industry (custody, fund administration, brokers, Transfer agent...)

Part 2 : The products

Equity / Fixed Income / Foreign Exchange /
Commodities
OTC vs listed
Cash and derivative products
The key areas of Axa's expertise

Part 3 : Asset management techniques

Indexed / benchmarked funds (relative return) vs
alternative funds (total/absolute return)
Top down vs. bottom up: role of research
Quantitative vs. fundamental
What is the role of a benchmark?
What is beta?
The role of an asset manager: generate alpha
Thematic investment with SCR /SRI

Part 4: Organization

Typical organization of an asset manager: key teams and their functions
Axa IM internal organization (incl. CORE, ALTS, PRIME, ARCHITAS & transversal teams)

Part 5 : CORE – Equity & Fixed income

Equity asset management

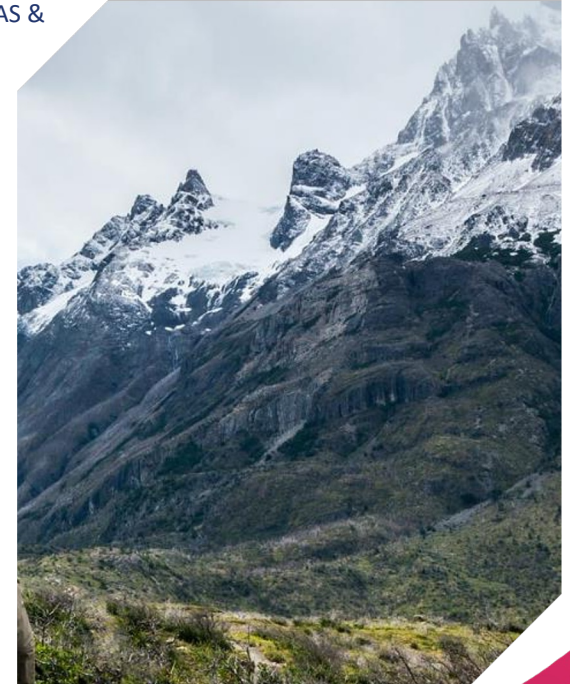
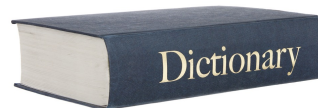
Equity in AXA IM : Framington & Rosenberg
What are the benchmarks?
What are the risks? (volatility, Beta & Alpha)
Analysis of an Axa equity fund

Fixed income asset management

Buy & hold vs. active
Different ways to classify debt :
i) Investment grade vs. high yield
ii) Credit vs. securitized debt
iii) Money market vs. bond market

Part 6: Alternative investments within Axa

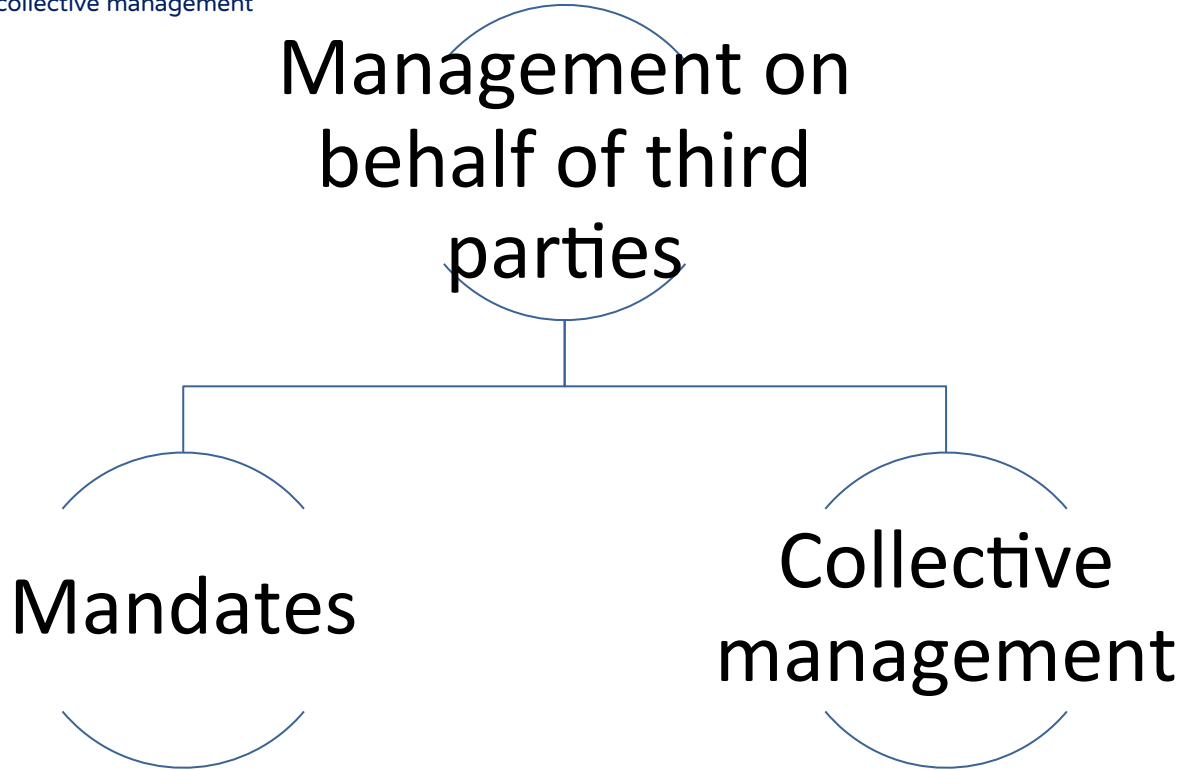
Real Estate & AXA Real assets
Private assets : debt & Equity
Hedge Funds & FoHF in AXA IM



Part 1 "Basics"

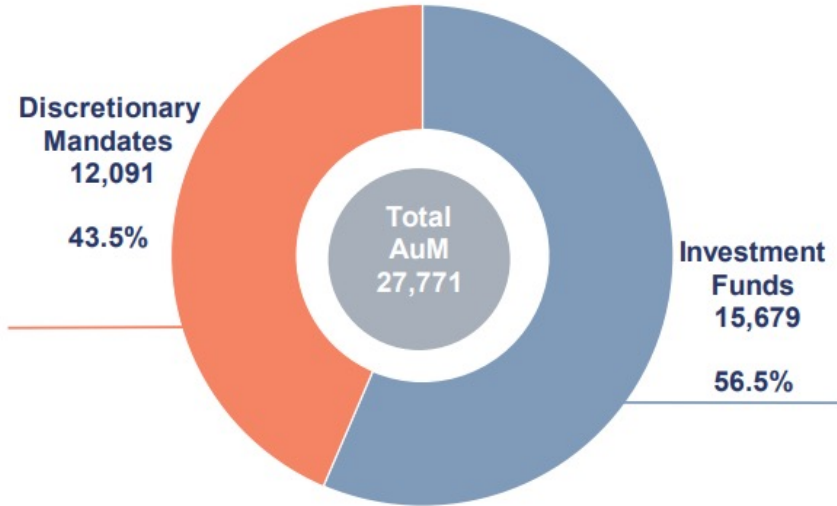
Management on behalf of third parties

Mandates and collective management

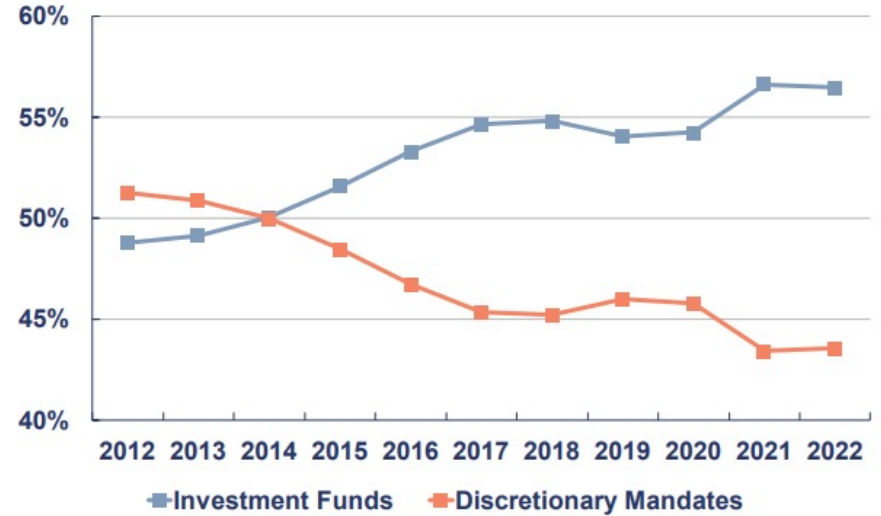


European figures

AuM at the end of 2022
(EUR billions, percent)



Evolution of AuM
(Share in total AuM)



The turnover of a management company

Amount and performance

- **Management fees** : management fees are mainly used to remunerate the management company for its know-how, the fund's operating costs, as well as the fund's distribution. They are generally between 0.5% and 3% per year for the most expensive funds. For the same fund, management fees may also vary significantly depending on the type of investor concerned and the method of distribution. The shares vested in the general public generally include in their management fees a portion which will be retroceded to the distributor.
- **Performance fees** : Some funds apply performance fees in addition to management fees. The main point: knowing against what the outperformance is measured. In general, it is calculated from the benchmark index of the fund which is indicated in the prospectus (more rarely from a fixed return). Outperformance fees are not included in the ongoing charges of the KIID but an estimate of their value is taken into account in the calculation of the NAV.

Ranking AUM

Rank	Fund	Market	Total assets (US\$ millions)
1	BlackRock	U.S.	\$10,010,143
2	Vanguard Group	U.S.	\$8,466,372
3	Fidelity Investments	U.S.	\$4,233,825
4	State Street Global	U.S.	\$4,138,172
5	J.P. Morgan Chase	U.S.	\$3,113,000
6	Allianz Group	Germany	\$2,954,432
7	Capital Group	U.S.	\$2,715,178
8	Goldman Sachs Group	U.S.	\$2,470,000
9	BNY Mellon	U.S.	\$2,434,330
10	Amundi	France	\$2,332,454
11	UBS	Switzerland	\$2,124,000
12	Legal & General Group	U.K.	\$1,917,486
13	Prudential Financial	U.S.	\$1,742,326
14	T. Rowe Price Group	U.S.	\$1,687,800
15	Invesco	U.S.	\$1,610,915
16	Northern Trust	U.S.	\$1,607,100
17	Franklin Templeton	U.S.	\$1,578,124
18	Morgan Stanley Inv. Mgmt.	U.S.	\$1,492,849
19	BNP Paribas	France	\$1,439,280
20	Wellington Mgmt.	U.S.	\$1,425,481

AXA IM

Alts

€183bn¹

In assets under management

30+¹

years of track record

470+¹

investment professionals

Prime

€34.6 billion

of assets under management.

6

locations in London, Paris, Frankfurt, Milan, New-York and Tokyo.

+100

professionals.

18

nationalities



Core

AXA IM in figures

€501bn

assets under management¹

€466bn

AUM in fixed income²

85%+

of our AUM is ESG integrated¹



Funds or UCI / OPC

Collective management

What is a UCI?

UCIs (collective investment undertakings) invest in transferable securities (stocks, bonds, etc.) on behalf of a large number of savers. By purchasing a unit of UCI, each saver has access to a diversified portfolio managed by a professional (an approved management company).

There are two categories of collective investments, i.e. UCIs: UCITS (UCIs in transferable securities), which are marketable throughout the European Union, and AIFs (alternative investment funds) which are other collective investments

There are general purpose funds and specialized funds such as private equity funds, real estate investment companies and real estate collective investment undertakings (OPCI), alternative funds of funds and employee savings funds

The balance sheet of a fund

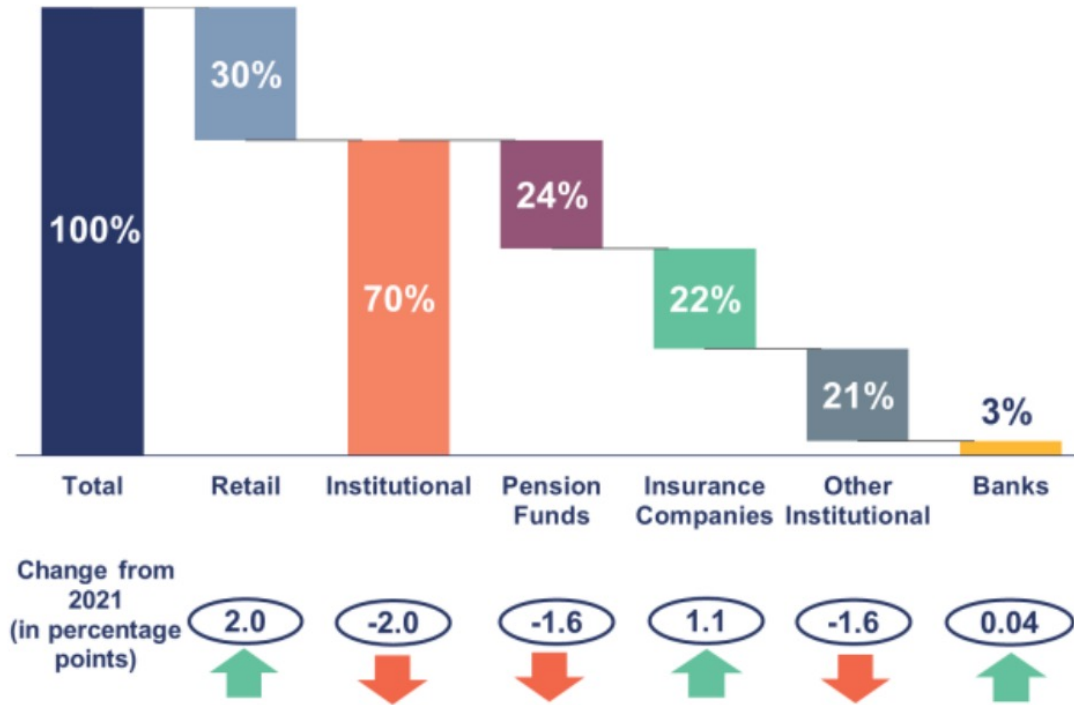
Assets & Liabilities

Assets	Liabilities

Management on behalf of third parties

European customers

Breakdown of AuM by clients at the end of 2022 (Percent of total and change in pp. from 2021)



The costs of a fund

Agreed rate of charges

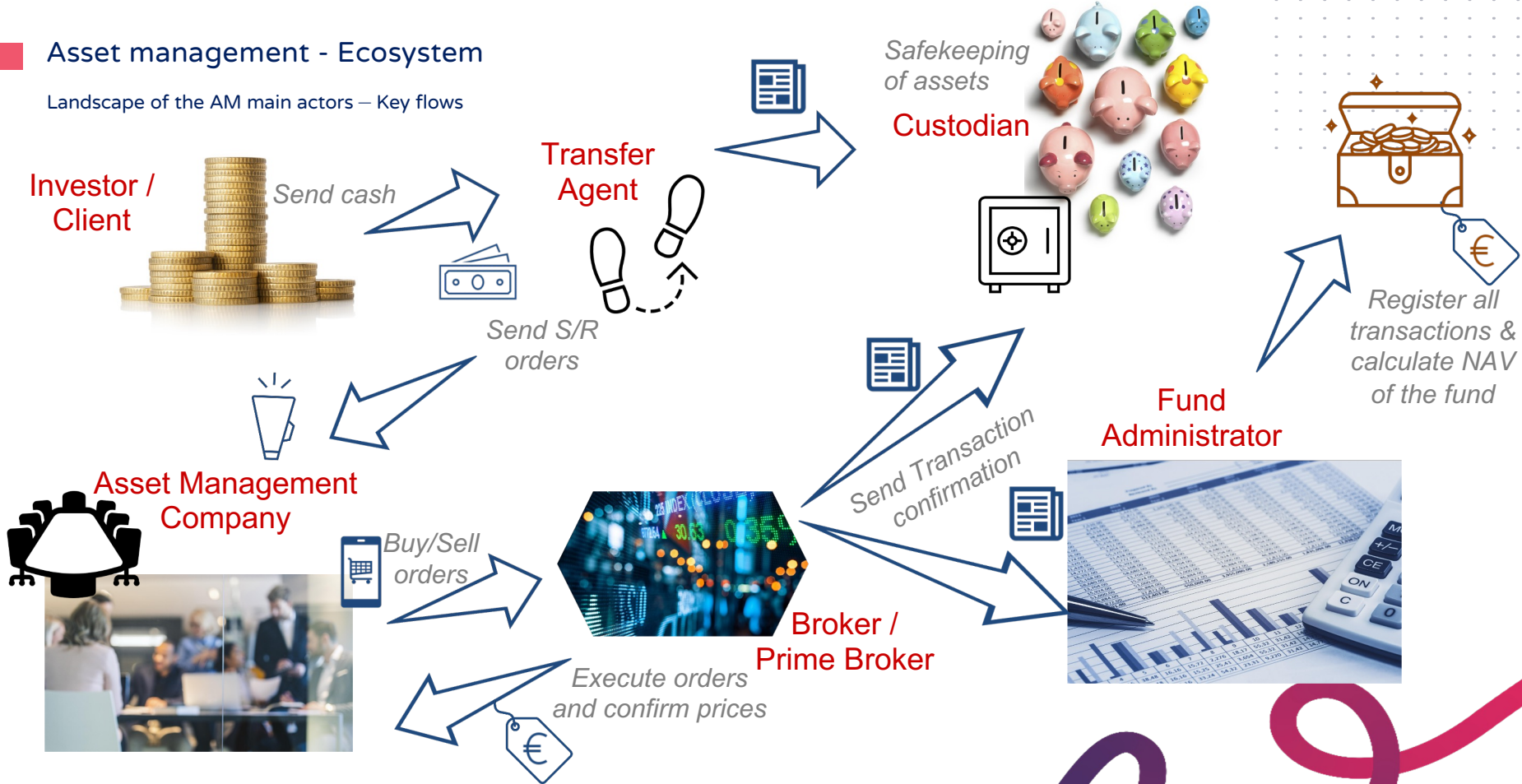
This rate is calculated by the portfolio management companies on an annual basis. The display of ongoing charges in the KIID thus enables a potential investor to know the amount of charges taken, generally over time, from investors in a fund over the previous year. They include in particular:

- Management fees;
- Custodian fees;
- Movement commissions;
- Costs related to the account keeper;
- The costs of the investment adviser;
- Statutory audit fees;
- Expenses related to delegates (financial, administrative and accounting);
- Costs associated with registering the fund in other EU Member States;
- Audit costs and / or legal costs;
- Certain costs linked to the distribution of the UCITS;
- Entry and exit rights when the UCITS subscribes or redeems units or shares of another UCITS or AIF.

However, some charges are not included in the ongoing charges. For example, these do not include the outperformance commission (where it exists), any entry or exit charges, or intermediation costs (for example, brokerage fees). For the sake of clarity of information, outperformance fees as well as entry and exit charges are presented separately. On the other hand, this is not the case with intermediation fees.

Asset management - Ecosystem

Landscape of the AM main actors – Key flows



Part 2

"The products"



AXA IM - Several areas of expertise

From fixed income products, to equities and alternatives

Actions

We have over four decades of active investing experience, backed by fundamental research and a long-term approach, designed to capture future trends. Backed by fully integrated risk controls, we offer a wide range of solutions designed to meet a wide range of client outcomes.

With over forty years of experience in active equity investing, our experts use a bottom-up investing approach to help clients successfully navigate the changing investing landscape and capture the growth engines of tomorrow.

To identify investment opportunities, our quantitative investing pioneers use technology and modeling to develop fundamental strategies based on environmental, social and governance (ESG) principles.

Fixed Income

Through bottom-up credit analysis and top-down macroeconomic research, our specialists strive to provide our clients with results-driven solutions, through a range of products spanning all fixed income securities.

Structured finance

Our well-established team strives for stable and predictable income from a diversified risk exposure that complements traditional allocations. We draw on our size and experience to find opportunities in the alternative credit spectrum, tailored to the specific needs of our clients.

Multi Asset


Our diverse team of investment professionals and researchers share a common goal: to responsibly design the best combination of asset classes and investment management techniques based on client needs.

Real Assets

We combine in-depth country knowledge with long-standing experience, strong convictions and in-depth understanding of capital structures.

AXA IM Chorus

Our team aims to generate absolute returns through a diverse set of behavioral finance-based investment strategies - providing clients with a differentiated proposition with low correlation to traditional assets.



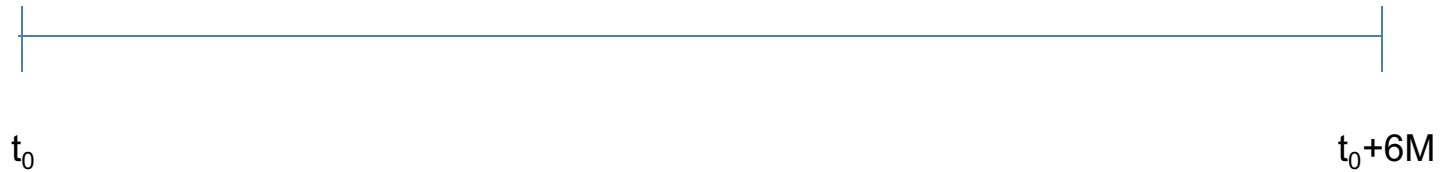
The products used at AXA IM

Financial market products

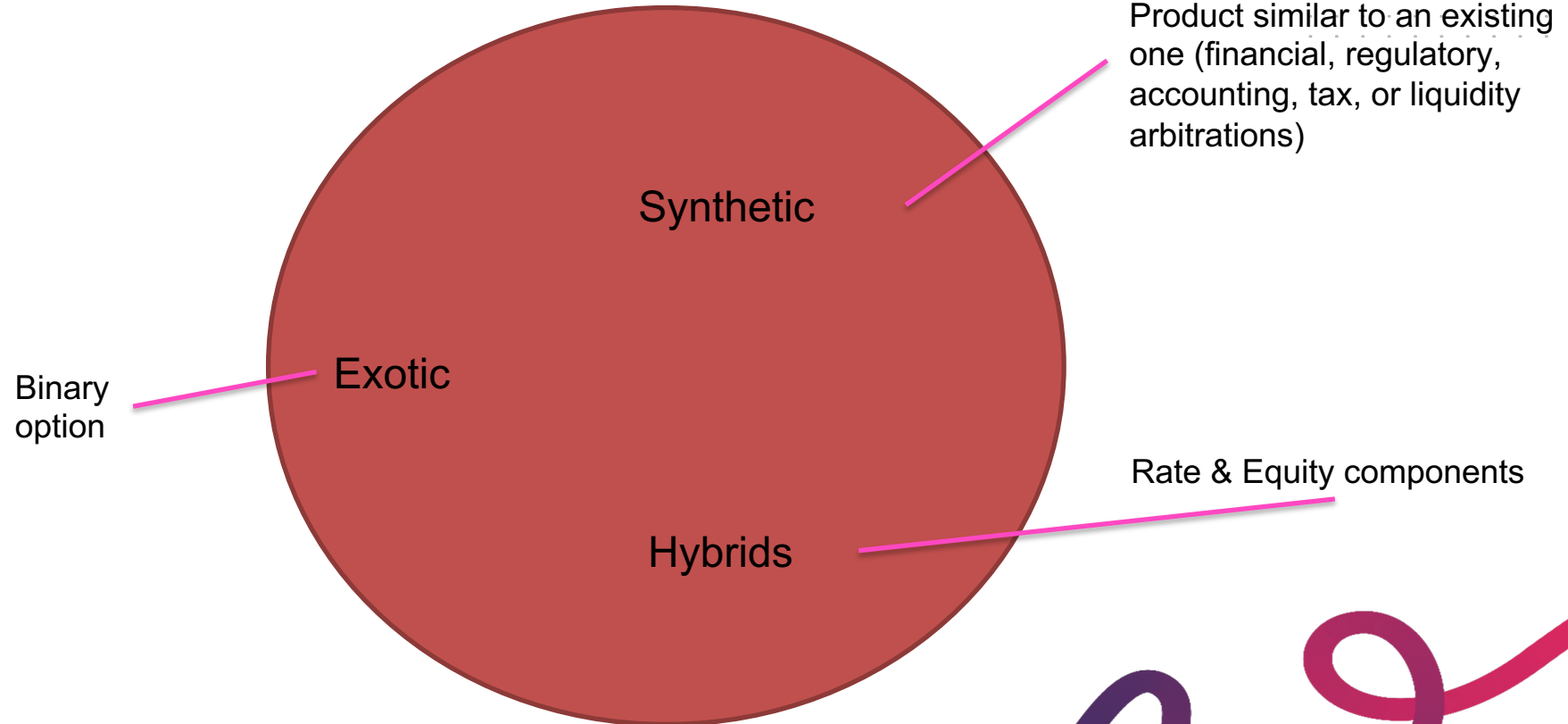
Assets / Products	Cash	Derivatives
Equity	AXA Share	- Forward
Fixed income	Loan / Bund / Oblig / CP ABS / OAT	- FRA, NDF - Futures - Swap
Forex	EUR, USD, CHF, INR, KRW, JPY	- Options
Commodities	Oil, Gas, Gold, Steel, Pork, Rapeseed, Oil,	- Warrants - Cap / Floor

Derivative products

A derivative product is a contract which allows to **fix today** the **conditions of an operation for the future**: Purchase / Sale / Loan / Borrowing



Structured products



Management on behalf of third parties

Main asset classes

3/4 major asset classes: consistent behavior and low correlation with other classes

Equities

Fixed Income:

Bonds (government, corporate, ...) / convertibles, etc.

Cash / Cash equivalent

Real Estate

Alternative: *decorrelation*

Commodities: gold, silver

Private Equity / Venture Capital

Hedge Funds & Structured Funds

Art, collection

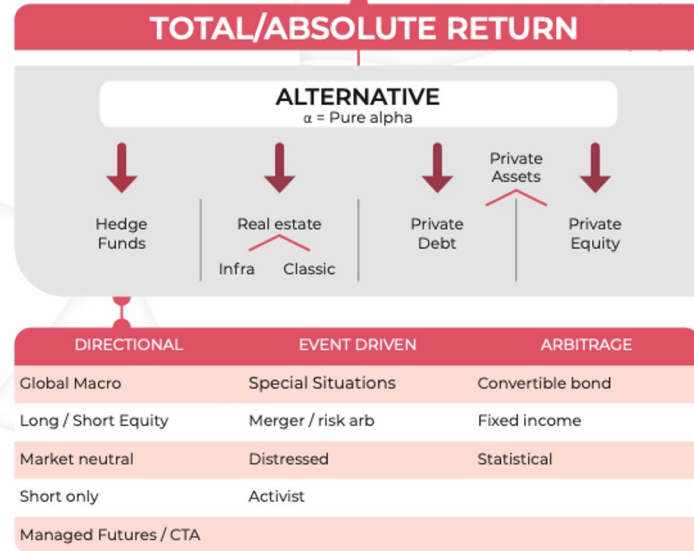
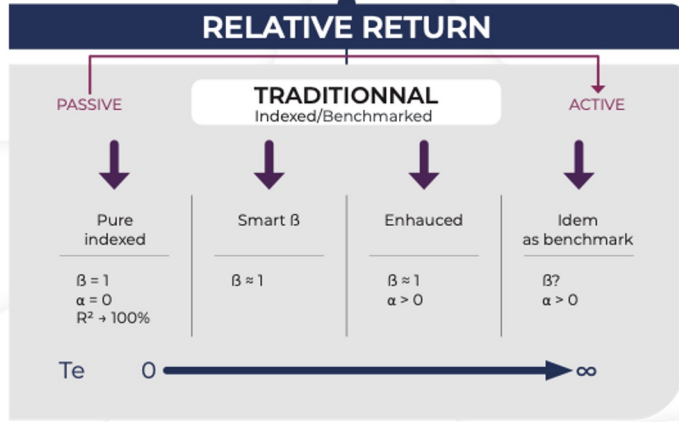
Asset allocation is the allocation of the portfolio between different asset classes



Part 3

" Asset management techniques "

MAIN MANAGEMENT TYPES



ASSETS	Equity		Fixed income	
			Bonds	Money Market
ANALYSIS	Fundamental	Quantitative		Technic
ALLOCATION	Top-down		Bottom-up	
STYLE	Value	Garp		Growth
CAPITALIZATION	Small cap	Mid cap		Large cap
	Geography & sectors	Thematics		ESG

Regulation :

UCITS

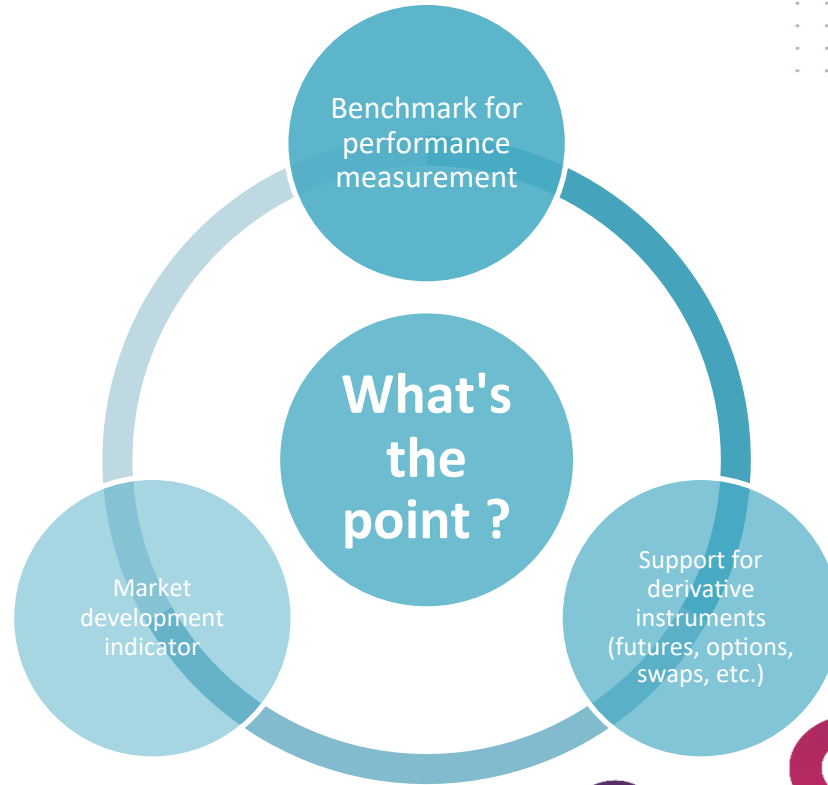
AIFM

What is an index?

Definitions

What is an index?

A stock market index is an indicator to determine the performance of a market. They are representative either of a market or of a particular sector of activity.



What is an index

Examples

Actions	Rate	Management	Others
CAC	EONIA / € ster	Lyxor L / S Equity Long Bias Index	Inflation
FTSE	EURIBOR	Lyxor Hedge Fund Index	GDP
MSCI World	LIBOR	FTSE EDHEC-Risk Efficient Indexes	Temperatures
Russell 3000® Value Index	SONIA	EDHEC-Risk Alternative Indexes	
DJ Eurostoxx 50	OAT / BUND / ect		
TOPIX	WGBI		

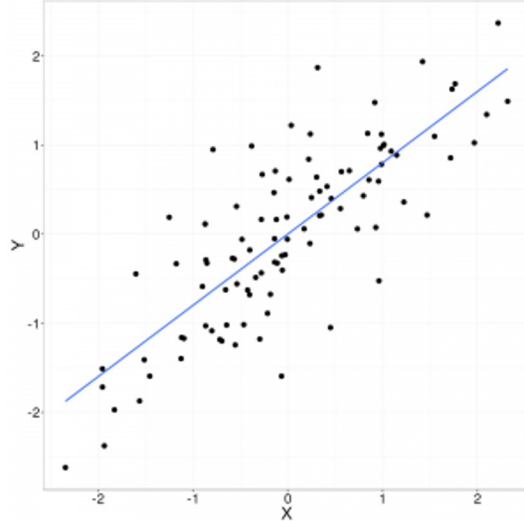
Beta

Risk measurement

The β of a security gives us the sensitivity of this security to market movements. The larger the β of the stock, the more it amplifies market movements.

For example for a security with β of 1.5, or can hope, that if the market gains 20%, the security will gain 30% (20% x 1.5). On the other hand, if the market loses 20%, the stock will lose 30%.

A manager who does not seek to anticipate the direction of market movements and is content to have a performance equal to that of the equity market will choose the securities held so that the β of the portfolio comes as close as possible to 1.



$$y = ax + b?$$

ALCATEL =

R^2 : The coefficient of determination is an indicator which makes it possible to judge the quality of a linear, simple or multiple regression. With a value between 0 and 1, it measures the fit between the model and the observed data.

Tracking error

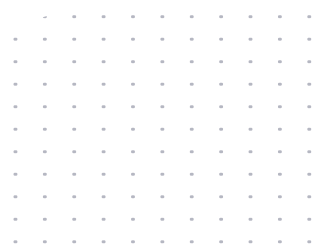
Risk measurement

$$TE = \sqrt{52} \sqrt{\frac{1}{N-1} \sum_{s=1}^N (R_s - \bar{R})^2}$$

It is a risk management tool for portfolios that measures the risk of deviation from the management objective.

The tracking error is the measure of the relative risk taken by a fund compared to its benchmark index. It is given by the annualized standard deviation (volatility) of the relative performance of a fund compared to its benchmark. The lower the tracking error, the more the fund resembles its benchmark index in terms of risk.

By definition two portfolios can have a comparable profitability but with a very different tracking error resulting from a regularity of disparate performances between the two portfolios. This is why it cannot be considered in itself as a management tool but more as a statistical indicator of risk assessment in relation to the benchmark portfolio.

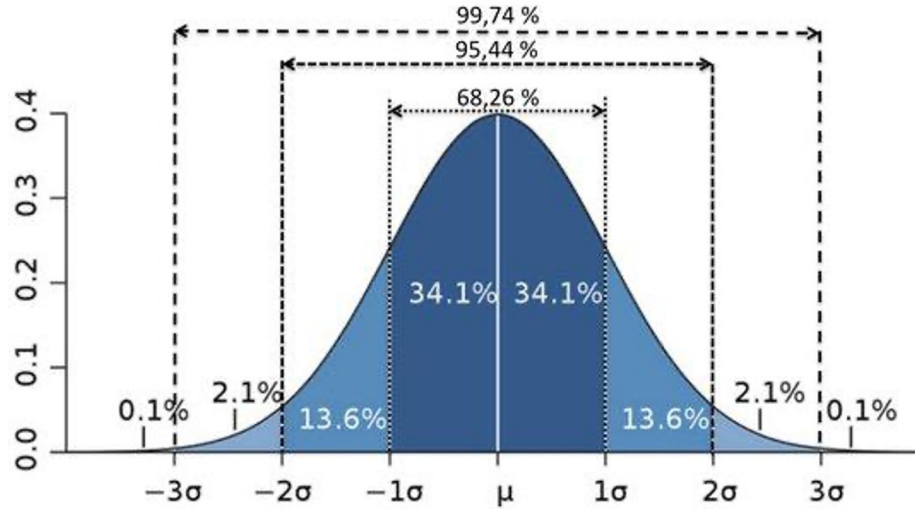


Tracking error

Risk measurement

Example : a tracking error of 3% means a risk of deviation of 3%, i.e. 67% chance of not deviating by +/- 3% from the performance of the index, over a one-year horizon .

NB: This result stems from the hypothesis according to which the distribution of performances generally follows a Normal law.



Magnitude

0 to 1: pure index

1 to 4: tilted index management

4 to 6: active management

> 6: very active. Is there a benchmark?



Pure index management

Pure replication

Total index replication objective

Purchase of all titles in the same proportions

Synchronous rebalancing with the index

No active positions therefore minimal tracking error

Basket of securities trading at the closing price

Use of internal crossing

Activism (corporate governance and SRI)

Advantage

Minimum tracking error (0.20%)

Minimum rotation

Difficulties

Requires large volumes (depending on the index)

Cash management, reinvestment of dividends

Possibilities to be refereed during rotations





Pure index management

& ETF



Hybrid funds subject to specific regulations

Primary market

Reserved for market makers and authorized participants

Subscription / redemption by contribution of the basket of underlying securities

Secondary market

Listing on a specific segment of an organized market

Market maker listing commitment

Arbitrage activity against indicative NAV (apparent / theoretical)

Varied liquidity depending on the interest for investors / speculators

Management of the ETF by the promoter

Receives / delivers baskets of securities (must define them)

Minimum intervention for corporate actions and index rebalancing





Extended index management

The alpha generation

Objective of enhanced indexing

Very controlled risk-taking: 1-2% Tracking error

50-100bp of additional performance

Typically higher information ratio than for traditional management

Very strong growth market segment

Awareness of the limits of pure index management

Development of core-satellite management

Enrichment of the techniques used

But sometimes a certain imprecision in the management style

Optimization techniques

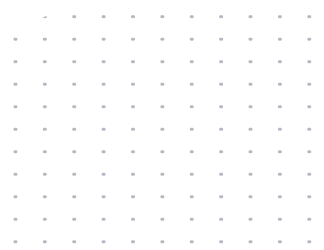
+/- risky arbitrage

Style bias (tilt = risk premiums)





Alternative management



An active strategy, but decorrelated

An absolute performance objective under absolute risk constraint (no benchmark)

Shorts positions

Leverage possibilities

Active collaboration with prime brokers and trading rooms

A flexible and opportunistic investment policy

Reduced liquidity

The need to preserve the secrecy of operations

Convergence with private equity sometimes





Alternative management

Weak regulatory protection

Performance pay 1 to 4% + 10 to 40%

High Water Mark & Hurdle Rate (+ equalization)

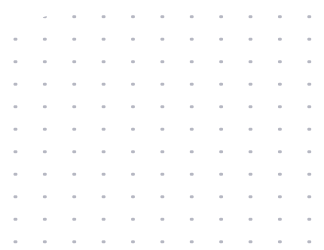
Associate and non-employee managers

Limited transparency

Limited capacity

High net worth investors (\$ 100,000 minimum)

Off-shore direct debits (Cayman Islands, Bermuda, Virgin Islands, Barbados, etc.)



UCITS

Undertaking for Collective Investment in Transferable Securities

Directive 2009/65/EU (UCITS V) is a EU directive issued in 2011 in its 5th version (application date 2016) and allows collective investment scheme (« funds ») to operate throughout the EU under the approval form one of its members

Goal : The UCITS Directive defines a common regulatory framework for open-ended funds distributed in the EU. Thus, funds authorized in one Member State can be sold legally in each Member State without further authorization and benefit from the same regulations.

Application field :

Non-eligible assets : real assets, Private equity, commodities, short positions .

Diversification rule: 5/10/40

Each instrument which represents more than 5% of the assets under management must not, in total, exceed 40% of the fund's assets under management.

Concentration rule: <10% of a bond issue (same issuer)

Borrowing limit: no borrowing is permitted (except primarily to fund redemption requests)

Derivatives limited to 100% of the AuM ie limited leverage effect

AIFMD

Directive 2011/61 / EU of the European Parliament and the Council on alternative investment funds managers (the “Directive”)

Goal

The AIFMD aims to create a harmonized regulatory framework for AIF distributed in the EU. The AIFMD aims to regulate alternative investment fund managers and the distribution of alternative funds in the European Union in order to ensure investor protection and avoid systemic risk.

Scope

The AIFMD applies to:

- o EU AIF managers who manage AIF, regardless of their country of domicile (EU AIF or non-EU AIF)
 - o non-European managers who manage EU hedge funds
 - o non-European managers who market their hedge funds in the EU
- Main subjects covered by level 1 (directive) With a view to harmonization, the directive covers subjects keys:
- o authorization
 - o capital requirements
 - o delegation of tasks to third parties
 - o use of leveraged funds
 - o the assessment requirements by the investment manager himself or by an external expert,
 - o business conduct, o remuneration policies
 - o reports to the competent national authorities,
 - o provisions and marketing rules in relation to third countries
 - o provisions relating to the depositary
 - o passport

Part 4

« Organisation & key functions »

AXA IM - Organization

Information correct as of 11 January 2024

Executive Chairman, AXA Investment Managers Marco Morelli ¹					
AXA IM Alts Isabelle Scemama ^{1,2} / Deborah Shire ^{1,3}	AXA IM Select Matthieu André ^{1,2}	AXA IM Core Hans Stoter ^{1,2}	AXA IM Prime Pascal Christory ^{1,2}	Global Transversal Functions	
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				Macro Research & Responsible Investment (RI) Centre Gilles Moëc ²	Human Resources Frédéric Clément ^{1,2}
				General Secretary Jean-Christophe Ménioux ^{1,2} Legal Finance Risk Management Compliance & Regulatory Affairs	Global Operations Caroline Portel ^{1,2} Operations Data Management Technology Facilities & Innovation Project Management Security Procurement

Part 5

"Equity asset management"

AXA IM - Organization

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Equity

Stocks & Shares



A **STOCK** is a title deed representing a fraction of a company's equity. Owning a share can give rise to various rights such as:

- * annual dividends according to the company's distribution policy;
- * possible voting rights;
- * preferential subscription right in the event of a capital increase to avoid dilution of the shareholder's voting rights.

This security can be:

- * OTC, in the event that the company places its shares directly with investors who have provided the funds in return;
- * listed on the stock exchange when there is a public offering.



Management on behalf of third parties

Management methods

Equity		FIXED INCOME: Bond or money market	
Fundamental	Quantitative	Technical	
Top-down		Bottom-up (stock-picking)	
Geographical	Sectorial	ESG / SRI	
Value	GARP / Blend Growth At Reasonnable Price	Growth	



Active approach

Top down management



Consists of analyzing all the factors likely to influence the evolution of a financial asset to deduce an allocation (6 to 12 months) by favoring:

- one asset class compared to another on the one hand
- a market (or an area) in relation to another on the other hand

Factors Analyzed:

Fundamentals : at the macro / micro-economic level

- economic cycle
- monetary cycle
- dynamics of corporate profits

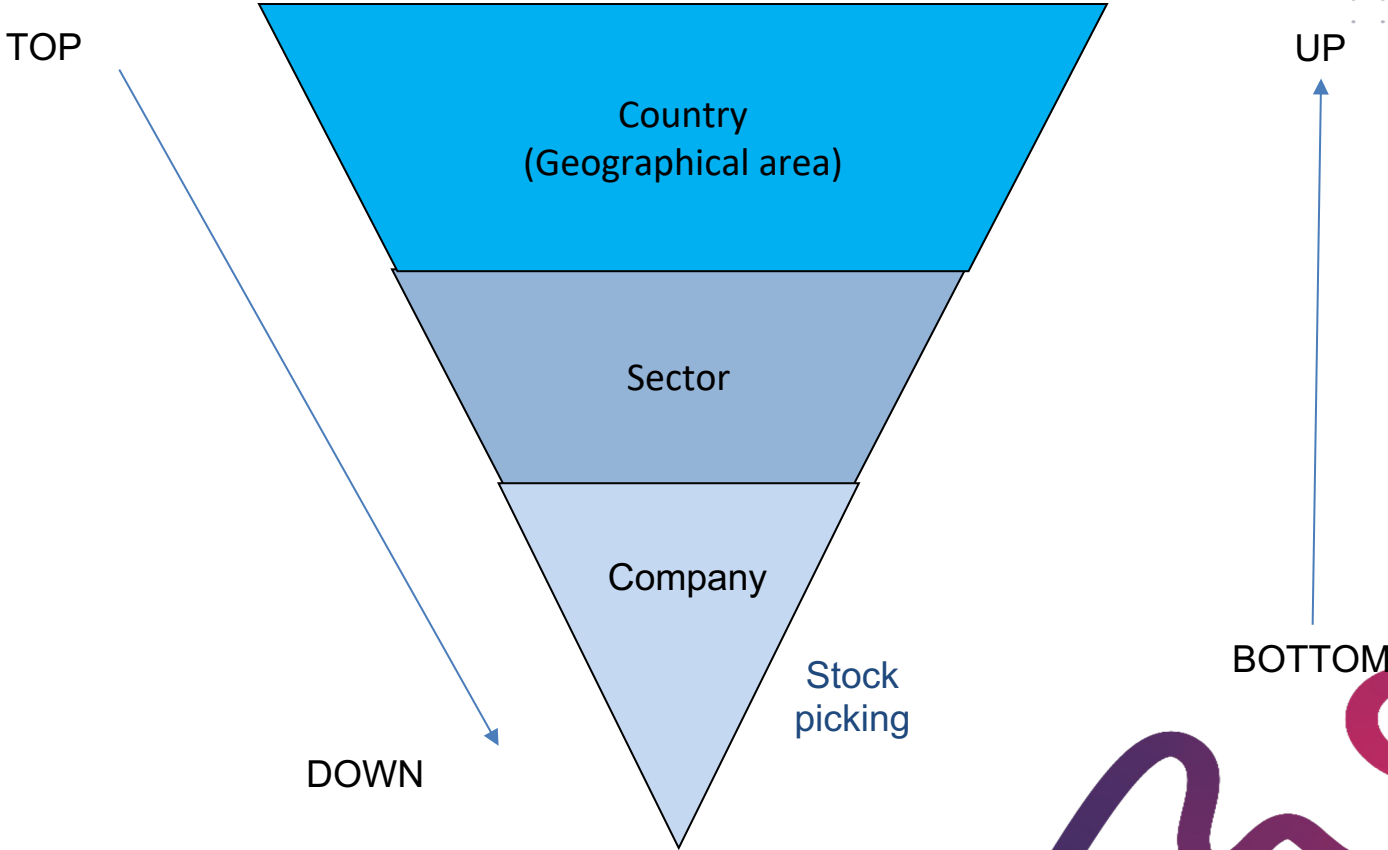
Evaluation relative markets

Market dynamics : volatility, liquidity factors, flows and volumes, technical analysis



Active Management

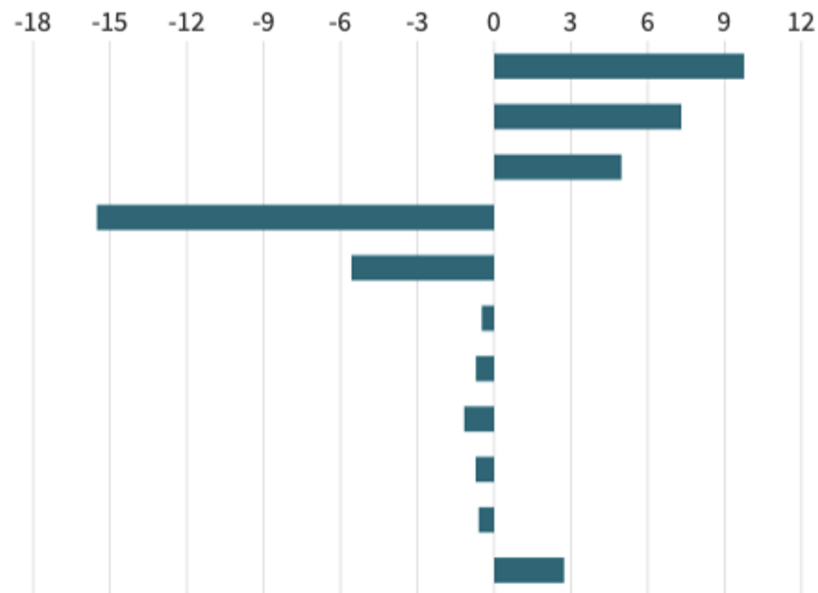
Top down



Geographical Breakdown (%)

	Portfolio	Benchmark
France	46.56	36.81
Italy	14.61	7.29
Spain	12.50	7.53
Germany	9.81	25.32
Netherlands	7.64	13.22
Finland	2.69	3.17
Belgium	2.48	3.19
Ireland	0.98	2.15
Portugal	0.00	0.72
Austria	0.00	0.60
Cash	2.73	0.00

Active Exposure by Geography (%)

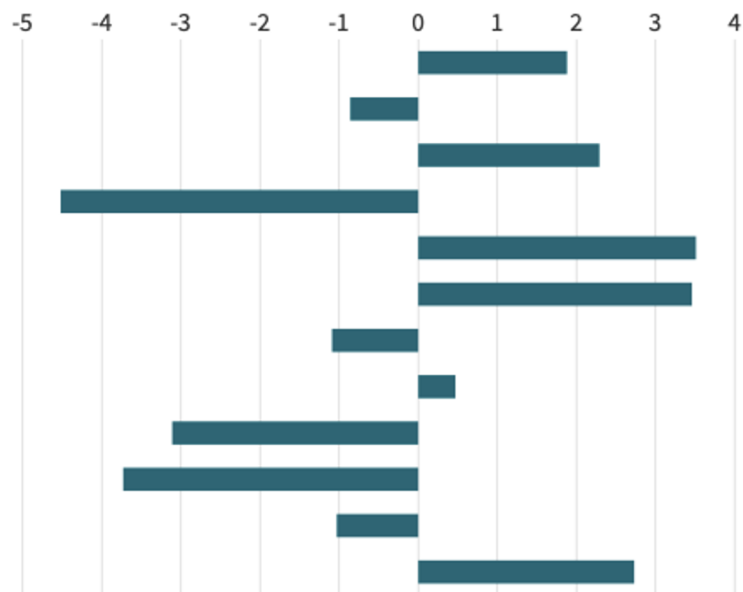


AXA IM Eurobloc Equity

Sector Breakdown (%)

	Portfolio	Benchmark
Financials	18.20	16.31
Industrials	14.59	15.45
Information Technology	14.30	12.01
Consumer Discretionary	10.95	15.47
Utilities	10.09	6.58
Communication Services	7.81	4.35
Health Care	7.37	8.46
Materials	6.90	6.43
Consumer Staples	5.23	8.34
Energy	1.84	5.56
Real Estate	0.00	1.03
Cash	2.73	0.00

Active Exposure by Sector (%)



Stock picking

AXA IM Eurobloc Equity

Top 5 Overweight (%)

	Port.	Bench.	Relative
FinecoBank Banca Fineco SpA	3.80	0.22	3.58
Publicis Groupe SA	3.53	0.32	3.21
Iberdrola SA	4.22	1.54	2.68
Intesa Sanpaolo SpA	3.41	0.81	2.60
Schneider Electric SE	4.17	1.65	2.52

Top 5 Underweight (%)

	Port.	Bench.	Relative
TotalEnergies SE	0.00	3.40	-3.40
SAP SE	0.00	2.34	-2.34
Siemens AG	0.00	2.31	-2.31
Airbus SE	0.00	1.53	-1.53
Prosus NV	0.00	1.24	-1.24

Company valuation

Three approaches

	Net worth	Cash flows	Peer Group
Underlying approach Appearance	Legal-accountant 50's	Economic 70's	Market 80's
Valuation tool	Corrected accounting balance	Feed update	Multiple
Concept Steps Time taken into account The firm	Patrimony Descriptive To (cumulative past) A stock	Investment Analytic Future An investment	Quoting Analog Short term An asset in the market
Benchmark Reference document	FP Balance sheet	Financial flows Flow table	Price / transaction Income statement



Portfolio management « Styles »

Value / GARP / Growth



The « **Value** » style involves investing in discounted securities, i.e. companies whose stock price is lower than its intrinsic value. To detect them, the "value" investor can, for example, use market multiples to compare companies with each other and/or with respect to their historical valuation: price relative to earnings (the famous "Price-Earnings ratio"), to the book value ("Price-to-Book ratio"), sales ("Price-to-Sales ratio"), cash flow ("Price-to-Cash-Flow ratio"), dividend.

The "**Growth**" investor looks for stocks with earnings growth potential above the market average. To detect these "growth" values, the investor can, for example, look in particular at the growth of profits (historically and prospectively), that of turnover, cash flow or even that of the book value of the business.

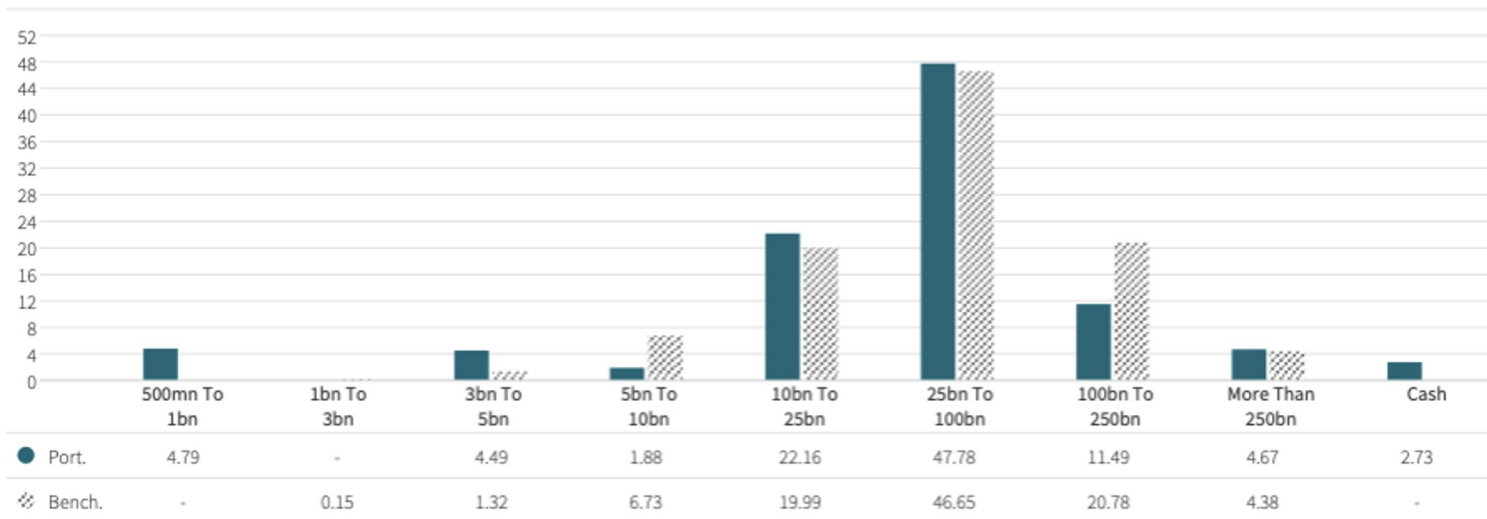


Market Capitalisation

Breakdown per market capitalisation (EUR - %)

Portfolio Analysis (Continued)

MarketCap Breakdown (EUR - %)



Thematic

Thematic investing, often referred to as "trend investing" or "mega-trend investing", is an umbrella term used to describe investment approaches based on certain economic, social, technological or corporate themes. In an ever-changing world, these topics typically focus on two drivers impacting long-term business behavior: demographic shifts and technological advancements.

Ageing and lifestyle

The number of over-60s ¹ is expected to triple in size between 2000 and 2050, creating challenges for companies and individuals.

Connected consumer

Only 18%² of global retail sales are transacted online, which will likely increase as smartphone adoption rises globally.

Automation

Forecast to grow 10-15% annually until 2025 ³, the robotics industry is rapidly changing how we live and work.

Clean Tech

Innovative companies are creating solutions to address pressures on scarce natural resources and the need for greenhouse gas emission reduction.

Transitioning societies

The growth of the global middle class is at a 150-year high⁴, boosting consumption in Asia and in the developing world.

Evolving trends

Discover a single point of access to the five major long-term growth themes we have identified in the evolving economy.

ESG Risk at the heart of the investment process

AXA IM

An exclusive ESG investment framework based on Environmental, Social & governance pillars and splitted across 6 factors :

- Portfolio managers use the ESG fundamental research to assess how the contemplated companies reduce ESG risks and use these factors to outperform their sector. ESG risks is taken into account along side with equity and credit risks,
- The Axa IM ESG quantitative team applies the proprietary ESG notation methodology taking into account these 6 pillars to get e final note per issuer from 1 to 10.
- Portfolio managers have access to these internal ESG notations and incorporate thme in their investment process
- In addition, AXA IM teams develop strategic partnerships with external providers, selected via robust RFP as well as on going reviews. It allows AXA to gather information about circa 7000 companies

ESG Risk at the heart of the investment process

AXA IM

AXA IM ESG norm aims at applying strict policies to develop ESG investments, among various areas :

- Climate risk (decrease of investments into coal and oil sands)
- Tobacco : prohibited sector
- Defence : restricted investment into companies which business activity includes development, maintenance or manufacturing of weapons,
- UNO Global Compact : prohibited investments into companies implied in any major violation of the UNO 10 key principles
- ESG quality : investment restricted in companies with worst ESG ratings



Part 5'

"Fixed income asset management"

AXA IM - Organization

Information correct as of 11 January 2024

Executive Chairman, AXA Investment Managers Marco Morelli ¹					
AXA IM Alts Isabelle Scemama ^{1,2} / Deborah Shire ^{1,3}	AXA IM Select Matthieu André ^{1,2}	AXA IM Core Hans Stoter ^{1,2}	AXA IM Prime Pascal Christory ^{1,2}	Global Transversal Functions	
Real Estate John O'Driscoll / Timothée Raully Alternative Credit Christophe Fritsch Infrastructure Mark Gilligan Natural Capital & Impact Investments Alexandre Martin-Min Client Group Florence Dard ¹	Global CIO Remi Lambert Client Offer Zaid Alrifai Distribution and Client Relations France Germani	COO Core Investments Geoffroy Reiss Fixed Income Marion Le Morhedec ¹ Equities Jeroen Bos Multi-Asset Laurent Clavel Client Group Pietro Martorella / André Thali Product and Client Strategy Nicolas Deschamps	Infrastructure Jean-Pascal Asseman Private Debt Fabien Ferrer Private Equity Peter Ischebeck Hedge Funds Johann Ropers Solutions CIO Marcus Thiel Business Development Corinne André	Internal Audit Erwan Boscher ²	Communications, Corporate Responsibility & ESG Development Marie Bogataj ²
				Macro Research & Responsible Investment (RI) Centre Gilles Moëc ²	Human Resources Frédéric Clément ^{1,2}
				General Secretary Jean-Christophe Ménioux ^{1,2} Legal Finance Risk Management Compliance & Regulatory Affairs	Global Operations Caroline Portel ^{1,2} Operations Data Management Technology Facilities & Innovation Project Management Security Procurement

The debt market

Fixed income

Counterparty risk

- Investment grade
- High yield

Legal status

- Credit
- Title

Duration

- Short term: Money market
- Medium & long term: bond market



Debt securities

Ratings

**Investment
Grade**

**Non-
Investment
Grade**

*High Yield
"Junk"*

Default

MOODY'S

S&P Global

FitchRatings

Moody's	S&P	Fitch
Aaa	AAA	AAA
Aa1	AA+	AA+
Aa2	AA	AA
Aa3	AA-	AA-
A1	A+	A+
A2	A	A
A3	A-	A-
Baa1	BBB+	BBB+
Baa2	BBB	BBB
Baa3	BBB-	BBB-
Ba1	BB+	BB+
Ba2	BB	BB
Ba3	BB-	BB-
B1	B+	B+
B2	B	B
B3	B-	B-
Caa	CCC	CCC
Ca	CC	CC
C	C	C
C	D	D

State debt

Funding sources Issuance of debt securities

T-Bills
Gilts

Taxes

Asset disposal

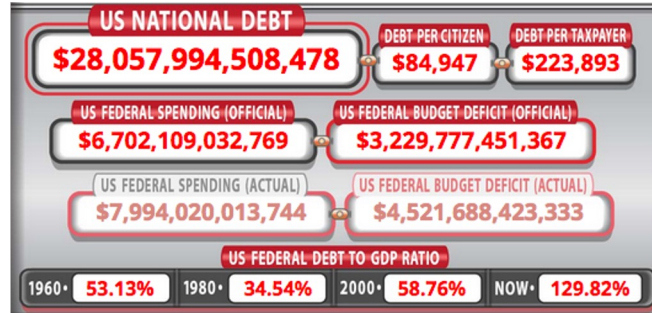
Real estate
Privatizations

2 032 414 237 173 € Encours de la dette négociable de l'État <small>31 janvier 2021</small>	
8 ans et 120 jours Durée de vie moyenne de la dette négociable <small>31 janvier 2021</small>	
-0,09 % TEC 10 <small>16 mars 2021</small>	-0,13 % Taux Moyen Pondéré OAT (moyenne des émissions annuelles 2021) <small>26 février 2021</small>

Table 1: General government gross debt, UK, financial year ending March 2013 to financial year ending March 2020¹

	£ billion ⁴							
Financial year ¹ ending March ²	2013	2014	2015	2016	2017	2018	2019	2020
Debt ³	1,424.2	1,520.9	1,602.6	1,650.9	1,719.6	1,763.4	1,820.9	1,876.8
as % GDP	82.6	84.2	85.5	85.2	85.3	84.7	84.1	84.6

Source: Office for National Statistics - UK government debt and deficit






Debt securities

Loans on the market



A **BOND** represents a debt security on the issuer (company, State), the nominal amount (face value) of which is reimbursed by the latter at maturity. It is accompanied by a rate of remuneration and a term determined at issue. Bonds are distinguished according to their rate, the terms of issue and amortization, the method of payment of the coupon (interest) and the signature of the issuer.

The **NEGOTIABLE DEBT SECURITIES** are short or medium term financial instruments traded on the money market. Negotiable debt securities are transferable securities, the legal form of which is applied to a category of means of payment, promissory notes.

A decorative graphic at the bottom right of the slide, consisting of a thick, wavy line that starts in a dark purple color and transitions into a bright red color, forming a stylized, abstract shape.

Debt securities

Loans on the market

Issuer / Duration	Short Term (<1 year)	Middle term	Long term
States	BTF T-Bills	Schatz Bobl T-Notes	OAT BUND GILTS T-Bonds
Companies	Negotiable European Commercial Paper	Medium-term negotiable securities Medium term notes	Obligations Bonds
Banks	Negotiable European Commercial Paper Certificates of deposits	Medium-term negotiable securities Medium term notes	Obligations Bonds
Insurance			CAT BONDS
Securitization		ABS / CDO	



Fixed income at AXA IM

Fixed income in numbers

€466bn

of assets¹

c.120

fixed income professionals¹

25+ years

experience in fixed income¹

Strategies

Investment grade credit

Inflation-linked bonds

Government bonds

Aggregates

Money markets

Short duration bonds



Part 6

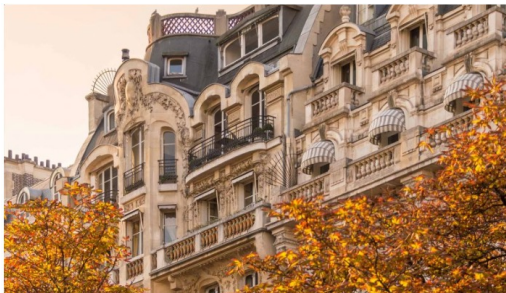
« Alternatives »

AXA IM - Organization

Information correct as of 11 January 2024

Executive Chairman, AXA Investment Managers Marco Morelli ¹							
AXA IM Alts Isabelle Scemama ^{1,2} / Deborah Shire ^{1,3}		AXA IM Select Matthieu André ^{1,2}		AXA IM Core Hans Stoter ^{1,2}		AXA IM Prime Pascal Christy ^{1,2}	
Real Estate John O'Driscoll / Timothée Raully Alternative Credit Christophe Fritsch Infrastructure Mark Gilligan Natural Capital & Impact Investments Alexandre Martin-Min Client Group Florence Dard ¹		Global CIO Remi Lambert Client Offer Zaid Alrifai Distribution and Client Relations France Germani		COO Core Investments Geoffroy Reiss Fixed Income Marion Le Morhedec ¹ Equities Jeroen Bos Multi-Asset Laurent Clavel Client Group Pietro Martorella / André Thali Product and Client Strategy Nicolas Deschamps		Infrastructure Jean-Pascal Asseman Private Debt Fabien Ferrer Private Equity Peter Ischebeck Hedge Funds Johann Ropers Solutions CIO Marcus Thiel Business Development Corinne André	
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				General Secretary Jean-Christophe Ménioux ^{1,2} Legal Finance Risk Management Compliance & Regulatory Affairs		Global Operations Caroline Portel ^{1,2} Operations Data Management Technology Facilities & Innovation Project Management Security Procurement	

Alternatives



INVESTMENT EXPERTISE

Real Estate Equity



INVESTMENT EXPERTISE

**Private Debt &
Alternative Credit**



INVESTMENT EXPERTISE

**Private Equity &
Infrastructure**



€183^{bn}¹

In assets under management

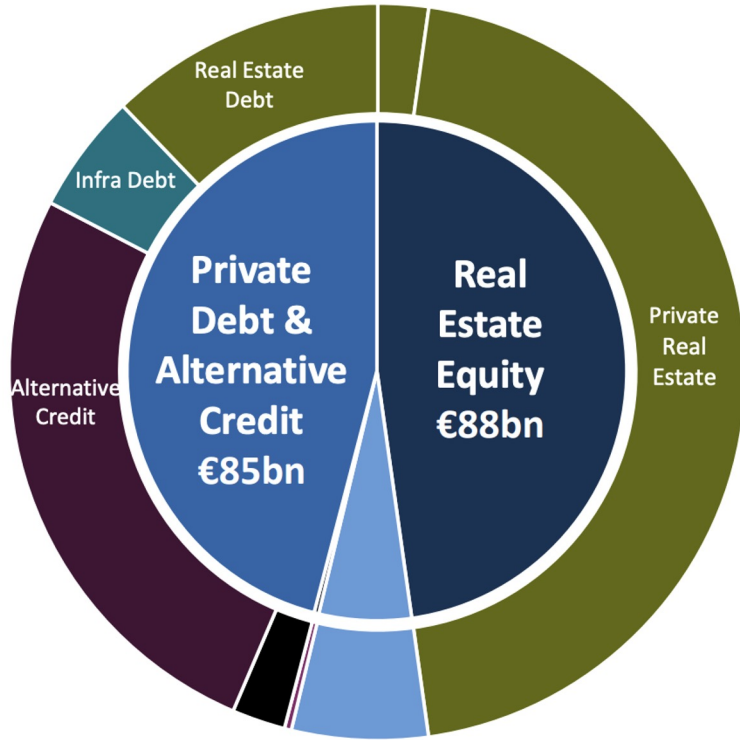
30+¹

years of track record

470+¹

investment professionals

3 key pillars



Private Equity & Infrastructure

5 business lines



CAPZA

Part 6

« Alternatives »

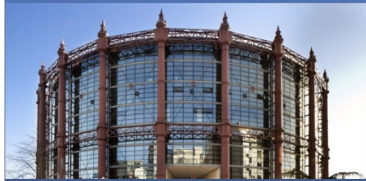
Real estate

What we do: Acquire, manage & dispose buildings



5 main asset classes: Office, Retail, Residential, Logistics & Alternative

Real estate



STRATEGY

AXA CoRE

Our open-ended real estate strategy seeks long-term, stable income from real estate assets in core markets across Europe.



STRATEGY

Residential

Offering global investors access to a highly diverse portfolio of residential assets in markets where rental growth can be supported by social and macro changes across Europe.



STRATEGY

Logistics

Targeting regular income and long-term capital appreciation while giving investors access to sectors supported by structural changes through a diversified portfolio of European logistics assets.



STRATEGY

Forestry

Investing in sustainable forests that protect global ecosystems, capture carbon and can provide a competitive return.

A selective approach

The strategy offers a distinctive value proposition based on 3 pillars:

1. Focus on major cities with population and economic growth
2. Focus on high-quality assets with modern building specifications
3. Targeting resilient income profile with good tenant covenants and lease terms

Targeted growth

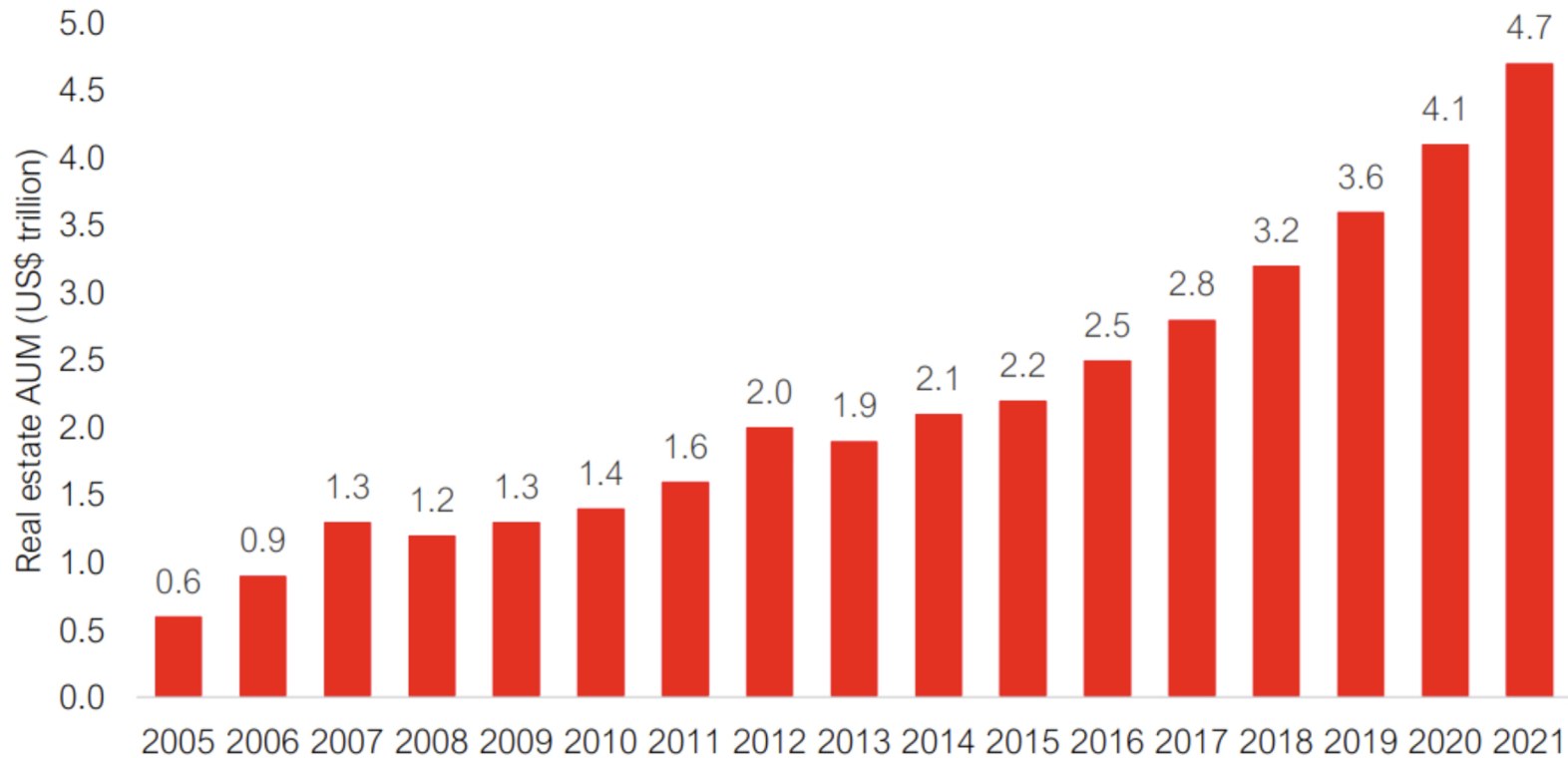
Capitalising on urbanisation and technology trends, we target a balanced mix of office, retail, industrial, residential and hotel assets in key cities and major hubs across Europe.

Strategic areas

Our goal is to select established and transparent markets across Europe. We focus on key cities with recognised liquidity to build a diverse portfolio that balances risk and growth opportunities.

Real estate funds

AUM



Real estate funds

Ranking

Total gross value of real estate assets under management (US\$ million, as of Dec. 31, 2019)								
Rank	Fund manager	Total	North America	Europe	Latin America	Asia	Australasia	Middle East
1	Blackstone	278,712.00	68,478.00	67,026.00	—	19,208.00	—	—
2	Brookfield Asset Management	208,182.00	149,271.00	35,539.00	2,810.00	10,064.00	9,837.00	661.00
3	Nuveen Real Estate	132,656.87	97,692.54	31,121.07	141.00	3,702.26	—	—
4	Hines	132,227.00	99,872.00	25,546.00	2,877.00	3,818.00	114.00	—
5	AXA Investment Managers – Real Assets	102,418.38	13,350.03	82,959.73	—	2,120.78	3,985.59	2.25
6	CBRE Global Investors	102,000.00	31,900.00	59,600.00	—	10,500.00	—	—
7	Swiss Life Asset Managers	100,818.53	—	100,818.53	—	—	—	—
8	UBS Global Asset Management	100,683.00	38,153.00	41,476.00	—	21,054.00	—	—
9	MetLife Investment Management	99,193.00	87,334.00	4,100.00	1,023.00	—	6,736.00	—
10	Principal Real Estate Investors	86,825.38	77,677.90	6,065.42	55.39	2,375.84	650.83	—
11	Invesco Real Estate	84,689.00	62,757.00	14,596.00	—	7,336.00	—	—
12	AEW Global	77,985.00	37,457.00	37,000.00	—	2,945.00	583.00	—
13	J.P. Morgan Asset Management – Global Real Assets	72,783.80	64,851.00	6,163.20	—	1,769.60	—	—
14	GLP	72,700.00	800.00	8,450.00	3,750.00	59,700.00	—	—
15	DWS	72,418.69	32,446.05	34,920.48	—	5,052.15	—	—
16	PGIM	72,208.90	54,025.60	7,910.70	3,141.40	7,131.20	—	—
17	Credit Suisse Asset Management	70,906.90	3,078.45	63,824.14	2,104.53	862.00	1,037.78	—
18	LaSalle Investment Management	69,453.00	22,928.00	23,347.00	188.00	8,640.00	1,755.00	—
19	Prologis	59,529.00	26,629.00	19,606.00	2,829.00	10,465.00	—	—
20	NYL Investors	58,287.00	58,287.00	—	—	—	—	—
21	Starwood Capital Group	57,494.70	47,594.00	9,048.40	124.50	727.80	—	—
22	Clarion Partners	54,931.00	54,083.00	773.00	75.00	—	—	—
23	Deka Immobilien Investment/WestInvest	54,006.40	2,222.95	50,052.24	791.50	404.17	535.53	—

Part 6

« Alternatives »

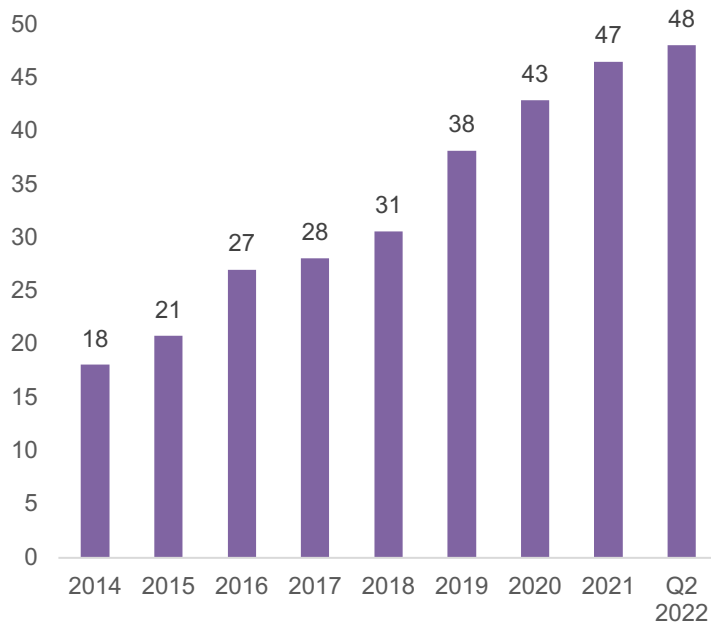
Alternative credit



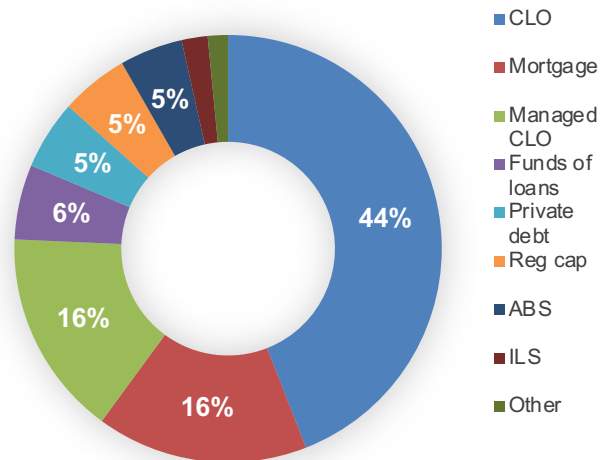
An early mover in non-traditional credit & market's disintermediation

Covering a wide range of alternative credit investment solutions

Alternative Credit Business Line
AUM historical evolution (€bn)



Alternative Credit Business Line
AUM split



Source: AXA IM Alts data (unaudited) as at 30 June 2022.

For illustrative purpose only. AUM growth is not indicative of future evolution. Diversification does not ensure profit or protection against loss.



Securitization

Financing solution through selling assets



Securitization is a method of financing through the transfer of assets.

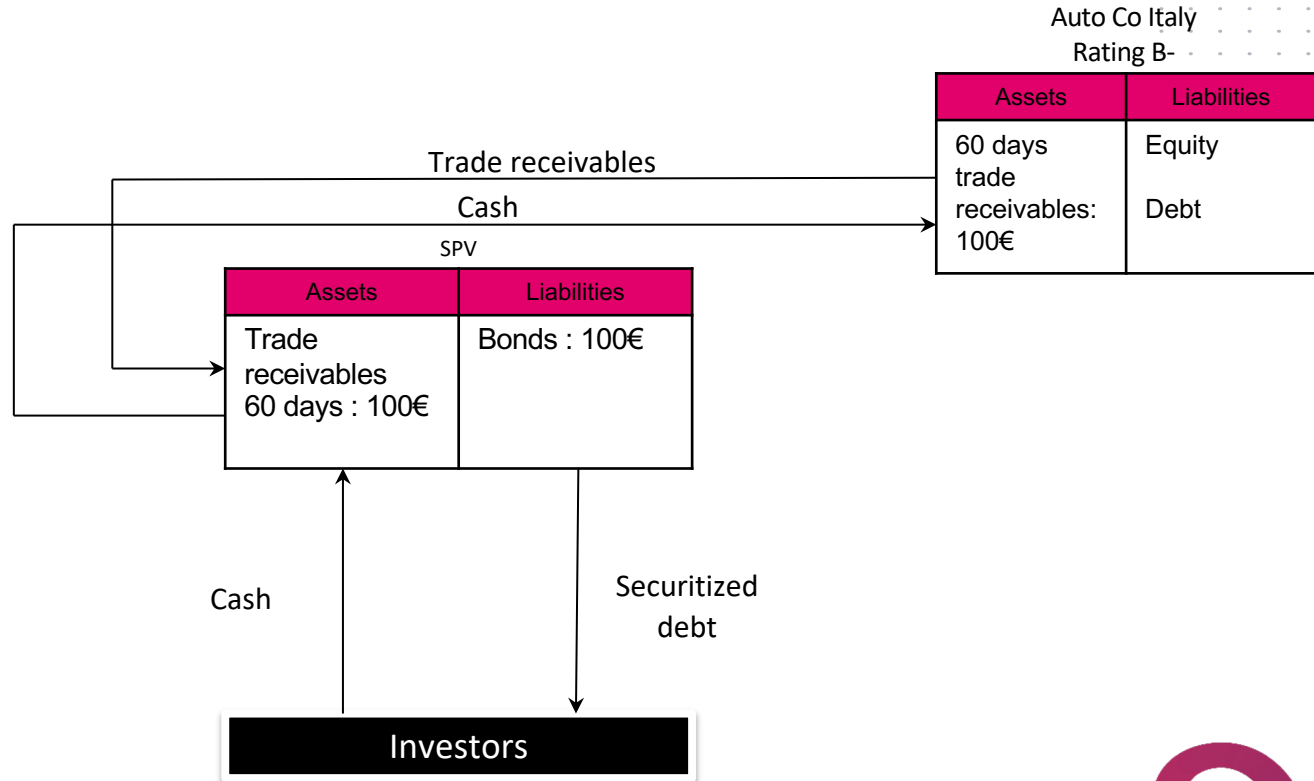
It involves the transfer of assets to a vehicle that refinances itself by issuing debt securities. Only the quality of the assets will allow the repayment of the debt.

It is a method of financing whose cost is uncorrelated with the risk of the issuer but depends only on the quality of the assets sold.



Securitization

Example



Asset Backed Securities

Types	Asset Class	Description
Mortgages	RMBS	<ul style="list-style-type: none">Residential mortgages that can be prime, buy-to-let and non-conformingLoans are mainly amortizing where cash flows include interest and principal payments.
	CMBS	<ul style="list-style-type: none">Commercial mortgages that are mainly interest-only loans
Consumer assets	Credit Cards ABS	<ul style="list-style-type: none">Highly granular assets
	Consumer loans ABS	<ul style="list-style-type: none">Amortizing receivables including credit cards receivables, consumer loans (secured or unsecured), auto loans (new or used vehicles) or leases (equipment)
	Auto loans/leases ABS	<ul style="list-style-type: none">Short maturity of loans receivables
Corporates loans	SME CLO	<ul style="list-style-type: none">Senior secured loans to Small-and-Medium EnterprisesGranular portfolio
	Leveraged loans CLO	<ul style="list-style-type: none">Senior secured loans of below investment grade companiesPortfolio is actively managed by a CLO manager

Types of ABS



Consumer & Residential ABS

- Auto loans and leases
- Credit card receivables
- Student loans
- Residential mortgage loans



Corporate ABS

- CLO
- CBO
- ABS CDO
- CRE CDO



Commercial ABS

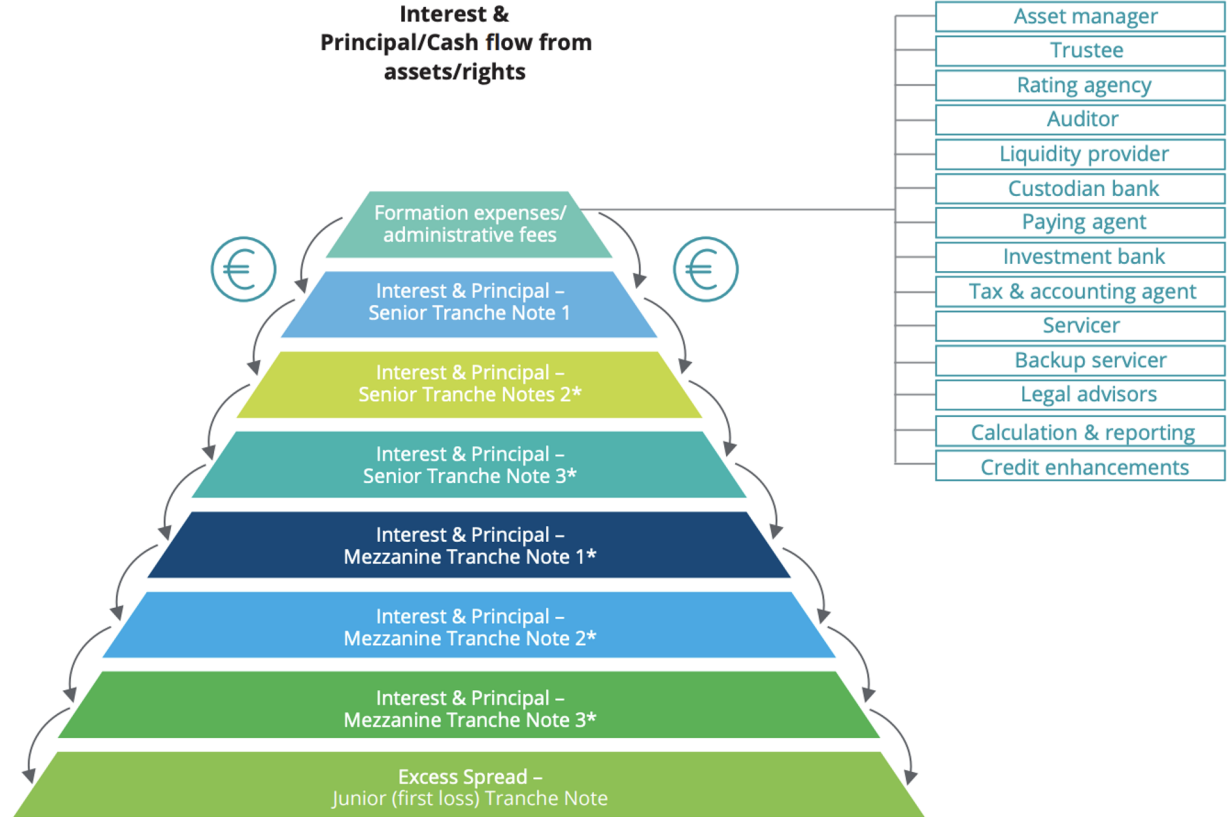
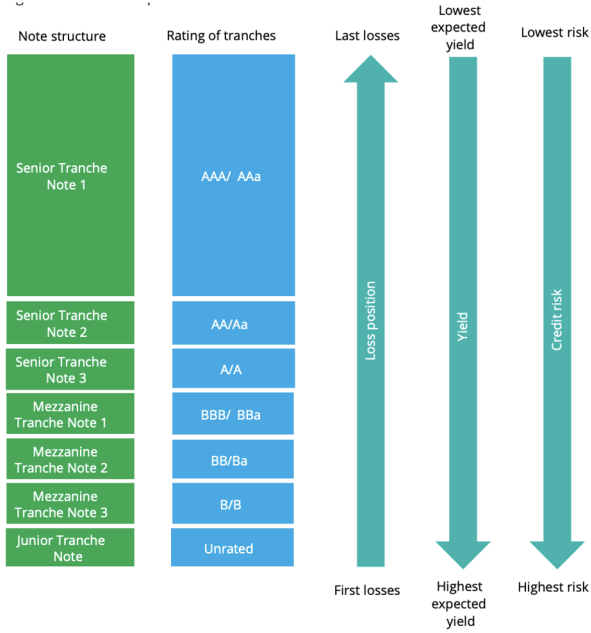
- Aircraft lease
- Maritime container lease
- Equipment lease
- Commercial mortgage loans



Whole Business ABS

- Franchise royalty
- Brand royalty
- Billboard lease

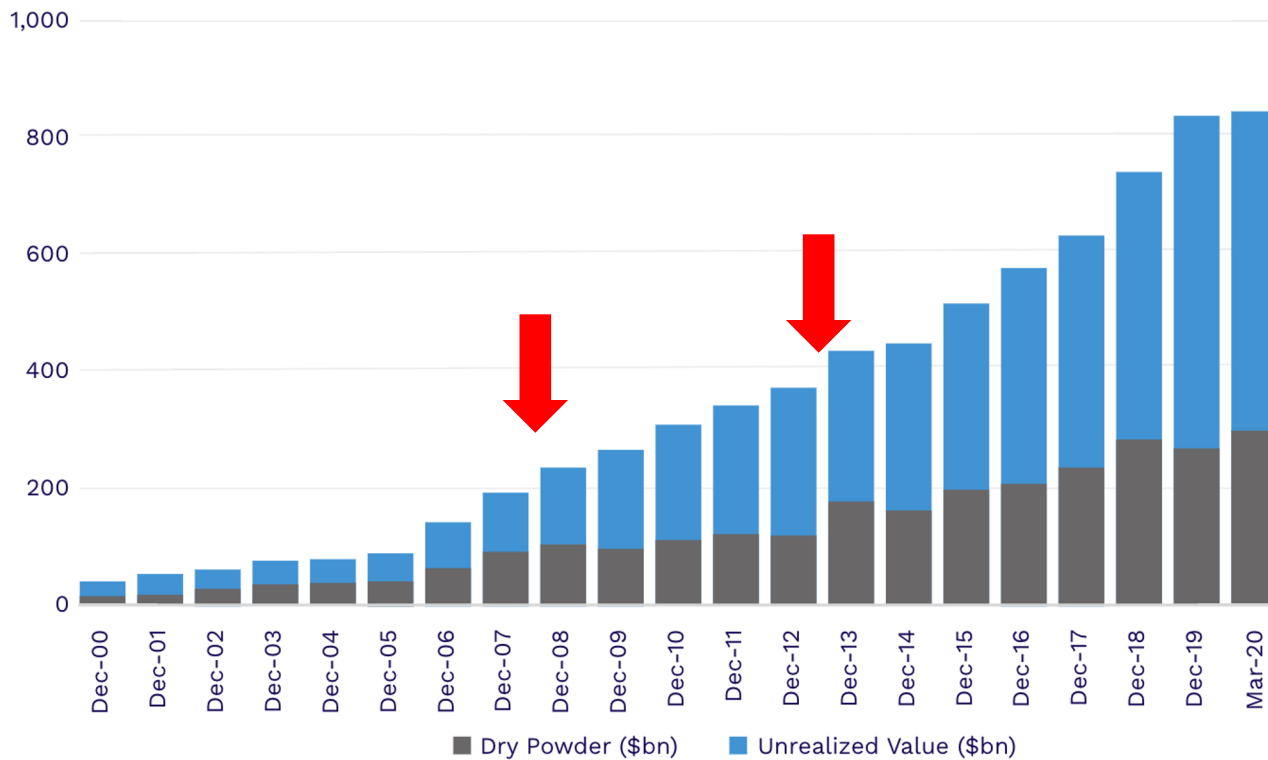
Tranches / Risk vs return



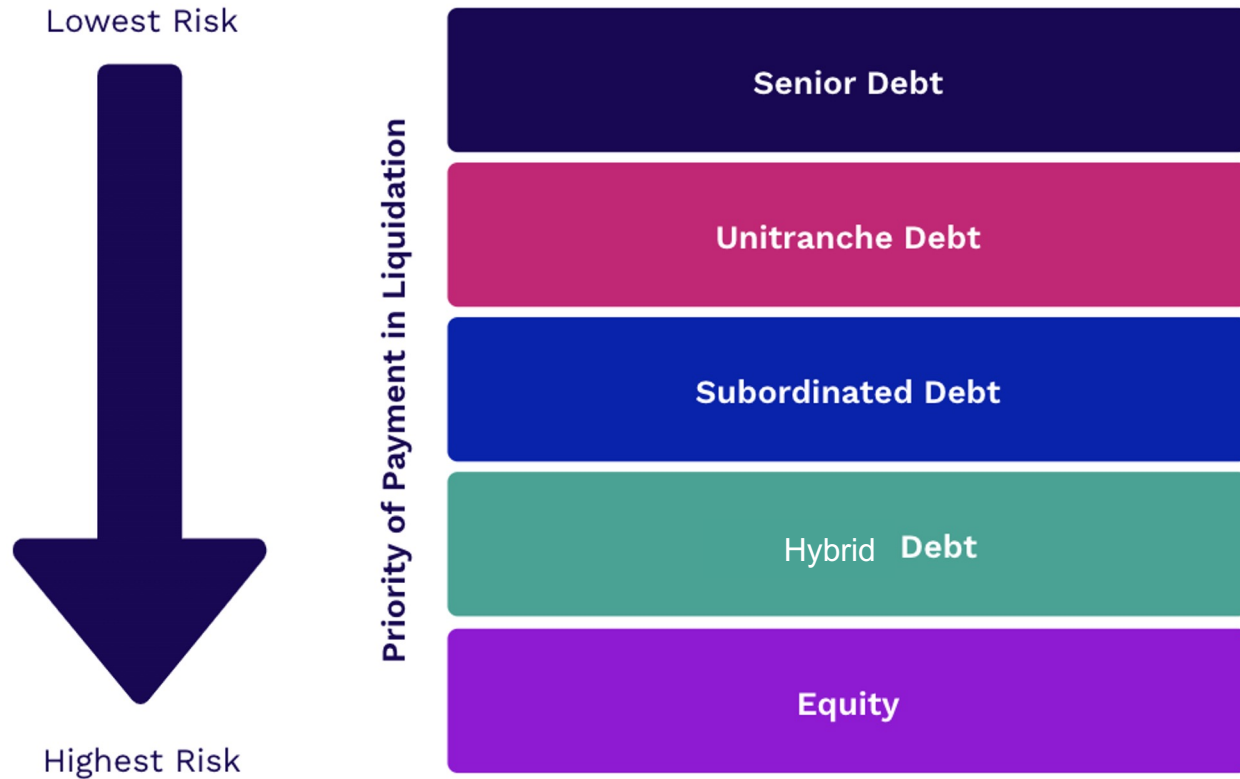
Private Debt

AUM

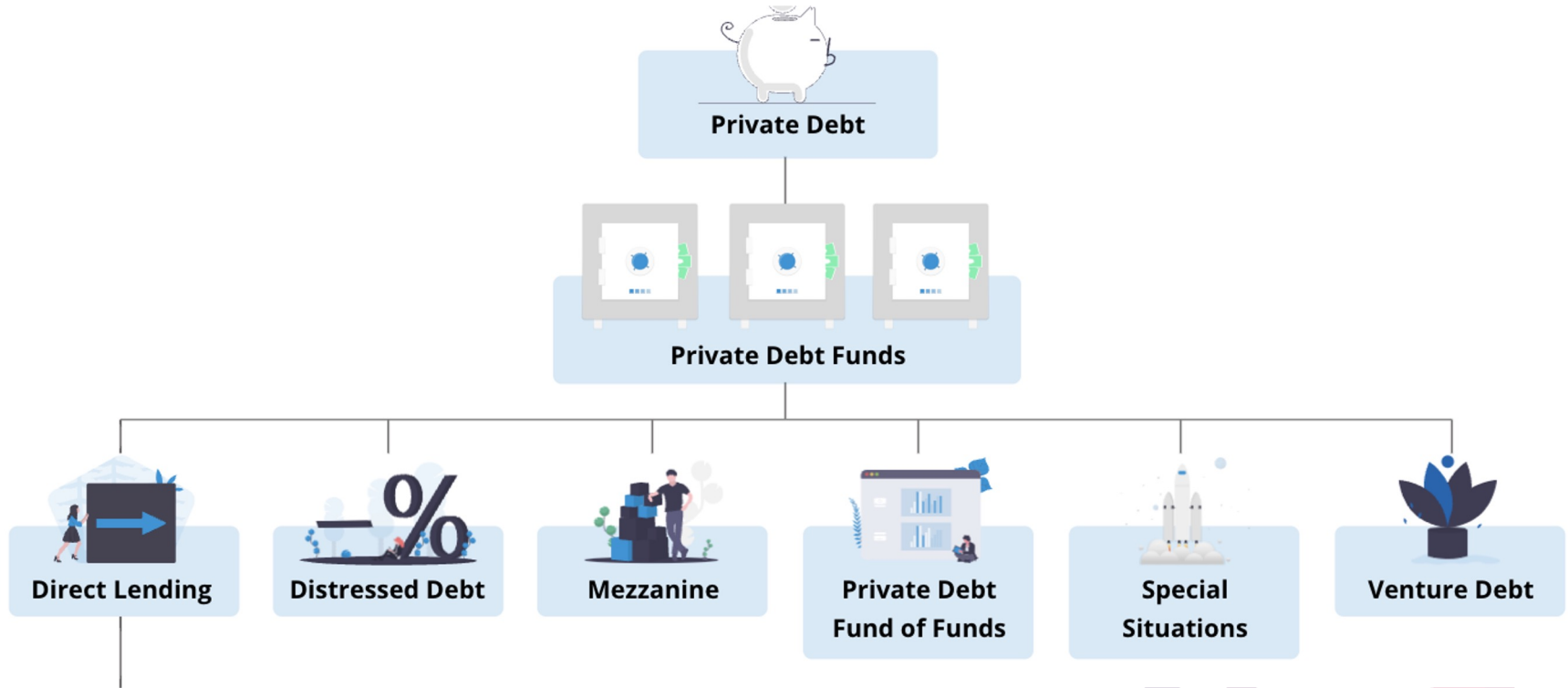
Private Debt Assets under Management, 2000 - Q1 2020



Types of debt



Private debt





Direct lending



Senior loans made to middle market companies without intermediaries. They may include RCF lines and second lien (mezzanine) loans.

Unitranche facilities, which combine different debt instruments under one umbrella, are also becoming increasingly common.

Unitranche debt refers to a type of financing that combines a senior and a mezzanine tranche into a single hybrid tranche, reflecting leverage and a weighted average rate.





Special situation & Distressed

Special situations

Debt investments made with the intention of taking control of a company, usually in financial distress. Special situations may include secondary market trading, direct origination or distressed debt where the manager believes there is a price dislocation.

Differs from special situations in that it generally involves the purchase of securities in the secondary market, rather than a new issue of debt or structured equity.





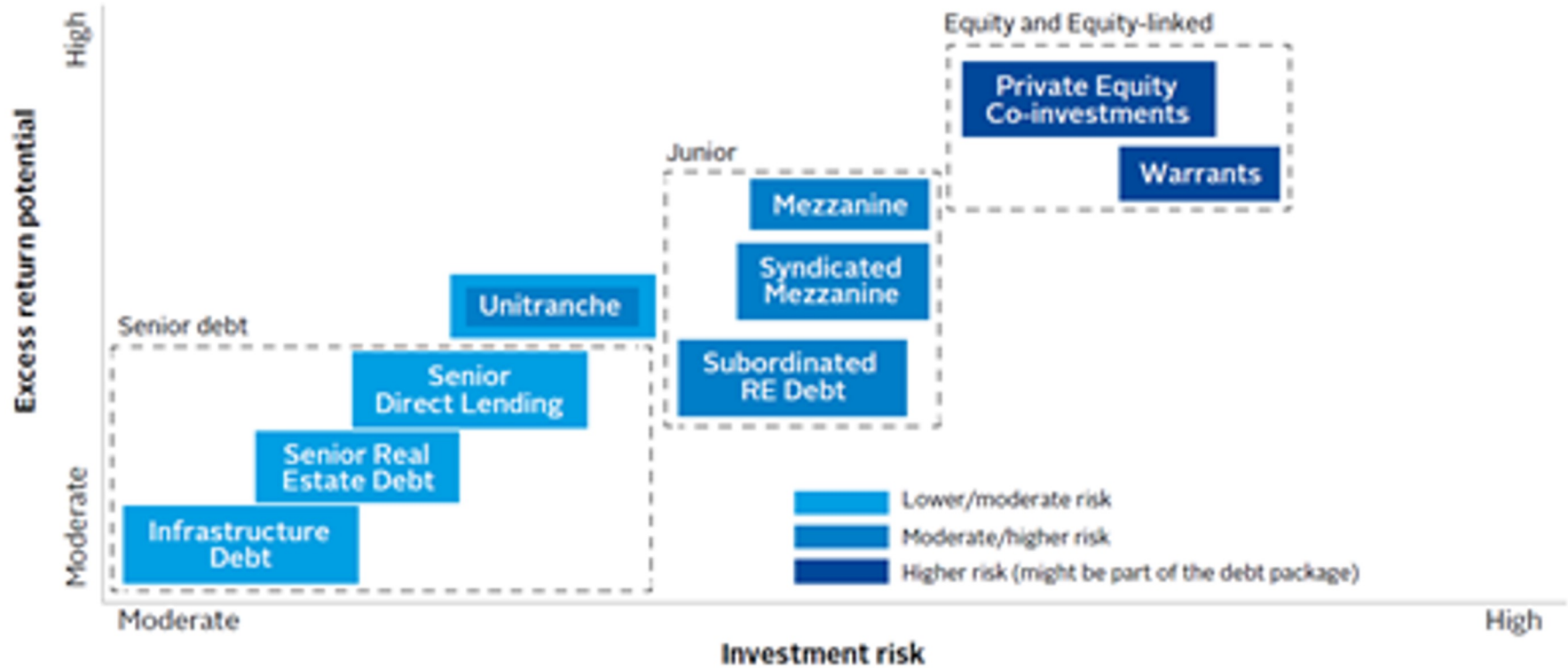
After 2 rounds of equity...

Debt financing provided to venture-backed companies. For entrepreneurs, venture debt - also known as a venture capital loan - allows for a longer exit period without further diluting ownership.

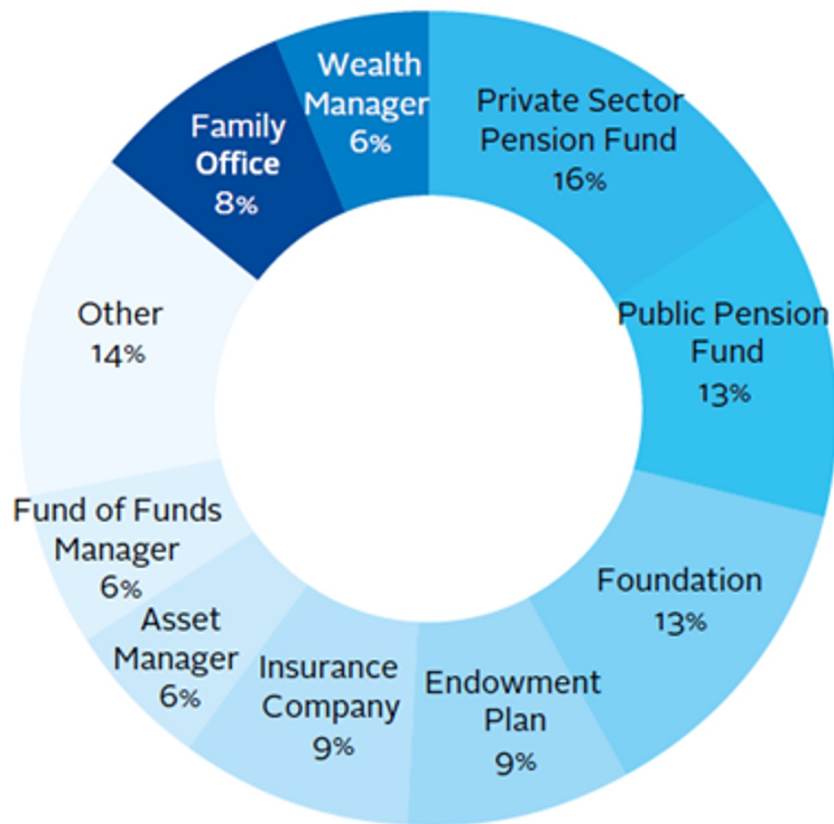
Venture debt is a type of short- to medium-term debt financing provided to venture-backed companies by specialized banks or non-bank lenders to finance growth and capital expenditures.



Risk / return of different strategies



Investors



Main private debt funds

Top private debt funds closing in H1 2022*

Fund name	Fund size (\$M)	Fund type	Fund location
Blackstone Capital Opportunities Fund IV	\$8,750	Mezzanine	New York City, US
Crescent Direct Lending Fund III	\$6,000	Direct lending	Los Angeles, US
Monroe Capital Private Credit Fund IV	\$4,800	Direct lending	Chicago, US
Carlyle Credit Opportunities Fund II	\$4,600	Direct lending	Washington DC, US
Apollo Hybrid Value Fund II	\$4,600	Distressed debt	New York City, US
Thoma Bravo Credit Fund II	\$3,300	Direct lending	Chicago, US
AG Credit Solutions Fund II	\$3,100	Credit special situations	New York City, US
Oaktree Real Estate Debt Fund III	\$3,000	Real estate debt	Los Angeles, US
Bridge Debt Strategies Fund IV	\$2,900	Real estate debt	Salt Lake City, US
17Capital Credit Fund	\$2,844	Direct lending	London, UK

Source: PitchBook | Geography: Global

*As of June 30, 2022

Preqin forecasts

Annualised figures from October 2021 put private debt assets under management (AUM) near USD1.21 trillion for the full year, off the back of a decade of 13.5 per cent annual growth, according to the 2022 Global Private Debt Report, published by Preqin.

Preqin forecasts that private debt will continue to grow, with AUM more than doubling to USD2.69 trillion by 2026. Among investors surveyed by Preqin in November 2021, 36 per cent said they looked to private debt for a reliable income stream, while 37 per cent were attracted to its high risk-adjusted returns. Environmental, social, and governance (ESG) is also of growing importance to both investors and fund managers. Some of the largest private debt firms have launched record-breaking funds that have some level of ESG consideration. The momentum behind ESG in private debt will be driven by investors, and Preqin expects it to grow in tandem with the asset class itself.

Providing further evidence that the private debt market is rapidly expanding, deal volume has dropped almost 12 per cent annually over the three years ending 2020, despite a modest uptick in transaction values. Based on data to Q3 2021, deal activity should end the year on a similar level to 2020. The trend of fewer yet larger deals is indicative of a greater number of larger funds, or those able to make significant commitments. The result for the end investor may end up being more concentrated portfolios and lower returns.

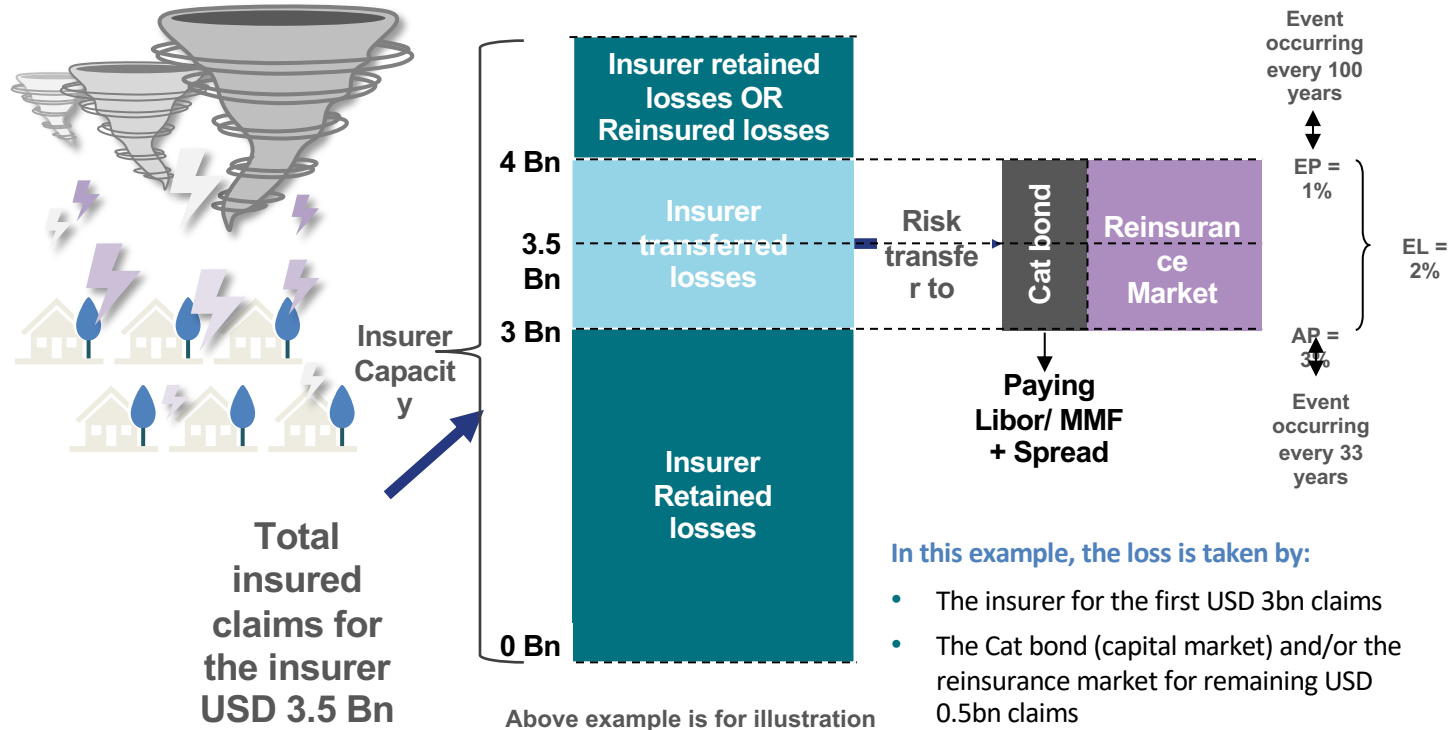
Among the strategies pursued by private debt funds, direct lending and distressed debt make up about 60 per cent of AUM in the asset class. According to Preqin data, direct lending will remain the largest strategy, with investors attracted to its more stable return profile in volatile markets. The strategy's AUM (USD452bn) is now nearly double that of the second-largest strategy, distressed debt (USD277bn).

Preqin forecasts that the US market, which currently accounts for more than 60 per cent of private debt assets (USD738bn), will continue to dominate private debt investments. That said, AUM in Europe, which reached GBP364 billion at the end of 2021, has consistently shown double-digit growth, and several large European-focused funds have been raised in recent years. Private debt growth in Asia-Pacific will be slower, although the region should attract greater interest from managers looking for attractive deal pricing in a less-developed private debt market.

The ILS market is an alternative to the traditional reinsurance market

A cat bond is indeed very similar to a reinsurance contract in terms of risks covered

A hurricane makes landfall...



Above example is for illustration only

EL = Expected Loss, average loss over all scenarios, expressed as a percentage of the principal amount.
 AP = Attachment Probability, probability of exceeding the ILS trigger level which would cause the first-dollar loss to the ILS.
 EP = Exhaustion Probability, probability of 100% loss to the ILS. Images for illustrative purposes only.

Part 6

« Alternatives »

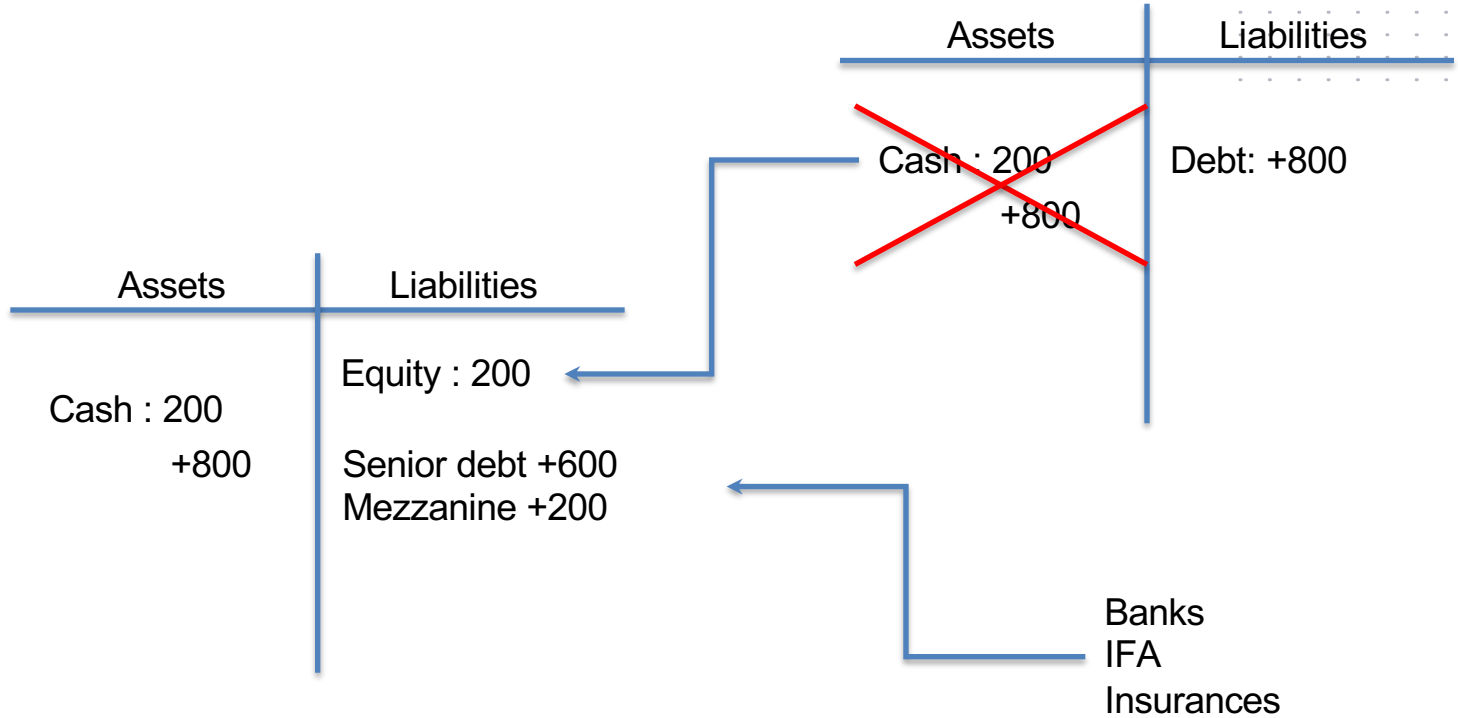
Infrastructure debt

Infrastructure

Debt used for infrastructure development and investment in existing assets, typically with longer terms (30+ years) due to the extended useful life of assets.



Project finance





Project finance



Project finance is the financing of an infrastructure, industrial project or public service based on a non-recourse or limited recourse financial structure.

The repayment of the debt depends on the cash flows generated by the project.

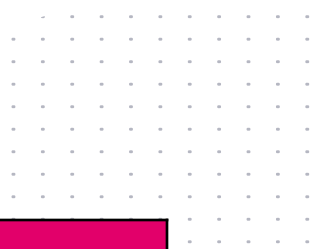
Project finance in a nutshell:

- Cash flow study
- Risk studies
- Risk allocation
- Decision making



Project finance

Risks	Hedge



Taxonomie des investissements infrastructure



Core infrastructure



Core-plus infrastructure



Value-add infrastructure



Opportunistic infrastructure

- **Core infrastructure:** This is the most stable form of infrastructure equity investment, as these assets are generally the most core to the company or the least risky. Returns are generally from income, with limited upside from capital gains, and the assets are generally held for the long term (more than seven years). Revenues and cash flows are typically governed by rate regulation, availability agreements (which provide for the payment of revenues as long as a facility is able to operate), or long-term contracts with highly creditworthy counterparties, such as governments, municipalities, and leading industrial companies.
- **The super core** includes assets such as regulated utilities - which have regulated rates and low volume variation - and availability-based public-private partnership projects.
- **Core** includes unregulated pipelines and transportation-related assets such as toll roads, highways and airports, fiber optics and telecom towers.
- **Core-plus infrastructure:** These assets have some similarities to core infrastructure; however, the cash flows of core-plus assets are generally more variable. Income is still a component of the overall return, but there is also the potential for greater capital appreciation. The holding period for core-plus assets is generally longer than six years. Core-plus infrastructure still consists primarily of brownfield assets. These assets are generally less monopolistic than core infrastructure and may include a growth/GDP component or other form of asset or contract optimization.
- **Core-plus investments** carry more risk and can offer returns close to those of private equity investments, up to 15% or more. These assets mimic the characteristics of traditional infrastructure investments but are not universally considered part of the asset class. Examples of core-plus assets include fish transport, vacation villages and crematoria.

Taxonomie des investissements infrastructure



Core infrastructure



Core-plus infrastructure






Value-add infrastructure



Opportunistic infrastructure

- **Value-add infrastructure:** These investments typically include less monopolistic assets, assets that have a significant focus on growth, expansion or repositioning, and some greenfield assets. The holding period for value-add infrastructure is generally shorter than for core-plus infrastructure and is typically between five and seven years. Returns come primarily from capital appreciation rather than ongoing income.
- **Opportunistic infrastructure:** These are the assets with the highest degree of risk but also potential for return. They may be assets that are under development, located in emerging markets, subject to a high degree of volume or commodity price exposure, or in financial distress and in need of significant repositioning. In general, opportunistic infrastructure assets share many characteristics with private equity investments. Holding periods typically range from three to five years and returns are derived almost entirely from capital appreciation.

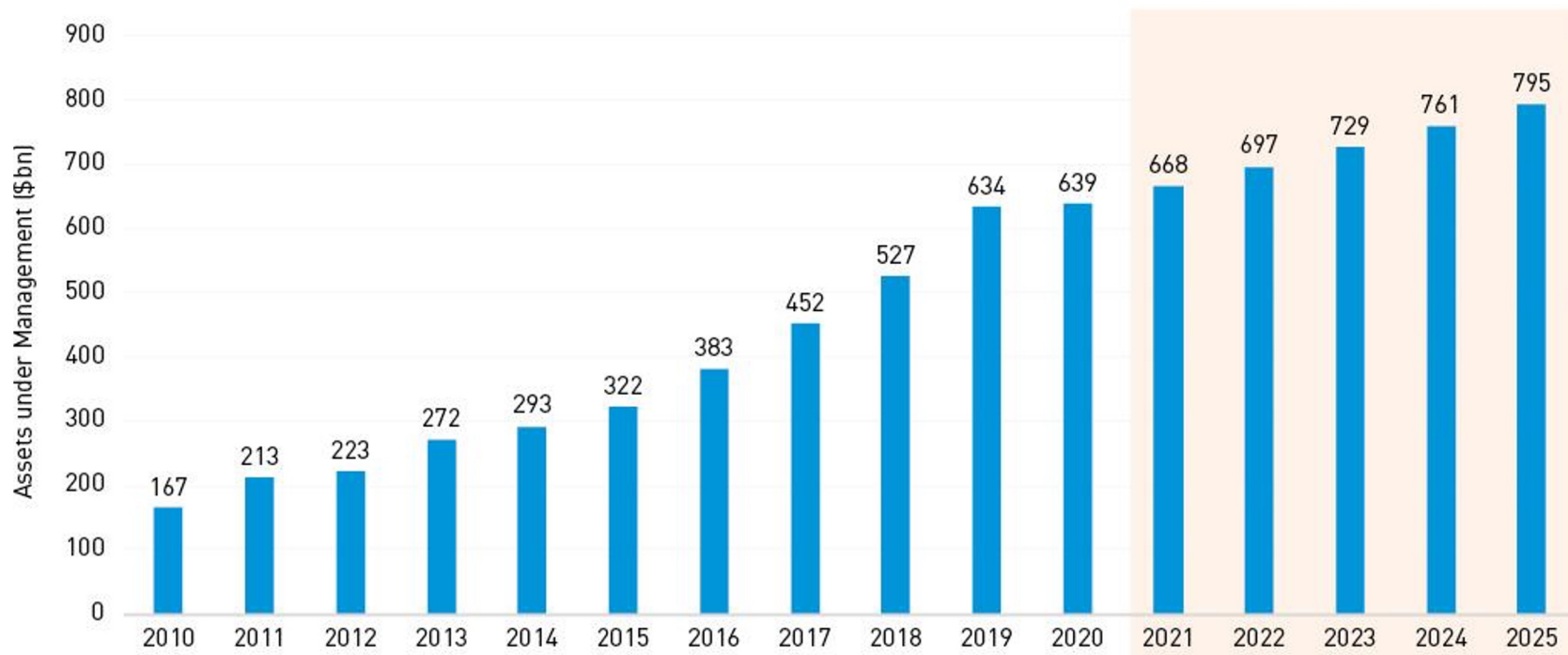
Taxonomy of infrastructure investments

Risk profile	Typical subsectors	Typical revenue drivers	Manager net IRR targets	Yield expectation	Implied capital gain expectation	Holding period (years)
 Core	<ul style="list-style-type: none"> Gas, electric, water/waste and multi-utilities Contracted and renewable power generation PPP assets Mature, top-tier airports, seaports or toll roads in major markets 	<ul style="list-style-type: none"> Rate regulation Long-term contracts with governments or creditworthy counterparties (such as quasi-governmental entities) Availability concessions with government agencies 	6%–9%	5%–7%	1%–2%	7+
 Core plus	<ul style="list-style-type: none"> Contracted thermal power generation Contracted renewable power generation with some development risk Contracted oil and gas midstream assets Toll roads, airports, seaports with greater GDP sensitivity 	<ul style="list-style-type: none"> Long-term contracts Concession arrangements subject to some volumetric/ GDP-linked risk 	9%–12%	4%–6%	5%–6%	6+
 Value add	<ul style="list-style-type: none"> Greenfield assets under construction (de-risked to core plus once commissioned) Early stage oil and gas midstream Data centers and fiber optic networks Assets undergoing meaningful expansion Assets undergoing meaningful repositioning 	<ul style="list-style-type: none"> Long-term contracts on greenfield assets Short-term contracts Contracts with less creditworthy counterparties Revenues reliant on meaningful ramp-up through GDP or demographic growth 	12%–15%	2%–3%	10%–12%	5–7

Infrastructure

AUM

Fig. 1: Unlisted Infrastructure Assets under Management and Forecast, 2010 - 2025*



*2020 figure is annualized based on data to October. 2021-2025 are Preqin's forecasted figures.

Source: Preqin

Infrastructure

Rankings

	Company	Infrastructure AUM (€m)	Total AUM (€m)	As at
1	Macquarie Infrastructure & Real Assets	209,377	239,974	31/12/2019
2	Brookfield Asset Management	117,211	374,696	31/12/2019
3	Global Infrastructure Partners	66,072	66,072	31/12/2019
4	M&G Investments/Infracapital	54,456	324,620	31/12/2019
5	IFM Investors	48,835	102,210	31/12/2019
6	Allianz Global Investors	35,000	563,000	31/12/2019
7	BlackRock	25,739	6,889,498	31/12/2019
8	AMP Capital	24,817	129,981	31/12/2019
9	MetLife Investment Management	23,239	543,806	31/03/2020
10	InfraRed Capital Partners	22,756	26,237	31/12/2019
11	DWS	20,736	767,399	31/12/2019
12	EIG Global Energy Partners	20,255	20,255	31/03/2020
13	Colony Capital	18,500	45,320	31/12/2019
14	Energy Capital Partners	17,857	17,857	31/12/2019



Part 6
« Alternatives »
Real estate debt

Real Estate

Debt

The most common real estate debt strategy is direct lending to acquire real estate. This can include the purchase and sale of securitized real estate loans in the secondary market (MBS). Risk profiles vary depending on the underlying assets.



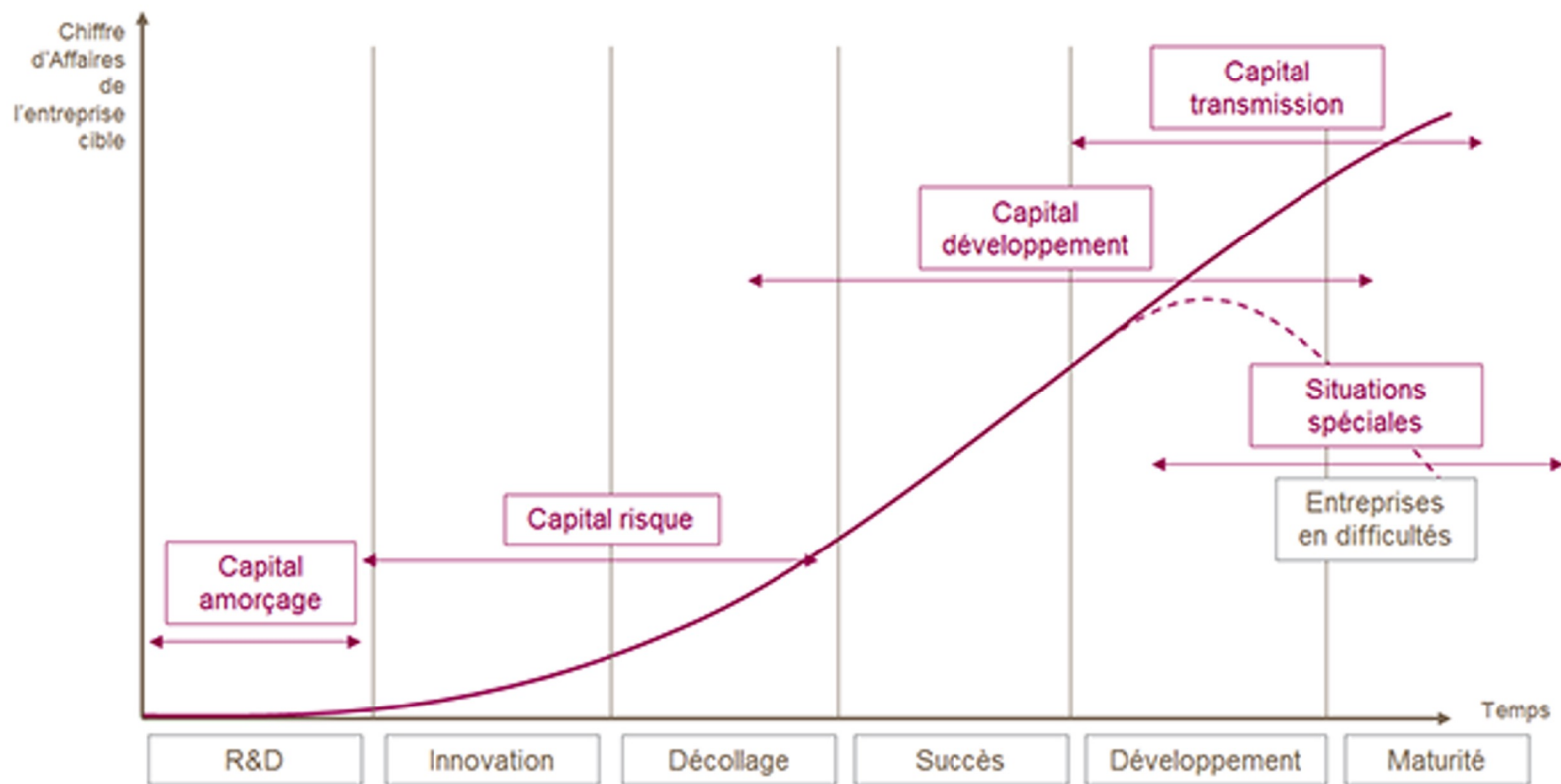
Part 6

« Alternatives »

Private equity

Private equity

Investment phases



Asset management Co

International
asset managers

Blackstone
KKR
Carlisle
Warburg Pincus
Bain
Carlisle
Apollo
CVC
EQT
Cinven
Apax
Permira
Ardian
PAI
Eurazeo
...

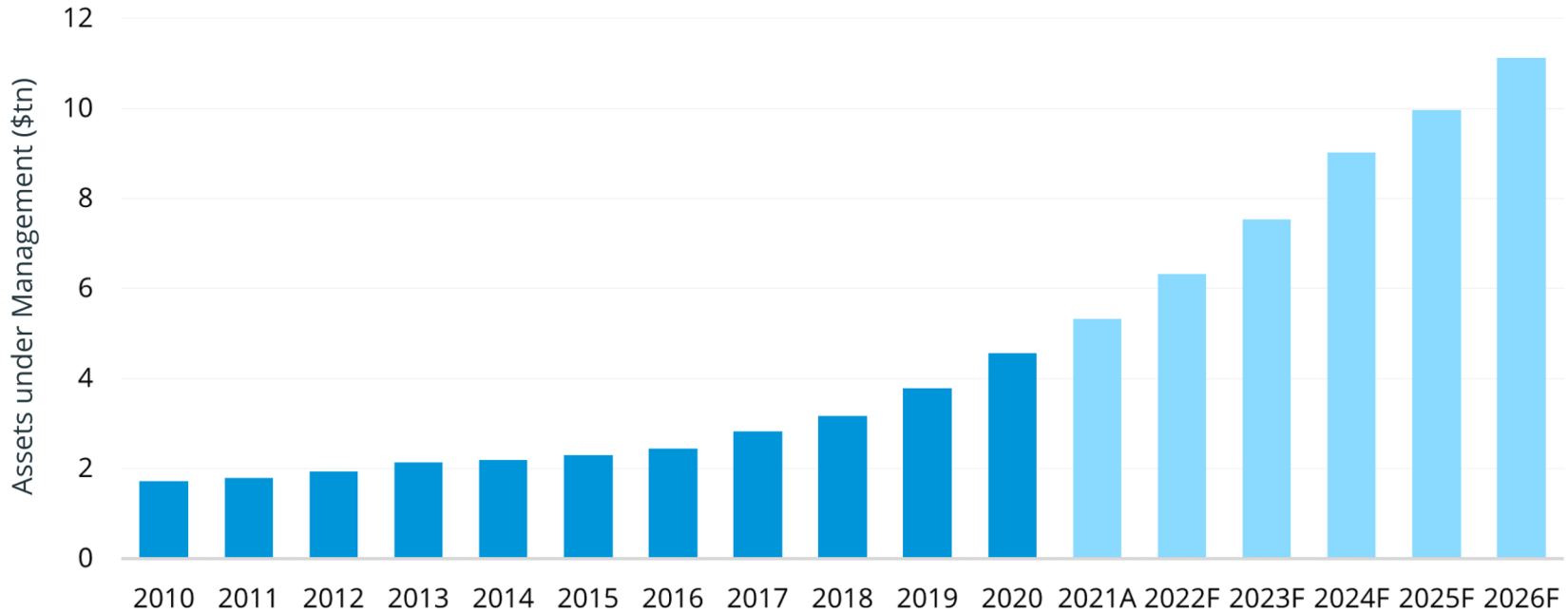
French Asset
managers

Andera
Qualium
Siparex
Naxicap
Tikehau
UI Gestion
Capza
MBO
BPI
Credit Mutuel Equity
Arkea Capital
BNP Dev
SGCP
...

Private Equity

AUM

Fig. 1: Private equity assets under management and forecast, 2010 - 2026F*



*2021 figure is annualized based on data to March. 2022-2026 are Prequin's forecasted figures

Part 6

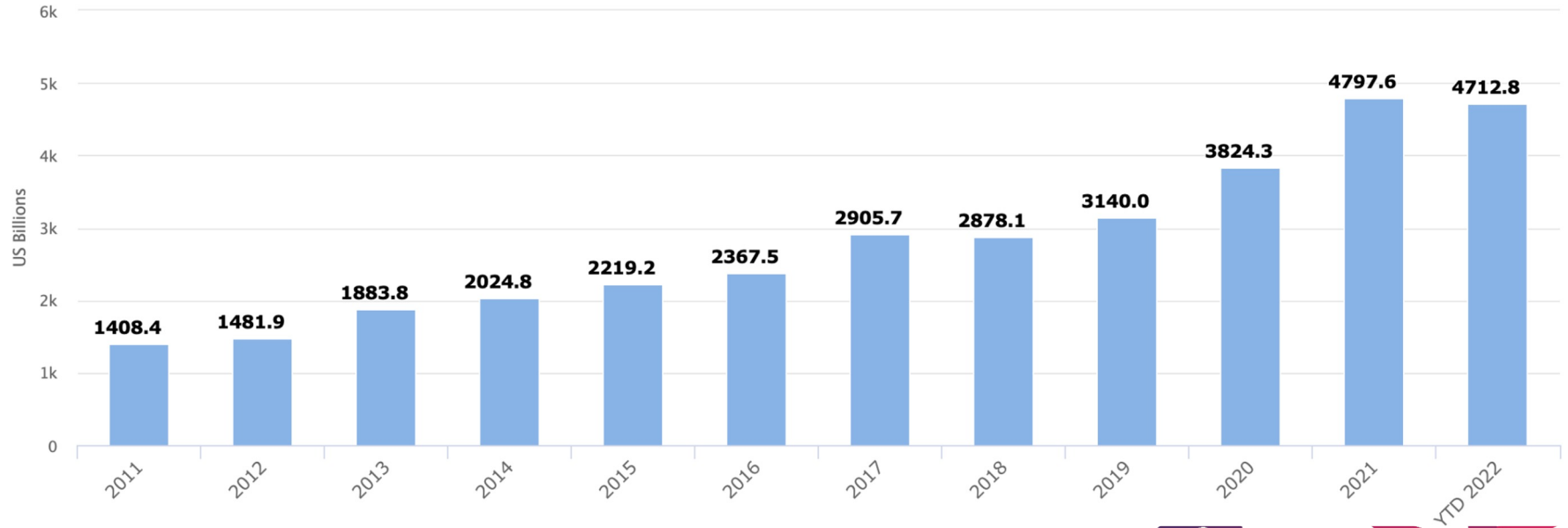
« Alternatives »

Hedge funds

Hedge funds

AUM

Assets Under Management – Historical Growth of Assets



Hedge funds

Ranking

Rank	Profile	Managed AUM	Type	Region
1.	Bridgewater Associates, LP	\$235,542,378,467	Hedge Fund Manager	North America
2.	Balyasny Asset Management	\$180,959,433,560	Hedge Fund Manager	North America
3.	Tiger Global Management LLC	\$124,655,466,641	Hedge Fund Manager	North America
4.	Garda Capital Partners	\$124,164,445,000	Hedge Fund Manager	North America
5.	Renaissance Technologies LLC	\$121,848,923,848	Hedge Fund Manager	North America
6.	Capula Investment Management LLP	\$118,360,187,022	Hedge Fund Manager	Europe
7.	ExodusPoint Capital Management	\$115,731,633,205	Hedge Fund Manager	North America
8.	Squarepoint Capital LLP	\$75,716,520,593	Hedge Fund Manager	Europe
9.	Two Sigma Investments	\$74,437,035,981	Hedge Fund Manager	North America
10.	Coatue Capital, L.L.C.	\$73,333,689,427	Hedge Fund Manager	North America
11.	Elliott Management Corporation	View Managed AUM	Hedge Fund Manager	North America
12.	Lighthouse Investment Partners	View Managed AUM	Hedge Fund Manager	North America

Hedge funds

Hedge Funds - Strategies



DIRECTIONNEL	EVENT DRIVEN	ARBITRAGE
Global Macro	Special Situations	Convertible bonds
Long / Short Equity	Merger / risk arb	Fixed income
Market neutral	Distressed	Statistical
Short only	Activiste	
Managed Futures / CTA		

FoHF : Strategies / Hedge funds => Auditer
MANAC





**It's not what we teach that
is important, but what you
learn!**

