



# **Timor-Leste Petroleum Fund**

## **Presentation to civil society**

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**August 2012**

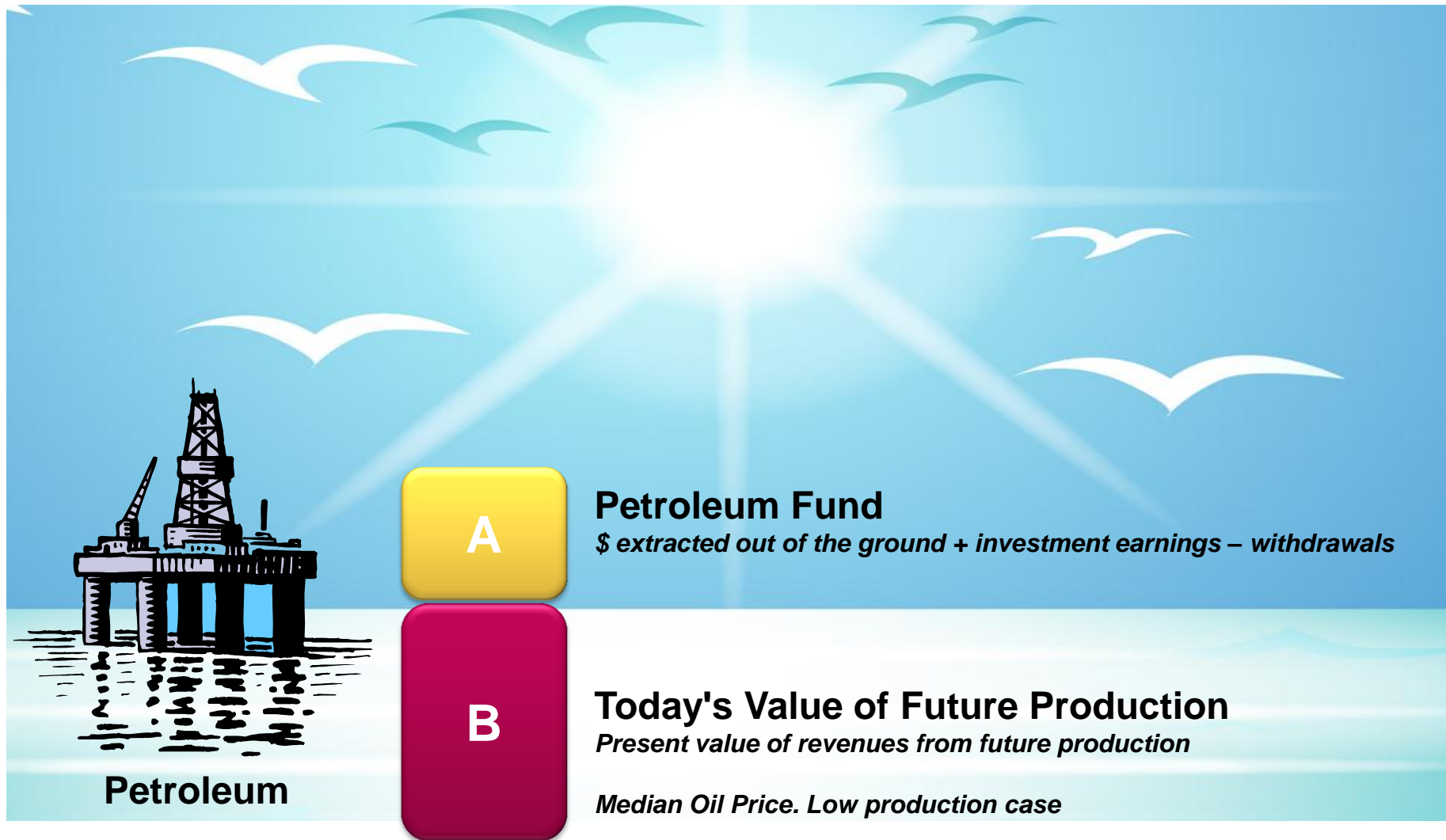
# Agenda for this afternoon

- The current fiscal regime, sustainability and investment strategy
- Equity and bonds
- Investment strategy
- Evolution of the Fund and current asset allocation
- Bonds

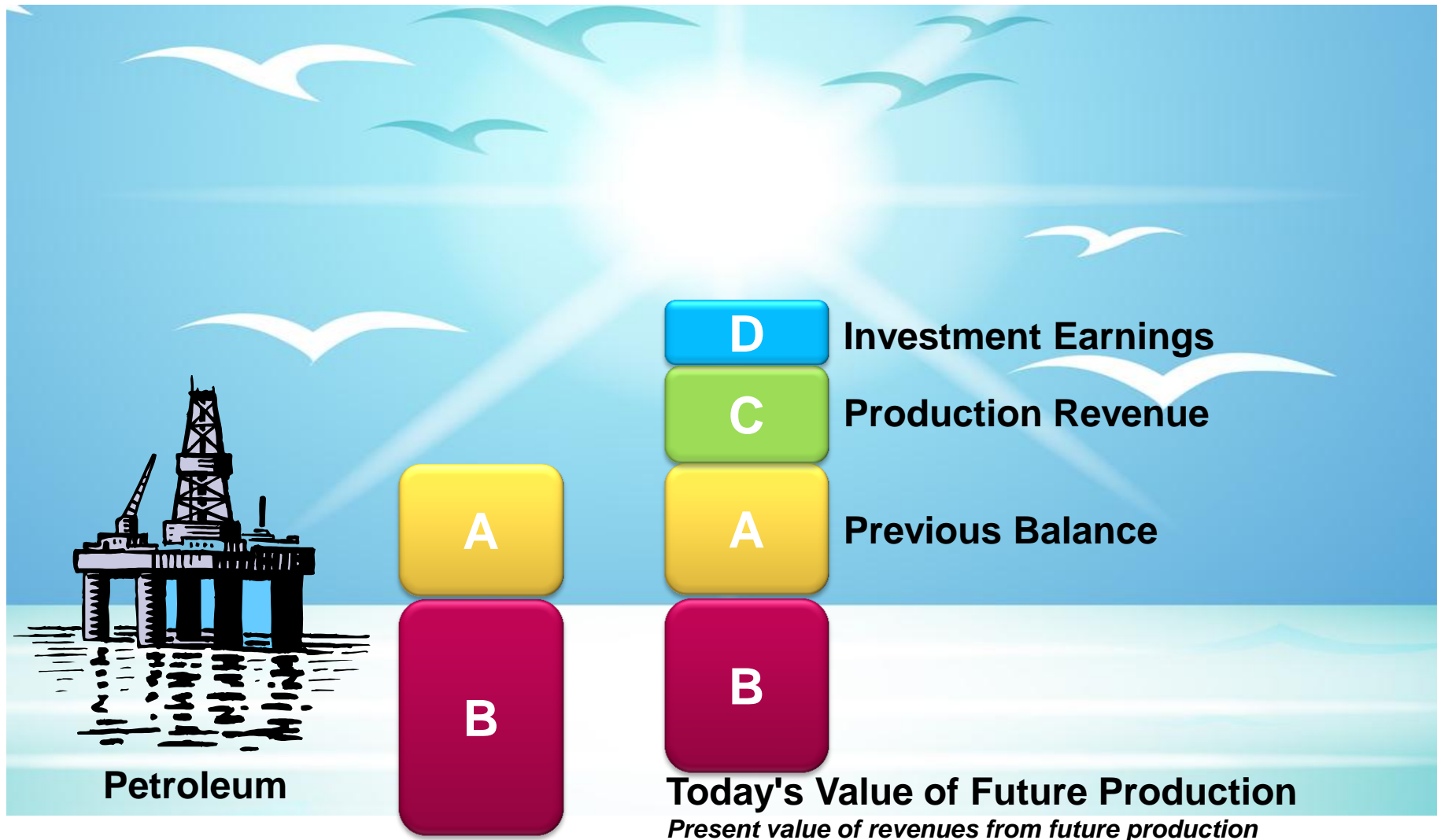
# Presentation to civil society

The current fiscal regime, sustainability and investment strategy

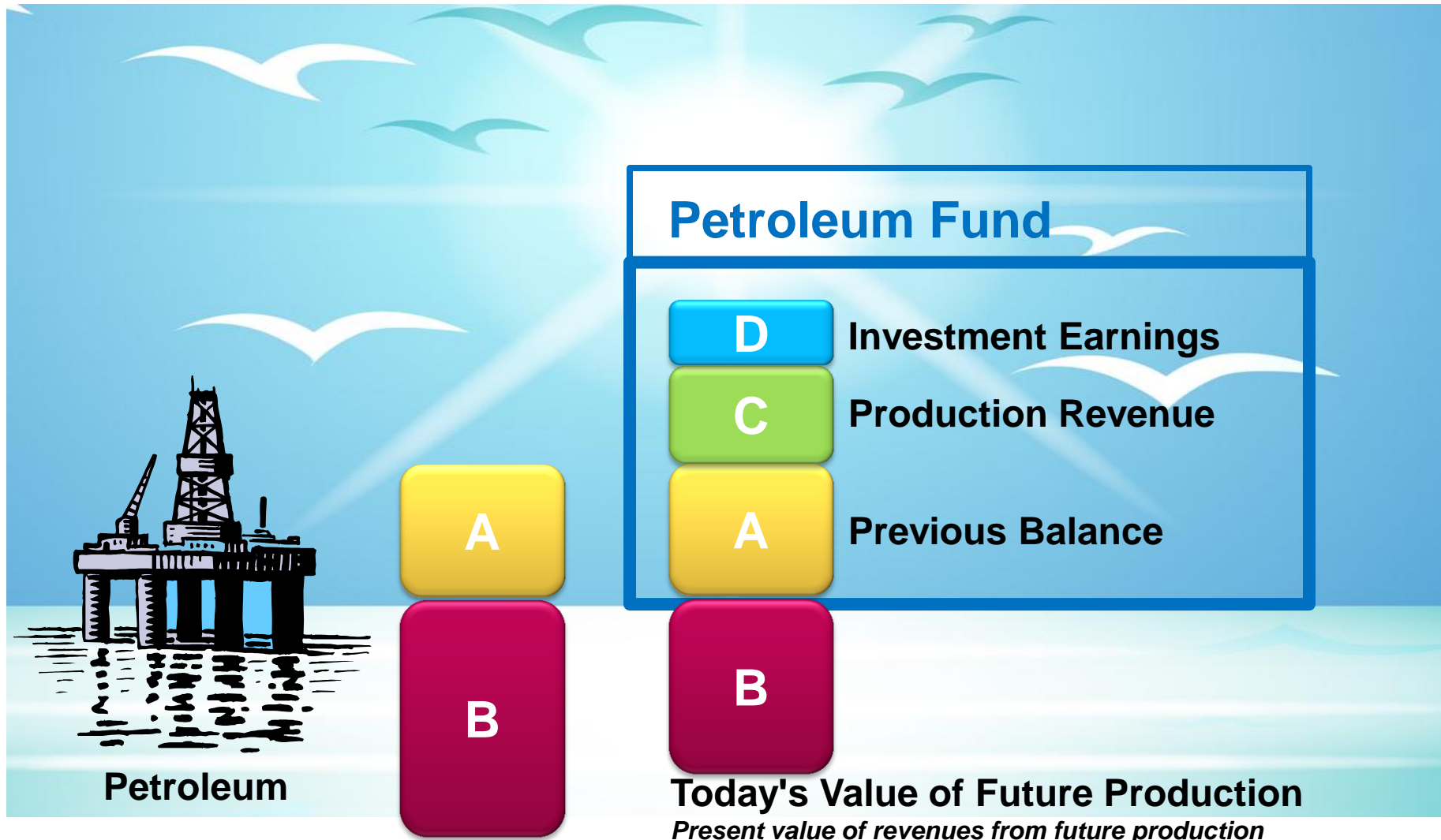
# Turning oil into dollars



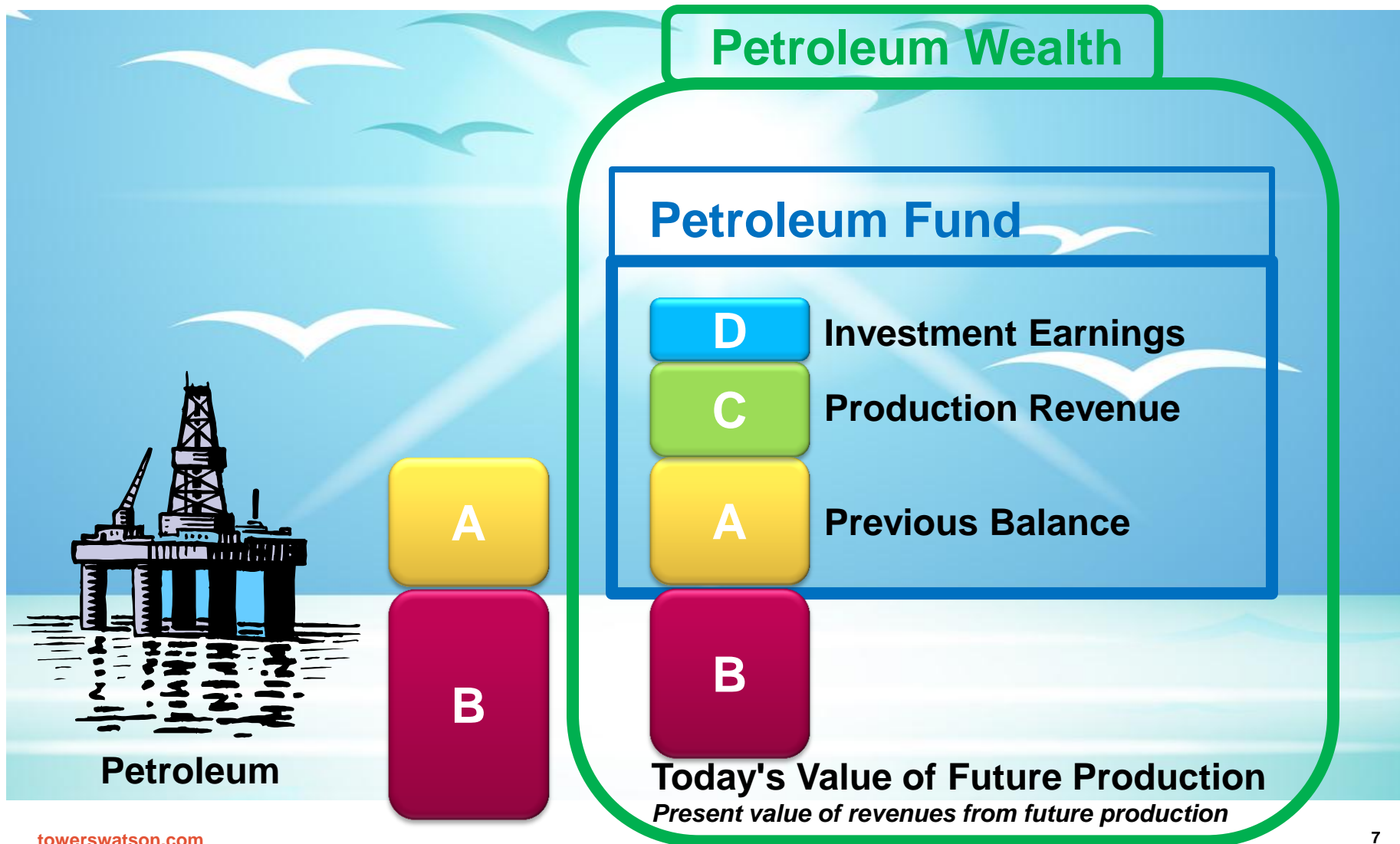
# How the Fund grows in size over time



# Components of Petroleum Fund

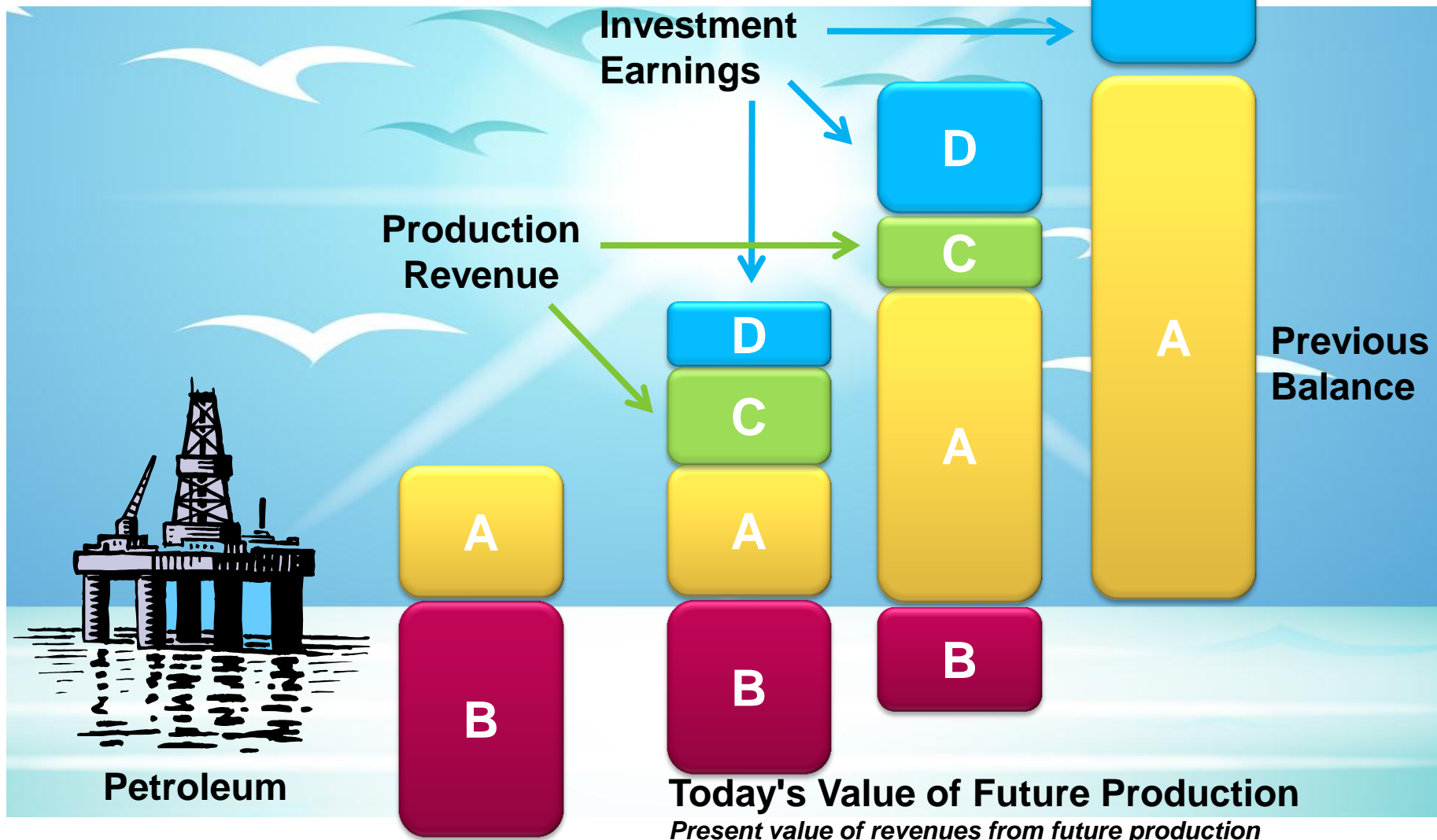


# Components of Petroleum Wealth





# From Oil to Financial Assets



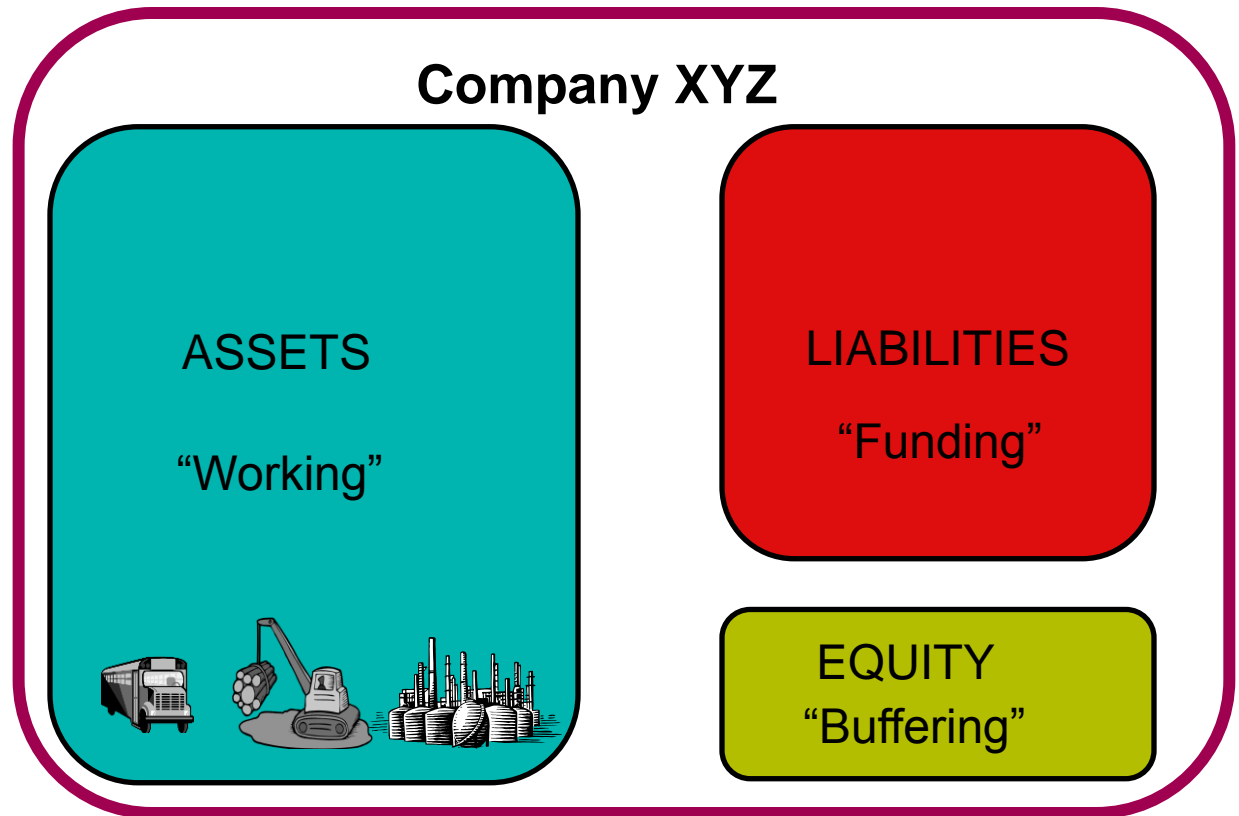


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## Equity and bonds

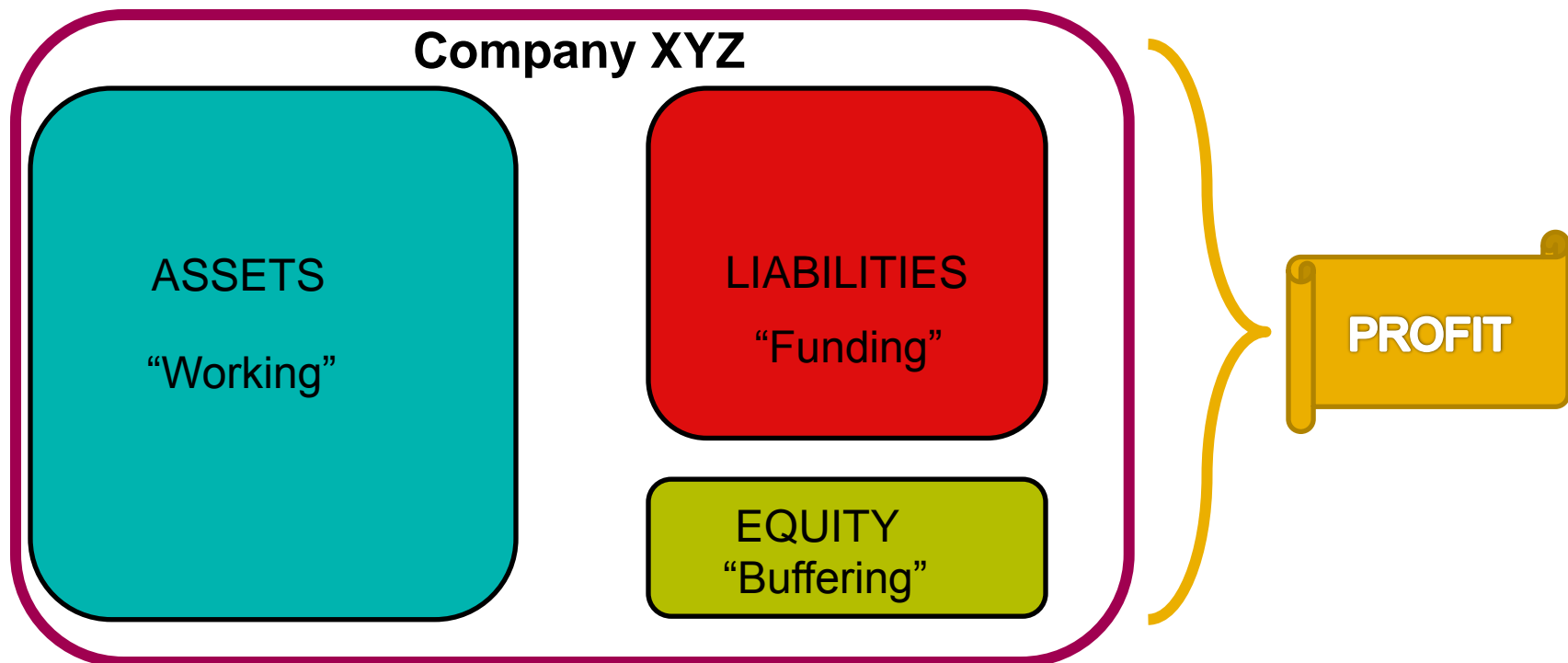
# Investing in companies

- So, you want to invest in a company?
- Buy the assets.....buy the debt...buy the equity....



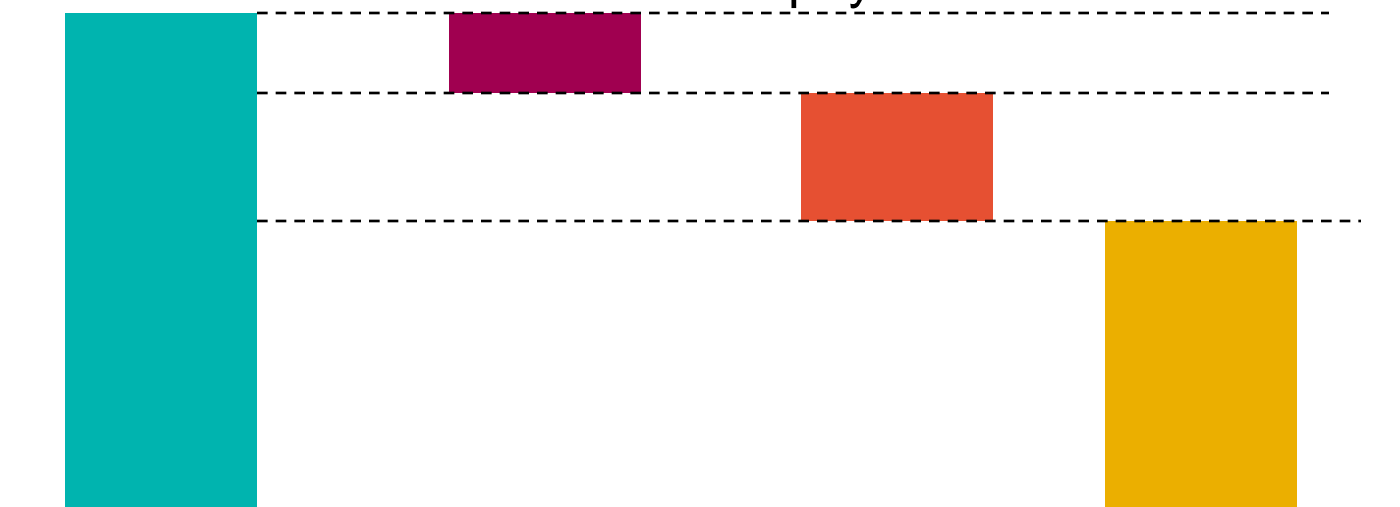
# Talking about valuations

- The “value” (or price) of a company is the present value of the expected future cash flows earned by equity
- So, if the company makes (or is expected to make) more money, then the value of the company should go up – that is the share price will go up.



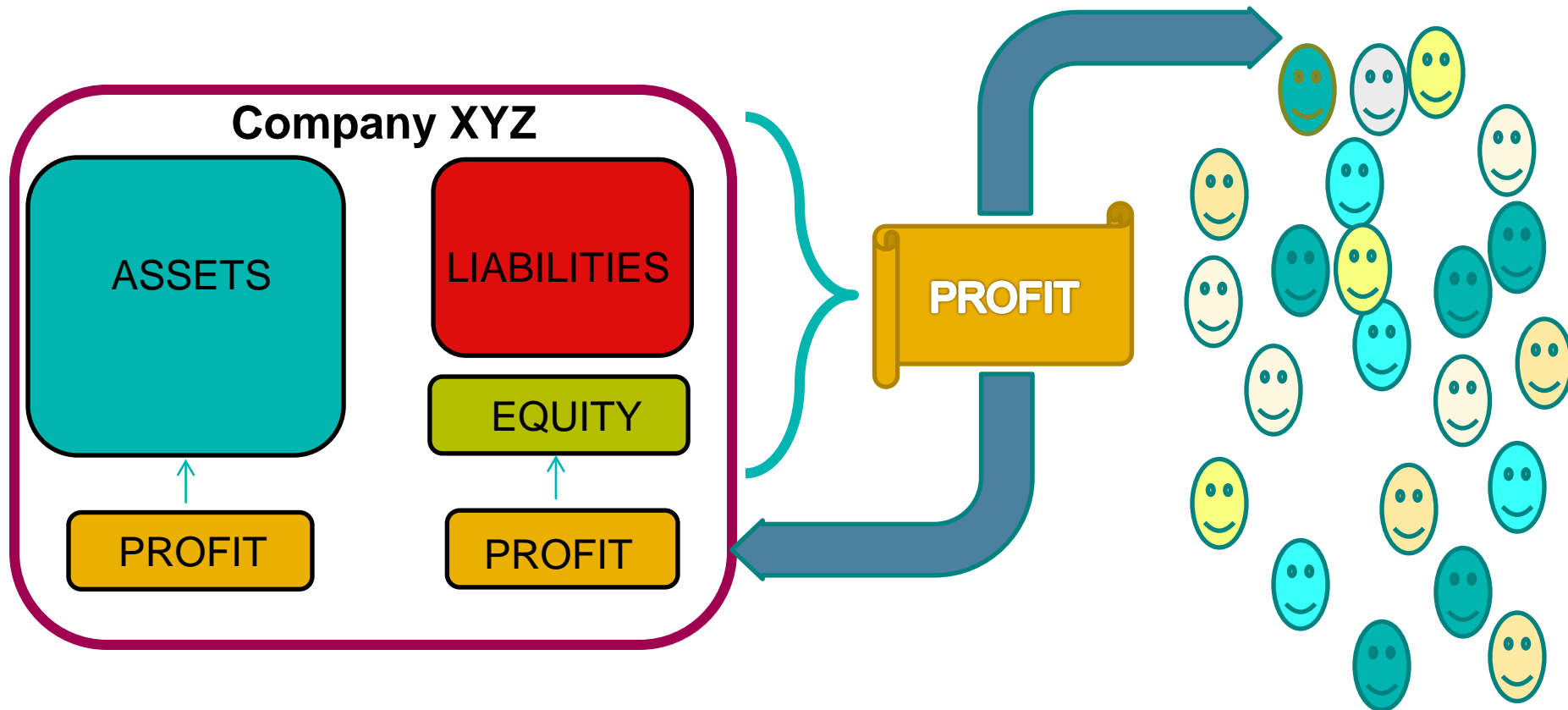
# From sales to profit

sales - expenses - interest payment = profit



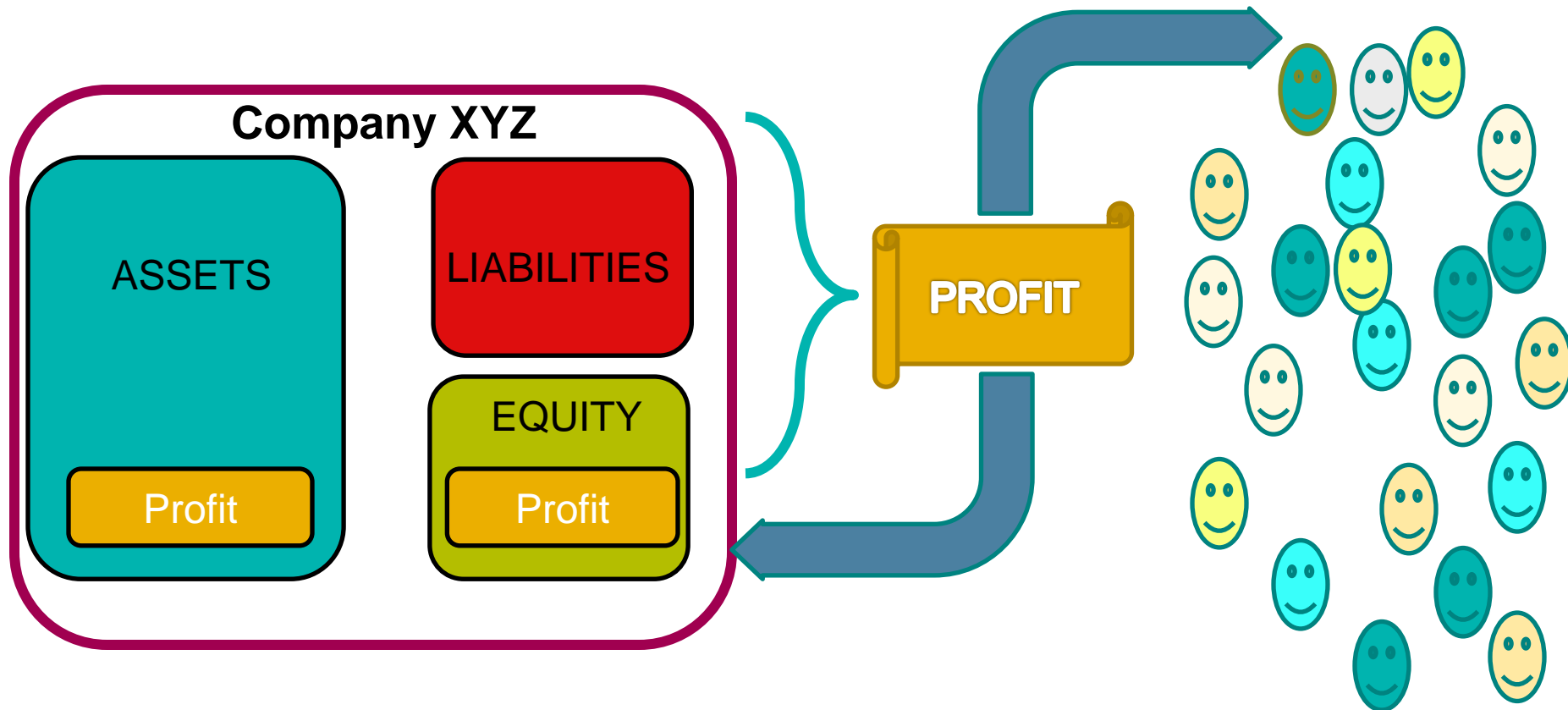
# What happens to profit?

- When a company makes profits these can be;
  - Re-invested in the business
  - Distributed to owners as dividends or share buy backs

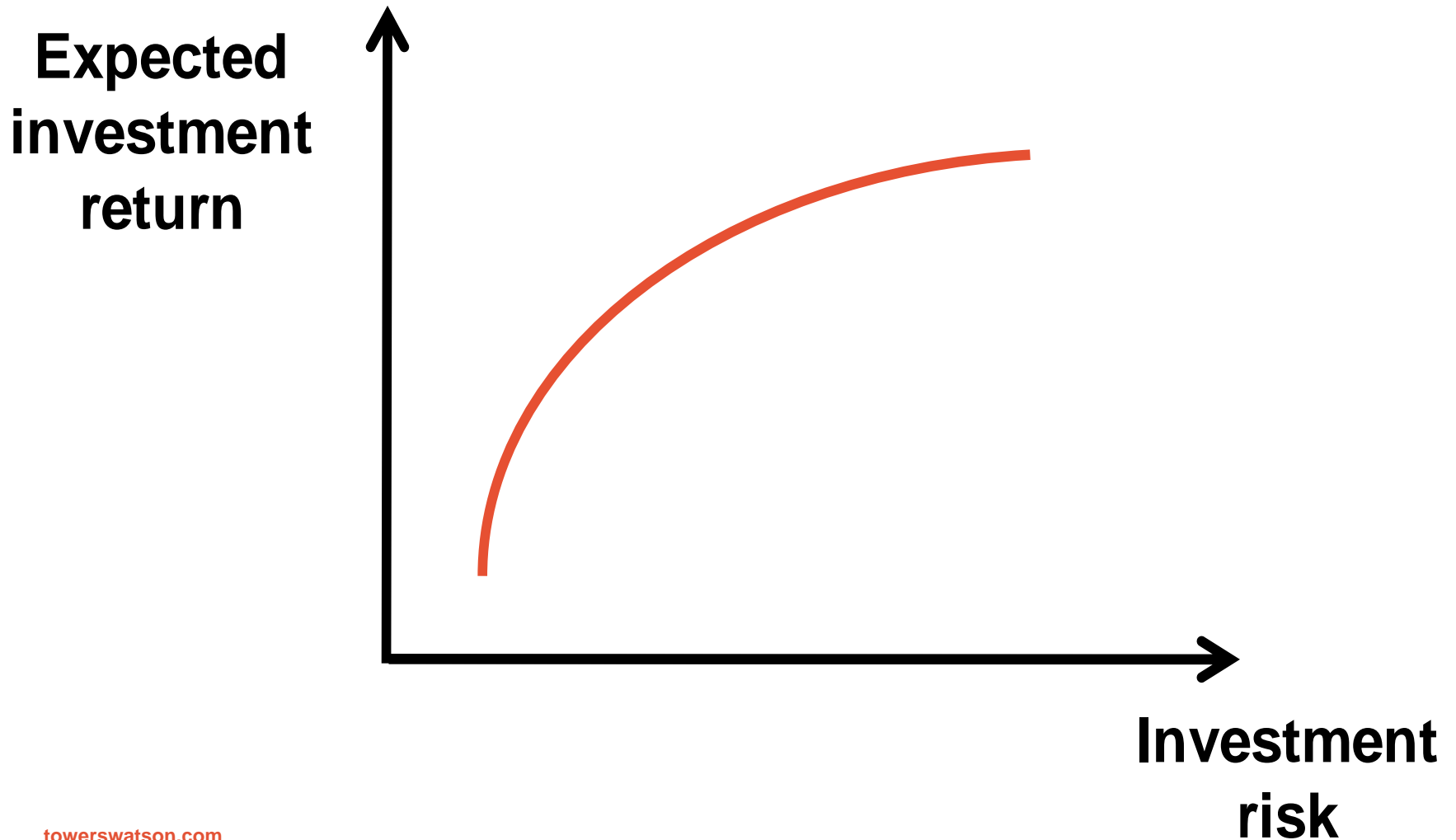


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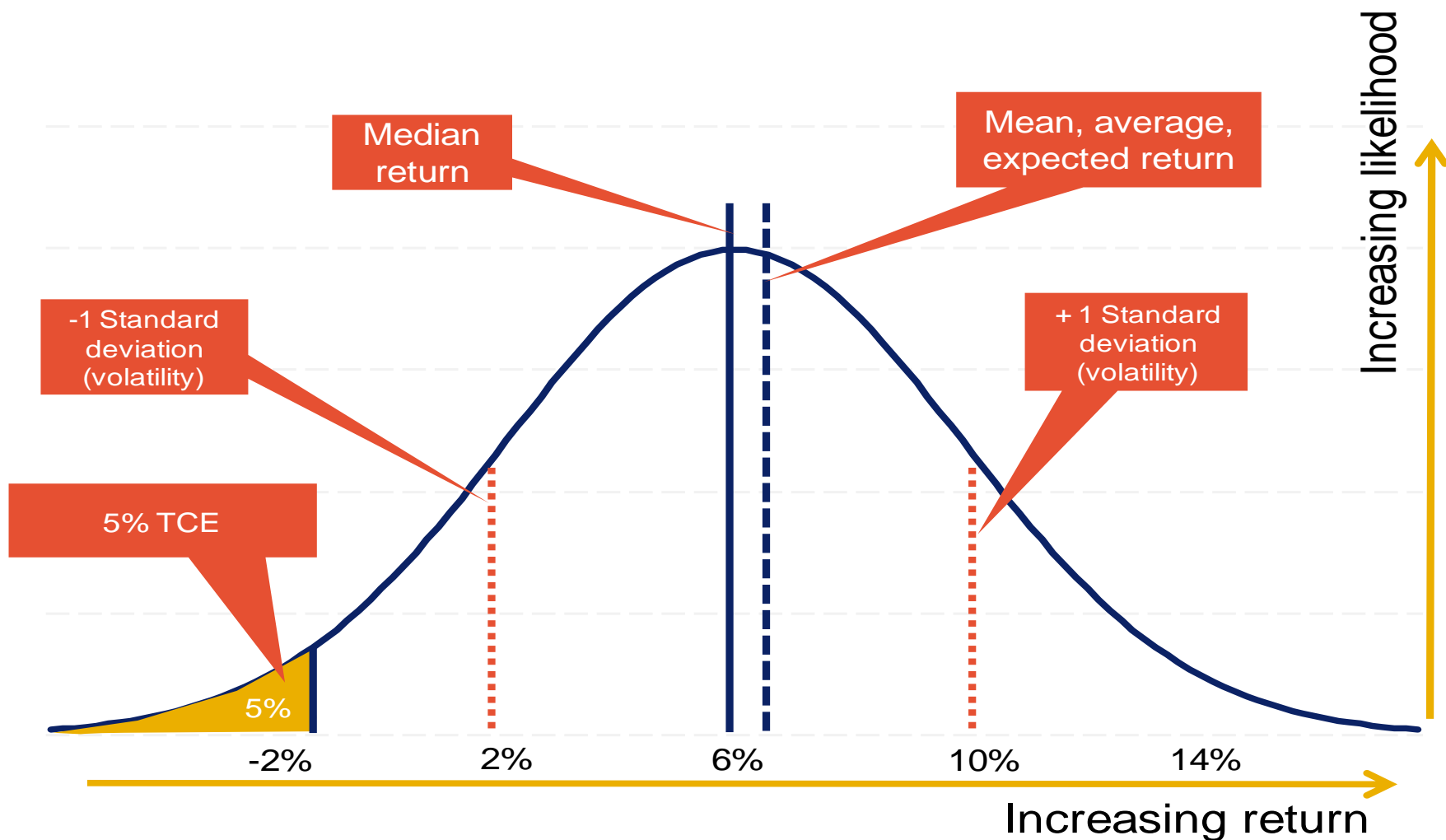


## Recap – Risk and Return





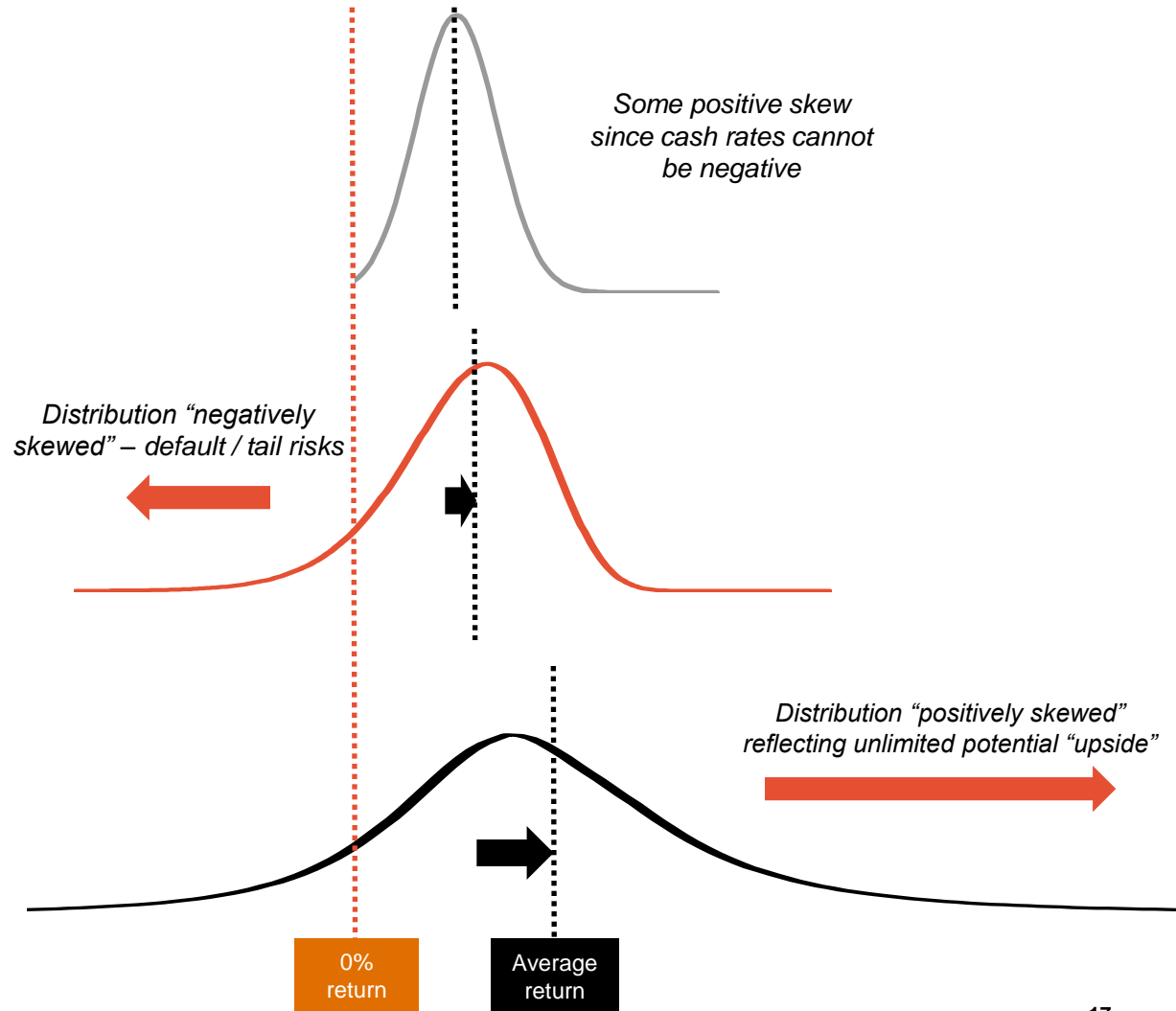
# The investment return distribution



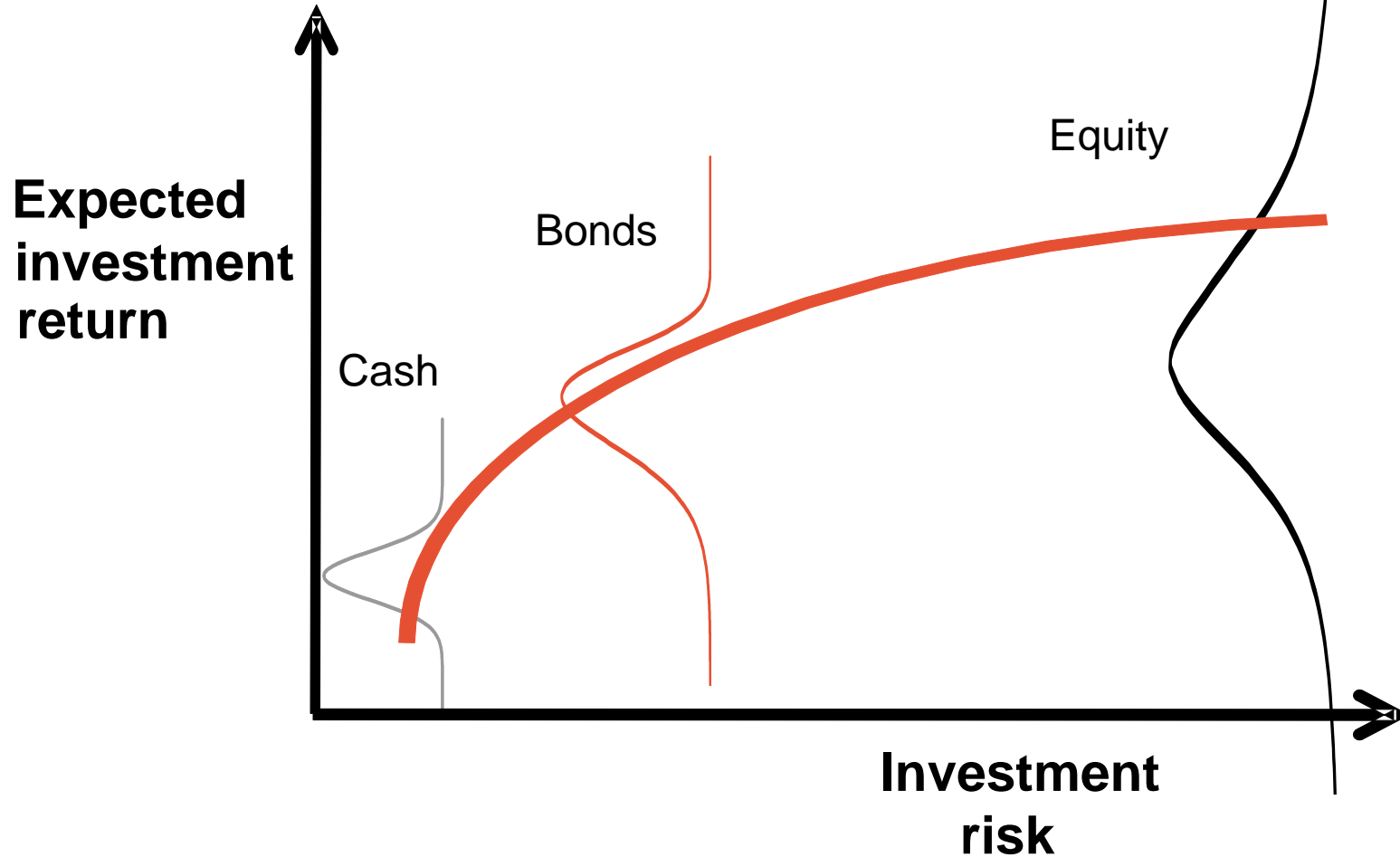
# How returns from equities, bonds and cash tend to differ



Example investment return distribution



# The trade-off between risk and return

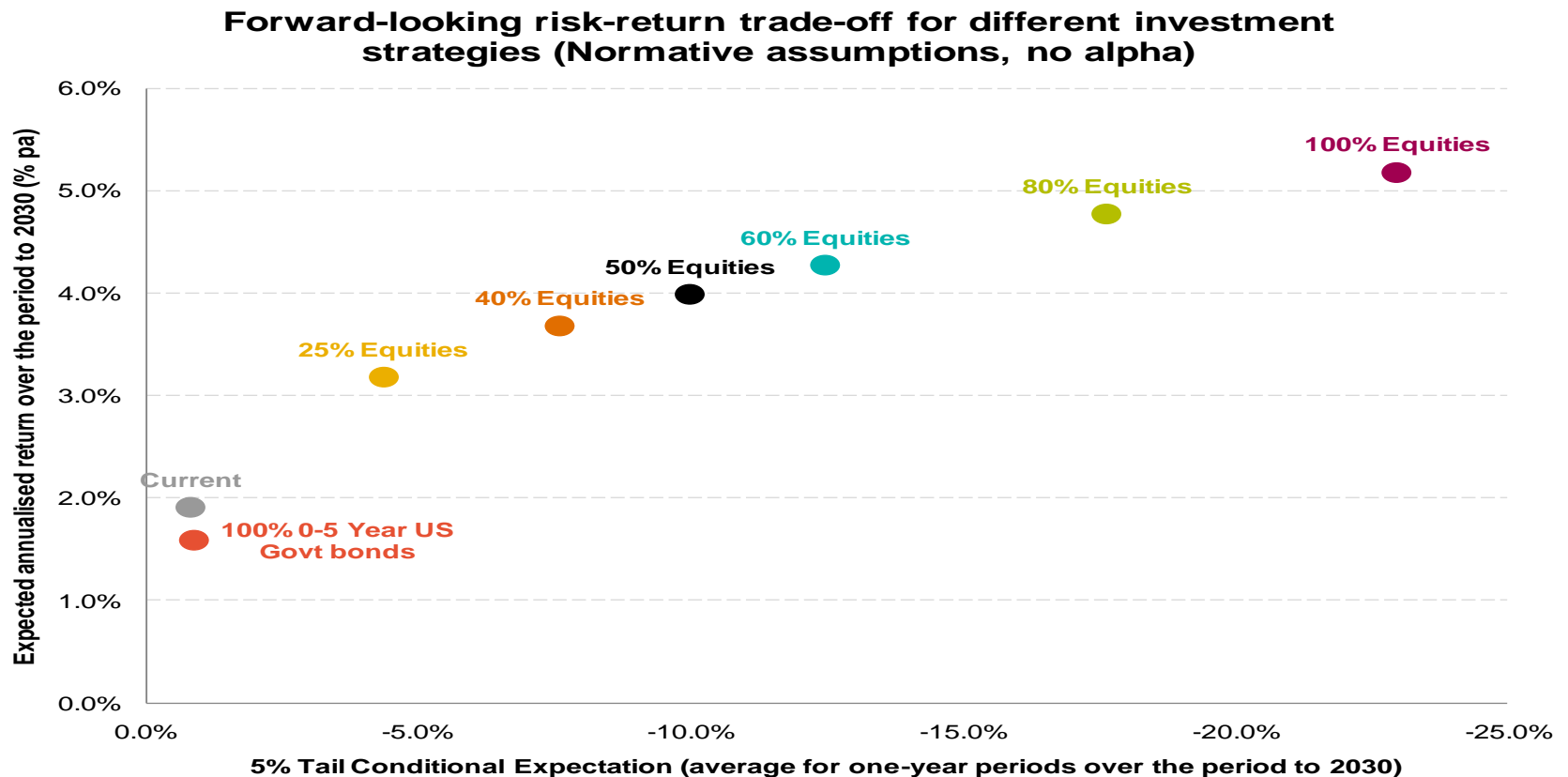


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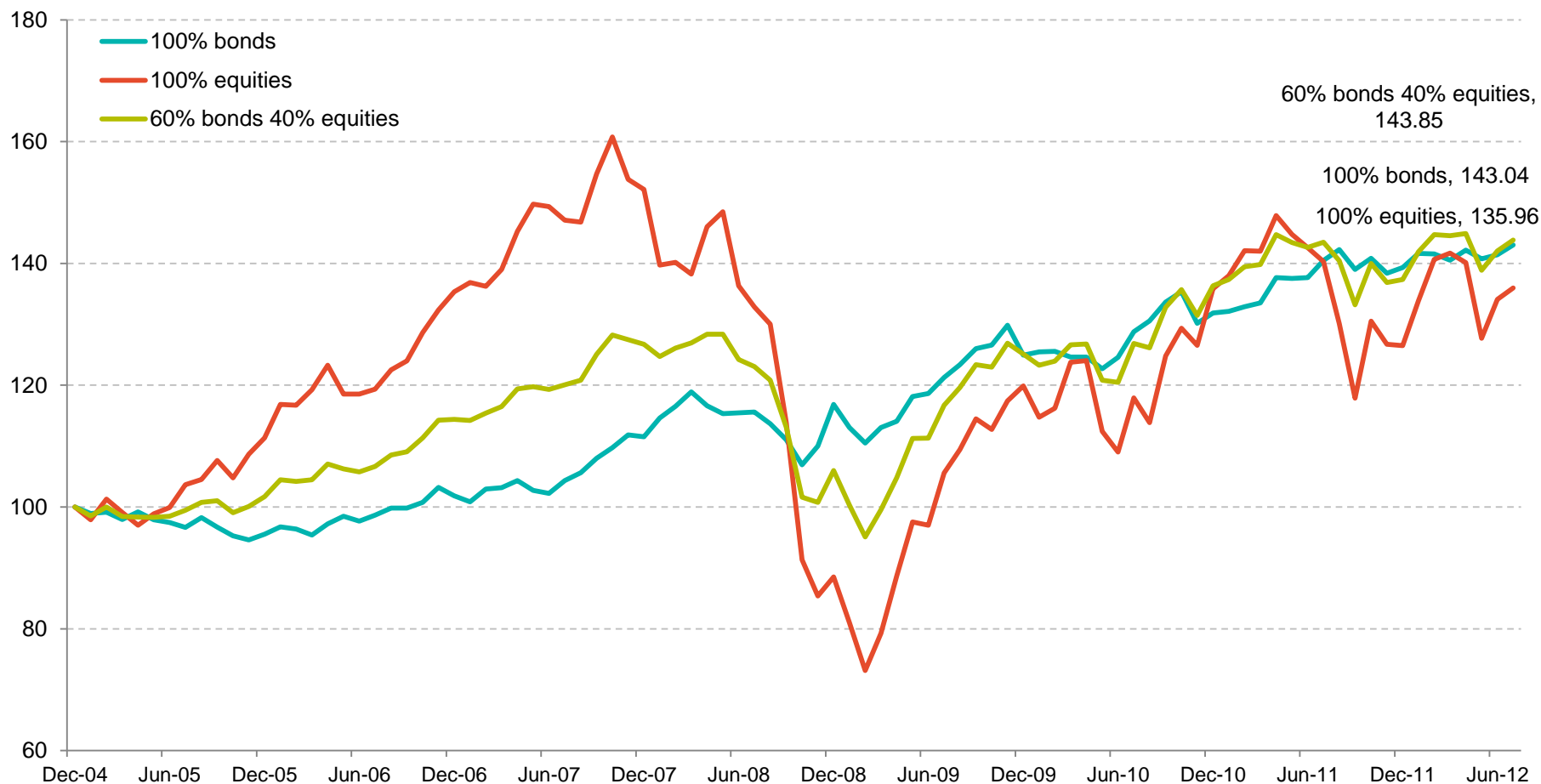
## Investment strategy

# Investment strategy – a balance of risk and return

- An allocation to equities of at least 40% is required to achieve a long-term real return of 3% per annum, with a reasonable probability, according to historical experience and our modelling framework.
- There are reduced benefits from increasing the allocation to equities beyond 50%.

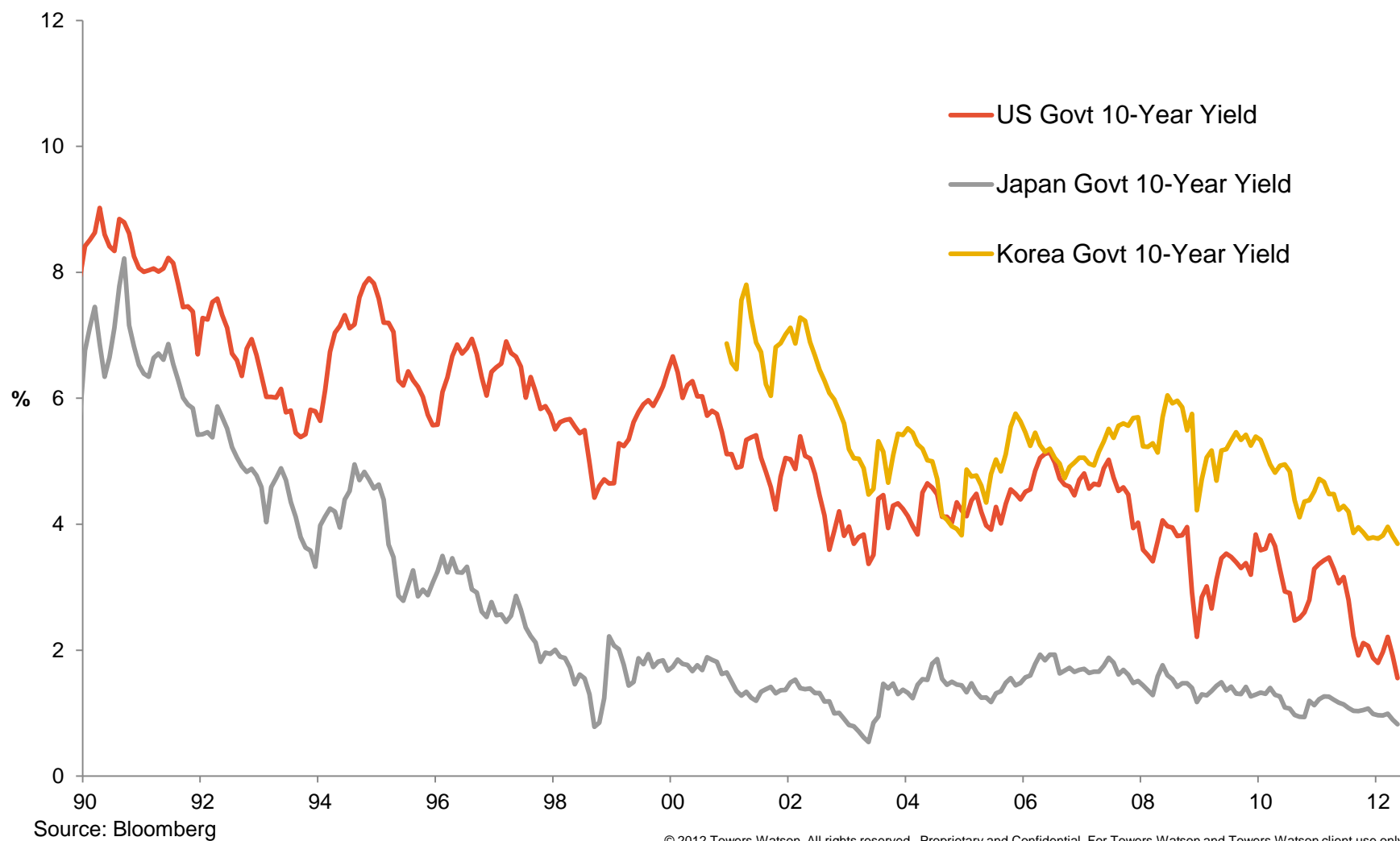


# Cumulative performance



Bonds: Barclays Global Agg USD unhedged  
Equities: MSCI ACWI World index

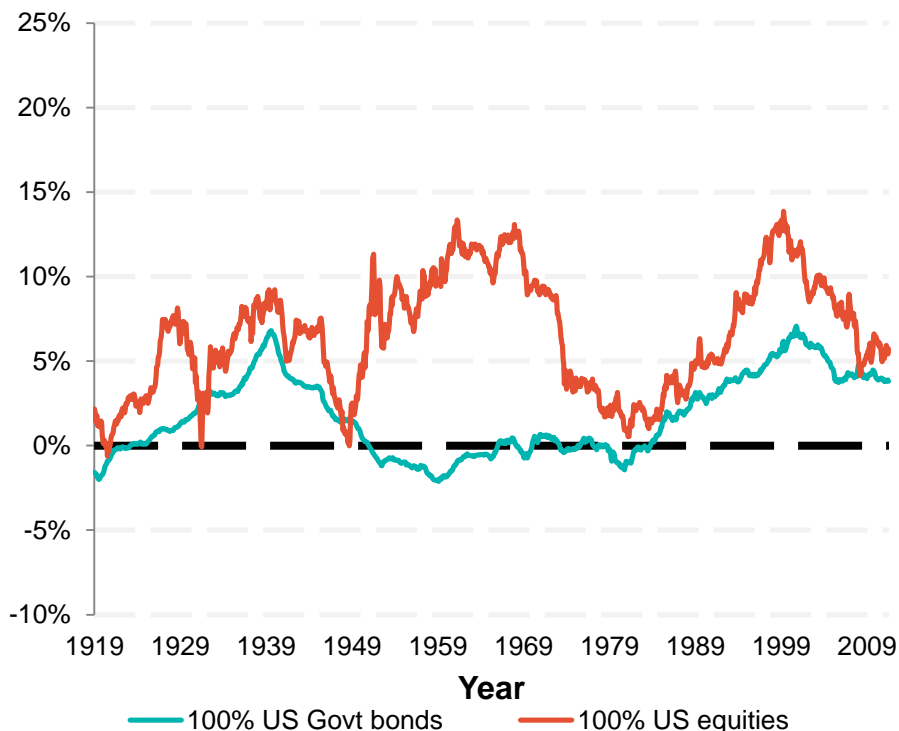
# Government bond 10-year yields



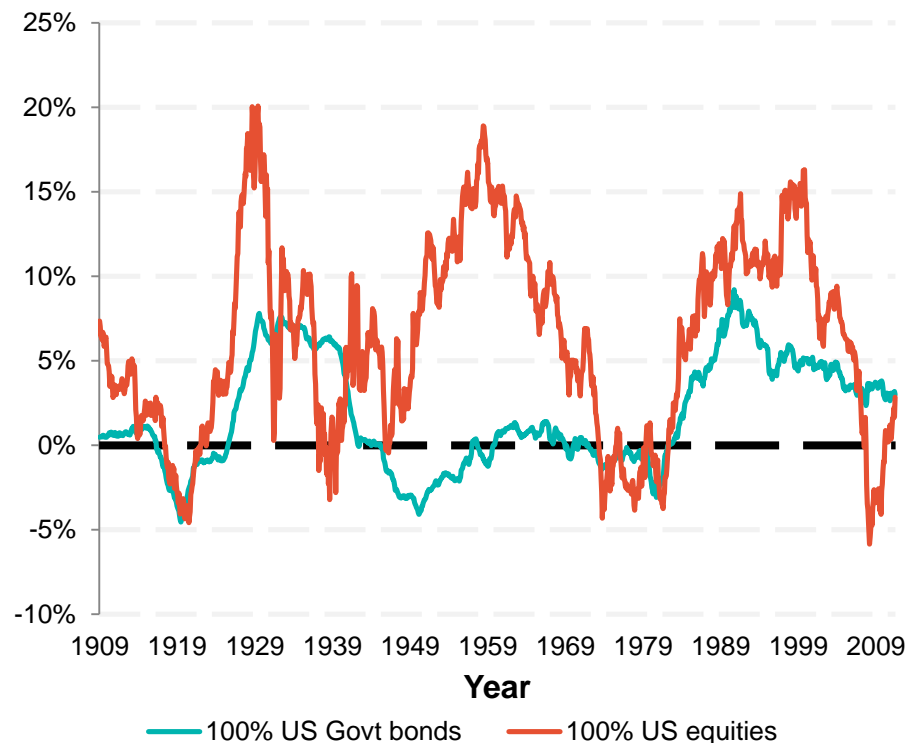


# Comparison of volatility – equity vs bonds

Historical rolling 20-year annualised real returns



Historical rolling 10-year annualised real returns



## Real returns over the period from 1900 to 2012 (% pa)

Annualised real return over full sample (% pa)

Highest 20-year annualised real return (% pa)

Lowest 20-year annualised real return (% pa)

## US Treasury Bonds

1.8%

7.1%

-2.1%

## US Equities

6.1%

13.9%

-0.6%

Source: Datastream, Bloomberg LP, Towers Watson

# Presentation to civil society

## Evolution of the Fund and current asset allocation

# Evolution of TLPF 2005 – present

*Conservative management of the investment portfolio to preserve capital. Investments 100% in U.S. Government Securities.*

*First steps taken to broaden the investment universe.*

*Investment universe broadened further to include some equity exposure*

*PF law amendment enables the Fund to invest more of its assets into equity*

**Principal preservation**

**Minimal diversification**

**Slight increase of diversification**

**SAA roadmap: Move to greater diversification**

**Continuation of SAA roadmap**

**2005**

## **U.S. Govt. bonds only**

- A simple and prudent investment strategy.
- This strategy reflected the lack of resources, skill set and investment experience at the time of inception.
- Investment objective of preserving the capital of the Fund and to avoid exposure to risk and volatility in the first stage.

**2009**

## **Govt. Bond Diversification**

- BIS hired as an external manager with an allocation of 4-5% of Fund assets, growing to 20%.
- Invest in non-USD instruments by adding AUD, JPY, EUR & GBP Government bonds.
- Also invested into USD denominated AAA and AA international government bonds.

**2010**

## **Global Equity**

- Appointment of Schroder as global equity manager in October 2010.
- Allocation of 4-5% of Fund assets.

## **PF Law fully Exploited**

- Further diversification is constrained by old Petroleum Fund Law.
- Desire to increase exposure to equities and further diversification as soon as the PF Law is amended.

**2011**

## **PF Law ammended**

### **Increase Global Equity**

- Desire to further increase exposure to equities in 2012 as per agreed “phasing in” strategy.

### **Global Bonds adjusted**

- Bond portfolio adjusted with changes to existing investment mandates.
- BIS mandate restructured with focus on US Treasuries only – PF no longer invests in international bonds.
- Duration of bond portfolio increased via adjustment to BCTL benchmarks.

**2012**

## **Increase Global Equity**

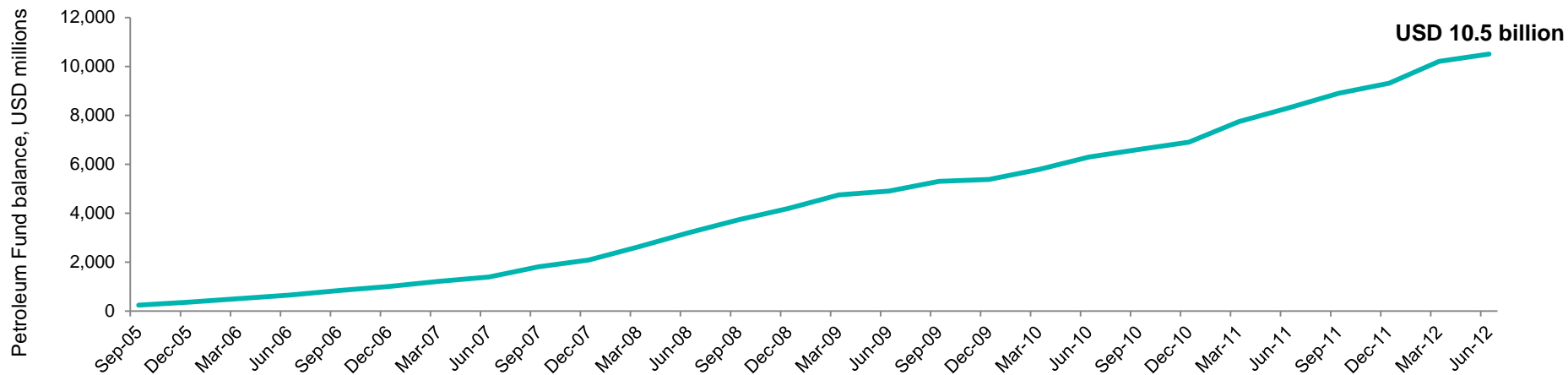
- 20% global equity by June 2012.
- Desire to explore greater diversification into equity

## **Global Bonds**

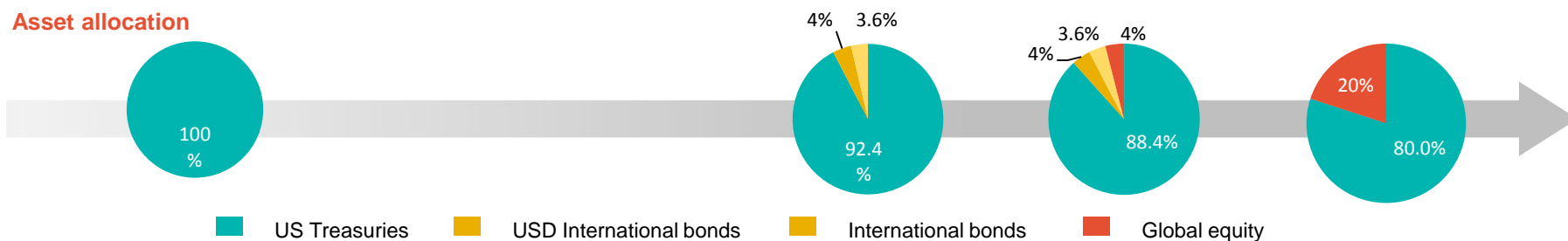
- Desire to diversify bond portfolio

# Evolution of TLPF 2005 – present

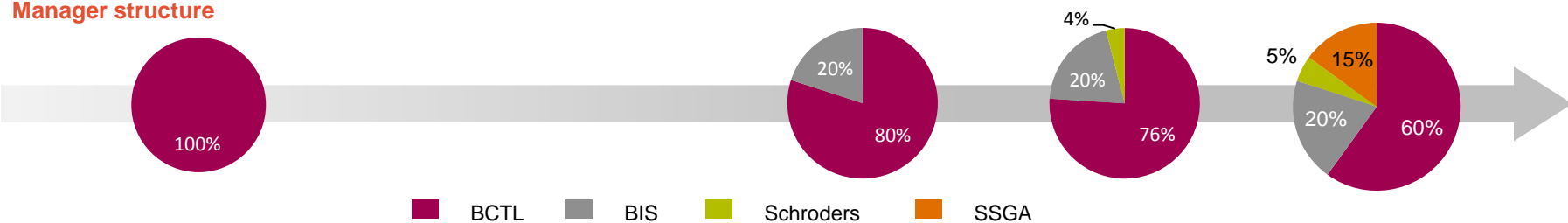
## Petroleum Fund balance



## Asset allocation



## Manager structure



Source: Petroleum Fund of Timor-Leste quarterly reports and Petroleum Fund Directorate, as of end June 2012

[towerswatson.com](http://towerswatson.com)

# SAA roadmap and current asset allocation

Asset	Current	T1	T2	T3	T4	T5	T6	T7	T8	T9
<b>Bonds</b>	<b>96</b>	<b>80</b>	<b>70</b>	<b>50-60</b>	<b>50-60</b>	<b>50-60</b>	<b>50-60</b>	<b>50-60</b>	<b>50-60</b>	<b>50-60</b>
US Treasuries	96	80	70	50-60	55-60	50-60	50-60	50-60	50-60	50-60
Global Bonds					0-5	0-10	0-10	0-10	0-10	0-10
<b>Equity</b>	<b>4</b>	<b>20</b>	<b>30</b>	<b>40-50</b>	<b>40-50</b>	<b>40-50</b>	<b>40-50</b>	<b>40-50</b>	<b>40-50</b>	<b>40-50</b>
Global	4	20	30	40-50	40-50	38-40	35-40	35-40	32-40	30
US Small Cap						0-2	0-2	0-2	0-2	0-2
Global Emerging Markets							3	0-3	0-3	0-3
Private Equity									3	3
<b>Other</b>								<b>0-2</b>	<b>0-2</b>	<b>0-4</b>
Hedge Funds								0-2	0-2	0-2
Non energy Commodities										2

Now current  
asset allocation

Key target asset  
allocation to meet 3% ESI

Original timeline for bond  
portfolio diversification

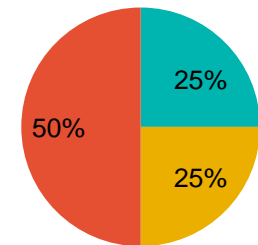
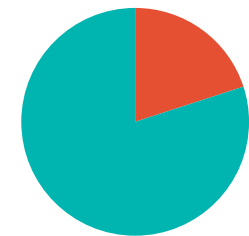
# Current asset allocation

- Based on the current structure of the mandates in the Petroleum Fund

Asset	Benchmark	Weight
Equity	MSCI World Index	20%
Bonds	Merrill Lynch 1-3 Years US Treasury Bond Index	20%
	Merrill Lynch 3-5 Years US Treasury Bond Index	40%
	Merrill Lynch 5-10 Years US Treasury Bond Index	20%

Data as of 6/30/2012

■ Equity ■ Bonds



■ ML 5-10 yrs US Trsy ■ ML 1-3 yrs US Trsy  
■ ML 3-5 yrs US Trsy

## Key issues going forward

40% equity

Bond  
portfolio  
construction

Currency  
numeraire

Performance  
monitoring

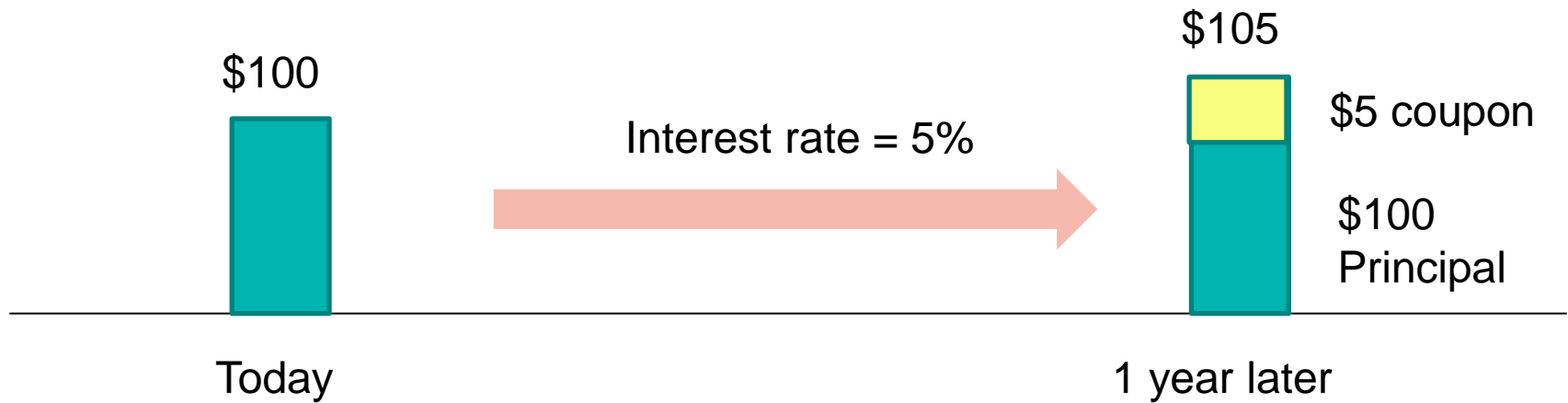
Risk  
management



# Presentation to civil society

## Bonds

## Simple 1 year bond



# Introduction to bonds

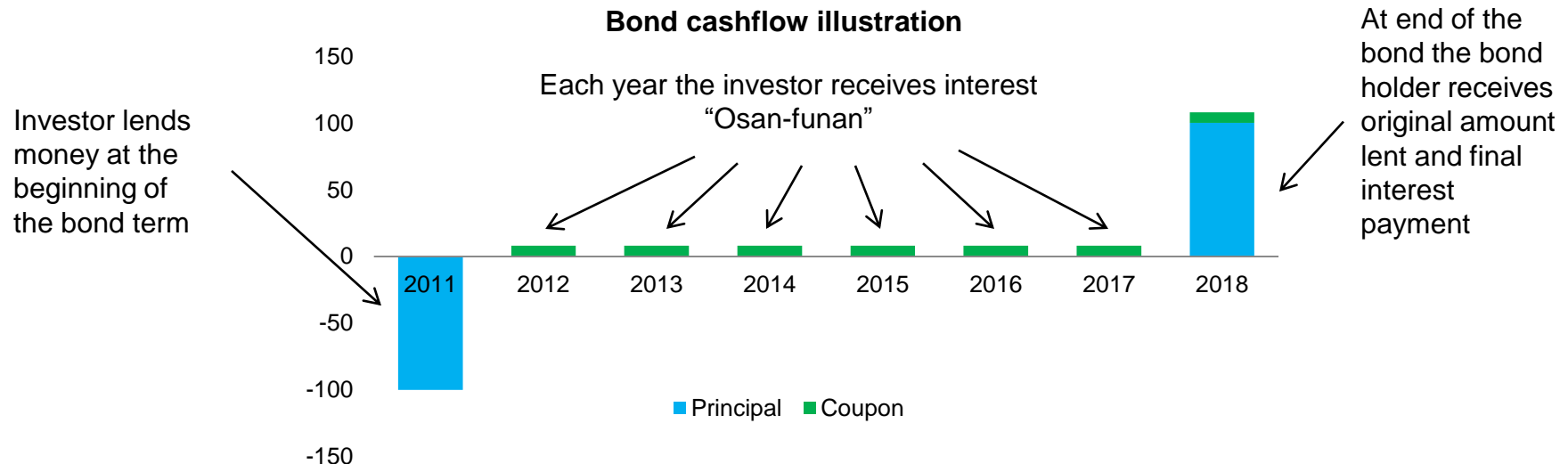
**A bond is a loan to a government or Company**

When a government (e.g. US) or business (e.g. Coca-Cola) needs to raise money to finance some kind of expenditure they may decide to borrow from a bank or look to issue a bond.

A bond is essentially a **loan** with certain terms and conditions attached to it whereby the borrower promises to pay back the loan to the lender at some agreed point in time.

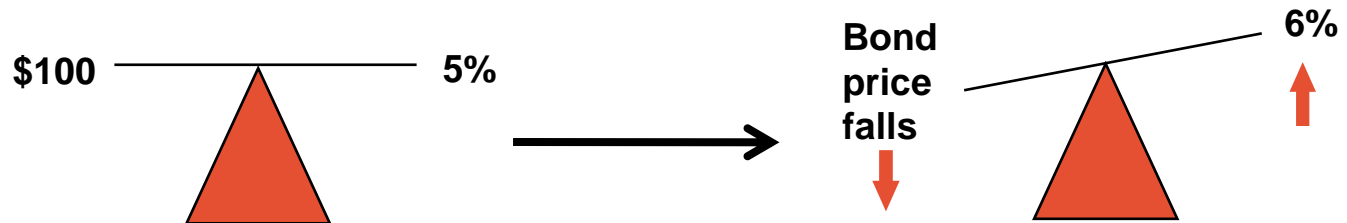
The lender, which tends to be an investor (i.e. the Petroleum Fund), in return, receives:

- Periodic payment called a **Coupon** (or interest payments), and
- **Principal** (capital repayment)



# The relationship between a bond's yield and its price

Bond yields and price have an inverse relationship

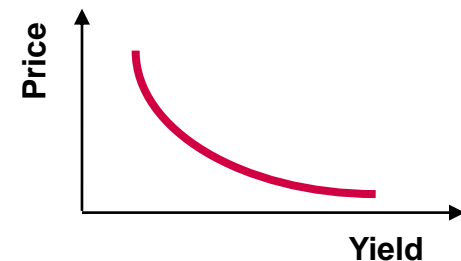


1. A bond pays a 5% coupon
2. Market yields (interest rates) are 5%
3. Therefore:
  - bond pays interest of \$5 pa
  - market price of bond is \$100

1. Interest rates rise to 6%
2. If bond still pays an interest of \$5 pa
  - demand for the bond falls
  - market price of bond falls until the total return of the bond is 6%

## Summary:

- As yields rise, bond prices decrease
- As yields fall, bond prices increase

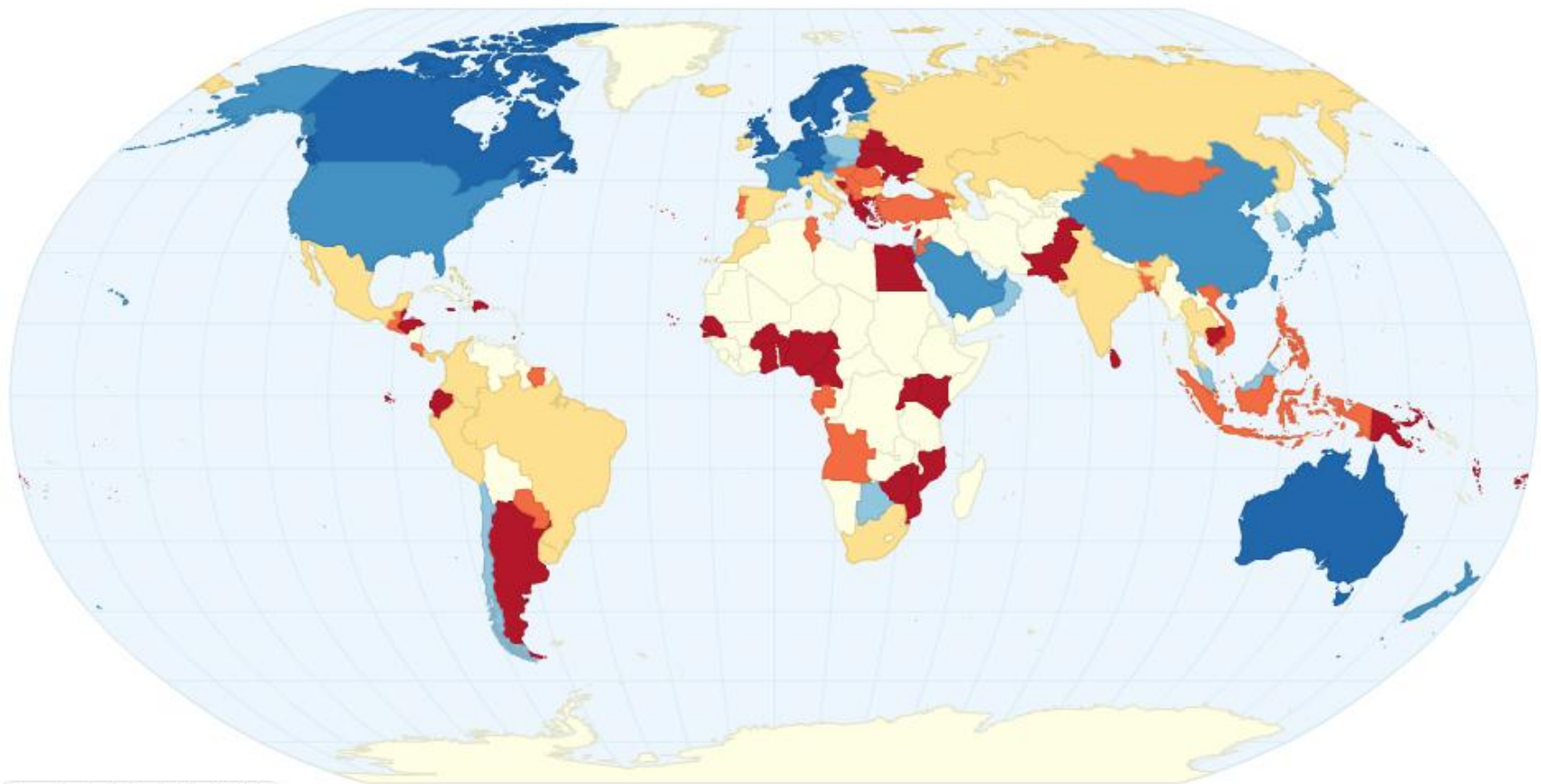


# Default

- A default is simply the failure to pay back a loan as promised.
- Default occurs when a debtor has not met its legal obligations according to the debt contract, e.g. has not made a scheduled payment, or has violated certain condition of the debt contract.
- Default may occur if the debtor is either unwilling or unable to pay his or her debt. This can occur with all debt obligations including bonds, mortgages, loans, and promissory notes.
- Investors face a potential downside return of 100% in the event of an issuer defaulting (i.e. not paying coupons or paying back principal), assuming no recovery
- However, the upside return for bonds held to maturity is fixed and known.

When holding bonds to maturity the greatest risk is  
default risk

# S&P global credit ratings



Standard and Poor's Credit Rating

- Prime
  - High grade
  - Upper medium grade
  - Lower medium grade
  - Non-investment grade speculative
  - Highly speculative
  - No data
- Year: July 2012

**AAA, AA & A in shades of blue**

**BBB in yellow**

**Sub-investment grade in shades of red**

# Credit rating spectrum

		Moody's		S&P		Fitch			
		Long-term	Short-term	Long-term	Short-term	Long-term	Short-term		
Investment grade		Aaa		AAA	A-1+	AAA	F1+	Prime	
		Aa1		AA+		AA+			
		Aa2		AA		AA			
		Aa3		AA-		AA-			
		A1		A+		A+			
		A2	P-1	A	A-1	A	F1	Upper medium grade	
		A3		A-		A-			
		Baa1	P-2	BBB+	A-2	BBB+	F2		
		Baa2	P-3	BBB	A-3	BBB	F3	Lower medium grade	
		Baa3		BBB-		BBB-			
		Ba1		BB+	B	BB+	B	Non-investment grade speculative	
		Ba2		BB		BB			
		Ba3		BB-		BB-			
		B1		B+		B+		Highly speculative	
		B2		B		B			
B3	B-	B-							
Caa1		CCC+							Substantial risks
Caa2		CCC							Extremely speculative
Caa3		CCC-							In default with little
		CC							prospect for recovery
Ca		C	C	CCC	C				
C				DD					
/				D					
/	Not prime	D	/	D	/	In default			



# The Bond Universe

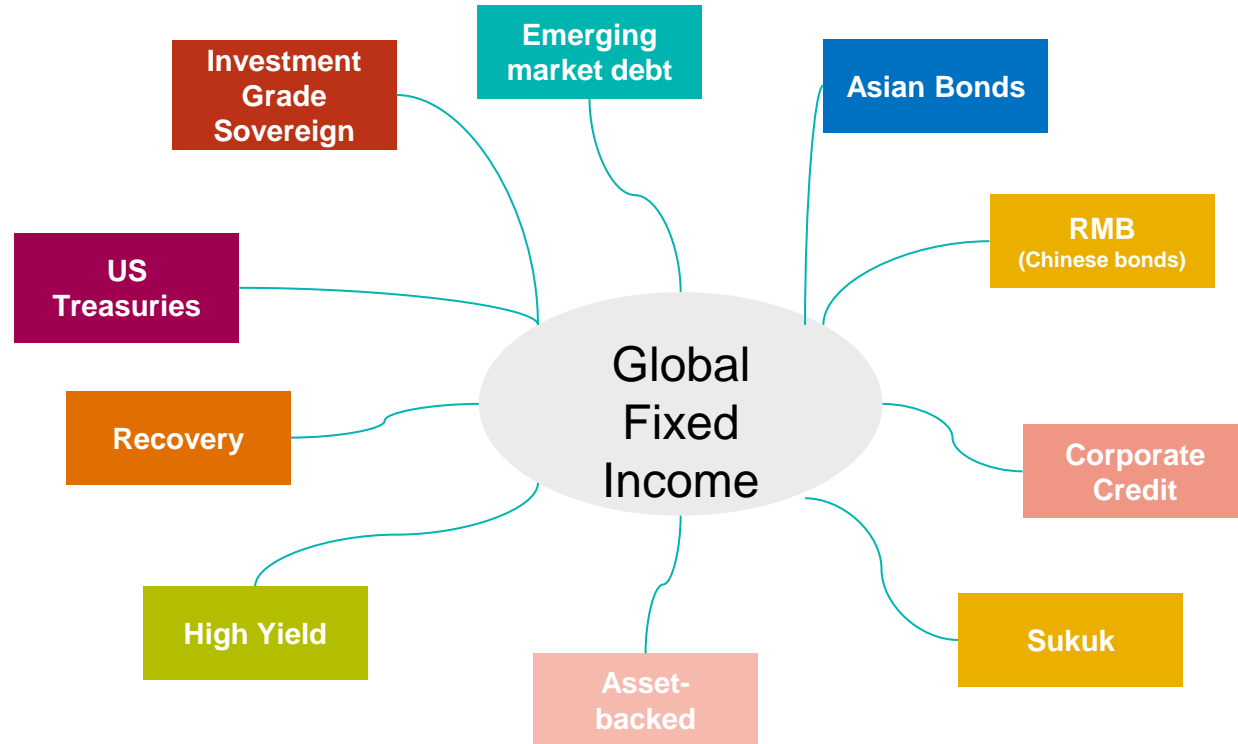
There are many different types of bonds to choose from.

2 broad categories

- Government
- Non-government

Some bonds are fundamentally more complex than others

Each bond grouping will have a different set of risk exposures and investment characteristics – investors must understand these, and decide whether they are willing to accept them in the portfolio



Beyond US Treasuries and Global sovereign bonds, investment complexity and the amount of governance resources required increases quite rapidly.

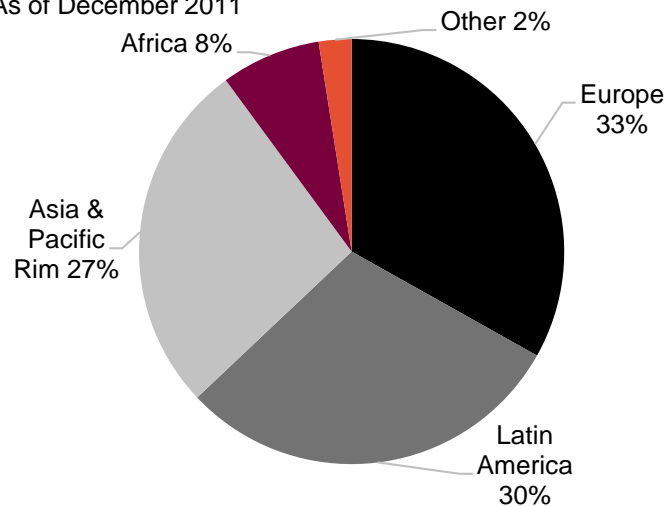
# Emerging market debt (EMD)

2 very different universes exist

- Hard currency EMD – bonds issued in USD
- Local currency EMD – bonds issued in domestic currency of the issuer

**Emerging Market Debt Local Currency**

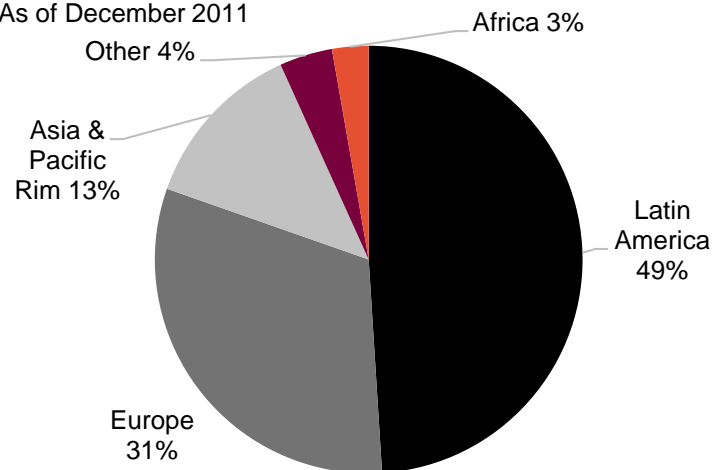
As of December 2011



Source: Barclays Capital

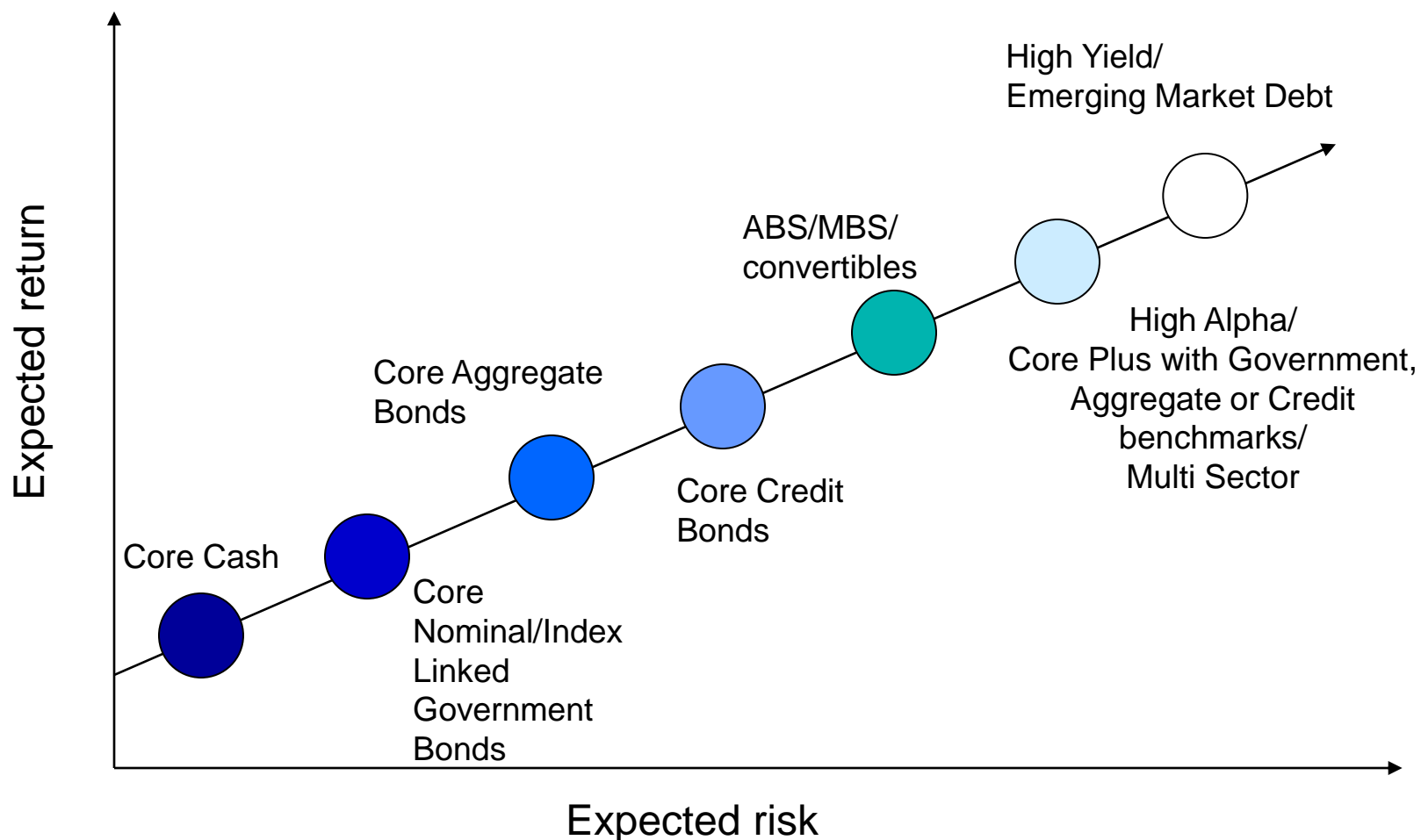
**Emerging Market Debt Hard Currency**

As of December 2011



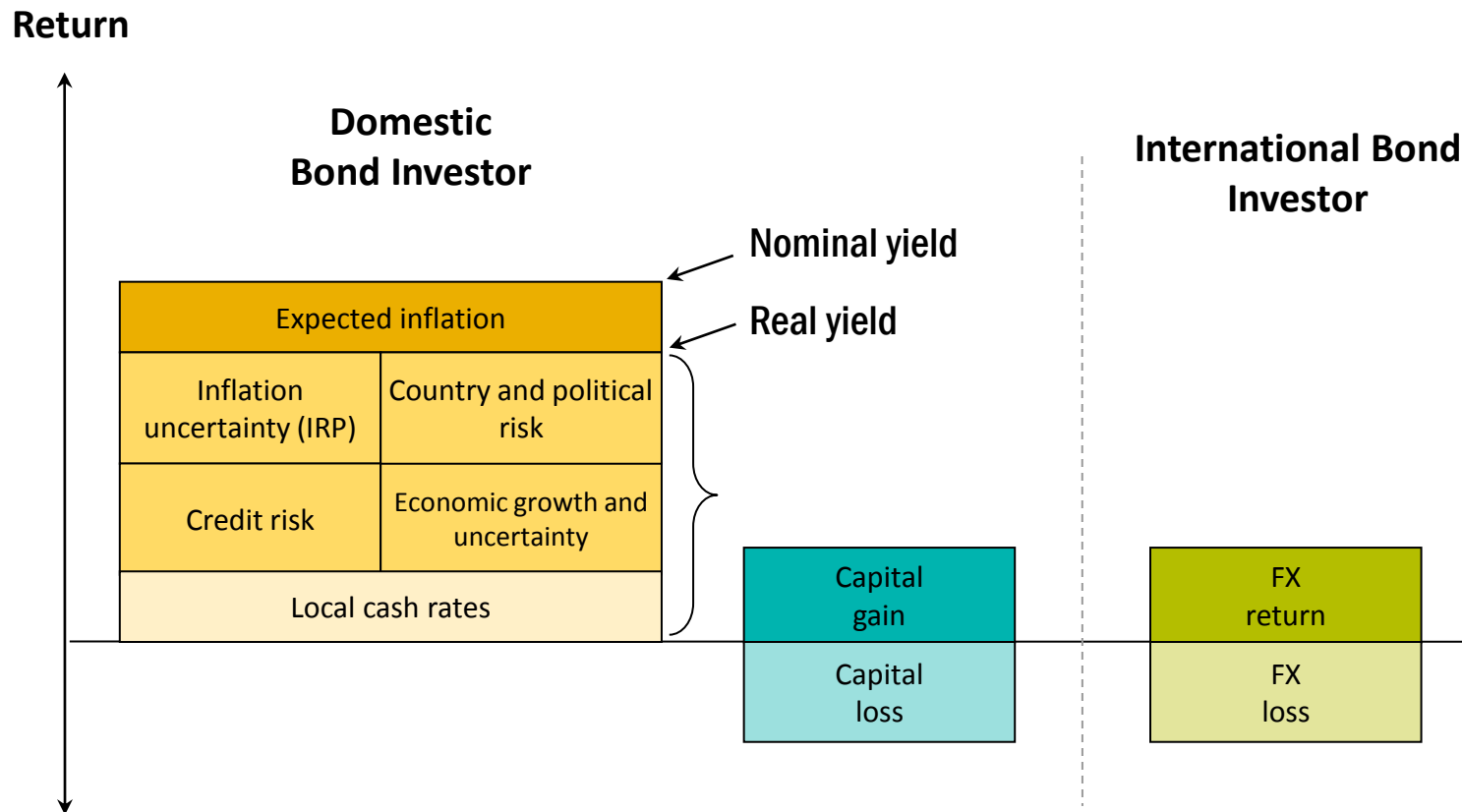
Source: Barclays Capital

# The spectrum of bond risk and return



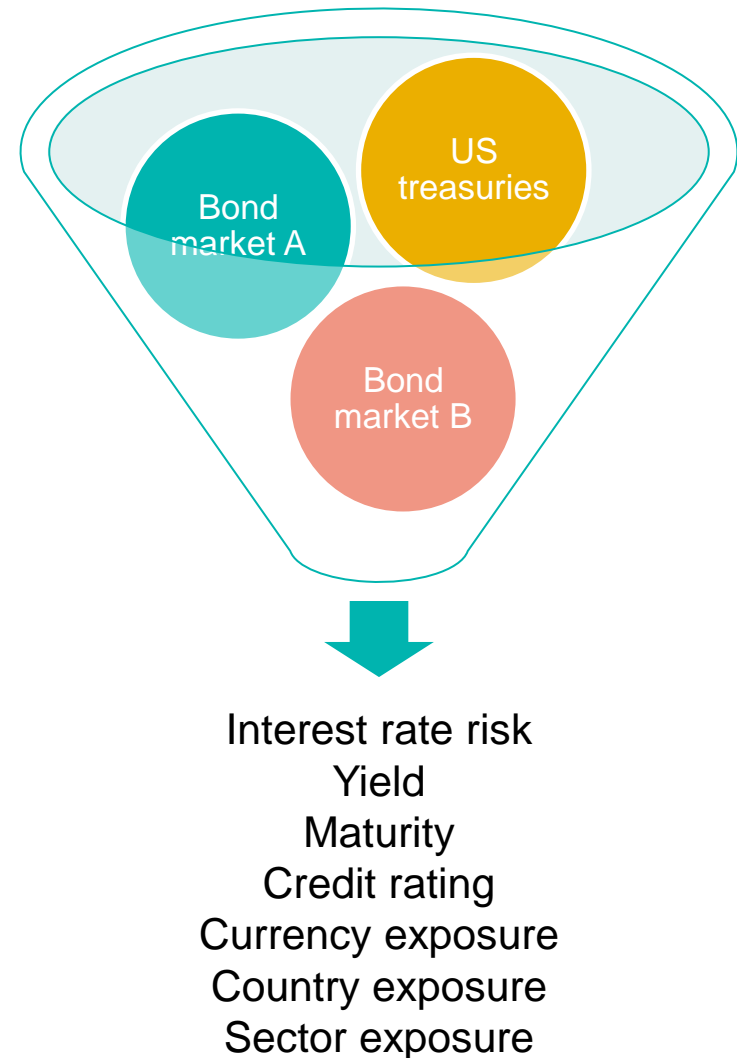
# What makes up the return on a bond?

Bond yields and subsequent market returns are affected by changes in the market's perception of the risks surrounding that bond.

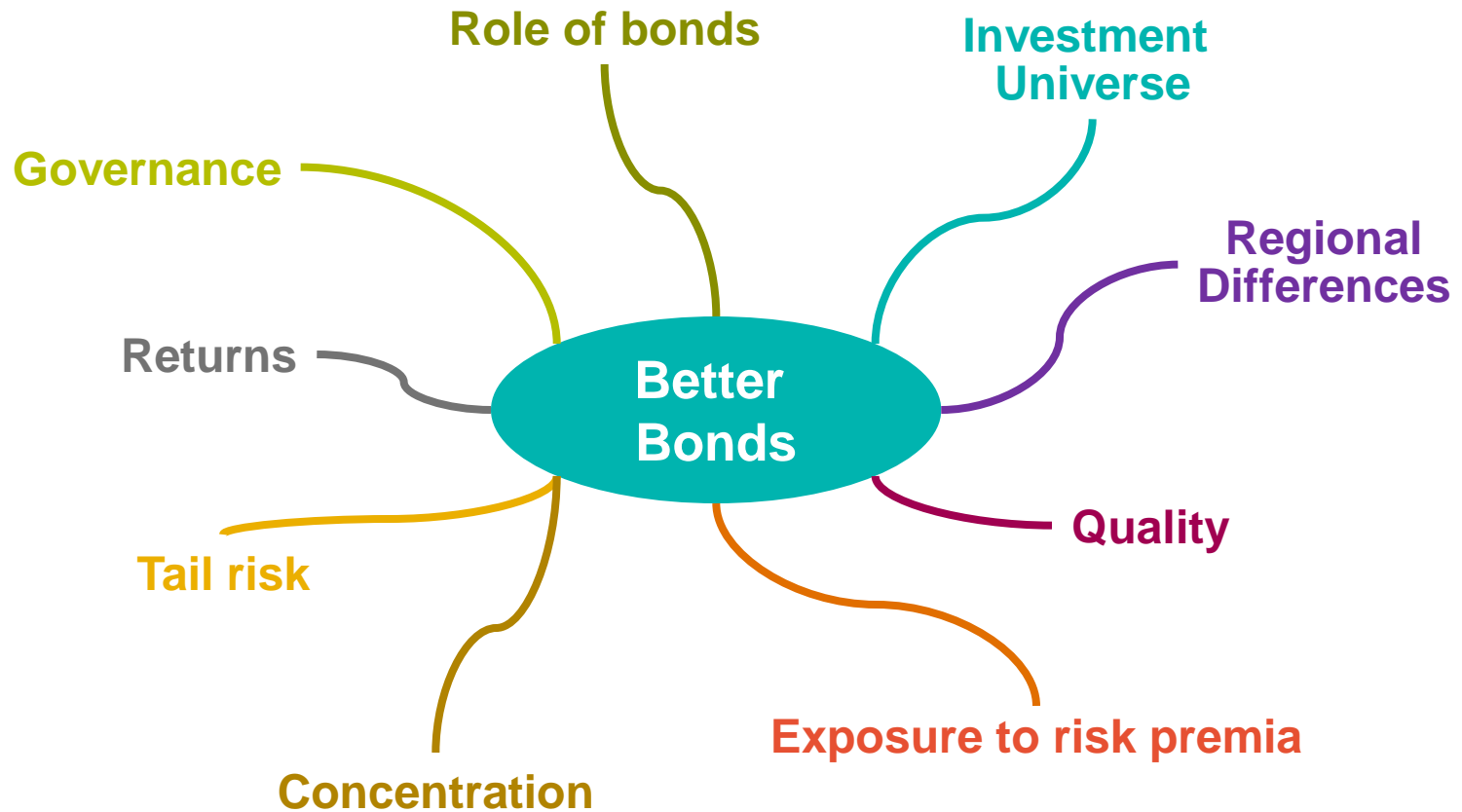


# Bond portfolio management

- A portfolio of bonds may consist of many many bonds issued by different governments and / or companies and / or other institutions.
- The time over which the money is repaid for each of these bonds may vary from (say) 1 to 30 years.
- The bond portfolio itself will be characterised by the type of bonds owned in the portfolio.
- A bond portfolio can have an 'average' duration, yield, maturity, credit rating, currency exposure etc.
- The bond portfolio may have certain concentrated region or sectoral exposure, such as to US or Treasuries



## Some initial considerations...



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