Portfolio Management

The Portfolio Process & Business Cycle

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The Portfolio Process & Business Cycle

- Investment Policy Statement
- Setting Capital Market Expectations
- Asset Allocation & Benchmarking
- Security Valuations
- Risk Management
- Monitoring & Rebalancing
- Performance Evaluation

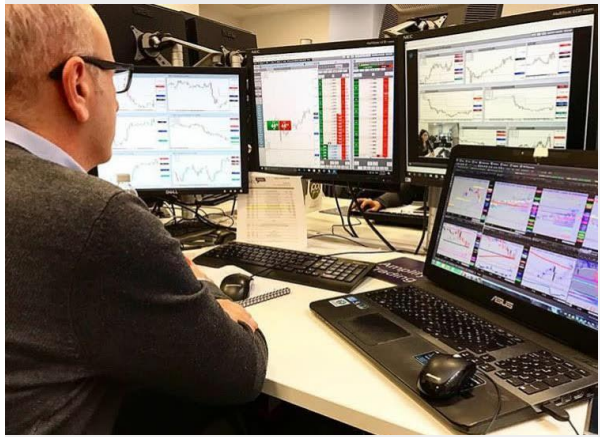
Today's Simulation

The Investment Policy Statement

- **Know your Client – Institutional or Private Wealth**
- **Understand circumstances of client**
- **Document all circumstances for legal & regulatory reasons**

The IPS is formed to understand and appreciate the circumstances of client, whether institutional or private investor, and helps to align the clients interest with the actions that dominate the whole portfolio process.

The Investment Policy Statement



- Return Requirements
- Risk Tolerance

- Liquidity Needs
- Legal Requirements
- Tax Requirements
- Time Horizon
- Unique Circumstances

These 2 risk/return characteristics, and portfolio constraints, dominate how the portfolio will be structured, allocation to each security & asset class, and other factors like legal and tax that dominate. These are individual to each investor, as a 80-year old ex-entrepreneur, might have no legal requirements and a short time horizon, while a Pension Fund, might have a long time horizon with high legal requirements.

Investment Return Objectives - example

Know your client

- Retired pensioner
- 30 year old tech entrepreneur

Capital preservation

- Return should be, at a minimum, equal to rate of inflation.

Capital appreciation

- Not simply looking to preserve capital but to grow it at a rate higher than inflation rate.

Current income

- Objective is to create income from an investors capital base.

Current income

- Growing capital base though appreciation and reinvestment of that appreciation.

Investment Constraints

Liquidity constraints

- For example – Your client needs £50,000 this year to buy a house
- So £50,000 needs to be 'set aside' (be liquid) for the investor to draw down

Time horizon

- Long or short. The longer the time horizon in theory the more risk appetite because there is more time for the investor to recoup any losses

Tax concerns

- If client is in a high-income tax bracket then incurring tax on profits from their investments will carry large tax consequences

Legal & regulatory

- For example a Trust maybe under the legal constraint of not allowing more than 10% of the trust to be distributed in any one year

Unique circumstances

- For example, a client doesn't want their money invested un 'socially irresponsible' companies: Tobacco, Alcohol

Setting Capital Market Expectations

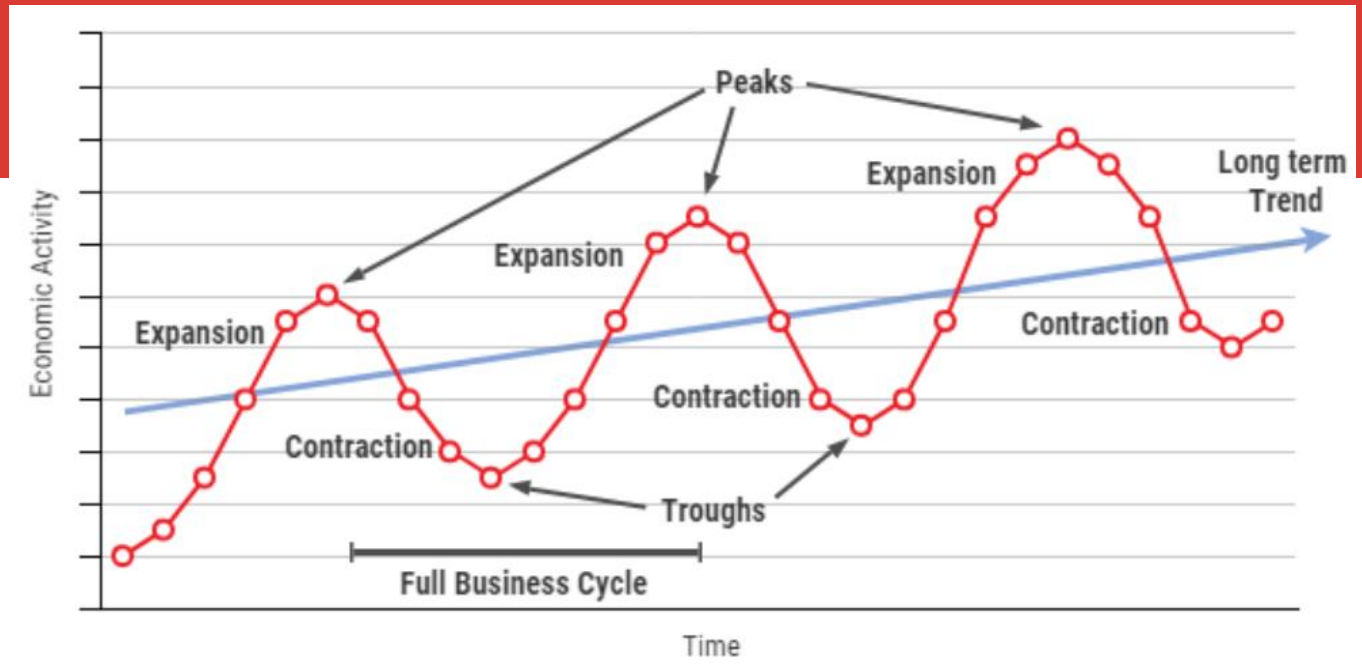
- **Global economics**

- **Understand relative valuations of broad indices & asset classes globally**
  - Bonds
  - Equities
  - Short Term Interest Rates
  - Commodities

- **Understand macro & business cycle**

THE BUSINESS CYCLE

- Assuming **Population Growth** & **Productivity Improvement** over time, the Real GDP of an economy should consistently grow
- But this is not a linear growth - Reality is more of a noisy growth scenario and this is what we call the **Business or Economic Cycle**



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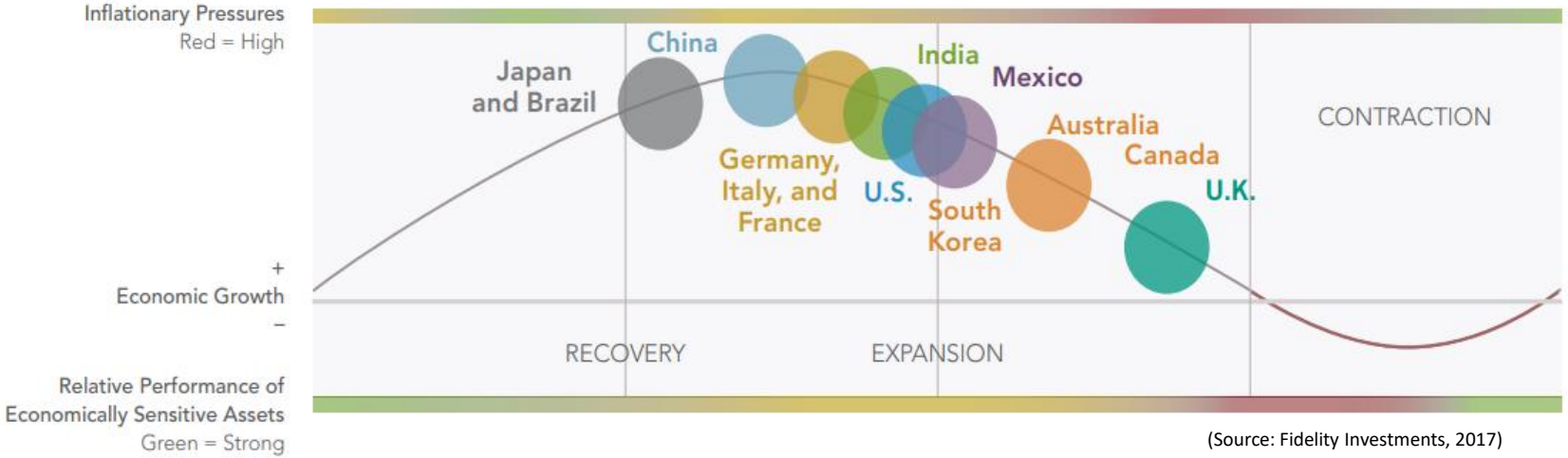
The Investment Policy Statement

- **Early Cycle Phase:**
  - A "V-shaped", sharp recovery from recession
  - Above average acceleration in economic activity (e.g. GDP, industrial production, employment)
  - Credit begins to grow amid easy monetary policy creating a healthy environment for rapid profit growth
  - Business inventories are low, whilst sales growth improves significantly
- **Mid-Cycle phase** – Normally the longest phase:
  - Positive but more moderate rate of growth
  - Economic activity gather momentum, credit growth becomes strong
  - Profitability is healthy against an accommodative – though increasingly neutral – monetary policy backdrop
  - Inventories and sales grow reaching equilibrium relative to each other
- **Late-Cycle phase:**
  - An overheated economy poised to slip into recession hindered by above trend rates of inflation
  - Economic growth rates slow to stall speed against a backdrop of restrictive monetary policy, tightening credit availability and deteriorating corporate profit earnings
  - Inventories tend to build as sales growth declines
- **Recession phase:**
  - This features a contraction in economic activity
  - Corporate profits decline and credit is scarce
  - Monetary policy becomes more accommodative and inventories gradually fall despite low sales levels
  - These factors then set up the next expansion and a move back to the Early-Cycle phase

Four Phases of the Cycle

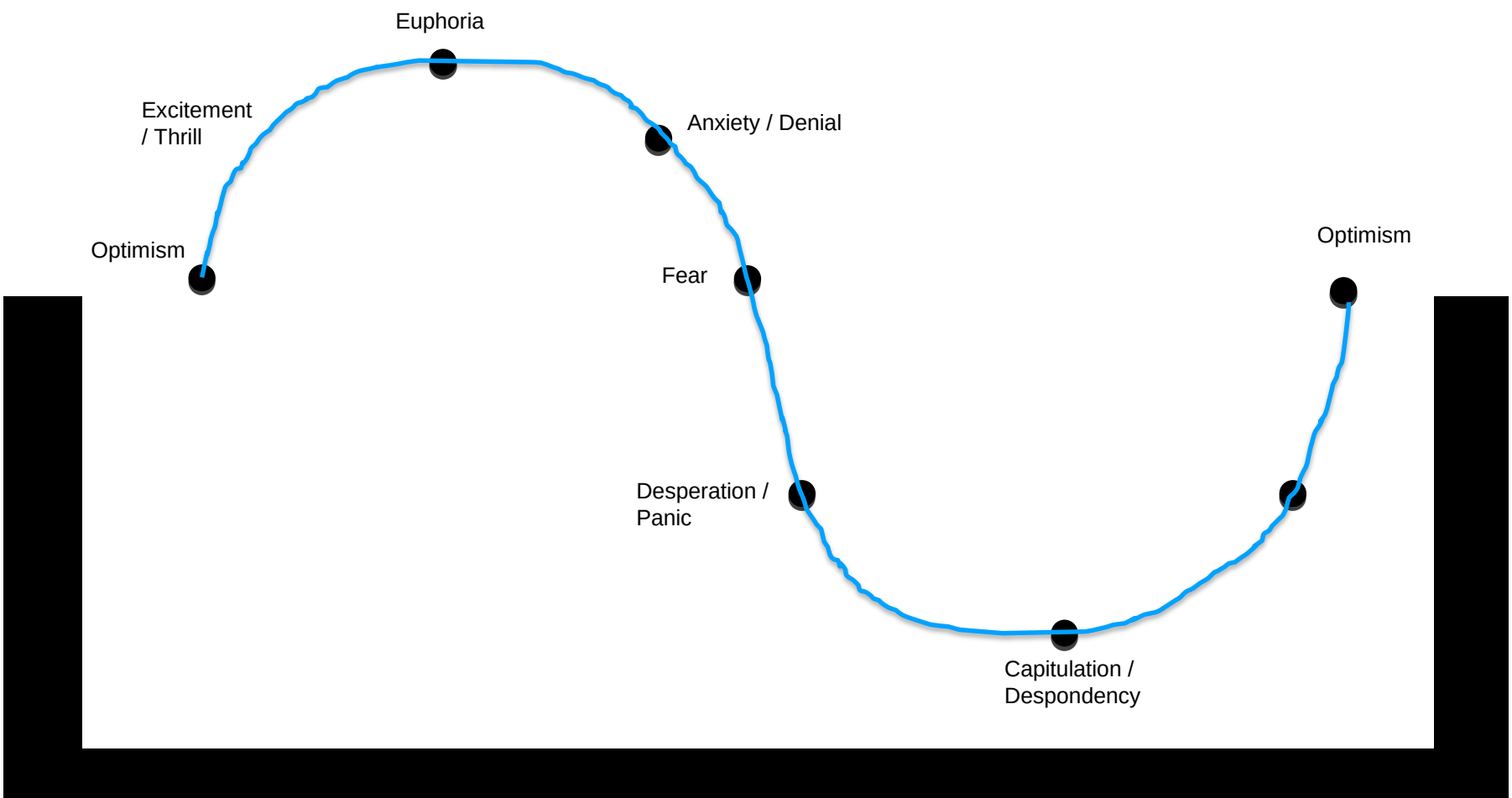
Keynesian economic theory: Monetary & Fiscal policy can help to smooth out the effects of the business cycle

Cycle Phases	EARLY	MID	LATE	RECESSION
	• Activity rebounds (GDP, IP, employment, incomes) • Credit begins to grow • Profits grow rapidly • Policy still stimulative • Inventories low; sales improve	• Growth peaking • Credit growth strong • Profit growth peaks • Policy neutral • Inventories, sales grow; equilibrium reached	• Growth moderating • Credit tightens • Earnings under pressure • Policy contractionary • Inventories grow; sales growth falls	• Falling activity • Credit dries up • Profits decline • Policy eases • Inventories, sales fall



(Source: Fidelity Investments, 2017)

Emotional Rollercoaster



Asset Allocation

Geographic allocation: Domestic bias?

• Analysis of economic performance on a relative geographic basis

Asset Allocation is the process of dividing a portfolio amongst major asset classes such as equities, bonds, commodities, cash.

• The objective is to reduce risk through diversification

• Geographic & Asset allocation: Domestic bias?

• Performance benchmarks, liquidity risk, tax implications

Asset Class Selection: 'Risk-On' / 'Risk Off'

• Risky Assets (Equities) – Economically sensitive, perform better during the early part of the cycle when growth is rising at an accelerated rate, the performance moderates through the other phases which finally declines during the recession phase

• Defensive Assets (Government Bonds) – Government bonds experience the opposite pattern with highest returns normally during recessions.

• Diversification – Alternatives such as Hedge funds, real estate, gold, cash

Additional Strategies

Equity Sector Performance Patterns

- Relative performance of equity market sectors tends to rotate as the overall economy shifts from one stage of the cycle to another
- Due to structural shifts in the economy, technological innovation, varying regulatory backdrops no one sector has behaved uniformly for every business cycle

Bottom-Up Analysis

- Fundamental company research may identify factors that will affect performance independently of the business cycle. New break-through in technology for example

Secular Overlay

- Longer term secular trends that are expected to unfold over several business cycles

Inflation Overlay

- Short term inflation trends tend to ebb and flow with the business cycle

Global Economic Analysis

- The US stock market has global exposure, which may warrant allocation away from domestically focused sectors depending on the phase of the US business cycle relative to the rest of the world.

Tactical & Quantitative Strategies

- Sectors may be impacted by tax changes or regulation changes which may affect performance outside of the typical business cycle trends

Monitoring & Rebalancing

Assuming a portfolio has a 50% allocation in equities and 50% allocation in bonds, what would happen if equities go up 5% and bonds go down by 5%?

Would the allocation remain the same?

Monitoring and rebalancing exists for this reason, to make sure that the original weightings are either adhered to strictly, or within a 'safety corridor', to minimise trading costs & other expenses. This can happen either periodically (e.g. Quarterly) or when a tolerance level in the corridor is beached.

The corridor that allows for slight allocation mismatch is influenced by factors such as:

- High Correlation between asset classes (Increase in corridor)
- High Liquidity (decrease in corridor)
- High Volatility (decrease in corridor)

Performance Evaluation

Sharpe Ratio

- The Sharpe Ratio looks at return per unit of risk

Traynor Ratio

- The Traynor Ratio looks at return per unit of systematic risk (beta)

Jensen's Alpha

- Jensen's Alpha compares the return of the portfolio to the pre-determined capital market expectations (typically through CAPM)

Information Ratio

- Information ratio compares the active return of the portfolio, judging how the portfolio manager's ability to earn excess return.

Simulation Overview & Performance

Investment Mandate

- Global, Multi Asset, Long/Short Hedge Fund
- $20million fund
- Teams of 2.
- Invest through a one year period of real price action and real breaking news
- Constraint: At least 90% invested at the start of each quarter
- Constraint: Max size of any single position $5million
- Fund of Funds – Discussion on how to allocate leverage for multi-manager fund. 50%, 33%, 17% weightings to be split between participants.

Performance Measurement:

- Relative Return vs Benchmark
- Absolute Return
- Peer group comparison

Benchmark & Assets

Security Ticker	Security Name	Asset Class	Geography	Benchmark Portfolio	Number of Contracts	Nominal Value of Trade
HSI	Hang Seng Index	Equity	China	50% Equity	61	$1,428,571.00
NKY	Nikkei 225 Index	Equity	Japan		137	$1,428,571.00
SPX	S&P 500	Equity	USA		1123	$1,428,571.00
MXAS	MSCI Asia ex Japan	Equity	Asia		2483	$1,428,571.00
SX5E	Eurostoxx 50	Equity	Europe		503	$1,428,571.00
MXLA	MSCI Emerging Markets Latin America	Equity	Latin America		306	$1,428,571.00
UKX	FTSE100	Equity	UK		238	$1,428,571.00
EURUSD	Euro/US Dollar Exchange rate	FX	Europe and USA	10% FX	1495327	$2,000,000.00
TY1	US 10yr Government Bond	Bonds	USA	20% Bonds	16643	$2,000,000.00
RX1	German 10yr Government Bond	Bonds	Germany		15907	$2,000,000.00
XAU	Gold	Commodity	N/A	20% Commodities	1408	$2,000,000.00
CLA	WTI Crude Oil	Commodity	N/A		21692	$2,000,000.00

Simulation Structure

Q1

- 15 mins research
- 15 mins prices frozen – construct portfolio
- 15 mins price action - breaking news - trading

Q2

- 15 mins prices frozen – rebalance portfolio
- 15 mins price action - breaking news - trading

Q3

- 15 mins prices frozen – rebalance portfolio
- 15 mins price action - breaking news - trading

Q4

- 15 mins prices frozen – rebalance portfolio
- 15 mins price action - breaking news – trading

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