Portfolio Management

for institutional investors

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Summary

- Portfolio management - definitions;
- The process;
- Investment Policy Statement – IPS;
- Strategic Asset Allocation - SAA;
- Tactical Asset Allocation - TAA;
- Securities selection - SS;
- Implementation;
- Performance and risk measurement;

Portfolio Management -definitions

Portfolio - an **appropriate** mix of or collection of investments held by an institution or a private individual.

Portfolio Management - the art and science of making decisions about investment mix and policy, matching investments to objectives, asset allocation for individuals and institutions, and balancing risk vs. performance.

Portfolio management – the process

Why?

- Performance measurement;
- Improvement – learning loop;
- Discipline;
- Risk control;
- Consistency;
- Continuity;
- Selling tool;

Portfolio management – the process

- Investment policy statement - IPS
- Strategic Asset Allocation - SAA
- Tactical Asset Allocation - TAA
- Security selection - SS
- Implementation – trading and rebalancing
- Performance and risk measurement

IPS – what & why

What:

formal statement of portfolio objectives and constraints which governs decisions making

Why:

• It is an agreement between the owner of the portfolio and the manager, defining the general terms of service;

• It is easily transportable – ensures continuity in case of manager change;

• Promotes long term discipline;

• Keep the portfolio in line in cases of panic and overconfidence;

IPS - content

- client description;
- **objectives;**
- **constraints;**
- asset allocation and deviation limits;
- guidelines for adjustments and rebalancing;
- duties and responsibilities of the parties involved;
- schedule for both performance and IPS review;

IPS - objectives

Risk objectives

Define the amount of risk to which portfolio will be exposed

Return objectives

- differentiate between required and desired;
- differentiate between real and nominal return;
- differentiate between pretax and after tax return;
- must be consistent with risk objectives and market conditions;

IPS - constraints

- liquidity – expected or unexpected cash outflows to be met at some point in time;
- time horizon;
- tax concerns;
- legal and regulatory factors;
- unique circumstances;

Strategic Asset Allocation

- The process that establish the weights of asset classes in total portfolio;

- Conscious effort to gain exposure to the desired level of systematic risk;

- Combining capital market expectations with the investors' risk & return objectives and constraints

- long term in nature

- dynamic vs. static SAA

- asset-only or asset liability management approach;

SAA – how?

Asset Class	Expected risk	Expected return	Weight	Allowed deviations
Equities	20%	25%%	?	+/- x%
Fixed income	10%	11%	?	+/- y%
Money market	3%	8%	?	+/- z%
TOTAL	?	?	100%	

Inputs: asset classes, expected risk and return, correlation matrix, constraints (short selling etc)

Process: mean variance optimization; (alternatives: Black Litterman model, Monte Carlo simulation, etc;)

Output: set of all possible portfolios (weights) with maximum return for any given risk level (or minimum risk for any given return level) = efficient frontier

Tactical Asset Allocation - TAA

Form of active management, when the portfolio managers deviate from SAA in order to take advantage of any perceived short term opportunities in the market.

Deviation from SAA introduces the risk that portfolio could return less than the SAA portfolio (benchmark), so this risk should be rewarded by additional return (over the benchmark return)

How: trading, derivative overlay

Security selection - SS

Deciding the structure of one asset class within the portfolio/ setting the so called **“model portfolio”** for each asset class / selecting form the investment universe the securities which will be included in the portfolio;

Factors to consider

liquidity;

diversification vs. crowding effect;

valuation;

top down vs. bottom up;

SS - valuation

Sources of research: brokerage houses vs. independent research vs. own research

Valuation methods

Discounted cash flows (DCF)

- discounted dividend model (DDM);
- free cash flow to the firm (FCFF);
- free cash flow to the equity (FCFE;)

Peer comparison – based on price multiples

- P/E;
- P/B;
- P/S;

Implementation – trading

TAA + SS => % weight of each security within the portfolio;

Trading principles:

• long term price movements are determined by fundamentals;

• short term price movement are driven by changes in supply and demand, emotions, market sentiment, one off events etc;

Recommendation: select securities based on fundamental analysis, enter or exit the market based on technical indicators;

Diversify strategies: fundamental with technical overlay;

Trading costs:

• fees;

• price impact;

• opportunity cost;

Implementation – what's next?

- do nothing – "buy an hold";
- rebalance – constant mix strategy;
- rebalance – "constant proportion portfolio insurance – CPPI";

Rebalancing - constant mix strategy

Why?

- divergent price movements;
- cash inflows or outflows;
- changes in asset allocation (SAA or TAA)
- changes in stock selection;
- to maintain the desired risk exposure to systematic risk factors;

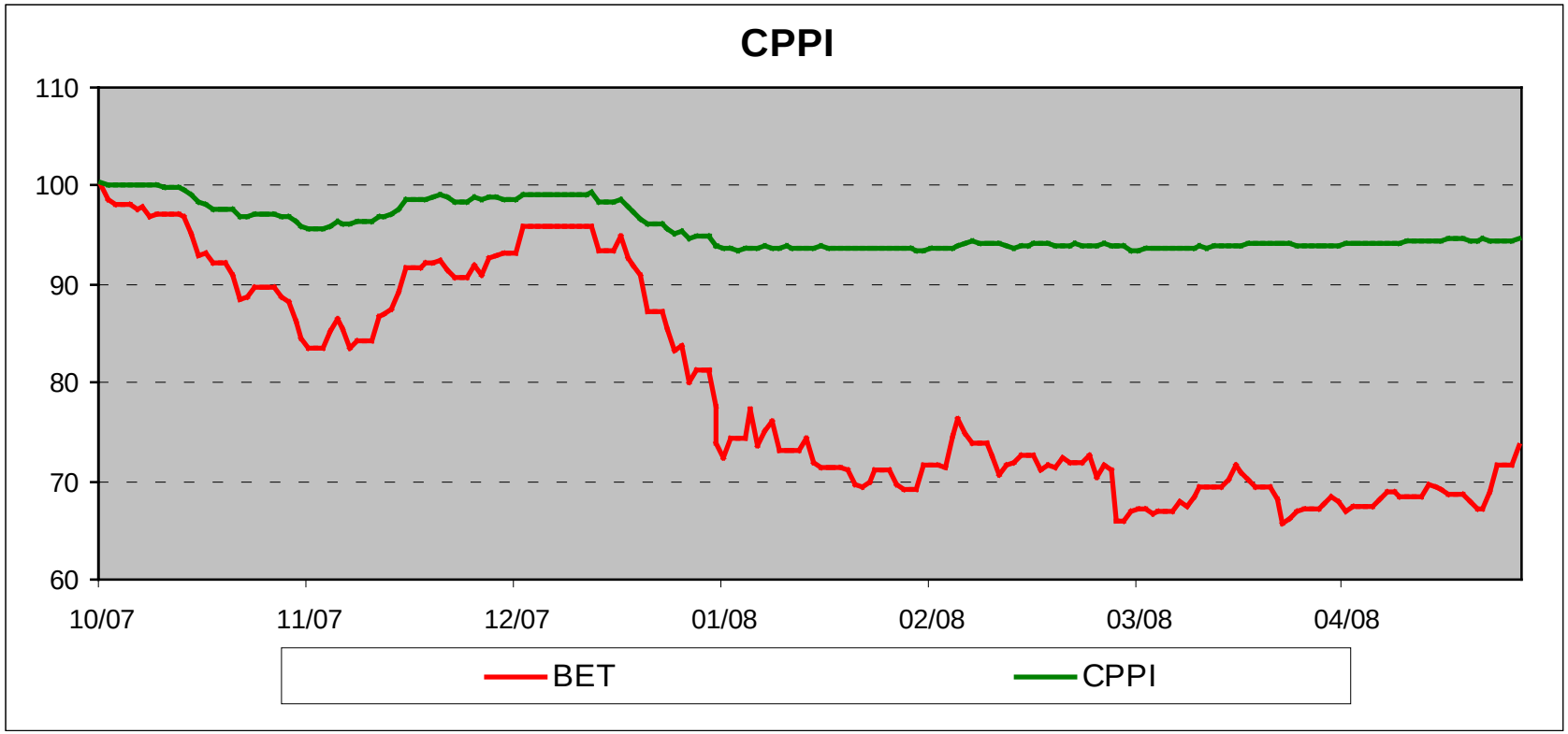
How?

- calendar rebalancing;
- percentage of portfolio rebalancing;

Rebalancing - CPPI

Protects the portfolio against adverse market movements. Protection comes at the cost of lower participation to market rallies (<100%)

% in risky assets (i.e. equities) = m * (TA-f)



Performance - definitions

Absolute return vs. relative return

return of SAA = benchmark

Alpha – the portfolio return in excess of the benchmark return

Performance analysis

- performance measurement;
- performance attribution;

Sources of alpha:

- tactical asset allocation;
- stock selection;
- market timing – trading;

Performance – attribution example

SAA	100% equities
Benchmark	100% BET
TAA	85% equities / 15% cash
BET return (benchmark)	20%
Model portfolio return (SS)	30%
Cash return	0%
Equity return	35%
Portfolio return	=85%*35% + 15%*0% = 29.75%
alpha	= 29.75% - 20% = **9.75%**
• asset allocation	= -(15%*20%) = - 3%
• stock selection	= 85%*(30%-20%) = 8.5%
• market timing	= 85%*(35%-30%) = 4.25%

Risk measurement

Absolute risk indicators

- Variance / standard deviation / value at risk;
- maximum drawdown;

Relative risk indicators

- tracking error;

Risk reward indicators

- Sharpe ratio;
- Information ratio;

Q and A

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