Asset Allocation

Capital Market Expectations, Part 1: Framework and Macro Considerations

Application of Growth Analysis to Capital Market Expectations
Aggregate value of equity: $Vt_e = GDPt \times St^k \times PEt$ where $Sk = E/GDP$
In the long run, total value of equity depends on the growth rate of GDP.

Approaches to Economic Forecasting
Econometric models – Output variable is predicted based on input variables.
- Structural models specify functional relationships among variables based on economic theory.
- Reduced-form models are more compact versions of the underlying structural models.

Econometric indicators – Economic statistics published by official agencies and/or private organizations. Types include lagging, coincident, and leading indicators. Multiple individual indicators combined $\rightarrow$ diffusion index.

Checklist approach - subjective involves putting together information that the analyst considers relevant.

Effects of Monetary and Fiscal Policy on Business Cycles
Aspects of fiscal policy can counteract cyclical fluctuations in the economy

Monetary policy is used as a mechanism for intervention in the business cycle
- Maintain price stability and/or growth consistent with potential.
- Suffers from "Long and variable lags."
- Ability to fine-tune the economy is limited.

The Taylor rule is a useful tool for assessing a central bank's stance and for predicting how it will evolve

$$i^* = r_{neutral} + \pi_e + 0.5(\hat{Y}_e - \hat{Y}_{trend}) + 0.5(\pi_e - \pi_{target})$$

Monetary Policy		Fiscal Policy	
		Loose	**Tight**
	Loose	High Real Rates + High Expected Inflation = High Nominal Rates	Low Real Rates + High Expected Inflation = Mid Nominal Rates
	Tight	High Real Rates + Low Expected Inflation = Mid Nominal Rates	Low Real Rates + Low Expected Inflation = Low Nominal Rates

Macroeconomic, Interest Rate, and Exchange Rate Linkages Between Economies
Macroeconomic Linkages
Macroeconomic linkages between countries are expressed through their respective current and capital accounts.

Four primary mechanisms to keep current and capital accounts in balance:
- Changes in income (GDP)
- Interest rates and asset prices
- Relative prices
- Exchange rates

In the short run, interest rates, exchange rates, and financial asset prices must adjust to keep the capital account in balance with the more slowly evolving current account.

Interest Rate/Exchange Rate Linkages
- Interest rates and currency exchange rates are linked

Two countries will share a default-free yield curve if (and only if) there is perfect capital mobility, and the exchange rate is credibly fixed forever.

If there is lack of credibly fixed exchange rates, yield curves will not have perfect correlation.

The link between interest rates and exchange rates is based on expectations with floating exchange rates.
- Interest rates should be higher in a currency that is expected to depreciate.
- Interest rates should be lower in a currency that is expected to appreciate.

Capital Market Expectations - Part 2: Forecasting Asset Class Returns Forecasting Equity Returns

Historical statistics approach
- Equity returns are extremely volatile
- Fluctuations in P/E and E/GDP
- Forecasts are not reliable

DCF approach
- Gordon growth model: $r = \frac{D_1}{P} + g$
- Grinold-Kroner model:

$$E(R_e) \approx \frac{D}{P} + (\%\Delta E - \%\Delta S) + \%\Delta P/E$$

Risk premium approaches
The Singer-Terhaar model combines two underlying CAPM models
- The first assumes complete global integration of markets and asset classes.
- The second assumes complete segmentation of markets and asset classes.

$$RP_i = \varphi RP_i^G + (1 - \varphi)RP_i^S$$

$$RP_i^G = \rho_{i,GM}\, \sigma_i\, \frac{RP_{GM}}{\sigma_{GM}}$$

$$RP_i^S = \sigma_i\, \frac{RP_i^S}{\sigma_i}$$

Forecasting Real Estate Returns
Historical real estate returns
- Real estate valuation relies heavily on appraisals rather than transactions.
- Historical return data is subject to smoothing
- Volatility and correlations are understated
- Real estate cycles
- Real estate is subject to boom–bust cycles that both drive and are driven by the business cycle

Capitalization rates
Cap rate = net operating income in the current period divided by the property value
- Standard valuation metric for commercial real estate
$E(R_{re})$ = Cap rate + NOI growth rate – %ΔCap rate

Cap rates are higher for riskier property types, lower-quality properties, and less attractive locations