

## Article: Factors in Fixed Income Yields

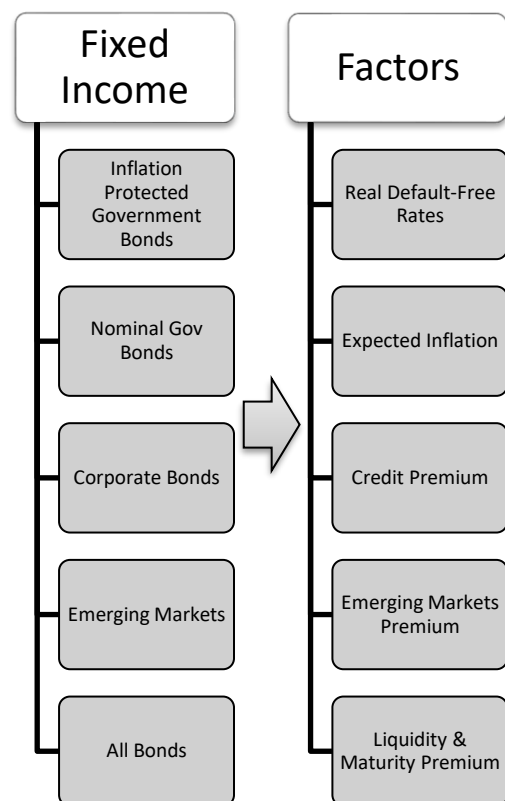
### 1. Introduction

The yield of a fixed income can be decomposed into its building blocks. Through a factor lens, the traditional categorization of asset class labels (government bonds, corporates, emerging market bonds, etc.) is replaced with categorization by the overall factor mix.

### 2. Real Default-Free Rates

With no risk of losing money over the investment in either nominal or real rates, it may be tempting to conclude that an investor will require no return for such a bond. But the choice of deferring consumption and investing today instead carries an opportunity cost that requires compensation.

The economy's real GDP growth is positively correlated with real rates. If more goods and services will be available in the future relative to today, investors' willingness to substitute over time will fall, resulting in less saving and more borrowing. In addition, because GDP growth cannot be predicted perfectly, the volatility of GDP growth will be positively correlated with real rates.



### 3. Expected Inflation

As investors are risk averse, they need to be compensated for taking on risk and will also require compensation for taking on the uncertainty related to future inflation. This is primarily reflected in the way the central banks and monetary authorities set interest rates to respond to the economy's position in the business cycle. Policy rates will be cut when inflation is considered to be "too low".

### 4. Credit Premium

For any corporate or government bond that embodies the non-zero probability that the issuer may default on its obligations, investors will demand a credit premium. The business cycle greatly affects the credit premium demanded by investors. When the economy is expanding, recovery rates tend to be higher, resulting in a lower credit premium.

Other than business cycles, individual company-specific factors will affect credit premiums. This is reflected in the credit ratings by credit agencies like Moody's and S&P. These credit agencies mainly analyse the profitability and financial flexibility of a company relative to its outstanding debt. The credit spread between higher- and lower-rated bond categories narrows in a period of a strong economy.

## 5. Emerging Markets Premium

The risk of default does not only affect corporate bonds. Bonds issued by governments in developing or emerging economies can default. Even though many of these governments can print money to meet their debt obligations in extremis, meaning that they could technically avoid defaulting on these debts, many developing-economy governments have defaulted on their debts in the past. Such defaults are mainly driven by very country-specific reasons, but the global economic environment, oil prices, and the evolution of global trade will often play a part in precipitating such sovereign defaults. Political upheaval may also lead to a change in capital market rules or render it unable or unwilling to service debt.

## 6. Liquidity & Maturity Premium

Some bonds do not trade very often, and that presents a risk to the investor. Hence, thinly traded bonds require a liquidity premium. Investors are unwilling to pay the full value of the bond if there is a risk of not being able to sell the bond in a timely and orderly manner. The size of the liquidity premium is dependent upon an investor's perception of how active the market is.

Long-maturity bonds carry a maturity premium to compensate investors for investing in bonds with a longer maturity. Such bonds are subjected to greater risk of capital gains or losses and reinvestment risk because there is more time for the interest rate environment to change.