

moneyfarm

Intelligent investment strategy

Working to maximise your
long-term returns



You have worked hard for your money

MoneyFarm understands that you are investing your hard-earned cash with us and you want to ensure that your money is secure. That is why our investment strategy will always start with capital preservation, we do not take unnecessary risk with your savings.

Achieve your life goals

Your money is there to pay for your child's wedding, that dream sabbatical or your retirement in the sun. MoneyFarm's investment strategy works on your long-term returns to help you have the money to realise those dreams.

You need to get the most out of your savings

With record low interest rates and inflation it is hard to grow your money when keeping it in cash. You need a new way to save with a strategy that takes on the appropriate level of risk. MoneyFarm constantly innovates to ensure you have the best wealth-management solution at the touch of a button.

You need to understand what is happening with your money

When you are saving for the long term you need to understand the costs, the investment strategy and the way your provider works. That is why our advice is totally unbiased and we do not receive any back-end fees on the funds we select for your portfolio. Our cost structure is low-cost and simple to limit the impact on your returns.

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By making an investment, your capital is at risk. The value of your MoneyFarm investment depends on market fluctuations outside of our control and you may get back less than you invest. Past performance is no indicator of future performance. The tax treatment of a MoneyFarm Stocks and Shares ISA depends on your individual circumstances and may be subject to change in the future. You should seek financial advice if you are unsure about investing in an ISA.



How we invest

Focused on the long term

At MoneyFarm, we believe that investors get the best returns when portfolios are diversified, cost-effective and based on a careful study of global trends.

We focus on long-term investment performance whilst not losing sight of short-term opportunity. We do this using strategic, multi-asset solutions designed for investors who seek to increase their wealth and also to preserve it in difficult times. We believe that investors should have access to all typical markets: bonds, equities, commodities and currencies.

There are many ways to build an investment portfolio: from quantitative to qualitative, dynamic to static, diversified to concentrated. We think the best way is to be balanced. So MoneyFarm takes a pragmatic, strategic approach that combines all these techniques, reviewing it regularly to reflect our view on the economic outlook.

Our investment universe

Carefully selected exchange-traded funds across world markets

Our strategic portfolios comprise exchange-traded funds (ETFs) in asset classes that give MoneyFarm investors access to most global markets:

- Cash equivalent
- Long-term government bonds
- Inflation-linked bonds
- Investment grade credit
- High yield credit
- Emerging markets government bonds
- Developed markets equities
- Emerging markets equities
- Commodities

MoneyFarm uses ETFs for two key reasons. They offer the same exposure to asset classes as mutual funds yet are more cost-effective, so provide better returns. And because they are traded like a stock, ETFs offer complete transparency on price dynamics.

We select ETFs rigorously according to:

- Quality of ETF provider
- Provider's high level of total assets under management
- Liquidity of ETF product
- Tight bid/ask spreads
- Low management fee

MoneyFarm's investment universe takes into account our strategic view of the main risk and return factors that affect performance: rates risk, credit risk, equity market risk, commodity risk and currency risk.

Each year, we update our long-term estimates based on the economic outlook rather than trying to estimate the next year's return. We believe this long-term view is the most professional and ethical way to offer our services.

Market forecasts

Our view of expected returns

Overview

The aftermath of the 2008 financial crisis changed the way we perceive financial markets. To prevent a credit market shock that could have triggered liquidations, defaults and economic depression, central banks across the world intervened, buying financial assets and carrying out aggressive quantitative easing. They succeeded in stabilising the markets. But this has had profound consequences for future returns. With interest rates for all fixed income securities around zero, these financial instruments in particular offer no return from a yield perspective.

Ultra-low interest rate policies pushed up asset prices and headed off a 1930s-style scenario where investments vanished and households suffered a deep recession. In the current environment, high valuations for some assets that have higher levels of risk means expected returns are lower.

Another important factor today is expected risk. While everyone agrees that the central banks have reduced volatility in bonds and equities, there is no consensus about where volatility will go in the future. Some anticipate a “new normal” of low return and risk. Others, including us, think that low interest rates are a potential trigger for volatility, given that policy makers have artificially compressed risk.

We therefore envisage an investment world with lower returns compared to the past, but with the higher-than-average volatility of recent years. Investing in the global financial markets will be more challenging given expected future returns are lower.

MoneyFarm’s forecasts for each major asset class are based on our own analysis and publicly available data from major providers.

Fixed income

Our fixed income market analysis (see Table 1) is based on rate forecasts over a ten-year horizon. We start from the current reference market yield and make an assumption about where we see the rate in the long term. (For fixed income markets, a higher yield means a price depreciation of the bond). To create an overall outlook for fixed income, we analysed the most important markets included in the main fixed income indices.

Table 1 shows the current

and long-term expected rate for these markets. The main assumption is that the yield of government bonds should be in line with nominal GDP growth in the long term. This is confirmed by historical data: on average, the difference between the long-term yield and nominal GDP growth has been roughly zero over the past 50 years. It is interesting to note that from the 1980s to 2000, government bonds offered a better yield than GDP growth. In the 1960s and after 2008, the opposite

Table 1. Current and long-term expected rate

Data: Based on public market data gathered by Money Farm.

	Yield to Maturity of a Generic Government Bond	Yield to Maturity in 10 years of a Generic Government Bond
United Kingdom Government Bond	1.8%	4.0%
United Kingdom Government Inflation Linked Bond (real return)	-0.5%	2.0%
United States Government Bond	2.1%	3.9%
Japan Government Bond	0.3%	2.0%
German Government Bond	0.55%	2.07%
Italian Government Bond	1.33%	1.95%
French Government Bond	0.89%	2.08%
Basket of Eurozone Government Bonds		
German Government Inflation Linked Bond (real return)	-0.52%	0.87%
Italian Government Inflation Linked Bond (real return)	0.39%	1.25%
French Government Inflation Linked Bond (real return)	-0.34%	1.08%
Basket of Eurozone Inflation Linked Bonds (real return)		
Basket of Global Government Bonds (Market Cap weighted)		
Basket of Emerging Markets Government Bonds in local CCY	5.4%	9.7%
Basket of Global Investment Grade Corporate Bond	2.5%	4.5%
Basket of High Yield Corporate Bond	6.4%	8.0%
Money Market Instruments		

has been true. This is not surprising: during periods of high government debt (for example after wars and after the crisis in 2008) the governments of developed markets were able to get cheap financing compared to GDP growth, thus reducing the debt burden.

At MoneyFarm, we believe that governments and central banks will succeed in keeping interest rates low. We call this “financial repression”. Our growth assumptions are

based on estimates from central banks, the IMF and internal sources.

For corporate, high yield and emerging market government bonds, the assumptions are more complicated. This is because we also need to take into account the credit spread embedded in the instruments. This reflects the perceived ability of the issuer(s) to make the repayment compared to a reference government bond with the same maturity. The default probability is

related to the likelihood that some issuers in one ETF could default. We take into account the market prices for default and the recovery values.

Where the instrument is quoted in a different currency from the reference currency portfolio, say US dollar or Japanese yen, we use market prices to extract the long-term expectation for exchange rates. This avoids any strong personal assumption about where we believe exchange rates might go in the long term.

Duration of a Generic Government Bond	Total Annualised Return in 10 years in GBP
8.69	1.05%
8.69	1.63%
8.75	1.07%
9.71	1.56%
9.79	0.60%
8.87	1.87%
9.34	1.15%
	1.38%
9.79	1.47%
8.87	1.92%
9.34	1.49%
	1.66%
	1.28%
7.02	-1.82%
6.51	1.18%
2.74	3.54%
	0.02%

Equities

Our forecast for equity returns is outlined in Table 2. We believe that for this asset class, a “value” approach is the best way to estimate long-term expected returns. This is based on the simple idea that although equity markets are very erratic in the short term, in the long run they behave according to fundamentals. To arrive at our valuation we use a well-known tool that is often used in academic research and is common industry practice: the cyclical adjusted price-to-earning ratio (CAPE).

The main elements of this tool, which we apply to each equity market we consider, are as follows:

Valuation ratio – The long-term CAPE for a given equity market is defined as price divided by the average of ten years of inflation-adjusted earnings: we call this the fair valuation. The average

CAPE is then compared to the market’s current price/earnings (PE) ratio to determine how far the current valuation differs from our target valuation. We assume that in the long term, PE ratios will revert to the average. This gives us the potential to assess returns from a pure price perspective, without considering the dividend component.

Earnings growth – We consider the overall earnings growth level and potential for a given equity market. Earnings growth will directly affect a company’s stock price and its ability to pay dividends in the future. In our analysis we have assumed that the earnings growth of a given market would be in line with the rate of nominal GDP growth of its economy.

Dividend yield – This is defined as dividend income

Table 2. Annual expected return for equity markets

Data: Based on public market data gathered by Money Farm.

	Dividend Yield	Nominal GDP Growth
North America	2.13%	4.10%
Eurozone	3.57%	3.20%
United Kingdom	4.23%	4.30%
Japan	1.85%	3.20%
Developed Markets Equity (Market Cap weighted)		
Emerging Markets Equity	3.0%	9.60%

received for holding one share of a stock, which ultimately contributes to the total return of holding the asset. Similarly, we have also assumed the growth of dividend income for an equity market to be in line with the rate of nominal GDP growth of its economy.

Currency appreciation/ depreciation – This will also affect the overall return for foreign investments. For example, the appreciation of emerging market currencies will boost the overall return on emerging market stocks from a euro or sterling perspective; on the other hand, the same investor investing into a foreign asset with weakening currency will deteriorate the total return of this asset.

In our forecast, we divide global equity markets into five key regions – US, UK, Japan, Eurozone markets and emerging markets –

forecasting the long-term return for each region separately.

For each market, we calculate the average CAPE based on historical earnings, inflation and price (using a generic stock index for equity regions as a proxy for that region).

For emerging market equities and currencies, we aggregate forecasts for constituents of the MSCI Emerging Market Index, a well-known index for emerging markets, in accordance with their weighting. Data for these estimates are provided by financial data providers, central banks and international organisations such as IMF and World Bank.

Return of the valuation to historical median	Total Annualised Return in 10 years in GBP
-2.35%	3.92%
-3.53%	4.83%
-3.69%	5.79%
-0.34%	7.27%
	4.41%
-0.77%	9.75%

Commodities

We believe that commodities are an important part of a diversified portfolio. In general, commodities ETFs buy derivatives contracts (futures) on commodities. The sources of return are the moves in a commodity price plus the impact of the derivatives term structure (roll yield). It is important to note that ETFs on commodities replicate indices that are not based on the market capitalisation. Some indices weight commodities based on liquidity on the derivatives contracts, others use global

consumption or a mix of criteria.

Forecasting long-term returns is very difficult in commodities because they do not provide coupon or dividends.

The expected return is therefore based on price expectation and roll yield effect. A possible approach to forecasting is to examine the long-term relationship between commodity prices and inflation. Because most global commodities are listed in the US, we studied the relationship between

Table 3. Annual expected return on commodity markets

Data: Based on public market data gathered by Money Farm.

**Long-term Historical
Inflation**

2.40%

**Long-term Expected
Inflation**

2.15%

US inflation and commodity prices. We found that there is a strong positive relationship between long-term inflation and commodity prices. As commodities are priced in US dollars, we take into account currency risk, adjusting for the long-term market expectation of exchange rates to convert the investment to the investor's currency.

Our expected return for this asset class is detailed in Table 3.

Commodities

1.26%



Risk forecasts

Our view of volatility and correlation

The two main components of risk are the volatility of each asset class and the correlation between asset classes.

At MoneyFarm, we believe that historical data on asset returns in recent years provide a good indicator for volatility and correlation between asset classes. There are two reasons for this. First, the recent past is in general the best way to forecast medium-term risk; and second, as global monetary policy is

unlikely to change from its current accommodative stance, we do not expect the investment environment to change significantly in coming years.

Table 4 shows volatility and correlation over the last 5 years for the main asset classes.

Table 4. Volatility and correlation between strategic asset class

Data: Based on public market data gathered by Money Farm.

	5Y Vol	Cash Equivalent	Long-term Government Bonds
Cash Equivalent	0.0%	1.00	-0.03
Long-term Government Bonds	2.2%	-0.03	1.00
Inflation-linked Bonds	7.5%	-0.12	0.73
Investment Grade Credit	5.5%	0.01	0.47
High Yield Credit	5.1%	-0.05	-0.09
Emerging Markets Government Bonds	9.1%	-0.17	-0.05
Developed Markets Equities	12.0%	-0.10	-0.24
Emerging Markets Equities	17.7%	-0.19	-0.20
Commodities	17.7%	-0.17	-0.26

Inflation-linked Bonds	Investment Grade Credit	High Yield Credit	Emerging Markets Government Bonds	Developed Markets Equities	Emerging Markets Equities	Commodities
-0.12	0.01	-0.05	-0.17	-0.10	-0.19	-0.17
0.73	0.47	-0.09	-0.05	-0.24	-0.20	-0.26
1.00	0.40	0.03	0.02	-0.15	-0.09	-0.13
0.40	1.00	0.77	0.32	0.06	0.00	0.00
0.03	0.77	1.00	0.52	0.35	0.28	0.22
0.02	0.32	0.52	1.00	0.58	0.72	0.41
-0.15	0.06	0.35	0.58	1.00	0.69	0.42
-0.09	0.00	0.28	0.72	0.69	1.00	0.38
-0.13	0.00	0.22	0.41	0.42	0.38	1.00

How we optimise portfolios

Strategic and sophisticated approach

Having chosen our investment strategy and mix of assets, we apply portfolio optimisation (choosing the weight of assets within a portfolio) using a proprietary tool that is an evolution of the Efficient Frontier, a concept within modern portfolio theory.

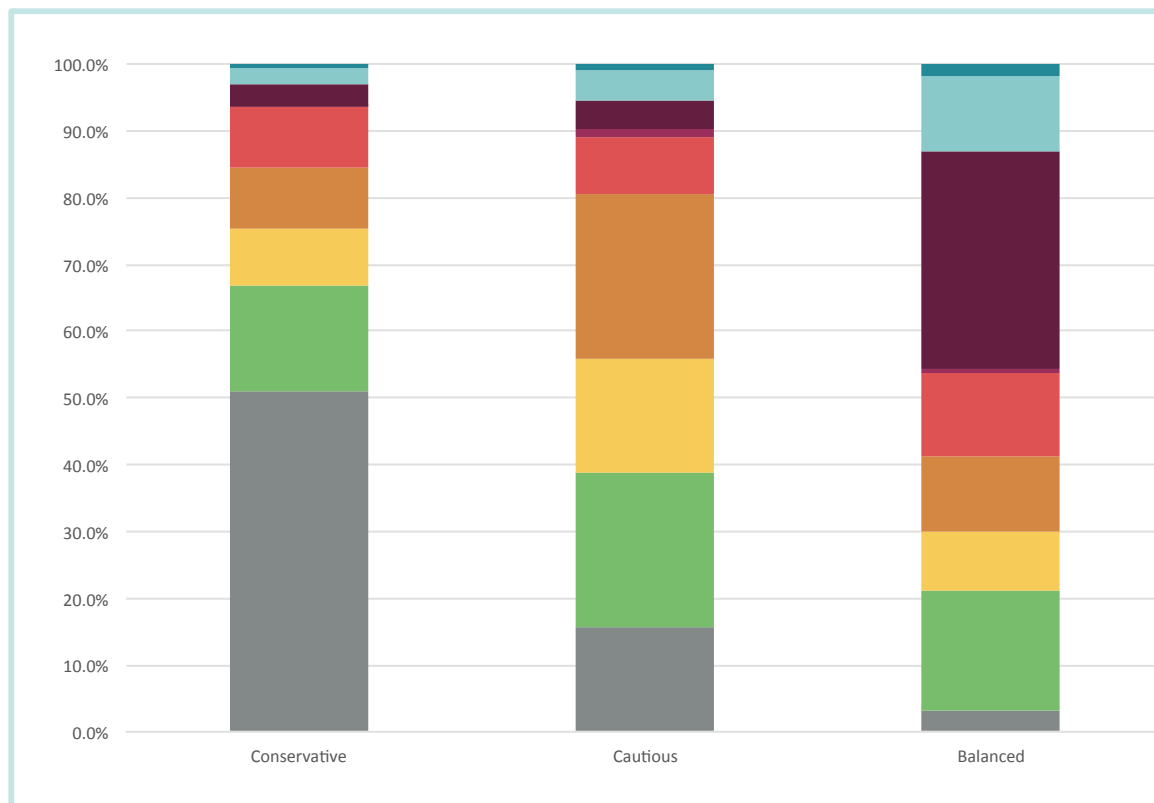
This looks to combine assets that can deliver the best possible expected return for a given level of risk. Using this technique, we build multiple strategic portfolios, and then select six to match the levels of risk that clients choose.

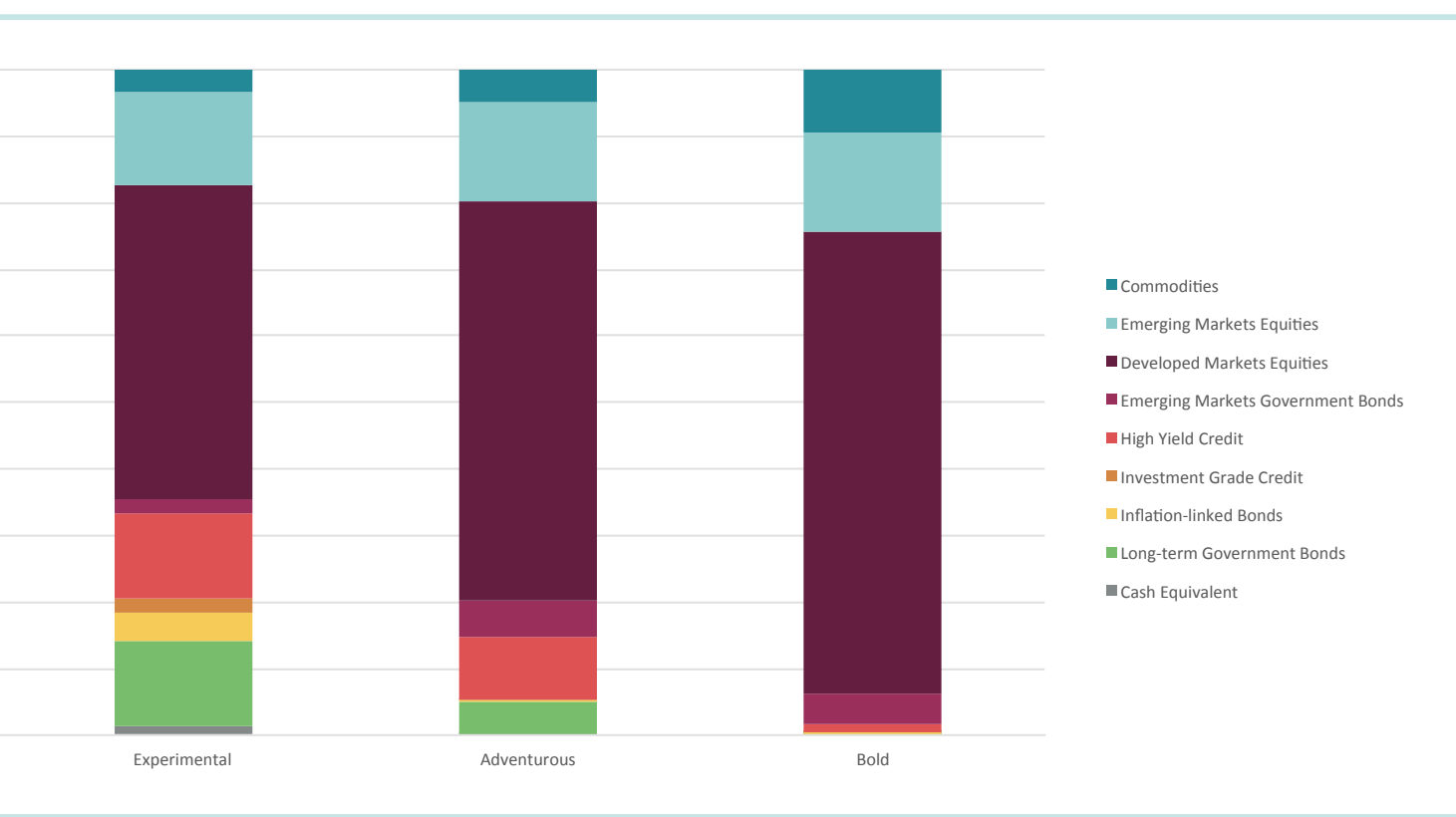
We pick portfolios based on

a range of expected volatility from approximately 2 percent to 12 percent, annualised.

Graph 1 includes a breakdown of our strategic portfolios.

Graph 1. Composition strategic portfolios





Conclusion

Tactics and diversification are key

There are three key themes to our asset allocation in the current environment.

Low returns from fixed income. In a zero interest rate environment, bonds are likely to provide low returns in the future, partly because central banks will continue with accommodative monetary policy that suppresses yields, but also because if they change the policy, we will see spikes in interest rates that cause losses from a pure bond price perspective. Some bonds offer interesting yields, but they are the most volatile ones and behave like an equity product in terms of risk (e.g. some high yield bonds in US). This low rates environment pushes investors to search for yield in the fixed income space instead of buying equity. The prospect

of continuing low returns in this asset class underlines the importance of a cross-asset investment strategy.

Investment managers need to be ready for a change in central bank policy.

Monetary policy actions are playing an important role in equity and commodity returns and central banks remain a powerful force. In this environment, fundamental valuations are not enough to judge the health of an economy or stock market. For this reason, having a tactical view is important to be able to quickly understand how the economic outlook may change if central banks act differently. For example, we

can better manage portfolio volatility if we believe the near future will be too volatile for our portfolios; or create a tactical cash holding when we believe there is a high probability to time the market.

Diversification and knowledge. We believe diversification – avoiding concentration in any one asset class – is critical to positive long-term performance. Our strategic portfolios are built using the most advanced techniques in portfolio management and our macroeconomic views provide an extra buffer of security when searching for returns in this challenging investment landscape.





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