

Bonds: a false market

Summary

“People must be stark, staring bonkers to hold gilts at 2% yields”.

In this paper we examine why this comment is right and also why it is more likely to be heard from a private investor of a certain age than from professional money managers and advisers. In a case of the emperor’s new clothes, the investment industry has too much invested in the pivotal role of bonds as a means of smoothing both their clients’ return path and their own profits from asset-based fees. The effect is to institutionalise ‘money illusion’: making an unrecognised or unspoken trade off between *return volatility* and *inflation risk*. Investors live with volatility but they live off real outcomes.

It is bad trade off for clients of the investment industry at the best of times but potentially disastrous with gilt yields of 2%, which then make corporate bond yields, priced off gilts, look deceptively generous. Current yields are impossible to rationalise except with a high level of confidence about a very specific scenario for the UK and global economy. Needing everything about investors’ view to be right is a fairly good indication of a bubble in prices. If we paid proper respect to the political and economic uncertainty that bondholders are vulnerable to, the range of probable returns, particularly after inflation, looks massively skewed to the downside. This is not a rational situation and irrational markets do not stay that way for long.

In the paper we suggest this not just a function of markets getting carried away but a specific impact of several factors leading to a false market:

- 1 The dominant industry investment approach pays insufficient regard to inflation risk and the importance of inflation risk to investors’ objectives
- 2 Changes in regulations affecting insurance companies and pension funds have led to a false sense of safety when matching long-term liabilities with bonds
- 3 The government’s ‘quantitative easing’ programme, which involves printing money to buy bonds from existing bondholders, has further distorted market yields.

This all matters massively to private clients because bonds are the main source of diversification benefit in the ‘balanced management’ paradigm. Bonds only perform this role because they are the only asset class with reliably low correlation with equities. Investors who are told their portfolios, products or pensions are less risky, the more bonds they hold, are only being given half the information they need and the wrong half at that.

Applying the principles of liability (or objective) driven investment, it is easy to see that bonds without inflation protection have no place in private wealth management. The balanced management paradigm and its flawed approach to risk management only make sense if investors and their agents are fooled by ‘money illusion’. This is no time for that.

The historical perspective

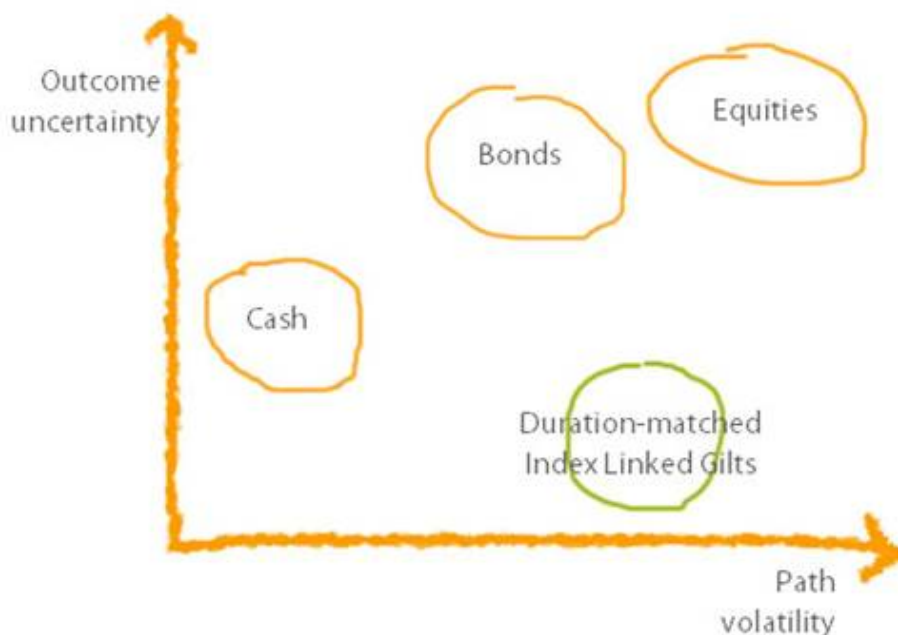
In the UK in the 20th century, the low point in gilt yields was in the 1930s but was still higher – at about 3.5% - than today's long-dated gilt yields of 2%. In the US, yields declined steadily with economic development over more than a century and troughed at around 2% in a window of several years after the second world war. But both UK and US government bond yields then went on to climb fairly steadily, with persistent and increasing inflation becoming a global rather than local phenomenon, to a peak of around 15% in the late 1970s. The move from 15% to 2%, as inflation moderated, also took about 30 years.

Each trend was long enough for investors to become conditioned to a view of what was 'normal' about the returns from bonds. But what the whole history tells us is that investors were seriously mistaken in their views. Their errors were mainly about inflation, as the majority of the nominal yield of a bond has become, since the 1950s, compensation for expected inflation. Errors in anticipating cumulative changes in the price level over the life of a long-maturity bond (or over an investor's long holding period) will lead to either very high or very low real returns, after inflation. Any investment with a wide range of possible levels of future purchasing power over its expected term cannot be counted as anything but risky.

Errors in inflation expectations have many sources but fundamental is the fact that there is no 'natural' price level and so neither is there any natural rate of change in the price level. This makes inflation bets radically different from other bets we can make in financial markets (including equities) that are subject to some kind of natural state of 'equilibrium' and therefore show 'mean reversion'.

In Fig 1 we show diagrammatically how differently bonds look, compared with other assets, when risk is measured as either short-term nominal volatility (on the x axis) or long-term real outcomes (on the y axis).

Fig 1. Volatility and inflation risks compared for the main asset classes



- Cash moves from no risk on a volatility basis (well to the left) to quite high risk (half way up) because, even though interest rates and inflation guesses can be reset by markets daily, there

is still room for errors to cumulate and governments have the power to manipulate cash markets.

- Equities, by contrast, are high risk whether measured by volatility or real outcomes (high and to the right).
- Conventional bonds are the asset that changes location the most, from modestly risky on a volatility basis to high risk on a real outcomes basis. Indeed, reflecting the history of the last 60 years, both in the UK and the USA, they are not a great deal less risky than equities – but do not provide a systematic risk premium for this uncertainty.
- Whereas index linked gilts (ILGs), which enjoy indexation of both interest and principal to changes (up or down) in general prices, are essentially risk free in real terms, they are quite volatile and indeed may be more volatile than conventional bonds. (It is not possible to hedge both risk measures simultaneously.)

Is inflation becoming less unpredictable?

To rationalise gilt yields as low as 2% we have to consider whether this historical perspective, which was not known when yields were last close to this level, is no longer relevant to the future. This might hold if the inflation process has somehow become more predictable. If it has, bonds are still largely an inflation bet but the payoffs from the bet will be neither as good nor as disastrous as in the past.

Our view, not informed by any special economic or monetary insights, is that predictability is as poor as ever. After a global debt crisis there are very plausible scenarios for both deflation and inflation. Whichever starts to take hold, there is also scope for markets to be fooled into extrapolating that trend, on the back of powerful populist narratives for the state of the world's economy. Both sources of error are important in assessing the risk that inflation expectations and therefore real returns will be too high or too low. If there is more confidence about inflation risk it is misguided.

What are the 'true' odds?

Risky assets are all those with an uncertain chance of meeting an investor's expectations or needs. In the absence of perfect foresight, rational investment in risky asset requires a favourable distribution of probable returns. How do bonds measure up to this requirement?

In nominal, or money, terms, 2% nominal yields on (say) 10-year bonds can hardly fall much further but yields could rise several fold. This is clearly not favourable.

To turn this into a more symmetrical, rational range of future real yields, after the event, requires broadly equal scope for both price deflation and price inflation. If the distribution of probable future changes in the general price level is skewed upwards, there is no symmetry in real returns from bonds either. The gold price is an indicator of what some, but not all, investors think about skewness in the inflation process. But many individual investors, not necessarily bulls of precious metals, appear anecdotally to hold the same intuitive opinion that the combination of paper currencies and democratic elections leads governments to take far greater risks with inflation than they will with deflation. Since they also vote, the chances are that individual investors probably share the same bias. Most households have more to lose from sustained deflation than from inflation.

In a skewed world, turning the nominal yield distribution into a real one might shift most of the probable range of real yields to (say): -6% (2% yield and 8% inflation) as a 'bad' outcome to 3% (2% yield and 1% deflation) as a 'good' outcome.

These estimates ignore the 'tail' risks. These are also not symmetrical. A higher rate of deflation than 1% pa over a sustained period (as in the example above) is less plausible than a higher rate of inflation than 8% pa. And the real extreme risk is hyperinflation, which has occurred far more frequently around the world than most investors assume and has no equivalent in either instances or scale of falling prices.

In most risky asset markets, irrational or bubble conditions in asset markets are often explained by convergence of many investors around a single view of what will happen and a willingness to stake a lot of money on that view. Compared with an agnostic investor, who tries to see all the probable outcomes, the knowing investor may be willing to bet on a single one. As we saw with technology and house prices, convergence on the same bet can explain, but not justify or sustain, a market level.

This is generally not a good way to explain bond markets, unlike other assets, and a poor one at present. There is relatively little evidence of a cosy consensus about economic activity, inflation or the exchange rate, all of which are required as parts of a single bet. Even the Japanese example (often quoted) of moderate deflation, keeping bond yields between 1 and 2%, has been very specific to a sustained strong currency as well as below-average growth and there is certainly no common assumption that sterling is in the same position even if the output assumptions are similar.

Why are bondholders defying these odds?

We consider three explanations. It is not possible to quantify the contribution of each but we are sure they have all played a role in creating an unsustainable market.

1. The institutionalisation of bonds in 'balanced management'

Bonds matter a lot to the UK investment industry. For all of private wealth and much institutional money, conventional bonds are the main variable by which managers (or financial advisers) alter asset allocation to ensure a portfolio or fund lies in one rather than another location on some notional 'risk spectrum'. They are therefore the key asset in firms' processes for assessing the risk of a portfolio. Because the process of assessing the 'suitability' of advice depends on matching the risk profile of the investor to a location on the risk spectrum, it is safe to say that bonds are fundamental to the success or failure of that suitability process.

Bonds only occupy this pivotal position because the dominant investment convention for most of the last half century has been diversification of asset class exposures, in what came to be known as 'balanced management'. The theoretical underpinning that gave balanced management such dominance was the rational objective of maximising returns per unit of risk. Diversification increases risk-adjusted returns provided the assets in the opportunity set are not perfectly correlated. But for bonds to play the pivotal role in altering the suitable location of a portfolio on a risk-adjusted line or spectrum, it was necessary to set the risk metric as volatility, or variance in the short-term return earned. Any other risk definition would deprive bonds of this risk-reducing role.

The power of bond exposure to explain differences in portfolio return variance arises from a single fact: they are the only asset with reliably weak correlation, or common movement of prices, with equities and property. In fact, in some economic conditions, they are inversely or negatively correlated.

Other weighting differences in balanced management probably include international equity exposure (usually treated as higher risk) rather than UK equities; property; and 'alternatives', such as private equity and hedge funds. Apart from the fact that some of these exposures cannot be priced (or 'marked to market') with the same frequency as equities, so distorting correlations, they are all exposed to the same business risks that drive prices in public equity markets, limiting their scope for

diversification benefits compared with bonds. Indeed, correlations for these other balanced-management building blocks have increased in recent years (a natural effect of the search for new 'diversifiers'), increasing the explanatory power of the bond weighting.

In Fig 2 we illustrate the current weightings of some widely-used benchmarks for private-client portfolios, by type, highlighting the bond weights in each case.

Fig. 2 Weighting differences in the APCIMS private client benchmarks

	Stock Market Conservative Index	Income Portfolio	Balanced Portfolio	Growth Portfolio
	%	%	%	%
Cash	5	5	5	2.5
Bonds	52.5	35	20	7.5
UK Equities	21.5	40	42.5	47.5
International Equities	11	15	25	32.5
Commercial Property	2.5	2.5	2.5	2.5
Hedge funds	7.5	2.5	5	7.5
Total	100	100	100	100

2. Hedging or insurance demand from regulated institutions

The key investment change in the last decade or so has been new thinking about the nature of liabilities in funds that promise to pay long-term benefits, and about the right way to account for the adequacy of capital to fund these promises. First insurance-company reserves and then pension reserves were made subject to new regulations governing the calculation of funding adequacy. The practical impact of this focus on liabilities and capital adequacy was that the relevant risk metric was no longer the generally-accepted assumption underpinning 'balanced management' and instead was defined specifically, fund by fund, as a function of the form, duration and quantum of their liabilities.

Risk attitudes were formed in terms of what mattered most to the fund sponsor, which was also a function of specific preferences or consequences. For one fund it might be the long-term real wealth generated to meet very long-term and inflation-linked liabilities. For another, it might be minimising the volatility in the funding status, perhaps because the new accounting rules give this a greater impact on current financial reports. For a company, a funding shortfall could affect market value and dividend payments. For any sponsor, accounting for the funding status will put management under greater pressure to limit volatility in the assets compared with that of the liabilities.

Once a fund had worked out how its welfare was best increased, it could calculate a risk budget that was expressed in exactly the same terms, depending on the relative significance for each of real or nominal outcomes and each of short or long-term outcomes. It did not take a genius to work out that the best way to make the asset strategy consistent with the risk budget was to split the capital between:

- 1 assets that were perfectly hedged to the liabilities (so that outcomes were assured and volatility could have no accounting impact on funding adequacy) and
- 2 a risky-asset portfolio with its own strategy designed to meet the way its welfare or benefits were defined.

Liability Driven Investing (LDI) now accounts for over half of UK pension funds by value. Even more funds would have adopted it but for the fact that it has the effect of crystallising funding shortfalls. In the process, LDI has destroyed the market position of most of the large investment houses that dominated balanced management, creating new market leaders. It has also been the final nail in the coffin of traditional with-profits life-company funds.

Conventional bonds have retained a significant role in LDI, but mainly as hedges rather than as part of the risky-asset portfolio. This hedging role arises only because many insurance and pension liabilities are priced in present value terms using government bond yields as 'discount rates'. This is an accounting rule (the stroke of a regulator's pen) but it ends up influencing how the investors affected think of their welfare.

How it ends up doing so is subject to behavioural bias. When temporary stewards or trustees have to make a trade off between conflicting aspects of welfare (in this case, short-term changes in funding status versus long-term, real-wealth outcomes), they will tend to give most weight to the short-term because that is what most affects their tenure.

3. 'Quantitative easing'

This is the term given to purchases made by a central bank of financial assets owned by private holders, using money created electronically (rather than literally 'printed'). As the proceeds are banked, system-wide bank deposits are increased. It is a means for governments to try to increase deposit growth and money supply (or prevent a fall that might otherwise occur) when cash interest rates are already as low as they can go.

The assets that the strategy chooses to focus on also reflect some specific policy intentions. In the US, for instance, the authorities focused on moving poor quality assets out of banks so as to speed up the improvement in their balance sheets necessary before any increase in bank lending could occur. The Bank of England has instead concentrated on buying gilts from financial institutions. The intended effects are to drive down yields (or prevent them rising) and encourage portfolio investors to make riskier investments instead, causing trickle-down effects via capital raising and investment by businesses. This is a very long string to push on and its effects will never be easy to measure.

Judging purely by the subsequent risk preferences of bondholders, quantitative easing has not been a success. The markets' response has not been to abandon bonds but rather to join the Bank in chasing yields down. For almost all of the period since quantitative easing was first introduced, retail investment flows imply increasing, not reducing, risk aversions, with strong flows into:

- corporate bond funds (where credit risk premiums are mistaken for inflation compensation at a time of negative real yields - and are probably 'consumed' as if real) and
- so-called 'cautious managed' funds with high allocations to bonds.

Institutional portfolio flows have also favoured bonds rather than equities and property but this is not surprising given the distortion to risk preferences caused by accounting rules. Lower yields or discount rates cause accounting deficits to widen so, instead of responding to lower yields in the way quantitative easing intends (taking more risk) regulated entities do the opposite and exchange risky assets for even more bonds. The Pension Insurance Corporation has estimated that pension funds increased their gilt holdings by £60 billion during the life of the first round of easing in which the Bank spent £200 billion.

The Bank cannot go on indefinitely buying gilts and at some stage will have to shrink its balance sheet by selling gilts, which it will be doing at the same time as the Debt Management Office is selling new gilts to fund the public sector deficit. Unless it can find a new source of demand, such as

foreign central banks or sovereign wealth funds, it may simply turn out to make a bad market worse.

If the main effect of quantitative easing so far has been to make a good market better, this has not been without an immediate cost. The collateral damage of this manipulation is a reduction in retirement annuity rates for people retiring recently and buying level annuities without inflation protection. Retirees on fixed incomes are always amongst the most vulnerable victims of governments' failures to control inflation.

The impact on index linked gilts

For investors with purchasing-power liabilities or objectives, ILGs are not like other bonds, as they match the liability perfectly, by its nature and by its time horizon.

Investors holding inflation-indexed bonds and avoiding conventional bonds might feel they are onlookers, unaffected by the trap being set in the gilt market. But they are not entirely immune. The erosion of real yields on index linked gilts, certainly once they moved below an economically-rational floor of 1% pa (as the 'pure time value of money'), owes more to arbitrage spilling over from the conventional debt market than it does to demand for inflation insurance, particularly in the shorter durations that interest us.

For the typical bond investor, ILGs and conventional bonds are substitutable for each other, depending on their view of inflation relative to the market's implied view. For a given average market view of inflation at any point, a reduction in the after-tax yield of conventional gilts alone would then leave the index linked equivalent on a higher expected yield. These differences do not get left unexploited: investors will sell the conventional and buy the index linked until the yield gap has disappeared. In our view, these arbitrage effects explain low current ILG yields more than the insurance demand of the much smaller, but well-informed, group of investors who use ILGs for risk control and so are less sensitive to yield changes.

If the arbitrage works this way, it will also work the other way. When the bond bull market turns sour, even if it is because of persistent inflation, there will be some spill-over harm to index linked prices too.

This impact, however, is trivial compared with the potential real wealth destruction awaiting conventional bond holders when the false market created by 'external' intervention goes away.

How private wealth should be managed

Unlike regulated institutions, private wealth faces no externally-imposed conflicts when defining its welfare. Planning need only focus on how the benefits of wealth are to be obtained (a conversation in which clients not their advisers are in control of the agenda and the language). However the goal-specific welfare is defined, it will define in turn both

- what the hedging assets are and
- the most appropriate strategy for the risky assets.

As advisers to individuals, we find that in most cases, private wealth benefits are defined in terms of *meeting quantifiable objectives at one or more time horizons, in purchasing-power terms.*

A plan for living off capital (such as drawdown from pension funds, other capital or disbursements from trusts) involves a stream of cash with widely-different horizons¹. Most of these private-wealth horizons are long enough for inflation risk to be as important as other sources of economic uncertainty and usually much more important than volatility, or short-term variance in the valuation of the portfolio.

Obviously individuals care about volatility. But as long as they have a plan based on their own liabilities they can learn to live with volatility, whereas plan outcomes are what will provide the benefits they need. The consequences of failing to achieve their goals usually loom a lot larger than the consequences of volatility. Consequences are a very important way private clients think about their welfare and reach decisions about priorities and make trade offs.

When strategies for private wealth are separated between hedges and bets, as in liability driven investing, conventional bonds have no place in either component of the portfolio.

- They are not a hedge for most private 'liabilities' or target outcomes, because these are defined in real terms, after inflation. Only horizon-matched ILGs (and index linked National Insurance certificates) fulfil that role.
- They are not a suitable asset for providing risk-adjusted reward for bearing other sources of risk. There is no historical evidence of a systematic risk premium for bearing the inflation risk of fixed income investments. There is a systematic risk premium for credit risk (applying to corporate borrowers, who could default) but this premium is not available both as a compensation for default risk and as a source of return for bearing inflation risk.

Whenever clients see balanced management being adopted to deal with horizons that are long and to deliver personal benefits that are about purchasing power, they should know that risk has only been 'reduced' by adding bonds because equity risk has been replaced by inflation risk.

At a time when bond yields are at levels that create almost unprecedented real-return downside risk, making this a terrible trade off, it is hard to avoid the logic that the balanced management paradigm is well past its sell-by date. Private wealth needs a liability or outcomes driven approach in which ILGs are the only bond holding and are held as hedges or insurance to dilute the real return risk of equity-based products. The risky portfolio still needs diversifying but not to the same extent as in balanced management (and so at a much lower cost), because risk has already been controlled at a higher level.

¹ The drawdown description applies as much to drawing income as drawing capital. Though taxed differently for individuals, both are just money. Treating income differently merely conceals the way 'total return' is consumed rather than reinvested.