# The global market portfolio

## Setting a new standard for the post 60/40 regime

Investors for a new now

July 2022

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# The Global Market Portfolio

## Setting a new standard for the post 60/40 regime

Authors: Peter Warken, Angelina Kostyrina

### Executive summary

A decade of exceptional returns for bond-equity portfolios has been undoubtedly quite pleasing for investors. Year 2022, however, reminds market participants that investing is not always a smooth sailing – volatility in US Treasuries has been comparable to that of equities, and returns have been challenging in both asset classes. How can investors meet their financial goals in an environment like that? Which asset classes need to be considered? We address these questions by introducing a global market portfolio, setting into perspective the delicate balance of traditional and alternative asset classes. Taking a bird's eye view on global capital markets, we also explore the role of the emerging asset class of digital assets in this context. In addition, we outline how client-specific circumstances and implementation constraints might impact the scope of opportunities of the investments landscape that can be captured. Lastly, a successful investment framework relies on a strategic view on risk and return: for this purpose, we apply our DWS Long View return framework and showcase how risk analytics help understanding interactions between invested assets.

### Our study in a short- and long-term context

We started the year with challenging equity valuations, inflation worries, rising interest rates and lower monetary stimulus. Recently, even more concerns have emerged from geopolitical uncertainties and worries about economic growth, further increasing volatility across financial markets.

These dynamics have been a drag to the performance of equity-bond portfolios. Year-to-date as of the end of May, the 60/40 portfolio[1] returned -10.9%, the largest decline for a 60/40 portfolio since 2009. What makes things worse is that, unlike many previous periods of market underperformance, this time both equities and treasuries experience negative returns. This reminds investors of the challenging market environment lying ahead that is characterized by volatility higher than the one we got used to. Any short-term forecast is subject to a high degree of uncertainty, but this publication takes an explicit long-term view.

In the last decade, the performance of the 60/40 portfolios has been exceptionally strong - from both a pure return and a risk-adjusted perspective. One could argue that broadening the investment opportunity set was not worth the effort during the last 10 years. Figure 1 illustrates that this regime[2] has been a clear outlier relative to the last 50 years with an excess return over short-term interest rates of 8.3% p.a. and a risk-adjusted return[3] larger than 1.

[1] 60% MSCI World and 40% US Treasury Total Return Index in USD are considered as 60/40 portfolio throughout the paper.

[2] In the analysis the years 2012 -2021 are considered as last decade / last 10 years.

[3] Return divided by volatility

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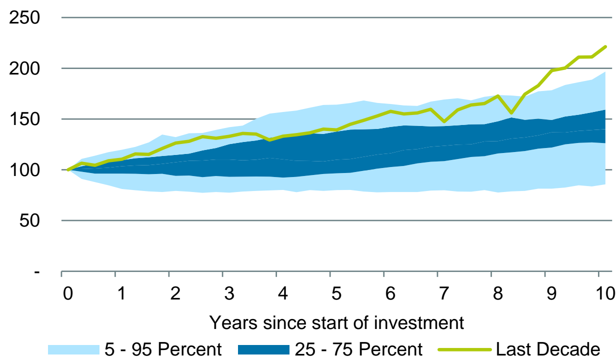
**FIGURE 1. 10-YEAR EXCESS PERFORMANCE OF A 60/40 PORTFOLIO FROM 1970 TO MAY 2022**




Distribution based on quarterly returns for overlapping periods since 1973.
Source: DWS Investment GmbH, As of: June 2022

Uncertainty in market conditions and longer-term challenges to real investment returns call for action. To meet financial goals in such a regime, investors must consider a broader range of opportunities and risks across global capital markets. Which asset classes should be considered for the long run? What do these assets offer in terms of risk vs. return? Do these investments enhance the portfolio diversification? Essential questions for investors to consider when investing strategically.

## The global market portfolio

Over the past few decades, the global investment landscape has changed dramatically. In addition to large-cap equities and sovereign bonds, various sub-asset classes & strategies have been established, offering distinct risk-return-characteristics. The purpose of this section is to take a bird's eye view by outlining which opportunities & risks are out there for investors. To do so, we introduce a market value-weighted allocation, a global composite allocation with all sub-asset classes proportionally weighted by their market capitalization, across regions. The idea is to derive a global aggregate portfolio of the market as a whole.

While the original idea of such an allocation dates back to Tobin (1958) or Sharpe (1964), the approximation of the true global market portfolio still poses challenges to the investor community. For example, the emergence of new asset classes, e.g., digital assets, or difficulties in benchmarking private market investments contribute to these challenges.

Still, it is prudent to comprehensively assess potential investment opportunities. Such an overview is increasingly relevant to investors' investment discussions, especially of those investors who want to diversify their traditional equity-bond portfolios to achieve differing objectives and strategies.

Overall, the split of the aggregate portfolio is 42% in equities, 42% fixed income and 16% in alternatives. The aforementioned asset classes of the 60/40 portfolio, large-cap equities and developed markets sovereigns[4], account for 56% of this allocation only. This demonstrates that there are plenty of categories that investors can consider to potentially enhance the long-term return potential and to increase the diversification of portfolios. However, note this overview is not designed to convey the message that every investor needs to be invested in all those asset classes. Nor does it claim the weights are optimal. Different market regimes call for different allocations, and different investment objectives & scenarios require different exposures. The overview serves as an initial guide to a truly global and diversified investment landscape that goes beyond traditional large cap equities and sovereign bonds.

[4] In this case we refer to nominal, global sovereign bonds and not only US treasuries.

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**FIGURE 2. THE GLOBAL INVESTMENT LANDSCAPE**

| **Equities** | **42.3%** | |
|---|---|---|
| | % of market portfolio | % of equities |
| Developed Markets | 37.3% | 88.4% |
| Emerging Markets | 4.9% | 11.6% |
| Large Cap | 36.1% | 85.5% |
| Small Cap | 6.1% | 14.5% |
| Listed Infrastructure | 2.1% | 5.0% |
| Listed Real Estate | 1.4% | 3.3% |
| **Fixed Income** | **41.8%** | |
| | % of market portfolio | % of fixed income |
| Developed Sovereign | 22.1% | 52.9% |
| Nominal Bonds | 20.0% | 47.9% |
| Inflation Protected Bonds | 2.1% | 5.0% |
| Developed Credit | 8.3% | 19.8% |
| DM Credit IG | 7.0% | 16.8% |
| DM Credit HY | 1.3% | 3.1% |
| Emerging Markets | 5.8% | 13.8% |
| Emerging Markets - Local | 2.6% | 6.2% |
| Emerging Markets - Corporate | 2.4% | 5.7% |
| Emerging Markets - Hard | 0.8% | 1.9% |
| Securitized | 5.4% | 12.9% |
| Convertibles | 0.2% | 0.5% |
| **Alternatives** | **15.9%** | |
| | % of market portfolio | % of alternatives |
| Private Equity | 3.7% | 23.0% |
| Private Debt | 0.7% | 4.6% |
| Private Real Estate | 5.0% | 31.4% |
| Private Infrastructure | 0.4% | 2.7% |
| Hedge Funds & Liquid Alternatives | 2.4% | 15.4% |
| Digital Assets | 0.8% | 5.0% |
| Gold | 2.9% | 18.1% |

Source: DWS Investment GmbH, Bloomberg L.P., MSCI, HFR, Boston Consulting Group, J.P. Morgan, World Gold Council, CoinMarketCap, As of: June 2022

During the last few years, the share of alternatives in the global market portfolio has shown a noticeable increase, with further growth of this market segment expected[5]. Record fundraising levels of private market investments, such as private equity or private debt, contributed to this rising share of alternatives.

Why has the integration of alternatives received increasing attention? The purpose of the integration is straightforward: to enhance returns, to dampen the portfolio volatility, to increase diversification or to increase the robustness in an inflation- / growth-surprise scenario.

Depending on the precise investment objectives, different types of investments, sub-asset classes and strategies are required as their portfolio effects can vary significantly. As outlined in Warken & Moehrle (2021) the alternatives category spans a broad universe with various sub-asset classes and strategies. Our core principle of knowing your premia for liquid strategies translates easily to the broader category of alternative investments that come with further asset-class specific challenges[6].

Having a fundamental understanding of your investments is also of utmost importance when adopting newly emerging asset classes such as digital assets.

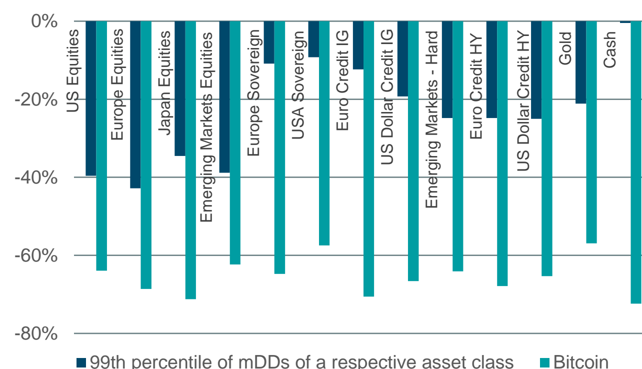
## Exhibit: Digital Assets

Decentralized finance, digital currencies and NFTs have been on top of the public mind for quite some time now. Bitcoin has most certainly been at the forefront of this attention wave, offering some investors occasional mind-boggling returns. However, while digital assets currently account only for c. 0.8% of the overall asset universe, the associated risk is significantly higher.

For instance, if one compares risk statistics of Bitcoin vs. traditional liquid asset classes[7], the former can boast a rather low correlation to the latter group. Nevertheless, investors should be very careful about this seemingly good news. Warken & Kostyrina (2021) have touched upon the multi-asset perspective on conditional expected drawdowns, and extension of this framework to Bitcoin helps see that in the worst cases of drawdowns[8], the digital currency in question might exacerbate the losses (cf. Figure 3).

All-in-all, our preliminary in-house analysis of cryptocurrencies' investment opportunities shows that this asset class might have a place in a multi-asset portfolio. However, one should bear in mind the inevitably related questions of the risk impact on the portfolio, tracking error budget and potential concentration issues. Moreover, Bitcoin's 50% price slump since the November highs and recent crash of the Luna token highlight once again that, at least for now, digital assets are an investment area for those with a strong stomach. By now, though, this market has experienced a lot of 'creative destruction' events.

FIGURE 3. RISKINESS OF DIGITAL ASSETS




Source: DWS Investment GmbH; as of: June 2022

Finally, implementation for such an investment is also a stand-alone and important question involving potential choices between ETFs, futures and/or other possible investment vehicles. Naturally, both financial service providers and investors should also pay attention to growth in tokenization markets and opportunities in such asset classes like tokenized debt securities or alternatives.

## Implementation

Understanding that there can be an extremely large dispersion of portfolios around the introduced global market portfolio is important.

Due to different investors having different investment objectives and preferences, a vast range of individual portfolios is created. The overall wealth, the ability and willingness to take risk, the investment horizon or liquidity needs further influence the design of the optimal investment strategy.

For instance, a corporate defined benefit plan will have a sizable weight in long-duration bonds to match its long-term liabilities, whereas endowments and foundations have the ability to harvest illiquidity premia via strategic allocations to illiquid investments (such as private equity) as they have the extended investment horizons required for such investments.

[5] Boston Consulting Group (2022)
[6] For example, liquidity or regulatory requirements as outlined on pg. 5.
[7] Time horizon of 2017 - 2022, weekly returns, exponential weighting, 98% winsorization
[8] 99th percentile of the maximum drawdown (mDD) simulations. The matrix is based on 100k one-year simulations.

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The following Figure 4 highlights these asset allocation differences for some selected investors.

**FIGURE 4. ASSET ALLOCATION BY CLIENT SEGMENT**

| Type | Equity | Fixed Income | Others[9] |
|---|---|---|---|
| Sovereign wealth fund[10] | 52.0% | 26.0% | 22.0% |
| Pension fund[11] | 27.1% | 49.4% | 23.6% |
| Endowment fund[12] | 14.0% | 7.5% | 78.5% |

Source: DWS Investment GmbH; as of: June 2022

The allocation to equities varies significantly between 14% to 52%, but the varying share in other investments is even more striking: between 22% to 79%. This category contains predominantly Alternative investments.

Allocating to this asset class category is associated with some specific considerations:

a) Liquidity requirements
Some investors are bound by liquidity requirements, i.e., there exist short-term cash flow needs. This limits the maximum allocation to illiquid investments and thus constraints the potential to harvest illiquidity risk premia.

b) Regulatory constraints
The legal structure of the investable assets in scope, of the investment portfolio itself and of the invested client influence the ability to allocate within alternative assets. This, in particular, holds true for non-UCITS eligible products which are common in the field of alternatives.

c) Operational due diligence
In-depth due diligence is required to select and invest in alternative investments. This includes the onboarding of those investments, the management of operational procedures, and the associated complexity.

While being highlighted in the previous exhibit, the topic of investment vehicles' selection is also of natural and prime importance here. A choice between a single name selection or funds, passive or active, plain vanilla or derivative overlay, might be a significant outperformance contributor or detractor. Everything considered, the right asset allocation and implementation are the two components that make an outstanding portfolio.

Now - knowing what is out there, knowing that it's important to know your premia and understanding that unique circumstances will impact the implementation - let's focus on what those asset classes offer in terms of risk and return over the long run.

## Long-term Risk-Return Projections

To construct strategic asset allocations, we use the output of the DWS Long View, our firm-wide methodology for forecasting strategic, 10-year returns across a breadth of public and private markets. The DWS Long View leverages a consistent and transparent building block approach that aggregates fundamental return drivers across three pillars: income, growth, and valuation[13].

Our main findings, summarized in Figure 5, for a selected set of sub-asset classes, suggest lower long-term returns for global equity markets versus the last decade. However, the repricing in 2022 raises future return projections. For example, European Treasuries saw a pickup of c. 0.5% in their return forecasts relative to the end of last year. Generally, in fixed income markets, we show slightly higher nominal returns relative to year 2021, reflecting higher starting levels on yields. Private market investments continue to offer better returns.

**FIGURE 5. 10Y RETURN FORECASTS P.A. IN LOCAL CURRENCY**

| Asset Class | DWS Long View |
|---|---|
| World Equities | 5.5% |
| EM Equities | 6.3% |
| EUR Treasury | 0.3% |
| EUR Corporate | 1.5% |
| EUR High Yield | 3.9% |
| US Treasury | 2.4% |
| US Corporate | 3.1% |
| US High Yield | 4.1% |
| EM USD Sovereign | 5.7% |
| World REITS | 3.7% |
| Global Infra. Equity | 5.4% |
| Private RE Equity US | 7.1% |
| Private EUR Infra. IG | 2.7% |
| Hedge Funds: Composite | 3.1% |
| Broad Commodities Futures | 0.4% |

Source: DWS Investments GmbH. Data as of 31 March 2022

[9] In particular this category contains alternative investments.
[10] Allocation in 2021 according to Global SWF (2022)
[11] Average allocation in 2020 in selected asset classes and investment vehicles in a selection of OECD countries according to the OECD Global Pension Statistics (2021).
[12] Asset allocation target for the fiscal year 2021, YaleNews (Yale University, 2020)
[13] Cf. DWS Long View 2022

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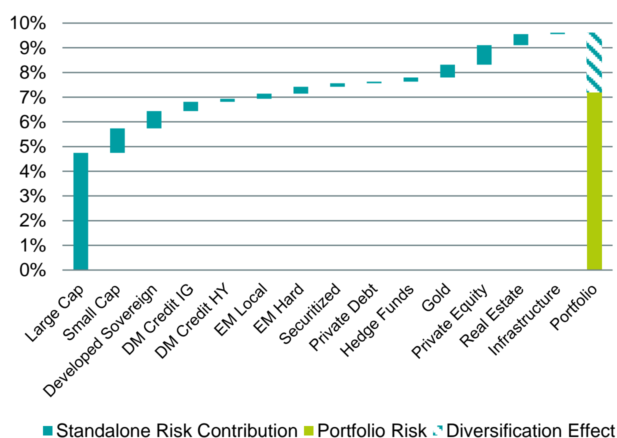
Application of those forecasts to the derived global market portfolio yields a 10-year forward-looking expected return of 4.2% p.a. in local currency[14].

In order to assess the associated risks, we use mid-term volatility and correlation estimators. In this case, estimating the risk of infrequently traded asset classes presents a challenge due to opaque information. We use the information contained in the autocorrelation of returns to adjust the risk of selected illiquid asset classes[15]. For example, we estimated an accounting volatility of 3.4% for Private European Real Estate Equity, while the economic risk is assumed to be 2.6-times larger at 8.8%.

Overall, the application of those estimates to the derived global market portfolio yields an expected annualized volatility of 7.2%.

Moreover, we emphasize the necessity of using a risk allocation approach when analyzing portfolios in order to understand investment risk holistically.[16]. Figure 6 shows the decomposition of the portfolio risk by asset class.

**FIGURE 6. RISK CONTRIBUTION BY ASSET CLASS**




Source: DWS Investment GmbH; as of: June 2022

Most of the risk is coming from equities, however, Alternatives and some sub-asset classes of the fixed income allocation contribute to the portfolio risk as well. It is worth mentioning that, despite its modest volatility contribution, the YTD impact of owning longer duration risk (e.g., sovereign bonds) has been much more pronounced.

While focus is put on financial risk-returns in this study, we note that ESG risks and opportunities are increasingly facilitated at an overall multi-asset portfolio level. The potential impact of integrating ESG factors on risk-adjusted returns and the potential best approach to optimize impact, while controlling risk can further be analyzed[17]. Results can be used to derive investor specific optimal ESG solutions.

## Summary

It is quite probable that we are currently witnessing tectonic shifts in financial markets, monetary policy, and real economy. The ample central bank liquidity era might be on its death bed, while inflationary or even stagflationary environment is raising its head. These circumstances invite deeper exploration of financial markets in search of protection or risk-return improvements.

For this purpose, a global market portfolio encompassing the current investment landscape is introduced, as nowadays investors can choose not only between listed equities and bonds, but see their universe dramatically expanded to assets as exotic as cryptocurrencies. Naturally, varying investment needs and constraints are going to influence the actual portfolios and different investors would face very different implementation opportunities. Finally, regardless of how unique portfolios can be, a robust view on the risk-return profile is critical – for this purpose we leverage our in-house DWS Long View forecast framework and a systematic approach to risk estimation. There is no ready-made formula for successful investment, but a good understanding of your targets and opportunities, combined with a systematic approach can help mitigate many of these risks.

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[14] Further approximations of the allocation are required at this stage.
[15] Desmoothing technique is applied, cf. Meng, Zhang and Ong (2016).
[16] Cf. Warken and Hille (2018).
[17] As outlined in Friede, Warken et al (2020)

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