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# Global Market Portfolio: Value of Investable Assets Touches All-Time High

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# Key Takeaways

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- The global investment landscape has changed dramatically over the past few decades with financial globalization, the digitalization of economies, the rise of China and the development of alternative investments and asset classes. The recent historical trends are likely to provide enough insights to help us make educated guesses regarding the short- and medium-term investment opportunities and help investors adopt a truly global mindset.
- In this context, we examine the evolution of the Global Market Portfolio (GMP) over time. The GMP encompasses the universe of all investable assets and their market value at a given point in time. It represents the positioning of investors in aggregate and reveals insights regarding their attitudes and preferences. The GMP, therefore, could be considered as a natural benchmark for investors' strategic asset allocations.
- Issuance of new securities during 2020 was particularly impressive as both governments and corporations raised new funds to navigate through the unprecedented economic challenges posed by COVID-19. In 2021, given accommodating financing conditions and the very low cost of capital, total issuance remained strong with full year numbers expected to exceed those of 2020. Equity performance was particularly strong, outperforming bonds across many countries. Consequently, the weighting of individual asset classes in the GMP changed visibly and equity weighting continued to rise.
- Compared with US\$162.8 trillion in value in December 2020, the GMP grew significantly last year to reach US\$179.0 trillion as of December 2021. This represents a 10% increase YoY. Equities weighed about 43% of the GMP as of end-December 2021, up from 40% as of end-December 2020, but well below the 50% level reached in 2007. Bonds represented about 45% versus 49% as of end-December 2020 but well below the 55% level seen in 2008.
- Investors need to get the most out of from their portfolios in order to meet their financial objectives. Questions related to the kind of asset classes that could be considered for the long term, what these assets can deliver in terms of risks versus returns and portfolio diversification continue to be investors' main concerns.
- Given the current market outlook, expected return for the GMP over the next 12 months is 3.3%, which is closer to our 2020 forecast but significantly lower than our first GMP estimate of 4.5% in 2014.<sup>1</sup> This reflects the high valuations of assets and low or even negative yields across many fixed income markets.

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# Market Portfolio From Theory to Practice

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The idea of a market portfolio — a portfolio of all risky assets proportionally weighted by their market capitalization — was originally proposed by James Tobin in 1958 and subsequently refined by William Sharpe in 1964. Given its intrinsic diversification, the market portfolio is subject only to systematic multi-asset class risks — that is, risks that affect the market as a whole — and not to unsystematic risks inherent to a particular asset class.

This idea has shaped the asset management industry, playing a crucial part in the formation of concepts such as the Capital Asset Pricing Model and others related to asset allocation. The market portfolio provides exposure to a broad set of global asset classes and market factors — such as equity risk premium, interest rate term premium, credit risk premium and to a lesser extent, liquidity risk premium through the inclusion of less-liquid assets.

An important research article in 2014 presented the methodology for a Global Multi-Asset Market Portfolio, an aggregate portfolio of the market as a whole, containing all types of investable assets available globally.<sup>2</sup> This research considered eight asset classes and their weighting in proportion to their relative importance in capital terms. What was at the beginning a cornerstone of the Modern Portfolio Theory over time became a tangible investment reality: over 90% of the aggregate market portfolio's exposure and composition can now be accessed by all categories of investors using easily tradable financial instruments.

The GMP is becoming increasingly relevant to investors' investment discussions, especially of those investors who want to diversify their portfolios geographically due to differing objectives and strategies.

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## Constructing the GMP

Following a similar framework, we define the GMP as consisting of all investable capital assets, where the proportion invested in each asset corresponds to its market value divided by the sum of the market values of all assets. As the sum of all holdings that result from the collective decisions of investors and issuers as well as suppliers and demanders of capital, the GMP can be seen as a de facto proxy for the investable opportunity set available to all investors globally where weights are a function of their respective market capitalization at any given point in time — and thus a reasonable benchmark for the average investor. We exclude cash from this portfolio as our focus is on capital and store-of-value assets.

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It is important to understand that there can be a huge dispersion of portfolios around the GMP. Different investors have different investment preferences and objectives, which lead to the creation of different portfolios. For example, a corporate defined benefit plan will have a sizable weight in long-duration bonds to match its long-term liabilities, while a bank's investment portfolio will consist largely of short-term bonds and cash equivalents held against its short-term liabilities. Endowments and foundations with longer investment horizons can take advantage of the illiquidity premium in their long-term allocations to illiquid investments, such as private equity (PE).

In our framework, we use broad indices to obtain invested market capitalizations for different asset classes. To focus on capital and store-of-value assets,<sup>3</sup> cash and commodities are excluded, with the exception of gold, where we are interested in the gold that central banks, sovereign wealth funds, institutions and individual investors treat as a store of value. The World Gold Council estimated that as of end-2020, approximately 201,300 tons of gold had been mined over the course of human history. Excluding most gold that is still used to make jewelry, along with the smaller amounts found in devices from mobile phones to medical equipment, we find that around 39% of available gold can be considered for its total capital asset value — that is, the sum of public and private investment holdings of gold.

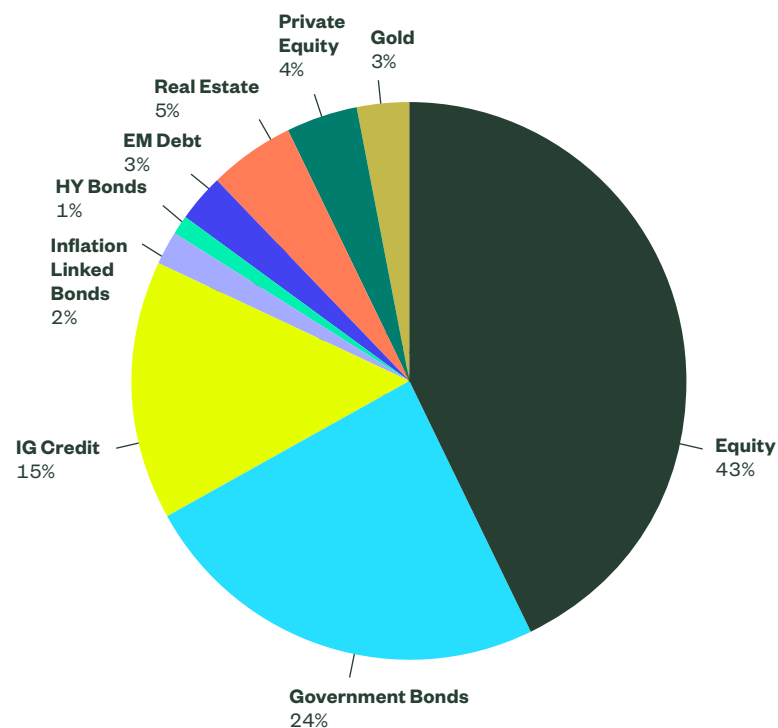
This methodology allows us to monitor changes in the GMP over time. We present below our estimates of the GMP's capital market values and weighting as of 31 December 2021 as well as its expected risk and return profile over different time periods. Then we evaluate the risk contribution of each asset class to the GMP as a percentage of total variance. We use the USD to compute the values of the various assets. In a year such as 2021, when the USD appreciated against many currencies, the rise in value could be considered as less impressive, versus years during which the USD depreciated, such as in 2017.

# Composition of the GMP

Figure 1 shows the composition and weighting of the GMP as of 31 December 2021. Its total worth can be estimated at US\$179.0 trillion, an increase of US\$16.1 trillion since December 2020 and an increase of US\$54.2 trillion since March 2020.

Equities represent the largest asset class with a market value of US\$77.8 trillion, which equals 43% of the total market capitalization of all asset classes. Government bonds have a market value of US\$43.0 trillion, or 24% of the total. Investment grade (IG) credits are the third-largest asset class, worth US\$26.7 trillion, at 15%. The other six asset classes are relatively smaller, and their market capitalizations in total add up to about 18% of the GMP.

Figure 1  
**Global Market Portfolio**



Note: Valued at US\$179.0 trillion as of end-December 2021. Weights are as of the date indicated, are subject to change and should not be relied upon as current thereafter. Source: Thomson Reuters, Bloomberg, Preqin, World Gold Council, State Street Global Advisors, as at 31 December 2021.

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## Equity

Since March 2020, equity has seen an impressive rebound with markets preferring cyclicals. As of end-December 2021, equity has reached an all-time high of US\$ 77.8 trillion, 18% higher than in December 2020 and 39% higher than its pre-crisis level in December 2019. The current market value is also almost four times the level during the global financial crisis (GFC) in 2008. Equity weighting also rose to 43% in December 2021 from 38% in 2020 and 36% in 2008.

Along with the expansion of the equity market, equity issuance continues its strong momentum, driven by improved investor confidence. Global equity issuance of IPOs, follow-ons, and convertibles (live transactions) surged significantly to an all-time high US\$1.4 trillion as of end-December 2021, 25% higher than 2020 and twice the 2019 level.

Looking forward, we expect the equity market to continue to see upsides provided the easing of supply chains, normalization of economic activity, improving emerging market (EM) backdrop and strong capital market activities offset the impact of high inflation.

## Bonds

Government bonds continued their expansion but at a slower pace than in 2020. The market value of government bonds recorded an all-time high of US\$42.9 trillion as at end-December 2021, just slightly higher than US\$42.4 trillion in December 2020 and 23% higher than the pre-crisis level. However, in terms of weighting, government bonds accounted for 24.0% of the GMP as at end-December 2021, compared with December 2020's 26.1% and December 2019's 25.1%. IG bonds increased by US\$400 billion to US\$26.7 trillion in 2021, accounting for 15.3% of the GMP. While the level was the highest since 2000, the increase is less impressive than in 2020 when IG credit rose by US\$3.6 trillion from the pandemic lows in March 2020 to touch US\$26.3 trillion in December 2020.

Global bond issuance has been on an upward trajectory over the past 20 years. Bond issuance in 2021 remained strong, totaling US\$9.7 trillion in December 2021, slightly lower than US\$9.9 trillion as at year-end 2020, which was the annual highest since 2000. In terms of domiciles, developed market (DM) and EM countries saw another year of record high issuance, but compared with December 2020, DM bond issuance started to lose momentum, contracting by more than 11%. Meanwhile, total debt issuance in EM countries continued its upward trend, rising by more than 4%. EM countries were responsible for more than 37% of the total global debt issuance by end-December 2021, compared with 32.1% in December 2020 and just around 3.5%–4% in early 2000s. Within EM countries, China alone accounted for more than 29% of the total global debt issuance, up from 24.8% in December 2020 and less than 1% in 2007.

Looking ahead, uncertainty abounds for bond markets given that policy accommodation has peaked. Rising inflation and rate hikes across countries amongst many other risks present challenges for bond markets in 2022.

## Alternatives

Following a sharp decline in deal making in 2020, private equity (PE) valuations rebounded strongly in 2021 as economic activity recovered. Deal making in the first half of the year reached new post-pandemic heights in some regions and areas although growth slightly moderated in Q3. As of Q2 2021, AuM was estimated to reach US\$6.3 trillion, an 18% increase from year-end 2020 and 40% higher than by year-end 2019. PE is currently estimated to contribute 3.5% to the GMP, compared with 3.3% last year.

As at end-December 2021, gold was estimated to account for 2.6% of the GMP, compared with 2.9% in 2020. Its total value reached US\$4.6 trillion, just shy of year-end 2020 value of US\$4.7 trillion. Gold's weighting now is lower than its pandemic highs of 3.2% as well as the 3.7% weighting it had in 2011–2012, when central banks were effectively printing money by buying assets through quantitative easing.

During 2021, real estate's market value rose by 21.0% from US\$7.3 trillion in December 2020 to US\$8.8 in December 2021. Real estate's market value is now 11.2% higher than its pre-pandemic December 2019 level. Real estate was estimated to account for 4.9% of the GMP as at end-December 2021, higher than the December 2020 weighting of 4.5% but still lower than 5.7% as of December 2019.

Figure 2  
**Comparison Between  
2020 and 2021**

	<b>Dec 2020</b>	<b>Dec 2021</b>	<b>Evolution in USD</b>	<b>Evolution in %</b>
Equity	65,781	77,842	12,061	18.3
Government Bonds	42,463	42,880	417	1.0
IG Credit	26,306	26,716	410	1.6
Real Estate	7,276	8,804	1,528	21.0
Private Equity*	5,333	6,294	961	18.0
EM Debt	5,147	5,944	797	15.5
Gold	4,792	4,622	(170)	-3.5
Inflation Linked Bonds	3,337	3,433	96	2.9
HY Bonds	2,413	2,477	63	2.6
<b>Total Global Market Portfolio</b>	<b>162,850</b>	<b>179,012</b>	<b>16,163</b>	<b>9.9</b>

Note: For Private Equity, latest data are as of Q2 2021 given that December 2021 data are not yet available. Source: Thomson Reuters, Bloomberg, Prequin, World Gold Council, State Street Global Advisors, as at 31 December 2021.

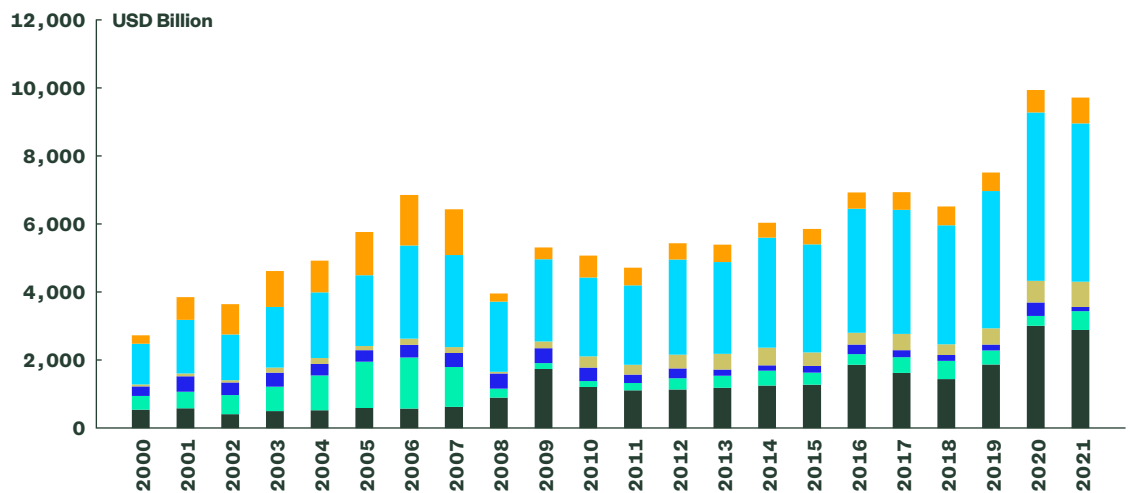


# GMP's Evolution Through Time

The year 2021 saw another dramatic rise in issuance particularly of fixed-income securities: new bond issuance reached US\$9.7 trillion, just slightly lower than US\$ 9.9 trillion in 2020 but 29% higher than the total value of bonds issued in 2019. High yield (HY), asset backed and mortgage backed witnessed increases in 2021 while other areas experienced some declines. HY issuance increased by 16% compared to year-end 2020 and reached the highest annual amount since 2000. IG issuance for 2021 remained strong, totaling US\$4.7 trillion, but still 6% lower than year-end 2020.

If we were to look at the issuance in percentage terms of the global bond market capitalization and compare this versus previous years, we are likely to reach a level close to 11.9% — in line with the level seen before the pandemic but slightly short of the pre-GFC level.

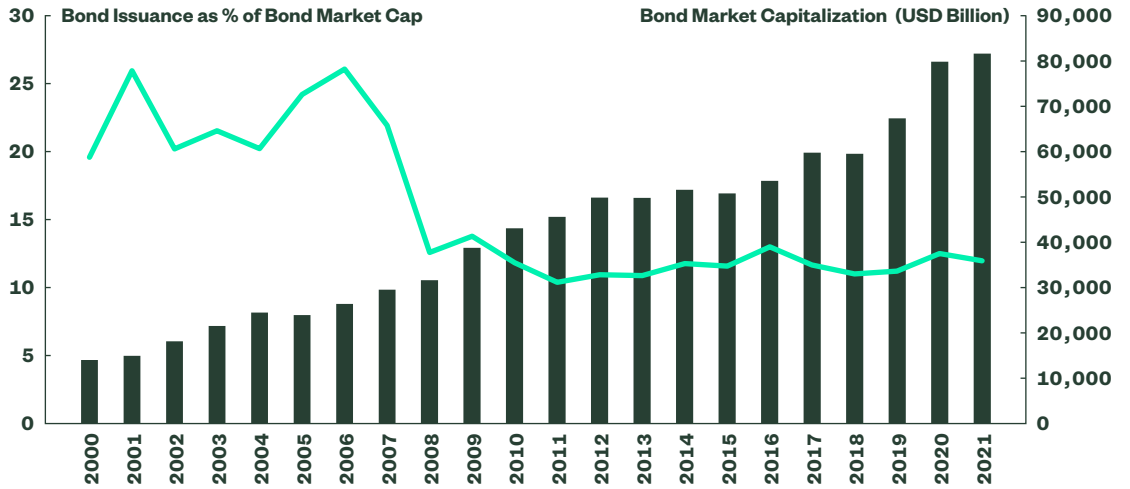
Figure 3  
**Annual Global Bond Issuance by Category of Issuers in Nominal Terms**



Note: Data refer to live transactions. Source: Thomson Reuters, Bloomberg, Preqin, World Gold Council, State Street Global Advisors, as at 31 December 2021.

Figure 4  
**Annual Global Bond Issuance in Percentage of Bond Market Capitalization**

Market Cap  
 Bond Issuance (%)

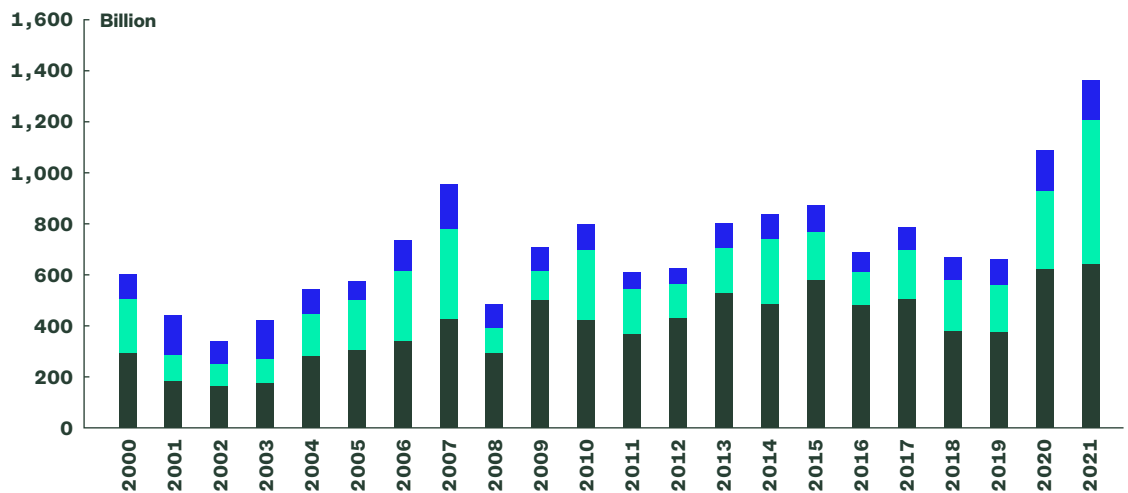


Note: Data refer to live transactions. Source: Thomson Reuters, Bloomberg, Preqin, World Gold Council, State Street Global Advisors, as at 31 December 2021.

Equity issuance has enjoyed another strong year. Global initial public offering (IPO) activity, estimated to reach around US\$566 billion during 2021, rose by more than 80% from the year-end 2020 level. IPOs on US exchanges almost doubled in 2021, while China-domiciled IPOs reached an all-time high of US\$110 billion in 2021. Global secondary offering activity totaled US\$644 billion during 2021, 3.1% higher than year-end 2020 and the highest annual amount since 2000. Global convertible offerings totaled US\$160 billion during 2021, accounting for 11% of global equity capital markets activity, and an increase of 57% from the pre-crisis level in 2019.

Figure 5  
**Annual Global Equity Issuance**

Follow-On  
 IPO  
 Convertible

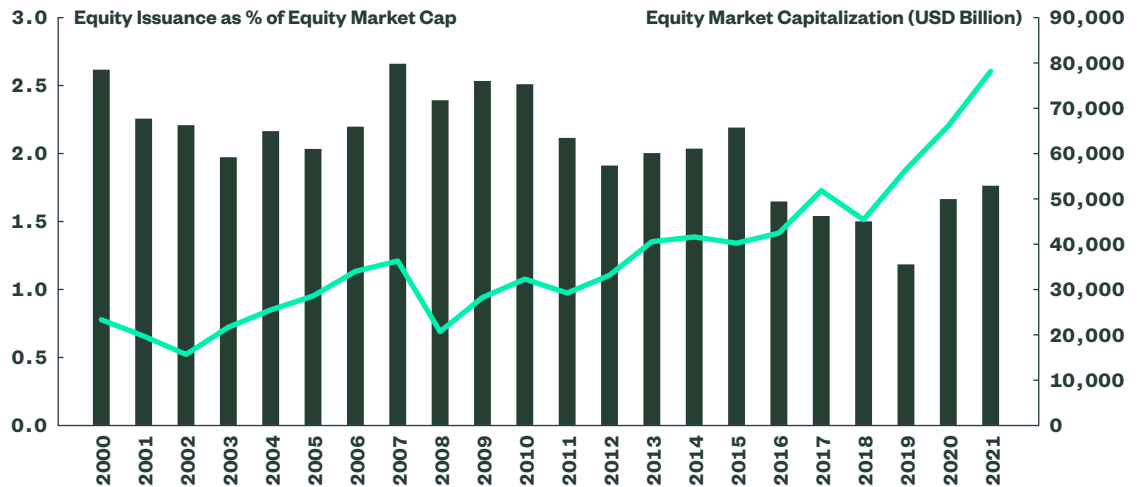


Note: Data refer to live transactions. Source: Thomson Reuters, Bloomberg, Preqin, World Gold Council, State Street Global Advisors, as at 31 December 2021.

As a percentage of the equity market, the new issuance represented 1.8% as of December 2021, far from the highs seen in 2000 or 2007 (2.6%).

Figure 6  
**Annual Global Equity Issuance as Percentage of Equity Market Capitalization**

■ Equity Issuance (%)  
 ■ Market Cap

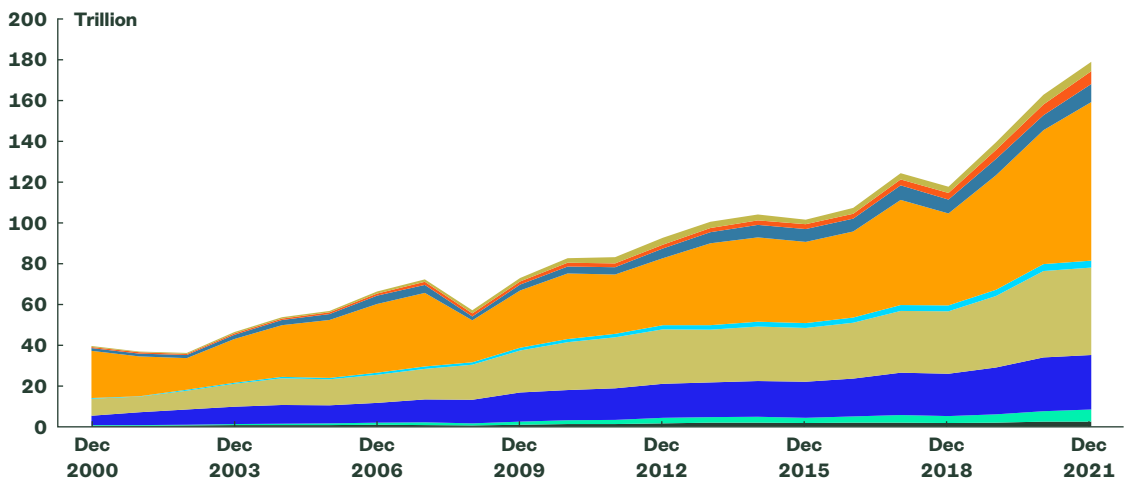


Note: Issuance data refer to live transactions. Source: Thomson Reuters, Bloomberg, Preqin, World Gold Council, State Street Global Advisors, as at 31 December 2021.

Figure 7 highlights the evolution of the total capital value of the GMP over time, which showed an increase of 443% over 20 years — from US\$39.5 trillion in 2000 to US\$179.0 trillion in 2021. Despite a steep fall in Q1 2020, comparable in magnitude to 2008, significant security issuances and rebound in asset values helped mitigate the intensity of the drop reasonably quickly by the beginning of the third quarter of 2020.

Figure 7  
**Market Value of Assets in Global Invested Multi-Asset Market Portfolio**

■ HY Bonds  
 ■ EM Debt  
 ■ IG Credit  
 ■ Government Bonds  
 ■ Inflation Linked Bonds  
 ■ Equity  
 ■ Real Estate  
 ■ Private Equity  
 ■ Gold



Source: Thomson Reuters, Bloomberg, Preqin, World Gold Council, State Street Global Advisors, as at 31 December 2021.

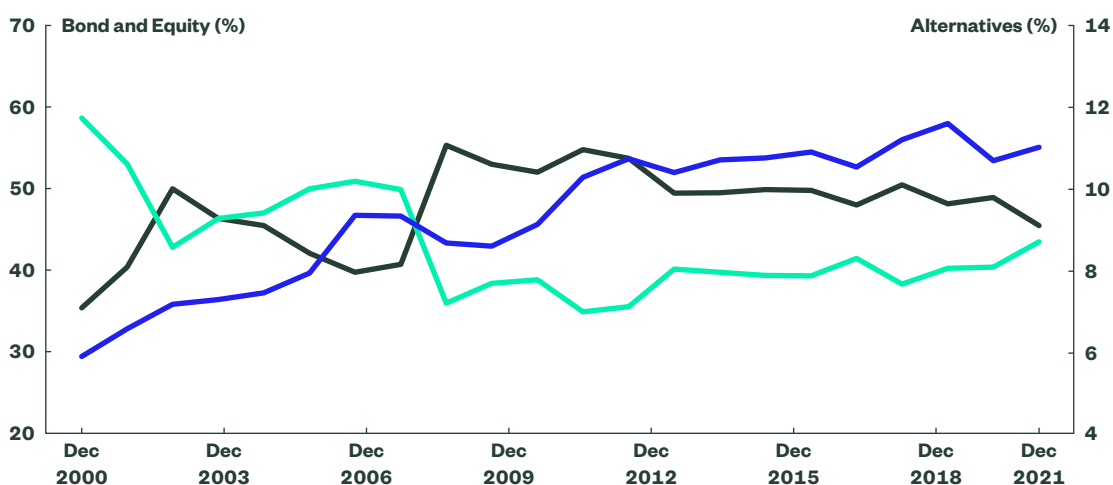
Of interest should also be the evolution of macro asset allocation weighting over time (Figure 8). At the peak of the equity market bubble in 2000, the weighting of equity reached an impressive 59%. It has steadily and visibly declined since then, reaching 50% in 2007 and oscillating between 35% and 45% since 2008. During bear markets and major corrections (2008, 2011 and March 2020), equity weighting tends to reach the low end of this range as depressed equity prices negatively impact equity weighting compared with other macro asset classes.

Conversely and unsurprisingly, given their more defensive characteristics, bond weighting tends to increase in equity bear markets, reaching close to 55%. Examples for this include December 2008 (55.3%), the eurozone crisis of 2011 (54.8%) and March 2020 (53.9%).

The weighting of alternative asset classes has been steadily increasing, almost doubling in weighting in twenty years, reaching 11.0 % in 2021 from 6% in 2000, thanks to their development over time, greater acceptance by investors and the rise in value experienced by key alternative asset classes such as PE or gold.

Figure 8  
**Evolution of Macro Asset Allocation Weights**

■ Global Bond  
■ Global Equity  
■ Global Alternatives



Source: Thomson Reuters, Bloomberg, Preqin, World Gold Council, State Street Global Advisors, as at 31 December 2021.

## The Rise of China

The size and structure of Chinese bond and equity markets had significantly evolved over the last two decades and the value of these markets is now competing with those of developed markets. Within equity markets, China currently accounts for 34% of MSCI EM capitalization, from only 15% in 2007. In the MSCI AC World Index, for example, China is now the third-largest market by capitalization, representing 3.6% of the index.

Within fixed income, we estimate that China accounted for 28% of the EM bond market from just 1% in 2000.<sup>4</sup>

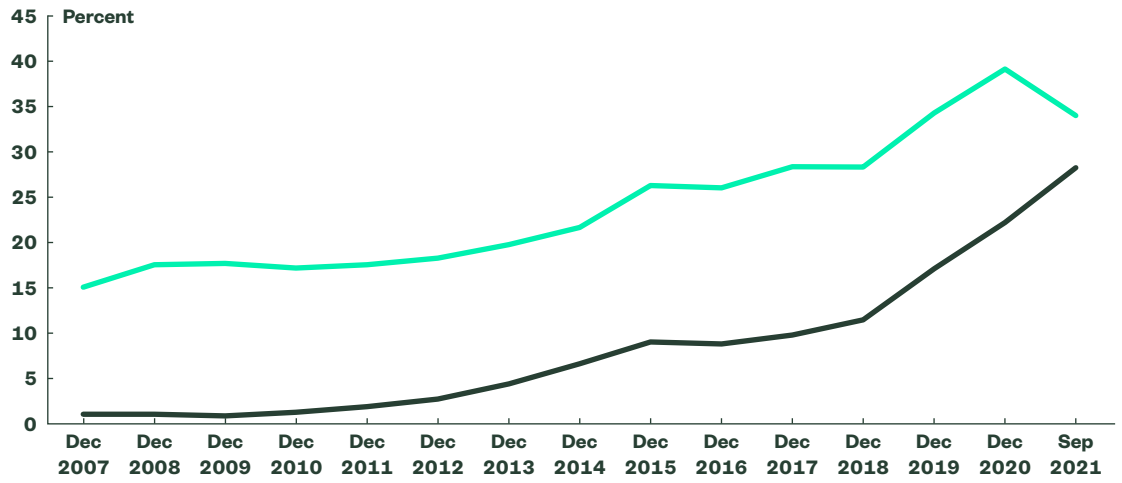
China exposure in global equity benchmarks remains low although the situation has improved since A shares have been increasingly included in major equity indices since 2019. Chinese equities are also structurally undervalued as they are currently trading significantly below the US and the rest of the world markets. As highlighted in State Street Global Advisors' 2022 Global Market Outlook, China's equity market capitalization is stuck at 82% of its GDP, far below the level of many developed markets. In addition, various valuation ratios also indicate excessive discounting, with China's current price-to-earnings ratio falling well below 20-year averages and global/DM benchmarks.

Similarly, China's bond market is one of the largest bond markets in the world. However, regulation has made it difficult for foreign investors to access it. As the market is starting to open to foreign investors, with the yuan becoming a reserve currency and fixed income indices increasing their allocation to China, the Chinese bond market is expected to provide further diversification.

We also expect that with the growth and dynamism of the Chinese economy, China will continue to offer the potential for attractive returns for investors.

Figure 9  
**Chinese Equity and  
 Bond Weights as % of  
 EM Indices**

■ China Bond Weight  
 ■ China Equity Weight as %  
 of Traded MSCI EM



Note: Bond weights were calculated based on JP Morgan indices: EMBI global, CEMBI Broad and GBI-EM Global.  
 Source: MSCI, J.P. Morgan, State Street Global Advisors, as at 30 September 2021.

These figures, however, do not represent the true size of the China market as a significant portion of its financial assets are not opened to foreign investors. Given its economic and political importance, China is still underrepresented in many investors' portfolios, but its constitution in the GMP is getting visibly bigger over time and Chinese investable assets now represent close to 2% of the GMP.

# GMP — Performance Outlook

We expect the GMP to deliver about 3.3% over 1 year (gross of fees and any transaction costs) in local terms — not taking into account currency fluctuations or costs of hedging — which is slightly higher than our last forecast in 2019 of 3.1%. The most important positive contributors of this return are equities and risky debt.

Albeit being relatively low, the GMP's return remains positive and superior to the current level of realized and anticipated inflation in most advanced countries.

Figure 10  
**Risk and Return Forecasts  
 For Global Multi-Asset  
 Market Portfolio**

	USD Billion	Weights (%)	1 Year (%)	Annualized Return 3–5 Years (%)	10+ Years (%)	Long-Term Risk (Std Dev) (%)
Equity	77,842	43.5	6.2	6.1	5.5	14.7
Government Bonds	42,880	24.0	-0.1	-0.6	0.0	3.7
IG Credit	26,716	14.9	1.3	0.0	0.8	7.4
Inflation Linked Bonds	3,433	1.9	-1.3	-1.3	0.1	6.4
HY Bonds	2,477	1.4	1.7	1.5	2.6	9.5
EM Debt	5,944	3.3	2.6	3.5	4.8	13.2
Real Estate	8,804	4.9	2.4	3.3	3.6	18.2
Private Equity	6,294	3.5	7.5	7.7	7.0	11.6
Gold	4,622	2.6	0.0	0.0	2.6	16.3
<b>Global Invested Multi-Asset Market Portfolio</b>	<b>179,012</b>	<b>100</b>	<b>3.3</b>	<b>3.1</b>	<b>3.2</b>	<b>8.2</b>

Note: The above forecasts are estimates based on certain assumptions and analysis made by State Street Global Advisors. There is no guarantee that the estimates will be achieved. Source: Bloomberg, Thomson Reuters, Precip, World Gold Council, FactSet, State Street Global Advisors, as at 31 December 2021.

Over the longer term, we expect the GMP to deliver 3.2%, or 0.2 pp higher than the end-2020 level. We also estimated the portfolio's long-term risk, using expected volatility (standard deviation) of each of the asset classes and the correlations between them. As of December 2021, this stood at 8.2%, slightly higher than our 2020 estimate of 7.9%. This modest rise is consistent with our expectation to see a gradual rise of volatility over time across most markets.

What can investors learn from these forecasts? Given the current low inflation and low cash yield conditions, the return from the GMP appears to compensate for the risks borne by investors, making a strong case for the GMP's continued importance for investors. But it is equally possible that these forecasts fall short of the long-term objectives of certain investors.

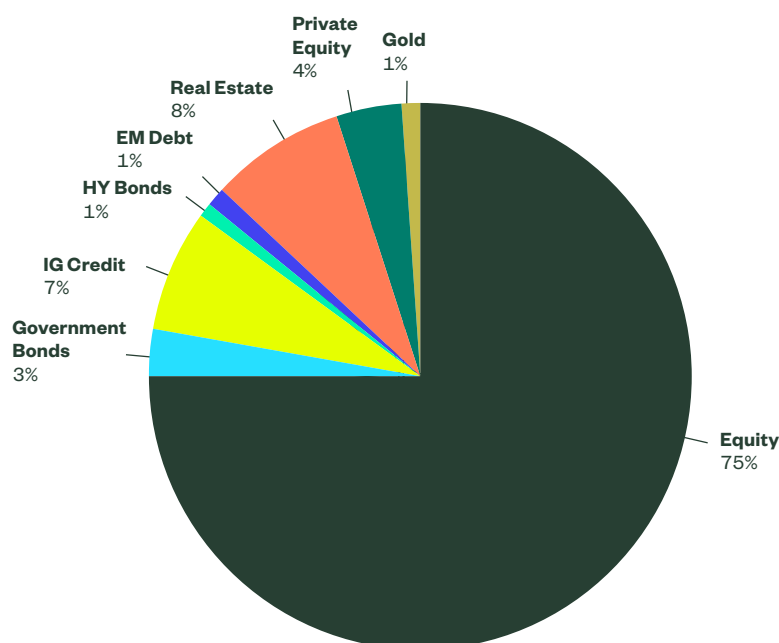
In such a scenario, investors will need to look at other ways to engineer a higher rate of performance: for instance, by way of a more aggressive asset allocation strategy with a larger emphasis on growth assets, active security selection, tactical asset allocation or smart beta. As this means assuming greater risk, requiring greater care, an alternative way forward is to get investor expectations and objectives revised and updated in line with the reality that the current GMP reflects.

## Balancing Risks and Returns

Another key consideration is the risk contribution of each asset class (Figure 11). The concept of risk contribution or risk attribution is widely used for asset allocation, active portfolio management, risk management and risk budgeting. Put simply — calculating the risk contribution allows us to evaluate how much risk comes from each asset class as a percentage of the total variance of the GMP. Global equity risk continues to dominate: with a 43% capital allocation, equities accounted for 75% of the total risk of the GMP as an asset class.

Although some investors may take issue with this, given the need for equity returns in the current low-yield rate environment, we would caution against reducing this allocation too drastically. Investors could, instead, consider a number of risk management approaches to reduce the risk — either at the equity level or at the total portfolio level. Such approaches could include, for instance, managed volatility equities, target volatility triggers or option overlays that are either strategically or dynamically adjusted.

Figure 11  
Risk Contribution by Asset Class



Note: Data are as of the date indicated, are subject to change and should not be relied upon as current thereafter. Source: Bloomberg, Thomson Reuters, Preqin, World Gold Council, FactSet, State Street Global Advisors, as at 31 December 2021.

Dynamic asset allocation could also play a key part in both engineering higher returns and reducing risk, by adding a set of shorter-term exposures based on a tactical market outlook as well as investor sentiment regarding the GMP. The GMP, more than ever, is an important starting point and these options allow investors to improve the risk and return profile of their individual portfolios and assess them relative to the GMP in order to target better outcomes.

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# Conclusion

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The GMP's value reached an impressive all-time record of US\$179.0 trillion in 2021, 10% higher than in 2020. It has benefitted from very positive tailwinds, such as strong equity performance and significant levels of security issuances in equity and fixed income markets. It had been modestly affected by several benign headwinds: the strength of the USD, corporate buybacks and the lackluster performance of certain asset classes, including IG bonds, EM debt and gold. Equity weight, as a percentage of the total GMP stands now at 43%. It has not reached the levels last seen during the previous peaks of the equity markets in 2000 and 2007.

Growth assets continued to get favored by investors and benefitted from the cyclical recovery, whereas more defensive assets are expected to deliver very low nominal returns and negative real returns. Absent a major shock, it is probable that risk appetite might stay higher for longer. The GMP framework continues to provide investors with an effective tool to guide them in their asset allocation decision. For those investors who wish to achieve a higher rate of return, a more aggressive asset allocation with an even larger emphasis on growth assets, active strategies such as security selection or a tactical asset allocation strategy could be considered.

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## Endnotes

- 1 Dodard, F., & Greenway, A. (2015). Using the Global Market Portfolio as a Natural Benchmark. State Street Global Advisors.
- 2 Doeswijk, R., Lam, T., & Swinkels, L. (2014). The Global Multi-Asset Market Portfolio, 1959–2012. *Financial Analysts Journal*, 70(2).
- 3 Greer, R. J. (1997). What Is an Asset Class Anyway? *Journal of Portfolio Management*, 23, 86–91.
- 4 The calculation is based on JP Morgan indices: EMBI global, CEMBI Broad and GBI-EM Global.



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ID944700-4241073.2.1.GBL.INST 0222  
Exp. Date: 02/28/2023