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Global Portfolio Changes During Recent Crises

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Executive Summary

The Global Market Portfolio (GMP) framework could be employed to compare changes that portfolios underwent during the pandemic with those during previous such crises. The GMP covers all investable assets and their market value at a given point in time and represents the aggregate positioning of investors, reflecting their investment and risk preferences. Compared with US$139.6 trillion in value in December 2019, the GMP grew significantly to reach US$147.1 trillion as of September 2020. Our expected return for the GMP over the next 12 months is 3.1%, closer to our 2019 forecast but significantly lower than our first GMP estimate of 4.5% in 2014. In this context, dynamic asset allocation could play a key part in both engineering higher returns and reducing risk, allowing investors to improve the risk and return profile of their portfolios and assess them relative to the GMP in order to target better outcomes. The GMP is also useful as a background to informed portfolio benchmarking, evaluation and construction. It is particularly relevant in a dynamically changing market environment that sees the emergence of new asset classes, strategies, pricing dynamics and regulations.

Key Points

- The year 2020 has been quite extraordinary given COVID-19 related losses and the high aggregate uncertainty faced by investors globally. Governments and corporations took on massive levels of debt and/or issued equity. In this context, we compare changes that portfolios underwent during the pandemic with those during previous crises using our GMP framework.

- The GMP covers all investable assets and their market value at a given point in time. It represents the aggregate positioning of investors, reflecting their investment and risk preferences. The GMP could be considered as a natural benchmark for asset allocations (strategic or tactical).

- The GMP's size and composition have evolved alongside the global investment landscape over the past two decades. These changes are likely to provide insights and inputs to investors for their future investment decisions.

- As far as equities and bonds are concerned, the late 1980s and the 1990s were golden periods. These were followed by a tech boom and bust in the early 2000s; a period of positive and stable growth in the mid-2000s, fueled by rising debt; the Global Financial Crisis (GFC) of 2007–09; and then a decade of sub-par economic growth, followed by the onset of COVID-19 in March 2020.

- Compared with US$139.6 trillion in value in December 2019, the GMP grew significantly to reach US$147.1 trillion as of September 2020. Equities weighed about 38% of the GMP as of end-September 2020, up from 35% as of end-March 2020 but well below the 50% level reached in 2007. Bonds represented about 51% versus 48% as of end-December 2019 but well below the 54% level seen in March 2020.

- Our expected return for the GMP over the next 12 months is 3.1%, closer to our 2019 forecast but significantly lower than our first GMP estimate of 4.5% in 2014.[1] The lower expected returns reflect the "low-for-long" position adopted by most central banks as well as the high valuations of most asset classes.

Market Portfolio From Theory to Practice

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 of Capital Asset Pricing Model and 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 in the world financial markets.[2] 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 replicated by investors using listed instruments.

The GMP is becoming increasingly more relevant to investors' investment discussions, especially those who want to diversify their portfolios geographically due to differing objectives and strategies. We believe it contributes to framing absolute and relative portfolio decisions at a strategic as well as tactical level.

Constructing 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.

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 different portfolios. For example, a corporate defined benefit plan will have a sizable weighting 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,[3] 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-2019, approximately 197,600 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.

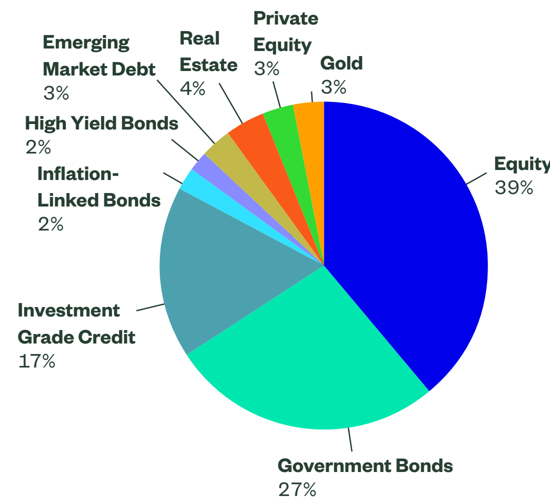
This methodology allows us to monitor changes in the GMP over time. We present below our estimates of the GMP's capital market values and weighting as of 30 September 2020 as well as its expected risk and return profile over different time periods. Then we evaluate the risk contribution of each asset class to the GMP as a percentage of total variance.

Composition of GMP

Figure 1 shows the composition and weighting of the GMP as of 30 September 2020. Its total worth can be estimated at US$147.1 trillion, an increase of US$22.3 trillion since March 2020 when the COVID-19 crisis started and an increase of US$74.9 trillion since the 2008 GFC.

Equities represent the largest asset class with a market value of US$56.4 trillion, which equals 38% of the total market capitalization of all asset classes. Government bonds have a market value of US$40.1 trillion, or 27% of the total. Investment-grade (IG) credits are the third largest asset class, worth US$25.3 trillion, at 17%. The other six asset classes are relatively smaller, and their market capitalizations in total add up to about 17% of the global market portfolio.

Figure 1
Global Market Portfolio as of 30 September 2020



Source: Thomson Reuters, Preqin, Bloomberg, the World Gold Council, State Street Global Advisors, as at 30 September 2020. Note: Valued at US$147.1 trillion as of end-September 2020. Weights are as of the date indicated, are subject to change and should not be relied upon as current thereafter.

Equity

Equity as an asset class was heavily affected by the pandemic with equity weighting falling significantly from 40.3% in December 2019 to 34.7% of the GMP in March 2020. While this 5.6% decline in equity weighting is still lower than during the GFC when it dropped from 50% to 36% of the total portfolio from December 2007 to December 2008, it represented almost US$13 trillion in loss during the first quarter of 2020. Equity market value rebounded strongly in Q2 and Q3 of the year, reaching US$56.4 trillion in Q3, exceeding the pre-crisis level by US$235 billion and accounting for 38% of the GMP.

Along with the recovery in equity market value, equity issuance surged significantly from US$130 billion in Q1 2020 to US$319 billion in Q2 and to US$379 billion in Q3, driven by improved investor confidence and by companies that were forced to tap the markets to avoid a liquidity shortage. During the first three quarters of 2020, equity issuance was estimated to have reached US$813 billion, 25% higher than the 2019 total of US$653 billion. Follow-on offerings amounted to US$259 billion in Q2, the highest since 2009. Initial public offerings (IPO) amounted to US$140 billion in Q3, the highest since Q2 2009, partly driven by IPOs in investment funds (27.9%) and the manufacturing sector (26.1%).

Bond

The market value of government bonds recorded an all-time high of US$40 trillion in Q3 2020, compared with US$35 trillion in Q4 2019, reflecting the impact of massive issuances, unprecedented policy interventions and liquidity support from major central banks since late March. Government bonds accounted for 27.2% of the GMP as of Q3 2020, lower than Q1 2020's 29.1% but higher than Q4 2019's 25.1%. The category of investment grade (IG) bonds also benefited tremendously from this liquidity support with IG credit surging sharply by US$2.2 trillion during the first three quarters to reach US$25.3 trillion in Q3 2020, accounting for 17.2% of the GMP.

Global bond issuance has been on an upward trajectory over the past 20 years. Bond issuance for the first three quarters in 2020 totaled US$7.1 trillion, making the 2020 bond issuance level the highest since 2000. Quarterly IG issuance reached the highest level in 20 years of US$1.6 trillion in Q2 2020, followed by the second and third highest levels of US$1.2.trillion and US$1.1 trillion, in Q1 and Q3 2020, respectively. High yield corporate issuance reached US$177 billion in Q2 2020, the second highest level over the past 20 years since Q2 2014's US$189 billion.

Alternatives

PE assets under management (AuM) had shown an increase during the 2009–2019 period, reaching US$4.5 trillion by end-2019. However, in Q1 2020, the AuM slightly dropped to US$4.4 trillion thanks to COVID-19 and a drop in unrealized value from US$3 trillion to US$2.9 trillion. Dry powder has been increasing steadily since 2012, reaching US$1.5 trillion in March 2020, more than double the US$687 billion in total recorded just five years earlier.

Although the pandemic's impact on PE fundraising was relatively muted in Q1 2020, PE activity slowed down significantly in Q2 as global lockdowns started taking hold. US$116 billion in aggregate capital raised was the lowest amount since Q1 2018's US$110 billion.[4] PE-backed buyout deals dropped to their lowest quarterly level in several years in Q2, after keeping relatively steady in Q1 2020.

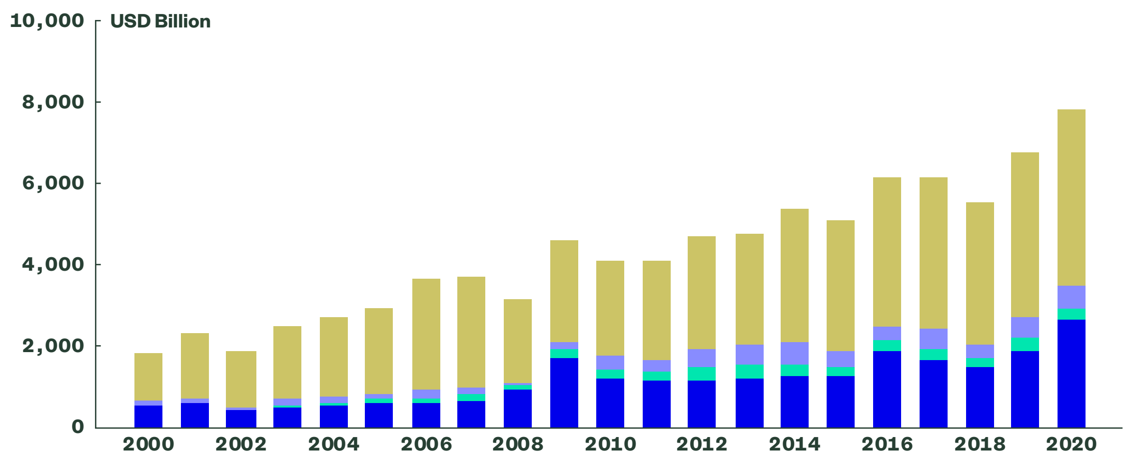
As of Q3 2020, Gold was estimated to account for 3.2% of the GMP compared with 2.6% in 2008, as its total value rose from about US$1.5 trillion to approximately US$4.7 trillion. Gold's weighting now is still lower than the 3.7% it had in 2011–2012, when central banks were effectively printing money by buying assets through quantitative easing.

Real estate's market value dropped by almost 27% from US$7.9 trillion in December 2019 to US$5.8 trillion in Q1 2020 when COVID-19 began. Although the market rebounded in Q2 and Q3 2020, the market value was estimated to be just US$6.4 trillion, 11% lower than its December 2019 level. Real estate was estimated to account for 4.4% of the GMP in Q3 2020, dropping from 5.7% as of December 2019, but higher than the 3.5% level in 2008.

GMP's Evolution Through Global Crises

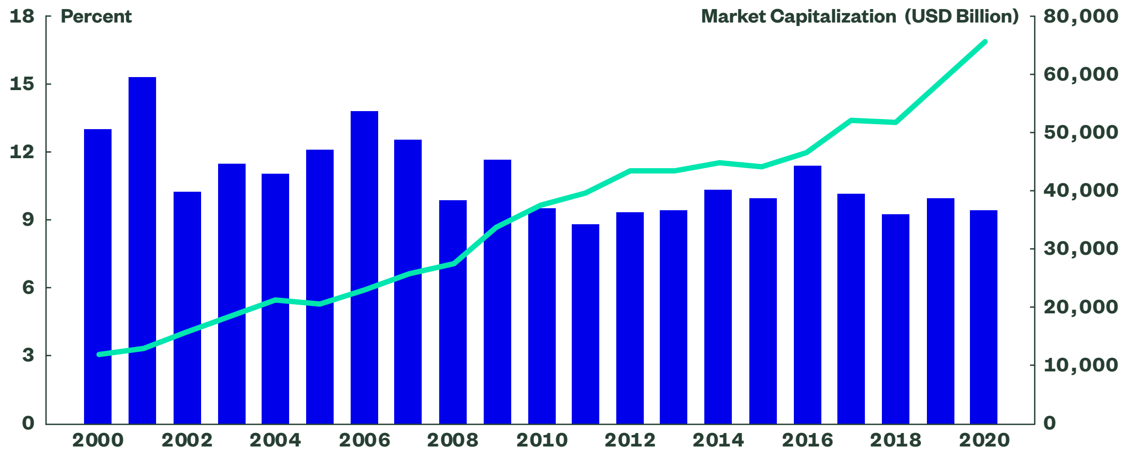
This year has seen a dramatic rise in issuance particularly of fixed-income securities. During the first ten months of 2020, new issuance of agency, supranational, sovereign as well as emerging and developed market corporate bonds reached US$7.8 trillion, US$1 trillion higher than the total value of bonds issued in 2019 and 2.5 times the value in 2008. 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 13.5% — in line with the level seen in 2006 but slightly short of what was seen in 2001.

Figure 2
Annual Global Bond Issuance by Category of Issuers in Nominal Terms



Source: Thomson Reuters, State Street Global Advisors, as at 31 October 2020. Note: 2020 data refer to the first ten months of the year.

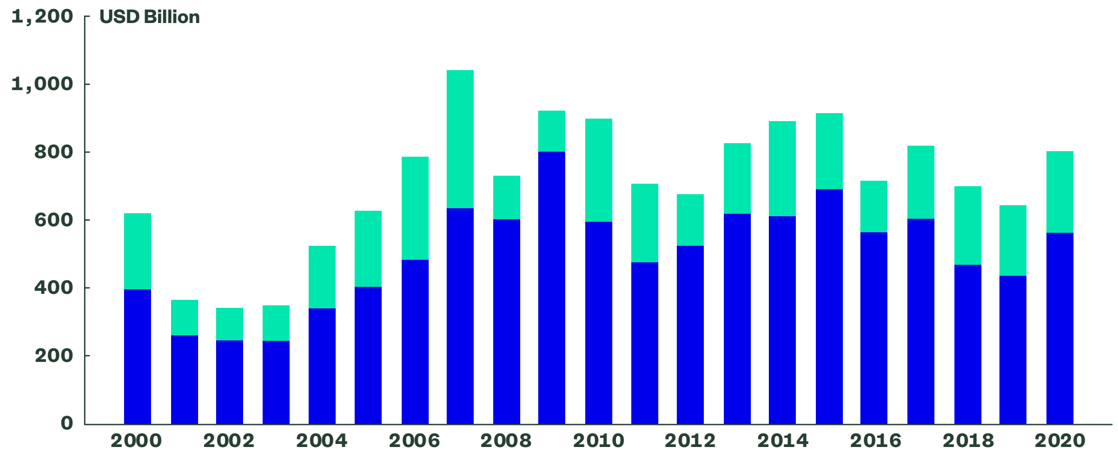
Figure 3
Annual Global Bond Issuance in Percentage of Bond Market Capitalization



Source: Thomson Reuters, State Street Global Advisors, as at 30 September 2020. Note: 2020 data refer to the first three quarters of the year.

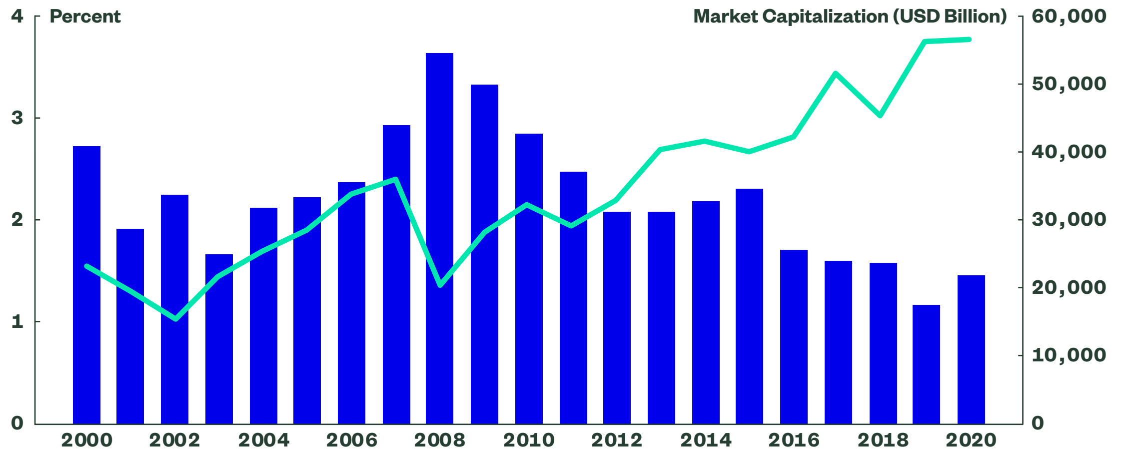
For equity securities, the issuance this year was strong in capital terms (Figure 4). If issuance were to continue at this pace in the fourth quarter as well, the record achieved in 2007 — of S$1.1 trillion in nominal terms — could be broken by a small margin. However, in percentage terms of the existing market capitalization, we expect 2020 to reach a level close to just 2.0% — far from 2008's 3.6% (Figure 5).

Figure 4
Annual Global Equity Issuance



Source: Thomson Reuters, State Street Global Advisors, as at 30 September 2020. Note: 2020 data refer to the first three quarters of the year.

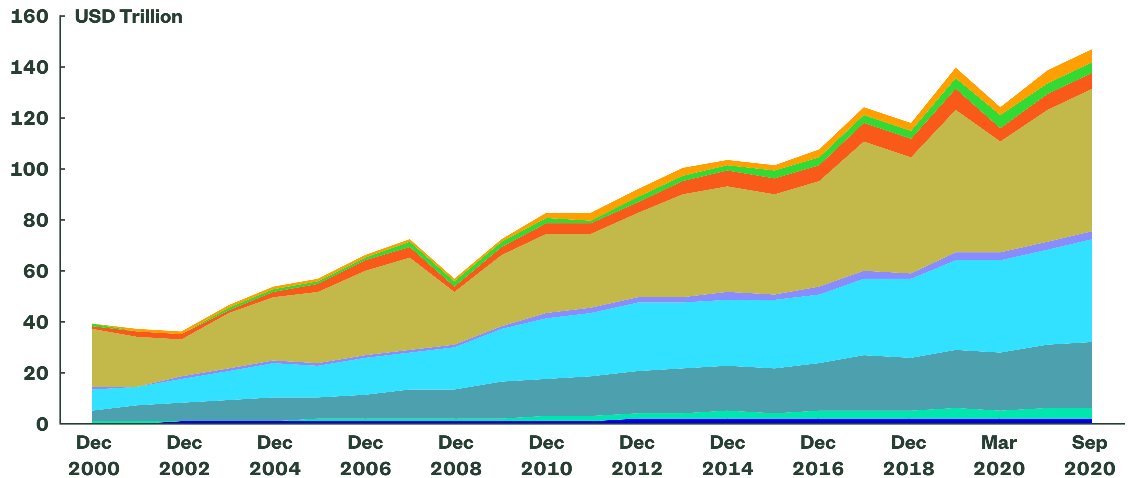
Figure 5
Annual Global Equity Issuance in Percentage of Equity Market Capitalization



Source: Thomson Reuters, State Street Global Advisors, as at 30 September 2020. Note: 2020 data refer to the first three quarters of the year.

Figure 6 highlights the evolution of the total capital value of the GMP over time, which showed an increase of 272% over 20 years — from US$39.5 trillion in 2000 to US$147.1 trillion in 2020. 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 6
Market Value of Assets in Global Invested Multi-Asset Market Portfolio



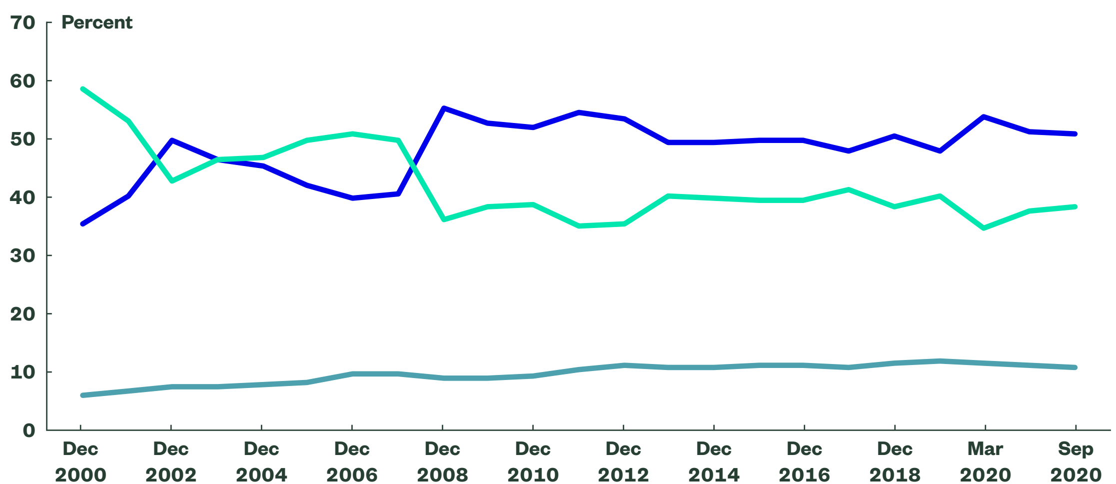
Source: State Street Global Advisors, as at 30 September 2020. Time period from December 2000 to September 2020.

Of interest should also be the evolution of macro asset allocation weighting over time that we show in figure 7. At the peak of the equity markets 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 40% 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%).

Lastly, given their development over the years and the rise in gold price during the 2000s, the weighting of alternative asset classes has been steadily increasing, almost doubling in weighting in twenty years, reaching 10.5% in 2020 from 6% in 2000.

Figure 7
Evolution of Macro Asset Allocation Weights



Source: State Street Global Advisors, as at 30 September 2020. Time period from December 2000 to September 2020.

GMP — Performance Outlook

We expect the GMP to deliver about 3.1% 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 lower than our last forecast in 2019 of 3.2%. 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 8
Risk and Return Forecasts for Global Multi-Asset Market Portfolio

	US$ Billions	Weights (%)	Annualized Returns (%)			Long-Term Risk (Std Dev.) (%)
			1 Year (%)	3–5 Years (%)	10+ Years (%)	
Equity	56,434	38.4	6.3	5.8	6.1	14.7
Government Bonds	40,058	27.2	-0.1	-1.0	-0.4	3.7
Investment Grade Credit	25,321	17.2	1.5	-0.3	0.5	7.4
Inflation-Linked Bonds	3,158	2.1	0.7	-0.9	0.2	6.5
High Yield Bonds	2,224	1.5	2.0	2.4	3.2	9.6
Emerging Market Debt	4,426	3.0	2.3	3.2	4.4	13.4
Real Estate	6,404	4.4	2.9	3.3	3.7	18.3
Private Equity	4,425	3.0	7.0	6.6	6.7	25.3
Gold	4,687	3.2	0.0	0.0	2.4	16.1
Global invested Multi-Asset Market Portfolio	**147,136**	**100**	**3.1**	**2.4**	**3.0**	**7.9**

Source: Bloomberg, FactSet, State Street Global Advisors, as at 30 September 2020. 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.

Over the longer term, we expect the GMP to deliver 3.0%, down by 1.2% compared with the end-2019 level. We can also estimate the portfolio's long-term risk, using expected volatility (standard deviation) of each of the asset classes and the correlations between them. As of September 2020, this stands at 7.9%, lower than our 2019 estimate of 8.1%.

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.

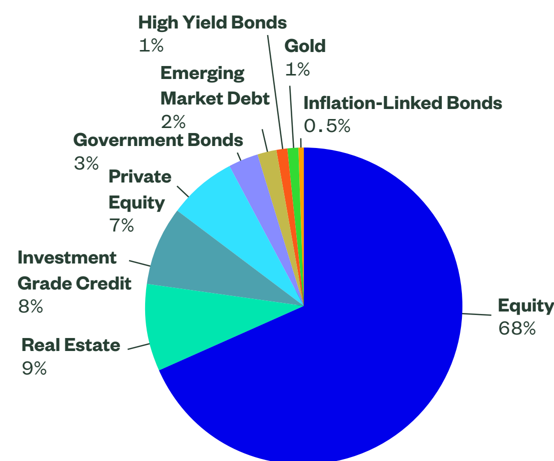
Balancing Risks and Returns

Another key consideration is the risk contribution of each asset class (Figure 9). 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. It is clear, somewhat unsurprisingly, that the global equity risk dominates.

With a 38% capital allocation, equities account for 68% of the total risk of the GMP as an asset class. Although some investors may take issue with this, given the need for equities in the current low-yield rate environment, we would caution against undertaking significant de-risking. 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.

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.

Figure 9
Risk Contribution by Asset Class



Source: State Street Global Advisors, as at 30 September 2020. Note: Figures are as of the date indicated, are subject to change and should not be relied upon as current thereafter.

Conclusion

We believe that the GMP is very useful as a background to informed portfolio benchmarking, evaluation and construction. It is particularly relevant in a dynamically changing market environment that sees the emergence of new asset classes, strategies, pricing dynamics and regulations. As opposed to investors of the 1980s and 1990s, this is especially pertinent to current investors who do not enjoy favorable tailwinds from a high-yielding market but instead face significant regulatory costs.

We hope that our research continues to prove relevant for their global asset allocation decisions, not least in terms of diversification and minimizing portfolio biases.

Endnotes

1 Dodard, F., & Greenway, A. (2018). 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 Preqin Quarterly Update: Private Equity & Venture Capital Q2 2020. (2020, July 8). Preqin | Alternative Assets Data, Solutions and Insights.

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* This figure is presented as of September 30, 2020 and includes approximately $80.51 billion USD of assets with respect to SPDR products for which State Street Global Advisors Funds Distributors, LLC (SSGA FD) acts solely as the marketing agent. SSGA FD and State Street Global Advisors are affiliated.

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Bonds generally present less short-term risk and volatility than stocks, but contain interest rate risk (as interest rates rise bond prices usually fall); issuer default risk; issuer credit risk; liquidity risk; and inflation risk. These effects are usually pronounced for longer-term securities. Any fixed income security sold or redeemed prior to maturity may be subject to a substantial gain or loss.

Government bonds and corporate bonds generally have more moderate short-term price fluctuations than stocks, but provide lower potential long-term returns.

Investing in commodities entail significant risk and is not appropriate for all investors. Commodities investing entail significant risk as commodity prices can be extremely volatile due to wide range of factors. A few such factors include overall market movements, real or perceived inflationary trends, commodity index volatility, international, economic and political changes, change in interest and currency exchange rates.

Investing in foreign domiciled securities may involve risk of capital loss from unfavorable fluctuation in currency values, withholding taxes, from differences in generally accepted accounting principles or from economic or political instability in other nations.

Investments in emerging or developing markets may be more volatile and less liquid than investing in developed markets and may involve exposure to economic structures that are generally less diverse and mature and to political systems which have less stability than those of more developed countries.

Investing in REITs involves certain distinct risks in addition to those risks associated with investing in the real estate industry in general. Equity REITs may be affected by changes in the value of the underlying property owned by the REITs, while mortgage REITs may be affected by the quality of credit extended. REITs are subject to heavy cash flow dependency, default by borrowers and self-liquidation. REITs, especially mortgage REITs, are also subject to interest rate risk (i.e., as interest rates rise, the value of the REIT may decline).

There are risks associated with investing in Real Assets and the Real Assets sector, including real estate, precious metals and natural resources. Investments can be significantly affected by events relating to these industries.

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