Goldman Sachs Asset Management

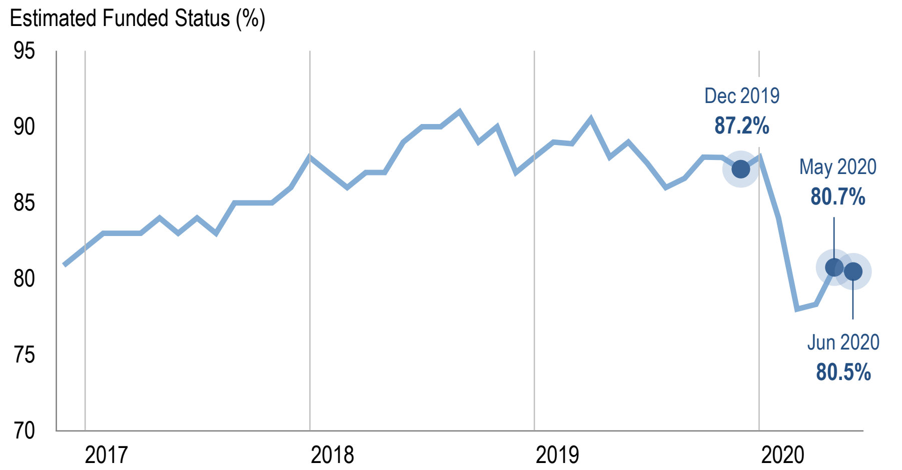
GSAM Retirement

Corporate Pension Quarterly Q2 2020: Whiplash

WHAT'S INSIDE: READING TIME 5:30 MINS

Quarterly Snapshot

Historical Aggregate S&P 500 Funded Status[1]



Source: GSAM as of June 30, 2020.
Funded statuses reflect monthly estimates with the exception of year-end data.

While coronavirus remains a public health concern, the market has significantly recovered from its March lows with all US states re-opening to some degree despite the recent uptick in COVID-19 cases. We estimate that in aggregate, pension assets have improved 0.2% and 8.3% for the month and quarter, respectively.

Asset Class/Index	YTD Change[2]
S&P 500 (%)	-3.1%
Barclays Agg (%)	6.1%
10y Treasury Yield (Change in bps)	-126 bps
Moody's Aa Corporate Rate (Change in bps)	-54 bps

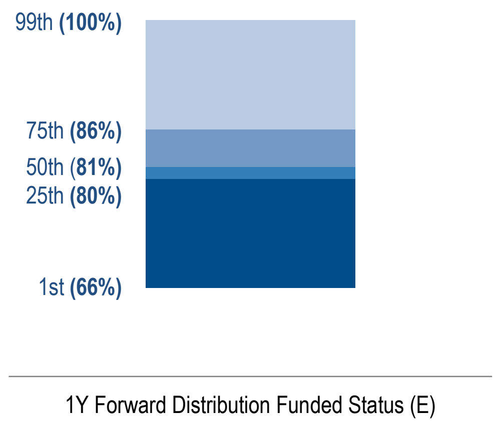
Distribution of Funded Status

Funded status for the aggregate S&P 500 was estimated to be

80.5% at the end of June.

~50%

of plans' funded status are expected to fall between a range of 80% to 86% in one year[3].



E = Estimated. Source: GSAM as of June 30, 2020.

- Over the quarter, yields on Treasury bonds steepened at the front end of the curve but remained largely unchanged for the other tenors. The 10-year US Treasury yield remained below 1% on June 30th.
- Credit spreads tightened on the back of improved liquidity and the Federal Reserve's commitment to purchase bonds in the primary and secondary markets. The net impact of these factors resulted in Moody's Aa, a rate often referenced as a proxy for pension discount rates, ending the quarter 49 bps below levels at the end of the first quarter.
- Given current discount rates, we estimate aggregate pension liabilities to have increased by 5.6% since March 31st.
- With asset values rising faster than liabilities, we estimate the funded status for the aggregate S&P 500 to have increased 2.1 percentage points to 80.5% on a quarter over quarter basis.

[1] Estimate is based off US plans (where specified) of pension plans within the S&P 500, except for the June 30, 2020 estimate, which is based off the largest 50 plans by assets in the S&P 500. [2] As of June 30, 2020; S&P 500 and Barclays Agg figures represent total returns. [3] Using estimates of asset/liability returns and volatility.

In the News

Regulatory Updates and Changes

Supreme Court Ruling in Thole v. US Bank[1]

- In the pension class action lawsuit against US Bank, the Supreme Court ruled in favor of US Bank, stating that pension plan participants who have not seen their benefit payments reduced or altered cannot sue plan fiduciaries on behalf of the plan for alleged breaches of fiduciary duties under ERISA.
- The ruling draws a distinction between defined benefit and defined contribution plans and indicates that because the pensioners in the lawsuit have not suffered any concrete harm (they continue to receive their monthly benefit checks), they lack standing under the US Constitution to bring the lawsuit.

Pension Relief Proposal through the HEROES Act[2]

- In May, the House of Representatives passed a bill known as the Health and Economic Recovery Omnibus Emergency Solutions (HEROES) Act, which includes provisions designed to provide defined benefit plan relief.
- For single-employer plans, the bill would extend the amortization period for underfunded plans from 7 to 15 years. Additionally, the discount rate corridor would be reduced from 10% to 5% and the phase out of the corridor would be delayed to 2026.
- For multiemployer plans, the bill would expand the authority of the Pension Benefit Guaranty Corporation (PBGC) to facilitate the partition of troubled plans. The PBGC guarantee for plans would double and plans in endangered or critical status would have 30 years to make up funding shortfalls rather than 15 years.

The bill remains under Senate review with the possibility that negotiations may begin by late July.

[1] Thole v. U.S. Bank, 140 S. Ct. 1615 (2020). As of June 1, 2020, latest available. [2] H.R. 6800, Heroes Act. As of May 15, 2020, latest available. [3] H.R. 748, CARES Act, Public Law 116-136. As of March 27, 2020, latest available. Source: Company reports and Goldman Sachs Asset Management. As of Q1 2020, latest available. Notable activities represent transactions or contributions that are unique or of meaningful size. Any reference to a specific company or security does not constitute a recommendation to buy, sell, hold or directly invest in the company or its securities.

Retirement Relief through the CARES Act[3]

The Coronavirus Aid, Relief, and Economic Security Act was signed into law on March 27, 2020, and provided temporary relief under retirement savings and pension rules:

Retirement Savings

- New 2020 distribution option for COVID-19 affected individuals for amounts up to $100,000 with special taxation and re-contribution rules.
- Increase in the qualified plan loan-limit for COVID-19 affected individuals from $50,000 to $100,000 for loans before September 23, 2020; loan repayments due before 2020 year-end extended for up to a year.

Pension Plans

- Minimum required contributions for single-employer defined pension plans due in 2020 extended to January 1, 2021 (with interest).
- Plan sponsors can use the prior year's adjusted funding target attainment percentage (AFTAP) to avoid benefit restrictions for plan years that include 2020.

Sponsors and Regulators Respond to COVID-19

- COVID-19 has produced a difficult operating environment for many corporations. A review for Q1 earnings suggests that some sponsors have increased their focus on protecting liquidity by deferring or suspending plan contributions. Moreover, risk transfer activity has also declined significantly.
- American Airlines, Alcoa, and Navistar International utilized relief permitted under CARES Act to defer minimum required contributions until Jan 1, 2021.
- Delta Air Lines deferred voluntary pension contributions it had previously announced for 2020.
- Risk transfer activity as of Q1 posted $4.5bn, 6% lower than the same time last year.

Portfolio Manager Perspectives

The first half of the year proved to be a wild ride for most corporate pension plans. GSAM's Global Head of Global Portfolio Solutions, Greg Calnon, shared his insights on what happened and what plans can expect going forward.

What lessons were learned during the first half of the year?

With the first half of the year behind us, it's safe to say that market volatility underscored the importance of thoughtful portfolio construction, risk management and nimble implementation for investors. Although almost no one predicted the onset of a global pandemic prior to the start of the year, it was somewhat evident that markets were in the late stage of a very mature economic cycle. As such, as part of our strategic asset allocation process, we felt it was prudent for clients to reduce exposure to 'fatter tail' asset classes, such as high yield, emerging markets debt and equity and small cap equities. While no portfolio was immune to market volatility during the first half of the year, being positioned appropriately heading into the pandemic generally improved outcomes.

What role can derivatives play in a portfolio?

During the 2008 financial crisis, derivatives were a source of issues for many institutions and plan sponsors. However, with the advent of exchange-cleared derivatives, the market has changed. Derivatives can play a crucial role in hedging the interest rate risk inherent in pension liabilities. While these hedges are generally not designed to produce excess returns, they can help clients preserve funded status. During the first quarter of the year, having the right hedging strategy was a significant benefit for client portfolios.

How important is it to be nimble in today's environment?

Given the swift equity market decline and subsequent recovery, it has become clear to us that plan sponsors need someone who is paying close attention to markets at all times. Taking advantage of investment opportunities is just one way to be nimble. Equally if not more important for plan sponsors, however, is the ability to "lock in" funded status gains. For example, at the end of 2019 the broad plan universe had a funded status level around 90%. That number dropped to the mid-70's during the worst of the drawdown suggesting that plan sponsors missed an opportunity to de-risk.

What opportunities exist given the recent volatility?

Now that the dust has settled in the market, we are starting to review the list of opportunities that may be available to clients. At a high level, we see potential investment opportunities in private equity, distressed assets, and structured credit. For plan sponsors following a liability driven investing (LDI) strategy, we continue to review the long duration fixed income opportunity set. In particular, with Treasury yields declining to historic lows, we believe credit may be more attractive than government bonds.

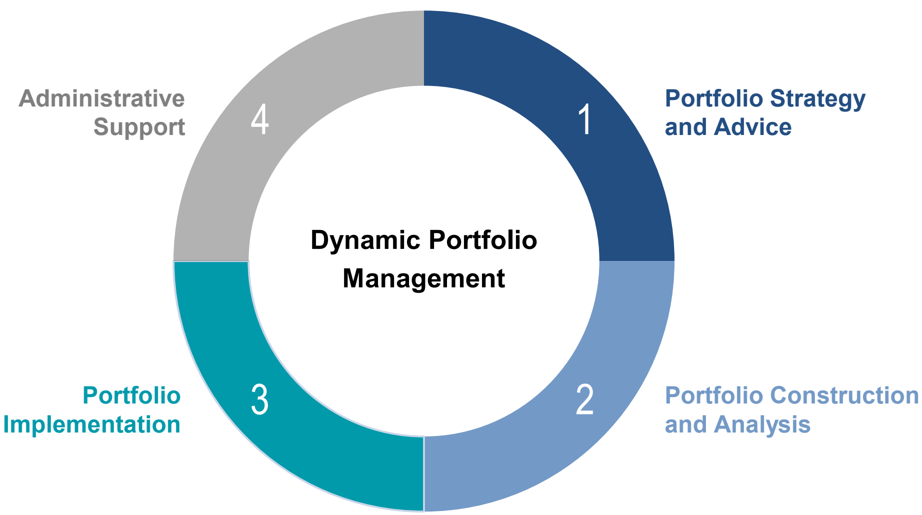
The economic and market forecasts presented herein have been generated by GSAM for informational purposes as of the date of this presentation. They are based on proprietary models and there can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation. There is no guarantee that objectives will be met.

Strategy in Focus: Strategic Partnership Approach During Pandemic

Situation

- Many defined benefit plan sponsors entered the year with reasonable funded status levels given the rally in risk assets in 2019.
- Market volatility during the first quarter of 2020 presented a number of challenges.
- GSAM's dynamic strategic partnership approach helped our clients manage their portfolios before, during and after the crisis.

Strategic Partnership Approach



Preparation, nimbleness and frequent communication helped our clients navigate the pandemic.

Selected Portfolio Actions and Impact

1 Portfolio Strategy and Advice (Pre-Crisis – 2018 / 2019)

- Reviewed the appropriateness of a proprietary macro tail-hedging strategy to provide a buffer in case of economic distress
- **Impact**: With Treasury yields moving to historically low levels, the proprietary hedging strategy helped provide a buffer

2 Portfolio Construction and Analysis (Late 2019)

- Reviewed client strategic asset allocation targets
- Reduced exposure to "fatter tail" asset classes such as high yield, emerging markets equity / debt and small cap equities
- **Impact**: Removing "fatter tail" asset classes from strategic asset allocation targets was beneficial

3 Portfolio Implementation (2020 YTD)

- Increased liquidity to meet benefit payment and other cash needs to ensure clients would not be forced sellers during a period of high volatility and increased trading costs
- Added to credit investments as credit spreads widened out during the height of the crisis
- Reviewed the investment landscape for potential opportunistic investments across public and private markets
- **Impact**: Careful portfolio rebalancing, adding long duration credit and getting clients access to time-sensitive investment opportunities

4 Administrative Support (Ongoing)

- Implemented technology infrastructure called Investment Dashboard to facilitate real-time communications and transparency to clients
- **Impact**: Surge in client usage of Investment Dashboard during pandemic (300+% increase in usage) gave clients real-time visibility into portfolio performance

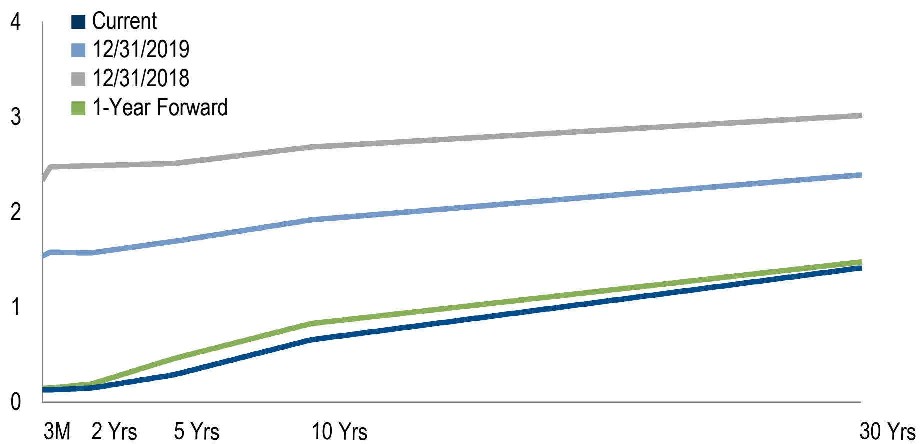
Source: Goldman Sachs Asset Management as of June 30, 2020. For Illustrative Purposes Only. **Past performance does not guarantee future results, which may vary. There is no guarantee that these objectives will be met.** The portfolio risk management process includes an effort to monitor and manage risk, but does not imply low risk.

The cited case study represent an example of how we have partnered with an institutional client. The case study has not been selected based on portfolio performance. It is not known whether the listed client approves or disapproves of Goldman Sachs or the advisory services provided. Results vary depending on the client's investment goals, objectives, and constraints. There can be no assurance that the same or similar results to those presented above can or will be achieved.

De-risking strategies should not be construed as providing any assurance or guarantee that as a result of applying the strategy an investor will reduce and/or eliminate risk, as there are many factors that may impact end results such as interest rates, credit risk and other market risks.

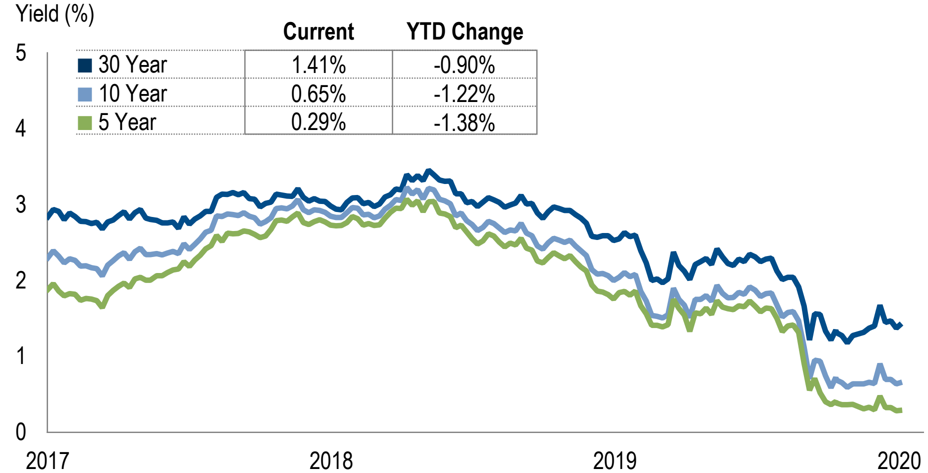
Market Monitor

U.S. Treasury Nominal Yield Curves



Source: GSAM as of June 30, 2020.

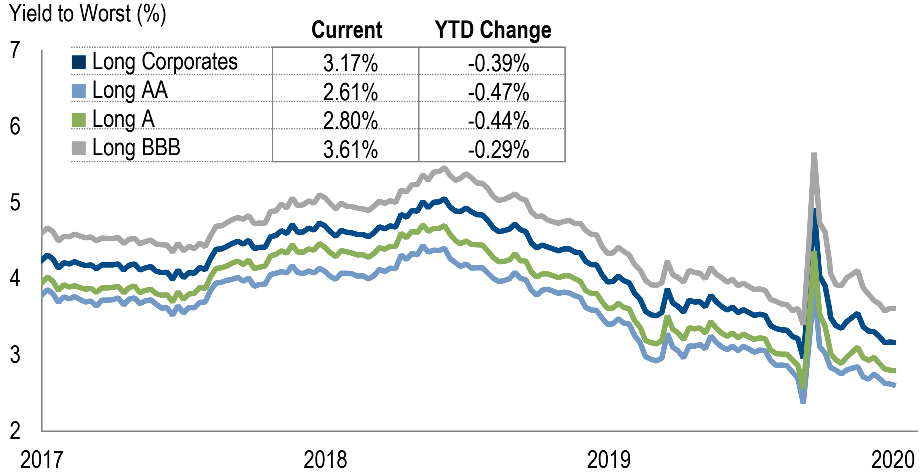
Constant Maturity U.S. Treasury Rates



	Current	YTD Change
30 Year	1.41%	-0.90%
10 Year	0.65%	-1.22%
5 Year	0.29%	-1.38%

Source: GSAM as of June 30, 2020.

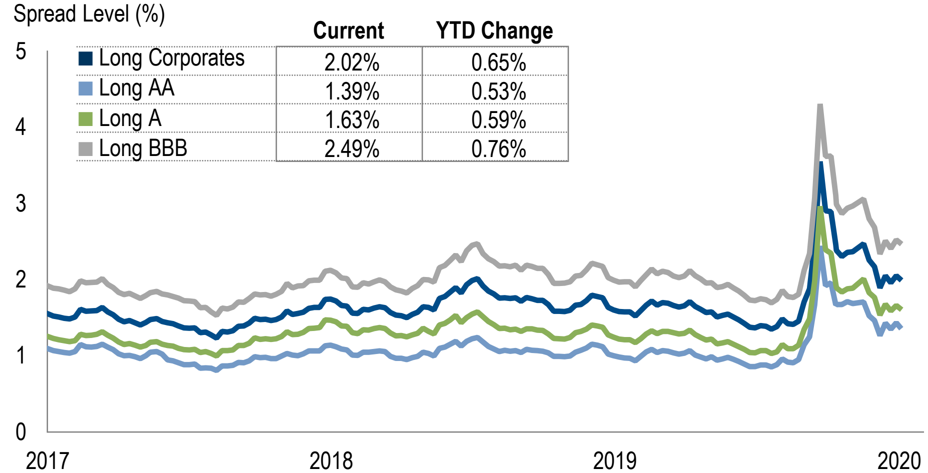
Fixed Income Market Nominal Yields



	Current	YTD Change
Long Corporates	3.17%	-0.39%
Long AA	2.61%	-0.47%
Long A	2.80%	-0.44%
Long BBB	3.61%	-0.29%

Source: GSAM as of June 30, 2020.

Investment Grade Corporate Bond Spreads



	Current	YTD Change
Long Corporates	2.02%	0.65%
Long AA	1.39%	0.53%
Long A	1.63%	0.59%
Long BBB	2.49%	0.76%

Source: GSAM as of June 30, 2020.

Past performance does not guarantee future results, which may vary.

GSAM Pension Solutions

What We Do

We engage with institutional investors, combining our advice and analytics with investment products, to help clients solve complex asset and risk management challenges. Whether evaluating de-risking opportunities, broader plan design questions or investment strategies, Goldman Sachs Asset Management has the resources and capabilities to help you assess, develop or manage a defined benefit strategy.

Who We Are

We are tenured strategists, investors, former actuaries and counselors that offer unbiased advice and customized solutions for defined benefit plans and defined contribution programs.

Analytics

Investment analytics to help plans monitor and assess plan performance and risk position

Asset Management

Growth Portfolio Optimization
Guidance on strategies to potentially enhance risk-adjusted returns in growth portfolios

Liability Hedging
Construct customized liability benchmarks and manage assets to better match liabilities

Equity Risk Mitigation
Reshape the distribution of equities designed to provide downside preservation with upside participation

Risk Transfer
Provide strategic guidance and asset and risk management services to help plans facilitate a pension risk transfer

Partnership

Advisory and discretionary offering to help plans with strategic asset allocation, manager research and selection, portfolio monitoring and rebalancing and administrative support

Key personnel involved in our Pension Solutions effort are comprised of members of our Fixed Income, Global Portfolio Solutions and Americas Client Business teams which are distinct groups separated by informational barriers.

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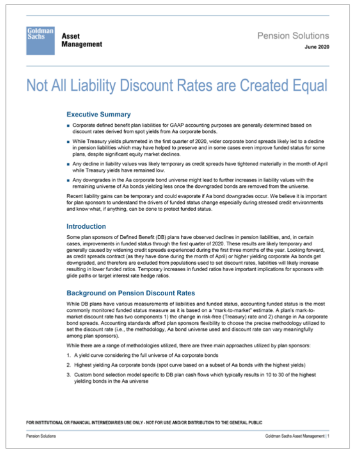
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