LPL RESEARCH

BOND MARKET PERSPECTIVES

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PUERTO RICO'S CRISIS DEEPENS

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KEY TAKEAWAYS

The devastation wrought by Hurricane Maria has led to weaker municipal bond prices for Puerto Rico issuers.

Spillover to other parts of the municipal market has been very minimal and may remain so.

Our hearts go out to all of those affected by the recent hurricanes in Puerto Rico. The loss of life is certainly the most important issue at hand and the human toll should never be forgotten or minimized. It is our hope that residents will regain access to clean water, food, and shelter as soon as possible. But given the devastation that has occurred, we understand that the territory may have a steep uphill climb back to normalcy.

That said, the disaster raises many questions for investors, especially those in the municipal bond market. Some investors are nervous about how the devastation in Puerto Rico could affect their municipal investments, or the muni market overall. It is too early to tell the spillover impact, but we believe it should remain largely contained to Puerto Rico with little impact on the broader municipal market.

SITUATION PRE-MARIA

Puerto Rico's fiscal issues have been years in the making, and the territory ultimately filed for bankruptcy earlier this year. Due to declining economic conditions and overleveraged borrowing in Puerto Rico, its inability to pay its bills was somewhat inevitable. Although the government has tried to implement reforms, such as attempting to fix their pension issues and working aggressively to cut government spending, Puerto Rico's economy has not cooperated. The problems were exacerbated in July 2016 when the island defaulted on general obligation (GO) debt — bonds that were supposed to be guaranteed by Puerto Rico's constitution. Though Puerto Rico had defaulted on revenue bonds previously, the GO default was the first real sign that bankruptcy-like restructuring was on its way. Intuition would argue that a devastating hurricane would make an already troubled situation much worse. The answer, however, is complicated.

POST-MARIA STATE

Puerto Rico's electrical infrastructure is said to be almost completely destroyed. The prospect of months without power, and thus months without utility revenue, led Puerto Rico Electric Power Authority (PREPA) bonds to sell off modestly post-hurricane, down 16.8% in price since the beginning of September (as of

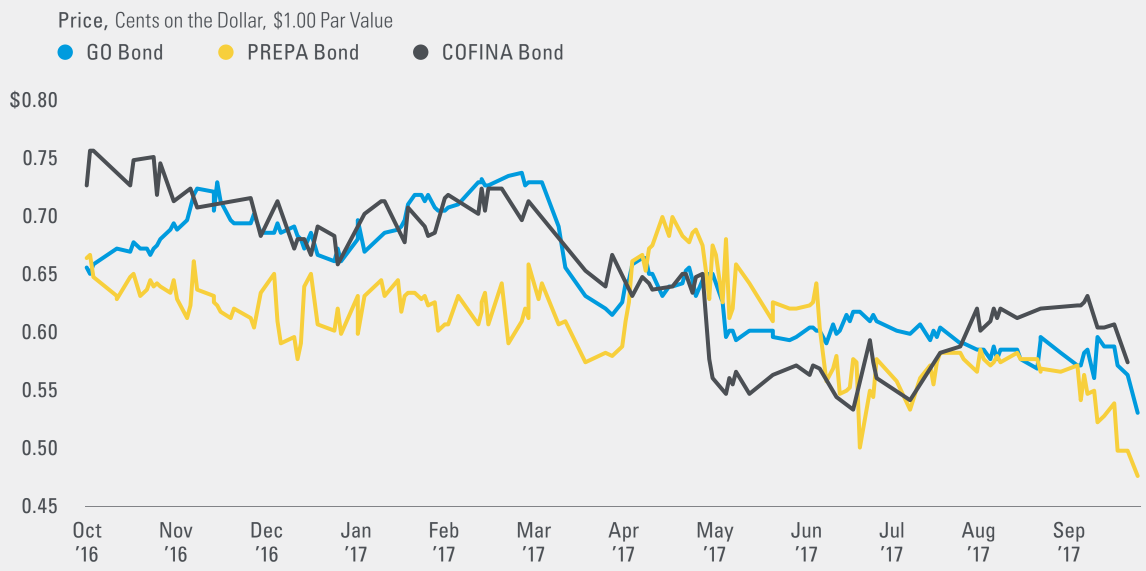
Municipal bonds are subject to availability and change in price. They are subject to market and interest rate risk if sold prior to maturity. Bond values will decline as interest rates rise. Interest income may be subject to the alternative minimum tax. Municipal bonds are federally tax-free but other state and local taxes may apply. If sold prior to maturity, capital gains tax could apply.

September 25). Essential service revenue bonds, such as those issued by PREPA, once held their value better than other bonds, but clearly this crisis is changing the dynamics of the debt situation in Puerto Rico. Similarly, Puerto Rico Sales Tax Financing Corp (COFINA) bonds have been hit as well, down 7.9% in price since the beginning of September (as of September 22, due to lack of pricing data on September 25). A devastated island means fewer cruise ships stopping over in the territory, fewer tourists, and lower sales tax revenue, not to mention the headwind of potentially months of an all-cash economy due to the lack of power. GO bonds, however, have held up well on a relative basis given the destruction of the island, down 6.9% in price since the beginning of September (as of September 25) [Figure 1].

POTENTIAL SILVER LINING

The silver lining for PREPA, as well as citizens of Puerto Rico, may reside in the fact that the territory's electrical grid was largely obsolete and already required massive investment to upgrade or replace it. Power in Puerto Rico has long been unreliable and over twice the cost of power in the United States mainland. With financial assistance from organizations like FEMA, Puerto Rico

1 **GO BOND PRICES HAVE HELD UP RELATIVE TO OTHER PUERTO RICO DEBT**



Source: LPL Research, Bloomberg 09/26/17

CUSIPs referenced are 74514LE86 (GO Bond), 74526QKX9 (PREPA Bond) and 74529JNX9 (COFINA Bond).

Performance is historical and no guarantee of future results.

Par value is the nominal value of a bond, share of stock, or a coupon as indicated in writing on the document specified by charter.

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The issues illustrated are considered high-yield/junk bonds. High-yield/junk bonds (grade BB or below) are not investment-grade securities, and are subject to higher interest rate, credit, and liquidity risks than those graded BBB and above. They generally should be part of a diversified portfolio for sophisticated investors.

may be able to build a more modern electrical grid, potentially taking a large opportunistic step like moving from oil to natural gas as a main source of fuel for energy production, increasing efficiency, decreasing pollution, and lowering costs for customers. However, doubts remain as to whether this can be accomplished, given PREPA's checkered history.

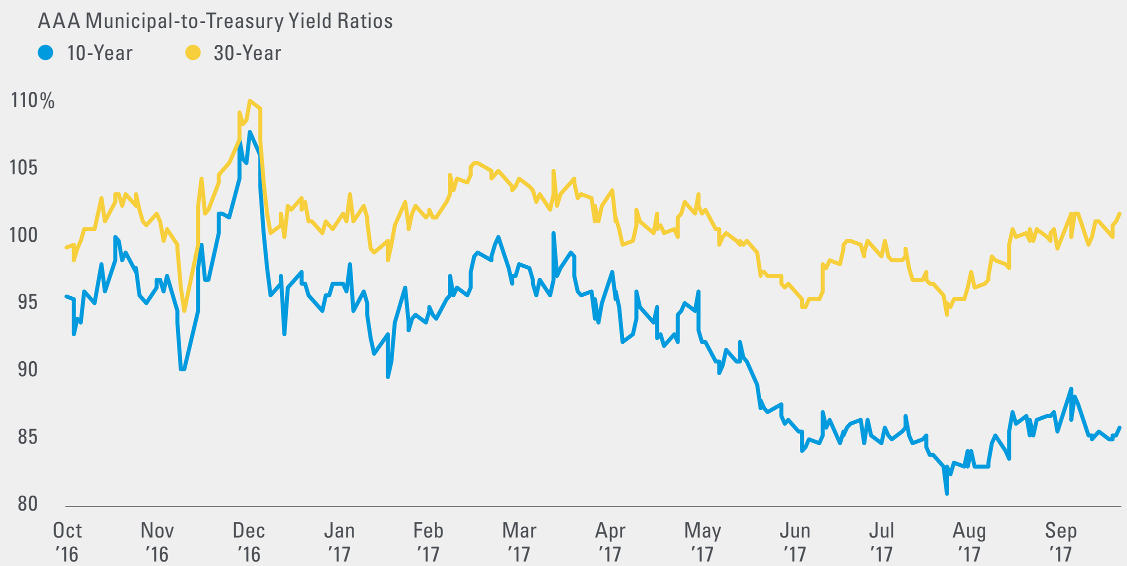
MANAGER POSITIONING

Considering how long Puerto Rico has been in this situation, investment managers have almost entirely decided already on whether to be in or out of Puerto Rican municipal bonds. While most have opted to forego large investments in the territory, some funds (especially hedge funds) have taken long-term opportunistic positions in Puerto Rican debt. The current disaster appears unlikely to greatly alter funds' positioning. Some large Puerto Rico issues have been dropped from the Bloomberg Barclays Municipal High Yield Index due to defaults, leaving exposure remaining in the index limited to near 4%.

GOING FORWARD

The situation in Puerto Rico is clearly unique relative to other problems that may impact municipal debt, as the territory was already

2 MUNI VALUATIONS HAVE HELD STEADY POST-MARIA



Source: LPL Research, Bloomberg 09/25/17

Yield ratio is a comparison of the expected yield of one bond to the expected yield of another. The yield ratio of municipal bonds to U.S. Treasuries is a common barometer of municipal bond valuations.

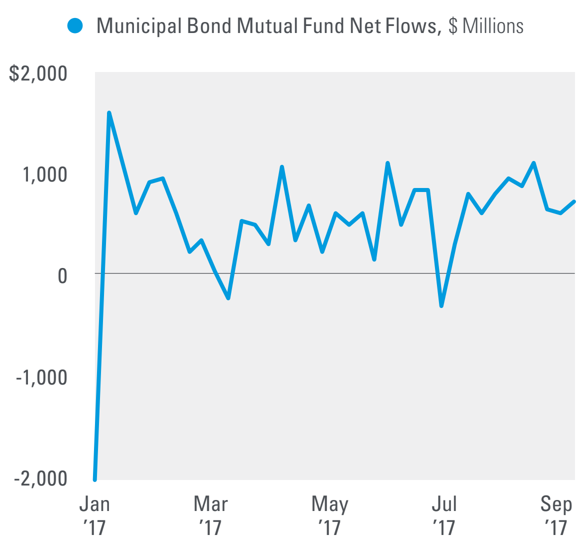
Past performance is no guarantee of future results.

struggling with an economic recession since 2006, a declining population, and over $70 billion in debt. However, natural disasters have not led to municipal defaults in the past — no municipal bond rated by Moody's has ever defaulted due to a natural disaster. In the year following Hurricane Katrina, there were actually more upgrades than downgrades by Moody's for bonds issued in the New Orleans region. With President Trump's declaration of a major disaster in Puerto Rico, the territory and its municipal issuers like PREPA could receive federal disaster funds to help pay for necessary repairs. However, in light of the previous defaults on GO and PREPA bonds, investors may demand additional compensation from issuers during their ongoing debt restructuring, potentially making recovery even more expensive.

Positive news for municipal investors is that spillover to other segments of the municipal market has been limited, and municipals have performed roughly in line with Treasuries over the last week and month. Valuations of investment-grade municipals relative to Treasuries have also been fairly steady, with municipal-to-Treasury ratios moving sideways since Hurricane Maria hit Puerto Rico [Figure 2]. The difference between the yields on municipal bonds rated BAA and those rated AAA, a good proxy for municipal high-yield bond spreads, fell to a year-to-date low on September 22, 2017, indicating that high-yield municipals have not been significantly impacted either.

Municipal flows have remained steady throughout 2017, which has been a stabilizing factor for the broad municipal market [Figure 3]. If this continues, it should help buoy the market through the difficulties and headline risk of a major disaster like Hurricane Maria.

3 **MUNI INFLOWS HAVE PROVIDED MARKET SUPPORT IN 2017**



Source: LPL Research, ICI, Bloomberg 09/25/17

Performance is historical and no guarantee of future results.

Investing in mutual funds involves risk, including possible loss of principal. Municipal Bond mutual fund's concentrated holdings will subject it to greater volatility than a fund that invests more broadly.

CONCLUSION

Puerto Rico, its citizens, and bondholders have a difficult road ahead. Further details of disaster financing and relief aid, in addition to updated estimates for the cost of the recovery efforts, will be important for the municipal market. There are many details to sift through, but we believe the municipal market should remain steady, with problems in Puerto Rico largely contained to the territory itself, and little spillover to the broader municipal market. We will monitor the situation and provide updates as new details become available. ■

IMPORTANT DISCLOSURES

The opinions voiced in this material are for general information only and are not intended to provide specific advice or recommendations for any individual. To determine which investment(s) may be appropriate for you, consult your financial advisor prior to investing. All performance reference is historical and is no guarantee of future results. All indexes are unmanaged and cannot be invested into directly.

The economic forecasts set forth in the presentation may not develop as predicted and there can be no guarantee that strategies promoted will be successful.

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Because of their narrow focus, specialty sector investing, such as healthcare, financials, or energy, will be subject to greater volatility than investing more broadly across many sectors and companies.

Bonds are subject to market and interest rate risk if sold prior to maturity. Bond values and yields will decline as interest rates rise, and bonds are subject to availability and change in price.

General obligation (GO) bonds are municipal bonds backed by the credit and "taxing power" of the issuing jurisdiction rather than the revenue from a given project.

The Puerto Rico bonds discussed are considered high-yield/junk bonds. High-yield/junk bonds (grade BB or below) are not investment-grade securities, and are subject to higher interest rate, credit, and liquidity risks than those graded BBB and above. They generally should be part of a diversified portfolio for sophisticated investors.

Credit ratings are published rankings based on detailed financial analyses by a credit bureau specifically as it relates the bond issue's ability to meet debt obligations. The highest rating is AAA, and the lowest is D. Securities with credit ratings of BBB and above are considered investment grade.

Government bonds and Treasury bills are guaranteed by the U.S. government as to the timely payment of principal and interest and, if held to maturity, offer a fixed rate of return and fixed principal value. However, the value of fund shares is not guaranteed and will fluctuate.

Yield spread is the difference between yields on differing debt instruments, calculated by deducting the yield of one instrument from another. The higher the yield spread, the greater the difference between the yields offered by each instrument. The spread can be measured between debt instruments of differing maturities, credit ratings, and risk.

INDEX DEFINITION

The Bloomberg Barclays Municipal Bond Index is a market capitalization-weighted index of investment-grade municipal bonds with maturities of at least one year.

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