

The Atlantic hurricane season traditionally runs from June 1 through November 30 each year. With nearly two months left in the term, the 2017 hurricane season already has proven to be one of the most destructive weather cycles in over a decade. Since the start of June, there have been 12 “named” Atlantic storms, including Harvey, Irma, and Maria. Although the storms left considerable damage in their wake, the majority of affected municipal credits will bear few long-term impacts. Unfortunately, the same cannot be said of Hurricane Maria and the Commonwealth of Puerto Rico.

In recent history, the mainland U.S. has endured numerous weather events, most notably Hurricane Andrew in 1992, Hurricanes Katrina, Rita, and Wilma in 2005 and Superstorm Sandy in 2012. Despite the powerful nature of these storms and the billions of dollars of losses incurred, municipal credit has remained resilient, largely due to time-tested preparedness and the availability of recovery funding, in the form of federal disaster relief and insurance proceeds. Historically, relief monies awarded by the Federal Emergency Management Agency (FEMA) have covered 75-100% of disaster recovery costs. Furthermore, governments maintain property insurance on public facilities and in many cases, business-interruption insurance. Public entities with healthy reserves and/or access to liquidity are better positioned to meet the immediate cash outlays following a storm, while waiting for the receipt of FEMA dollars and insurance settlements. Although natural disasters disrupt economic activity and revenue generation, the longer-term benefits of

the rebuilding efforts, such as the replacement of older structures with newer, more efficient models, often outweigh the short-term setbacks associated with the event.

For the first time on record, two Category 4 hurricanes made landfall in the U.S. during the same season, with Harvey hitting Rockport, Texas on August 25 followed by Irma making two landfalls in Florida, first the Keys, then Marco Island on September 10. Along with peak winds of 130 mph for each storm, Harvey dropped 40 to 60 inches of rain as the system hovered over Houston for nearly a week, while Irma brought 10 inches of rain to Florida, coupled with storm surges of 10 to 14 feet across the Keys.

We hold a number of issuers located in the path of both hurricanes, including airports, toll roads, hospitals, water and sewer utilities, electric utilities, and state general obligation bonds, yet have no exposure to local general obligation debt. Since both states have experienced severe weather events in the past, preparedness upgrades have been made, including the relocation of generators to higher ground and the installation of barrier doors to prevent floodwater penetration. Due to resiliency improvements constructed over the years, as well as the standard precautionary measures enacted prior to landfall, we received no reports of lasting damage to the physical assets of any of our positions in the affected areas. We expect revenue weakness and economic softness caused by temporary service disruptions and any incremental recovery costs will be offset by sufficient levels of cash on hand or other liquidity sources. The

State of Texas (AAA/AAA) and the State of Florida (Aa1/AAA) are highly-rated issuers that are well positioned to assist local governments with interim assistance, as evidenced by healthy reserve levels of \$10 billion and \$5 billion, respectively.

Unfortunately, Puerto Rico’s outcome stands in stark contrast to the experience of the mainland U.S. On September 20, Hurricane Maria, a Category 4 storm, passed directly over Puerto Rico causing significant destruction, specifically island-wide losses of power, drinking water and telecommunications, widespread flooding, unpassable roadways, and the leveling of neighborhoods. The damage to the island’s infrastructure speaks not only to the severity of the storm, but also to the antiquated nature of public assets due to years of neglect as the government struggled financially. In the midst of its own debt restructuring, Puerto Rico is in no position to support its recovery, with few reserves on hand nor access to capital markets. The severity of the destruction will hamper the Commonwealth’s already-troubled economy for years to come and potentially lead to higher out-migration. In assessing the aftermath, PROMESA, the board overseeing the island’s debt reorganization has indicated recoveries on Puerto Rico bonds will likely be revised downward.

Natural disasters are an unavoidable occurrence. We believe the best defense against these uncontrollable events is to focus on high-quality issuers with a sound fiscal foundation, an experienced management team with contingency strategies in place, and a solid history of infrastructure planning and investment.