

MUNICIPAL ANALYSTS GROUP OF NEW YORK

Nick Sourbis

Municipal Market Analytics

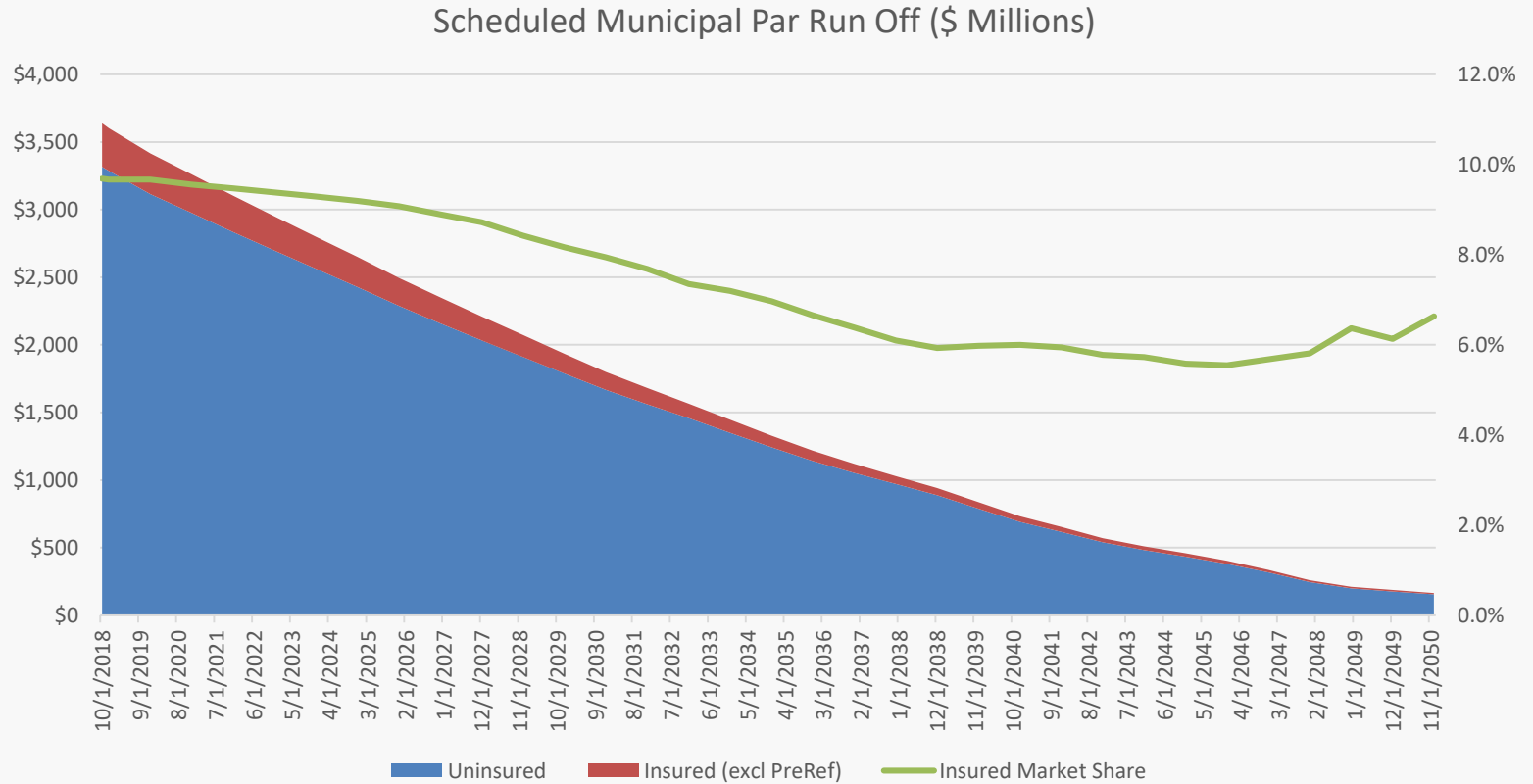
nsourbis@mma-research.com

914-484-3461

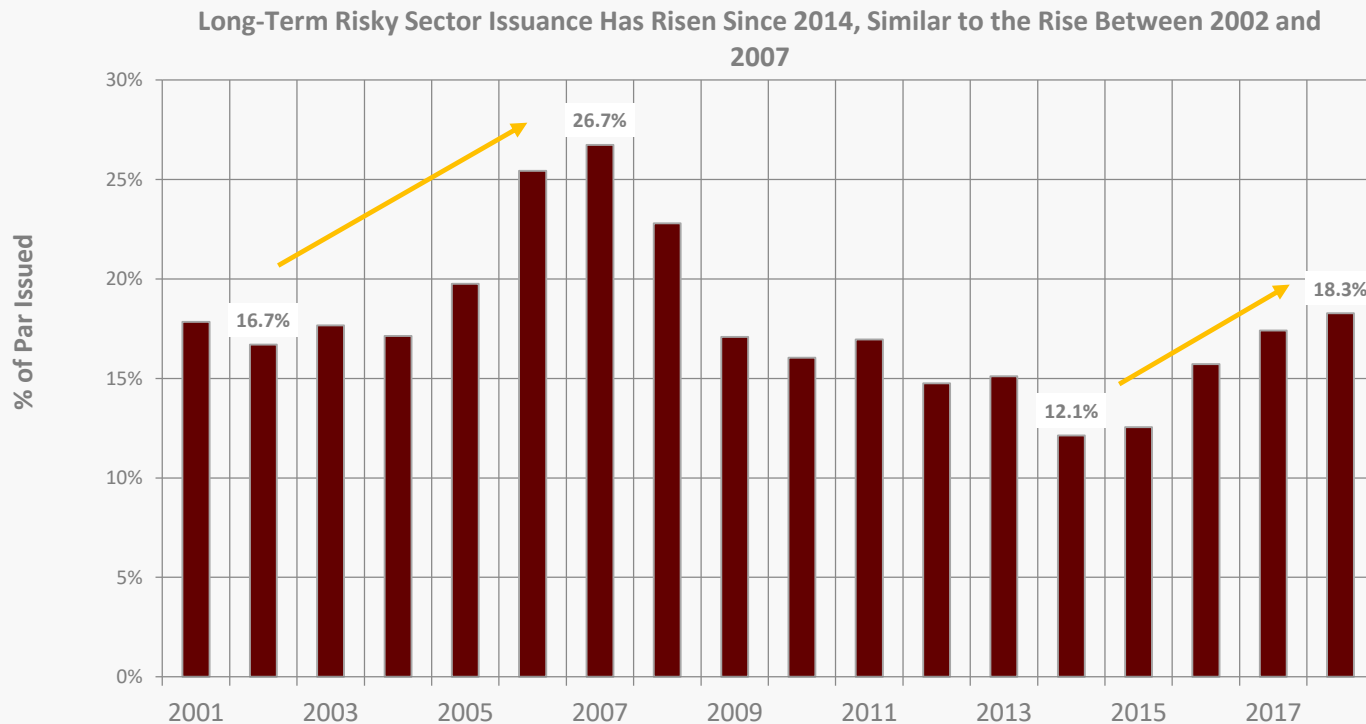
Municipal Market Analytics

- The leading independent research and consulting group in the US municipal market
- Well known thought leader on market and credit trends, infrastructure finance, related systemic risks, and regulation/policy issues
- No sales, trading, banking, or underwriting operations or affiliations; **MMA** is not a registered advisor or asset manager
- Core business is strategy and research reports and proprietary market data. Several hundred municipal industry subscribers, including buy side and sell side firms, advocacy organizations, regulators, and others
- Consulting arrangements include long-term default modeling, bank portfolio filtering for credit surveillance, and single name credit research

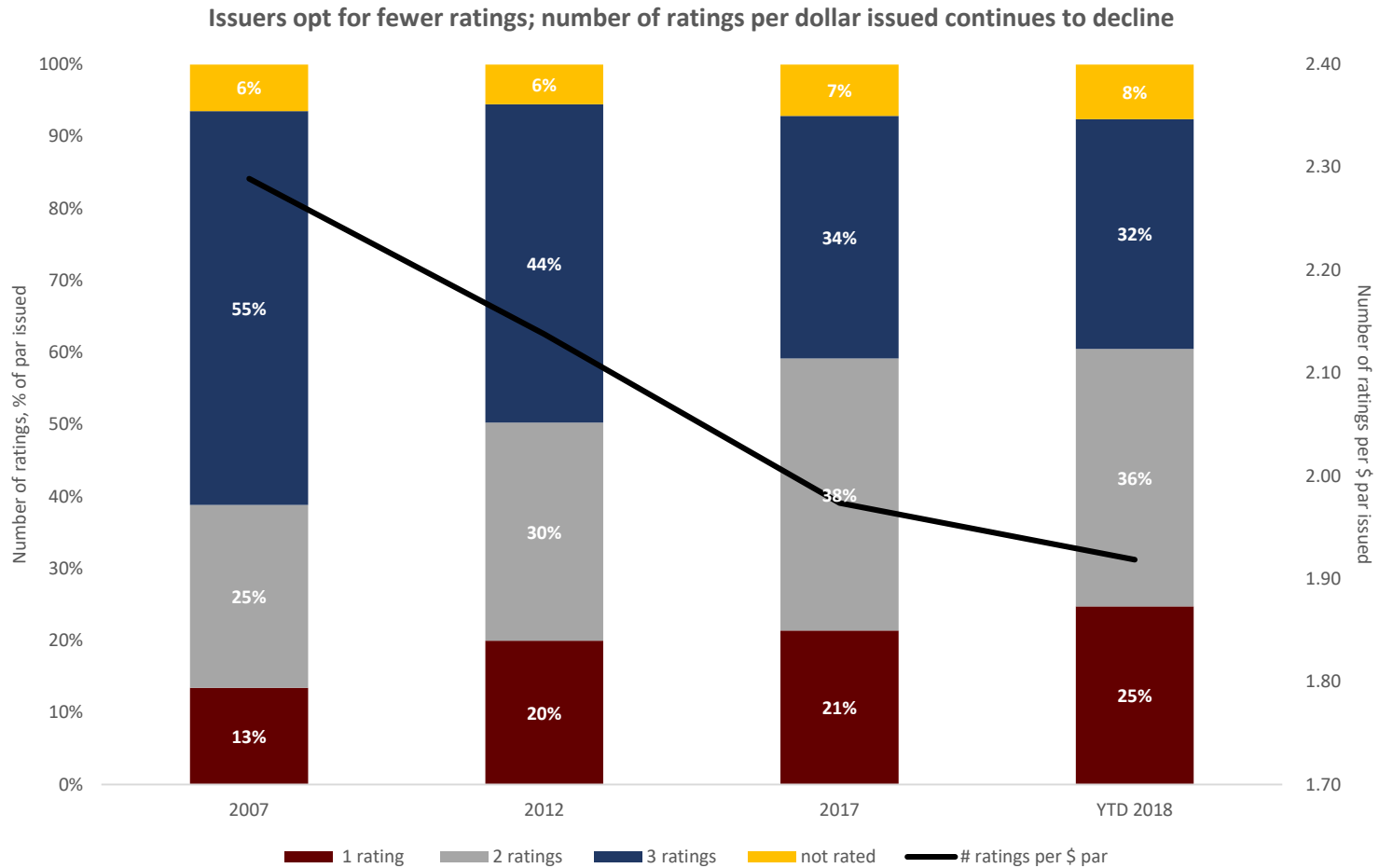
Outstanding Insured Par Matures Slightly Faster Than Total Muni Par



Risky Sector Issuance Continues to Grow



Bond Issues Carrying More Than One Rating On the Decline



Credit Spreads Remain at Low Levels

Bond Buyer Revenue vs. G.O.: Spread (bps): 51 bps
January, 1980 - September 28, 2018

