

# Financing With a Purpose

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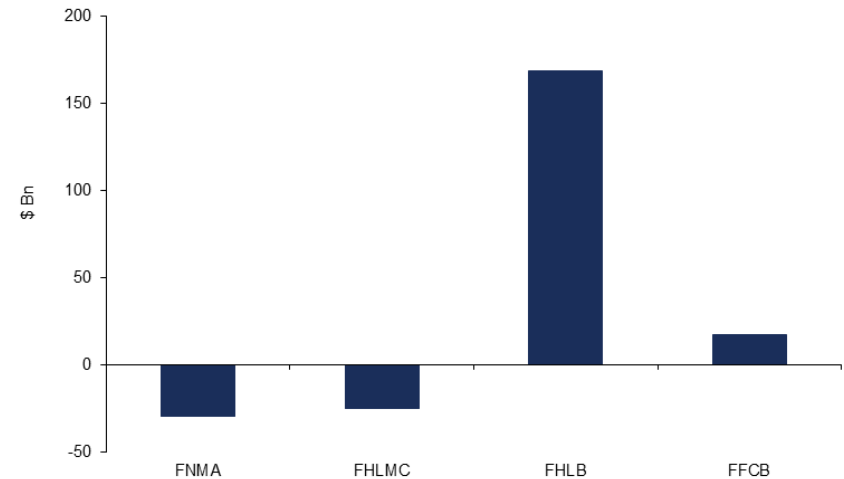
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# Fixed Income Strategy

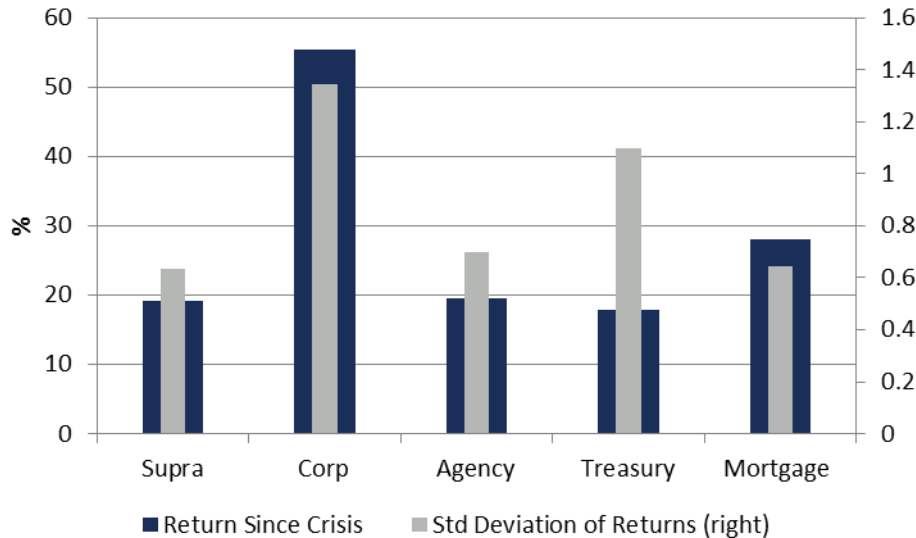
*Fitting Agencies and SSAs in Your Portfolio*

- State and local agency holdings have fallen as FNMA and FHLMC have shrunk debt outstanding.
- FNMA and FHLMC debt likely to continue declining alongside GSE reform
- How should I meet the agency, or “spread” portion of my portfolio?
  - Stay in agencies?
  - Migrate to SSA?
  - Both?

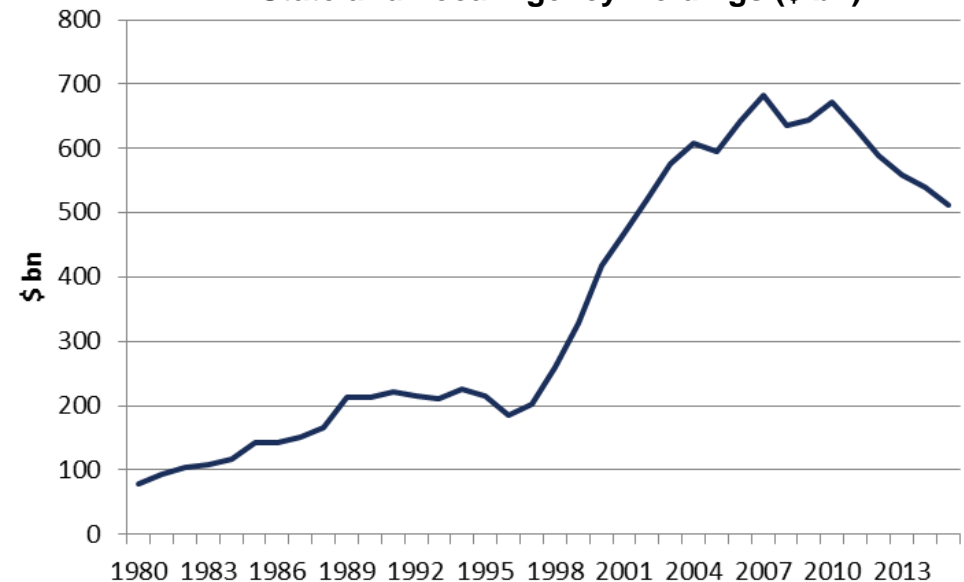
**2016 Net Issuance (\$ bn)**



**Total Returns and Standard Deviation (%)**



**State and Local Agency Holdings (\$ bn)**

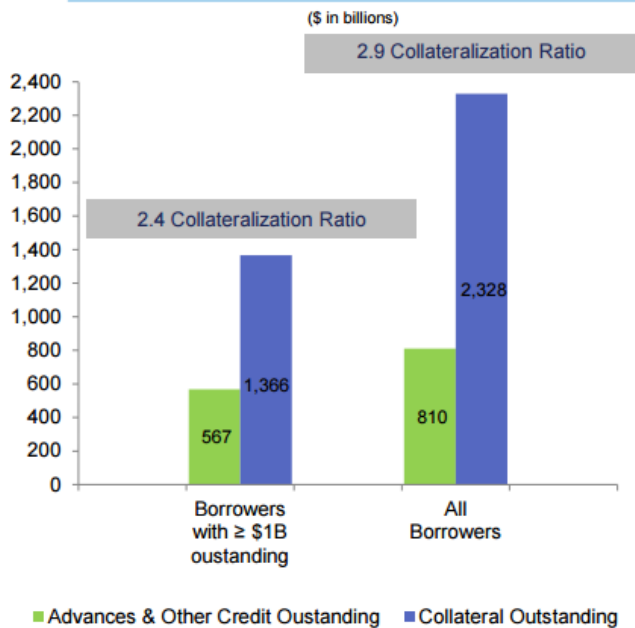


# Fixed Income Strategy

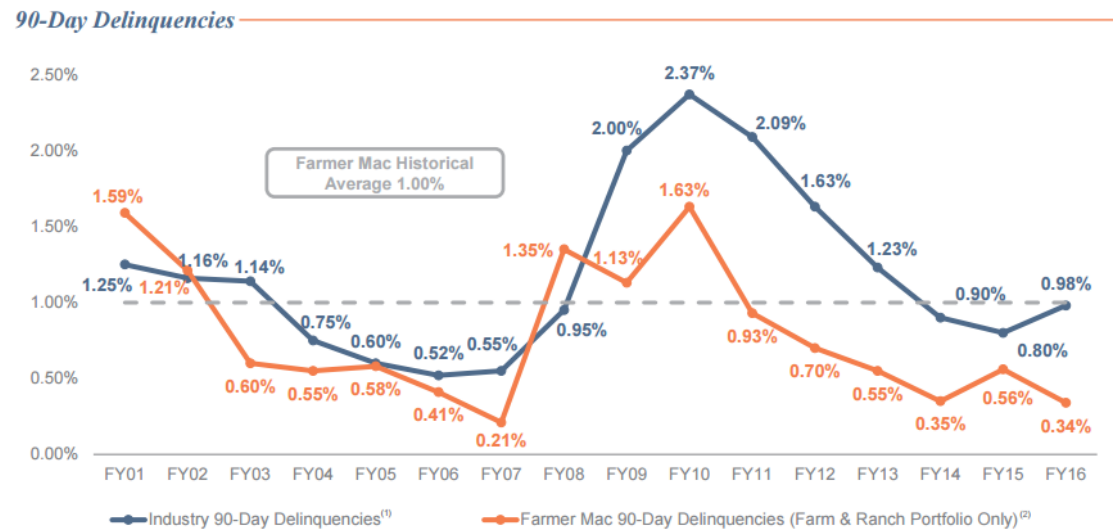
*SAFETY: Agencies Have Very Strong Balance Sheets and a Strong Implicit Guarantee From the United States*

- Agency Credit Quality:
  - Strong balance sheets. FHLB has never had a credit loss on its advance portfolio in its history given collateral backing loans.
  - Farmer Mac asset delinquency rates well below the industry average, even during the credit crisis.
  - Implicit guarantee from the United States government, which would likely be used were it ever necessary (FNMA/FHLMC).

## FHLB Total Credit Exposure vs. Collateral Outstanding



## 90-Day Delinquencies (%)

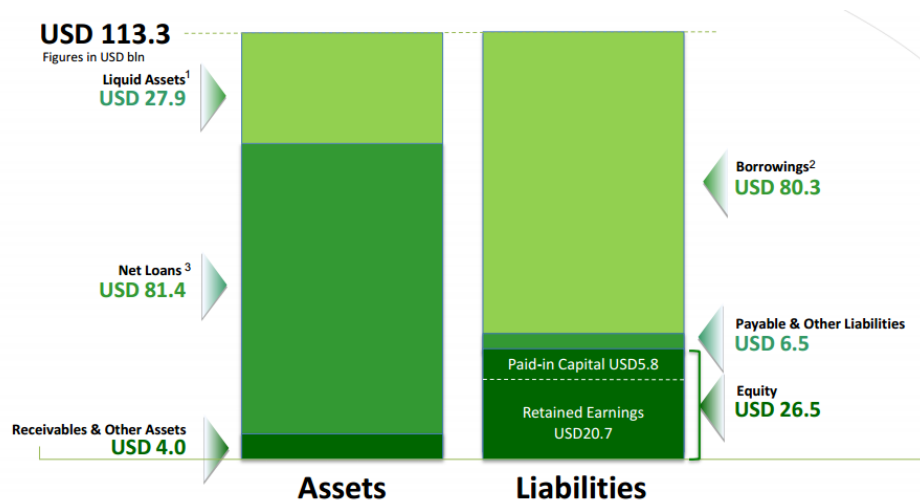


# Fixed Income Strategy

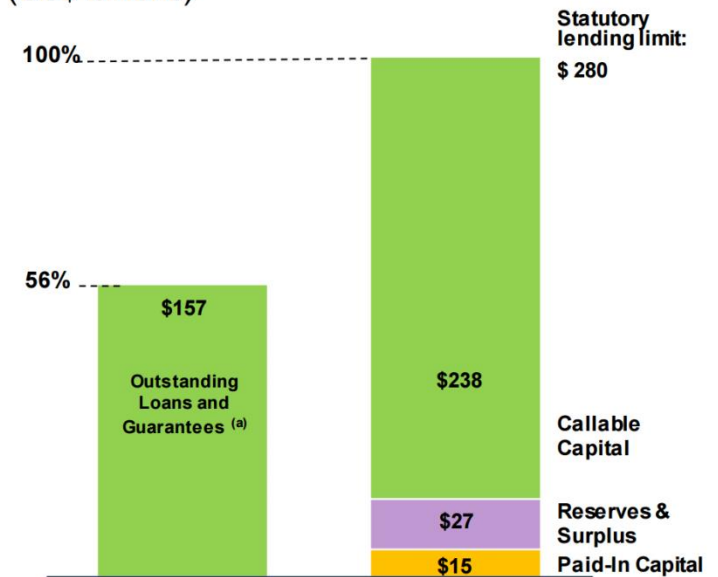
*SAFETY: Supranationals the Safest Option in the SSA Market*

- Supranational Credit Quality:
  - Backed by paid-in and callable capital from member countries.
  - Callable capital sufficient to cover outstanding debt even if IADB/IBRD had 100% default rates on their loan portfolios.
  - Have never had to make a claim on callable capital.
  - Preferred creditor status.

**IADB Loans and Available Capital (\$ bn); IADB Callable Capital = \$164.9 bn**



**World Bank Loans and Available Capital (US\$ billions)**

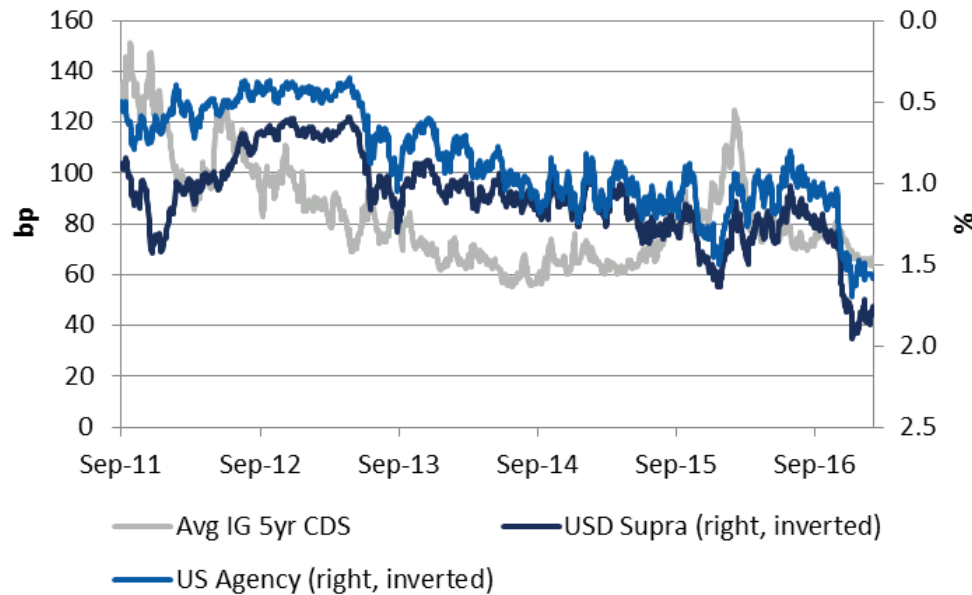


# Fixed Income Strategy

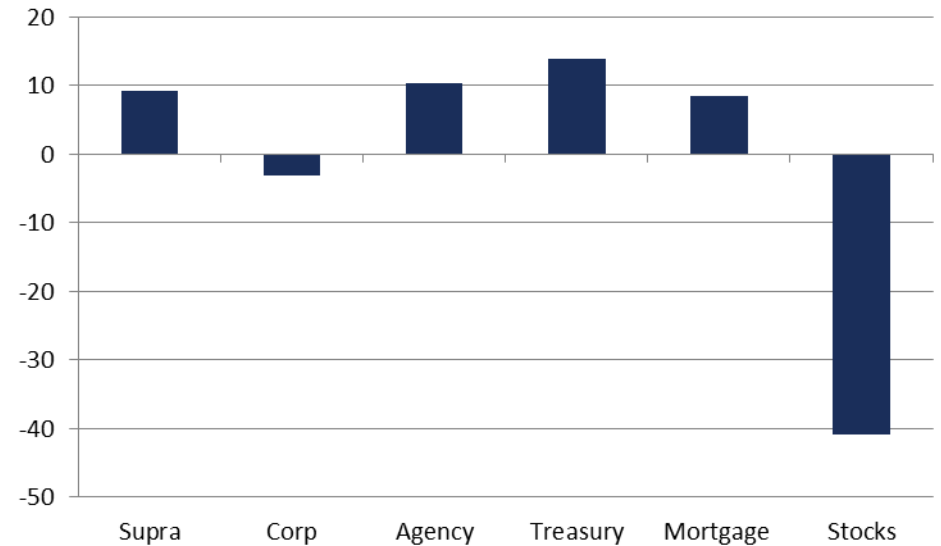
*SAFETY: Strong Credit Quality Makes Agencies and SSAs “Flight to Quality” Assets*

- Inverse correlation between agency/supra yields and corporate credit default swap rates
- Both agencies and supranationals had positive total returns in 2008 during the peak of the financial crisis, while corporates were negative and stocks were sharply negative.

**5yr Corporate CDS and Agency/SSA Yields**



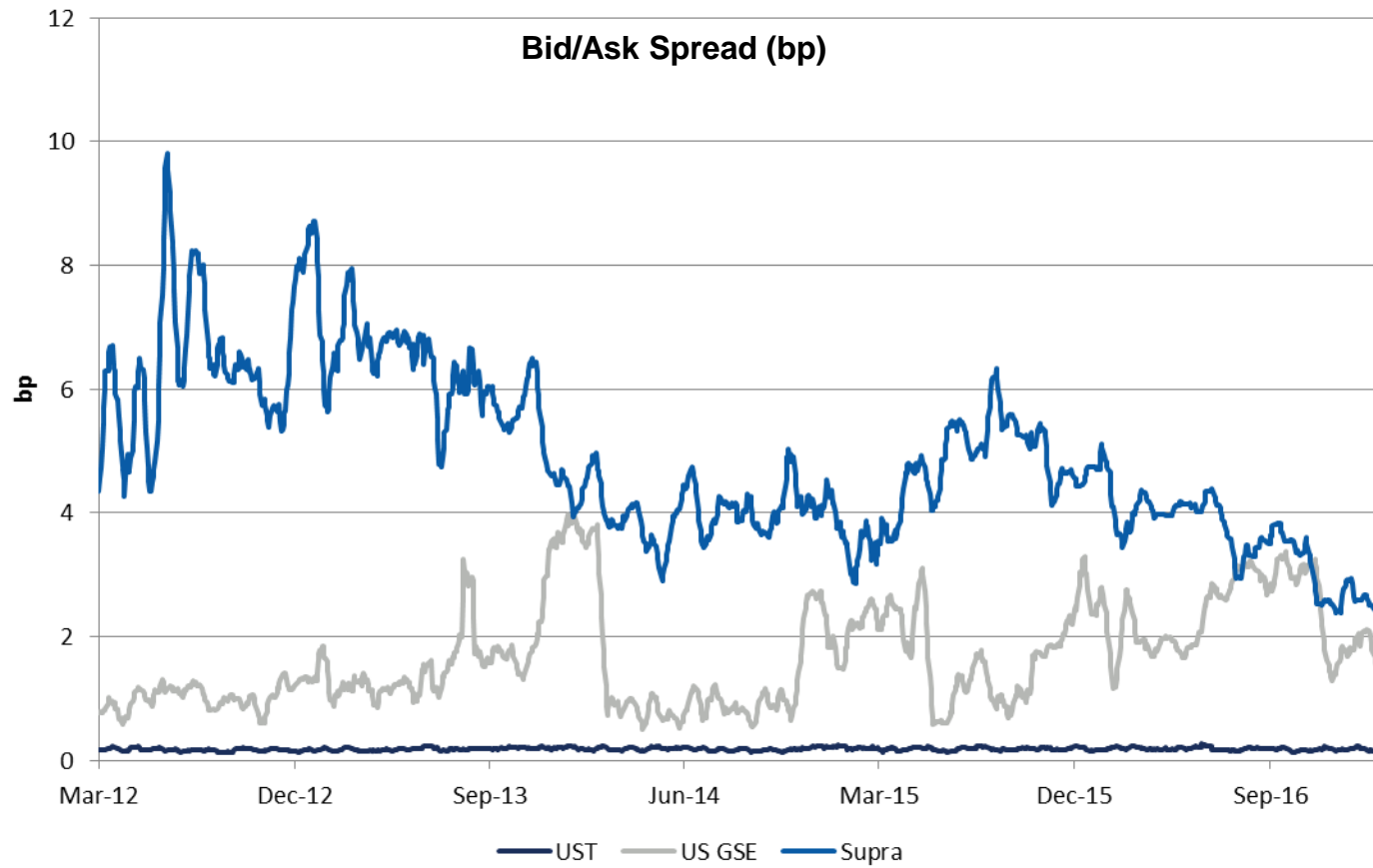
**2008 Total Return (%)**



# Fixed Income Strategy

*LIQUIDITY: Bid/Ask Spreads a Useful Liquidity Measure*

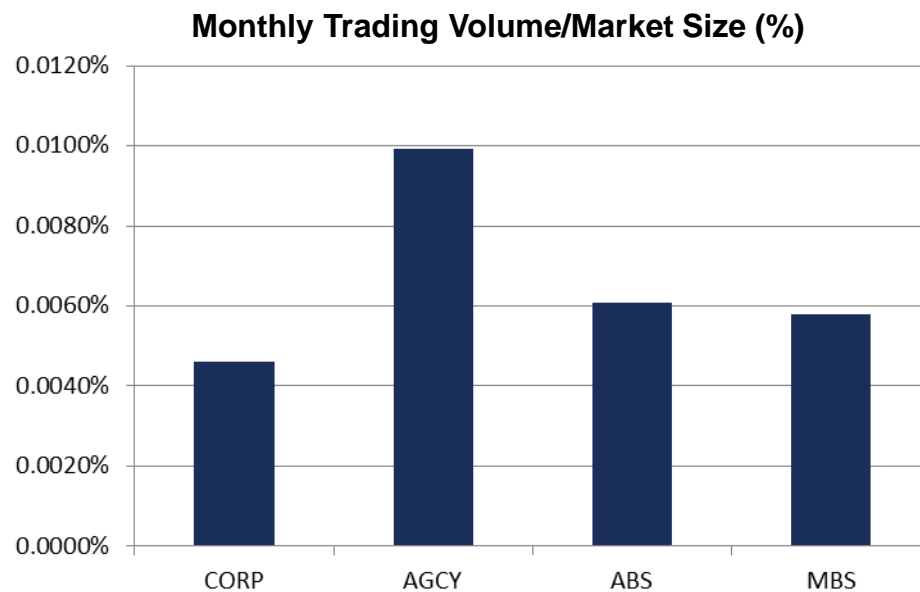
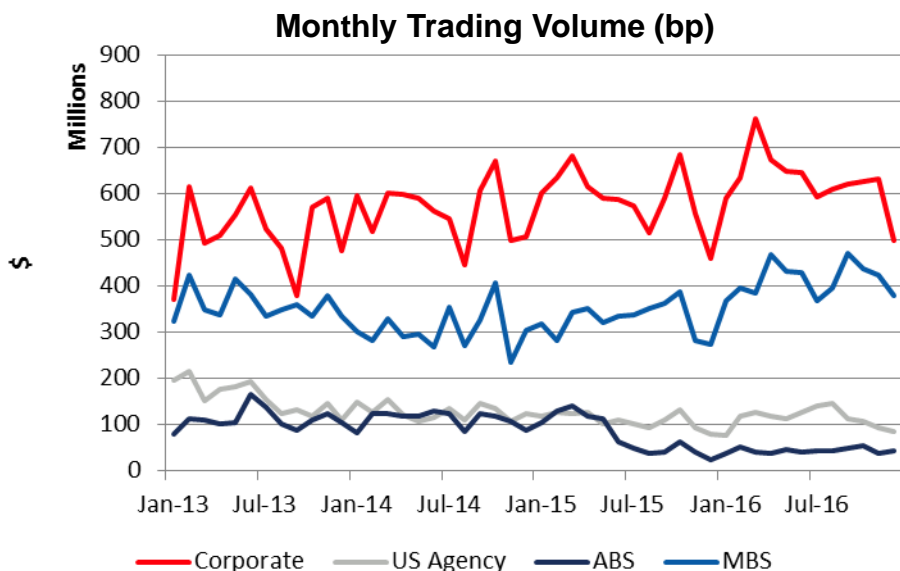
- Liquidity is stronger in the agency market with a bid/ask spread consistently below 2bp.
- Supranational liquidity improving as more market participants become familiar with the market.
- SSA bid/ask spreads similar to agencies in normal times, but still vulnerable to drops in stressed market environments, such as the European debt crisis in late 2012.



# Fixed Income Strategy

*LIQUIDITY: Agencies Second Only to UST*

- According to TRACE statistics, approximately \$100 mn of agency securities trade each month, down from \$200 mn/month in 2013.
- However, when comparing trading volume to market size, 0.01% of the entire agency market trades each month, more than corporates, ABS, and MBS.
- Unfortunately, supranationals are exempt from TRACE reporting. How can we compare liquidity?

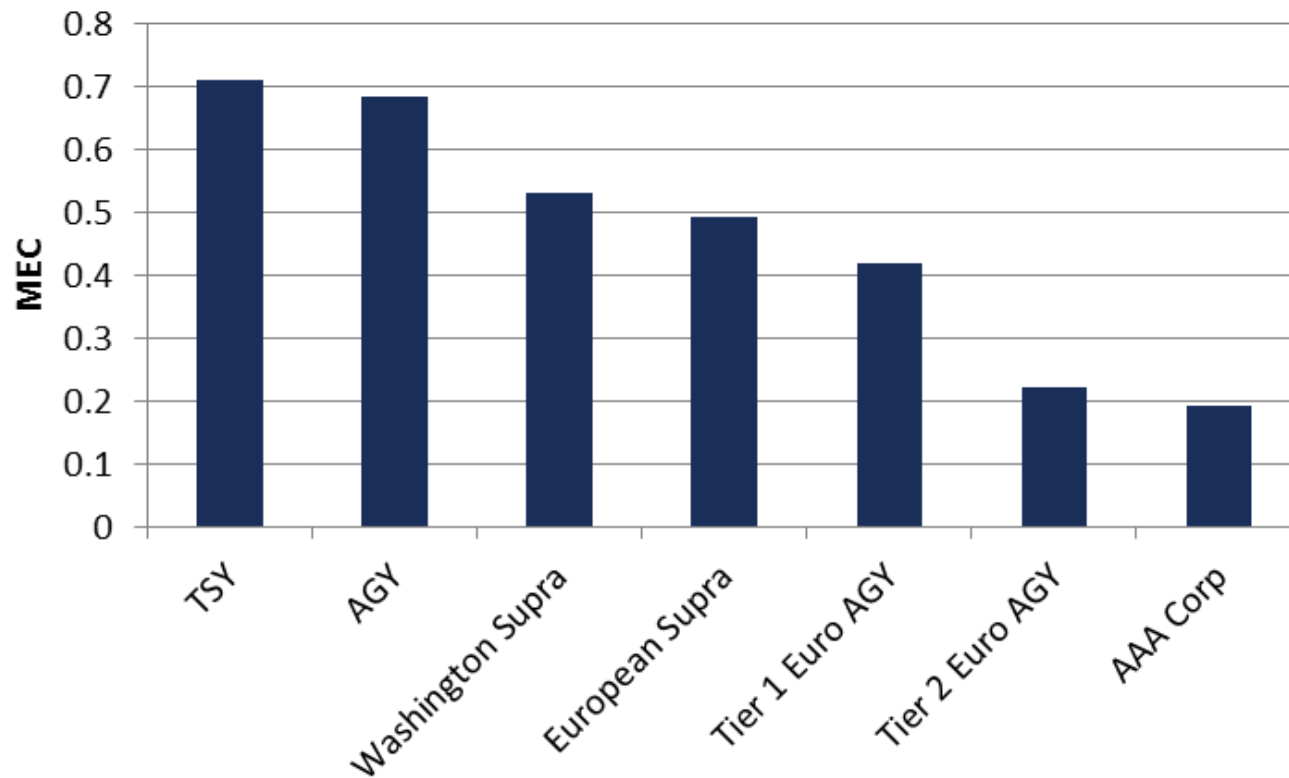


# Fixed Income Strategy

*LIQUIDITY: Supranational Liquidity Not Far Behind*

- Market Efficiency Coefficient (MEC) is a measure of liquidity that essentially focuses on how orderly price movements incorporate new information.
- As expected, Treasuries are first and agencies are second. Supranationals trade with liquidity more like agencies than like corporates.

**MEC Over the Past 5 Years**

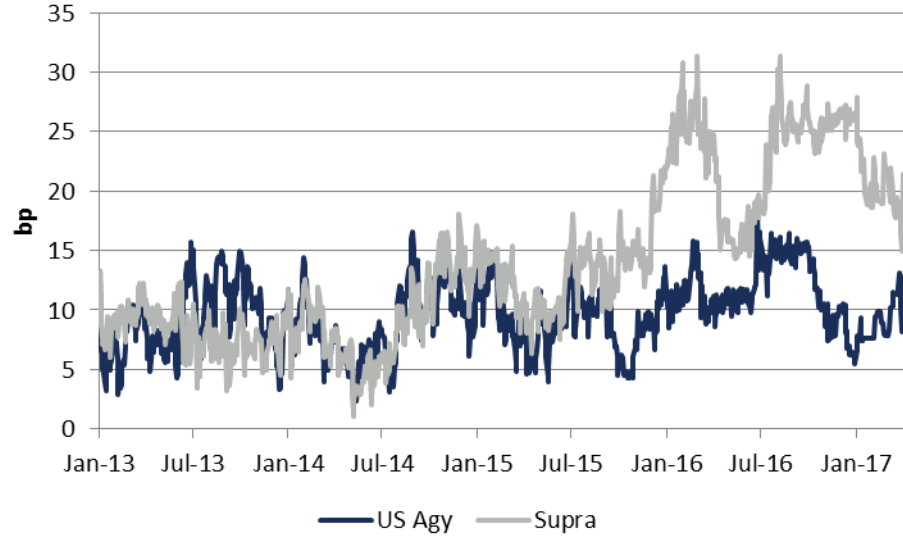




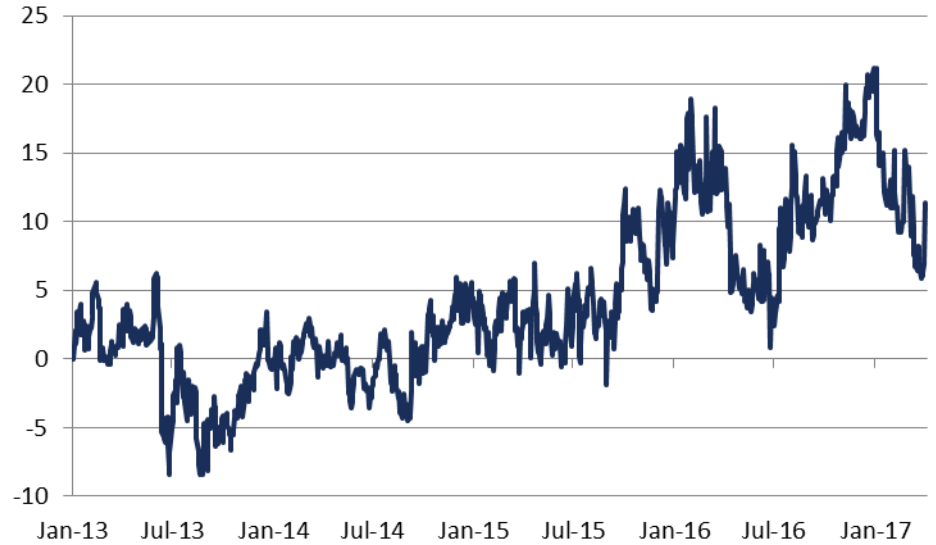
# Fixed Income Strategy

*RETURN: Supranational Spreads are Wider Than Agencies at the Short End, but Narrower at the Long End*

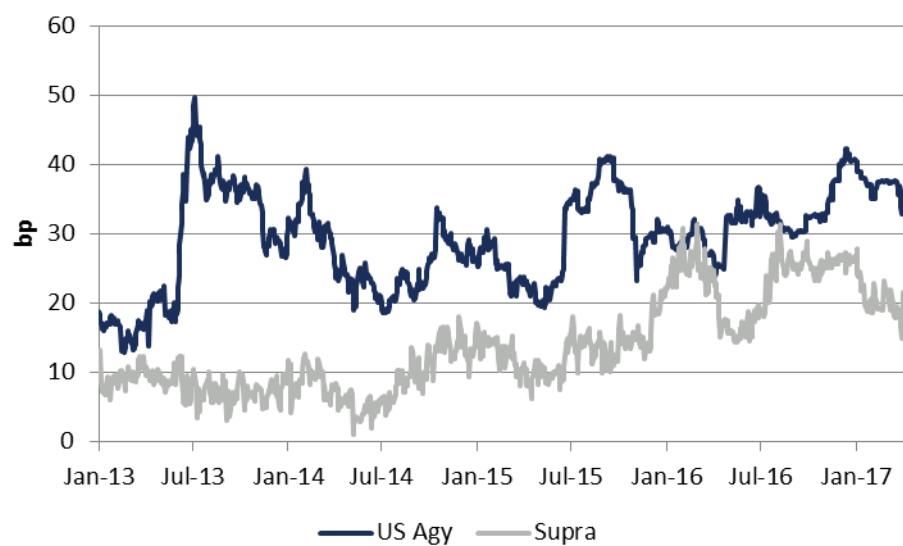
**3yr Spread to Treasuries**



**3yr Supra Spread to Agencies**



**10yr Spread to Treasuries**



**10yr Supra Spread to Agencies**

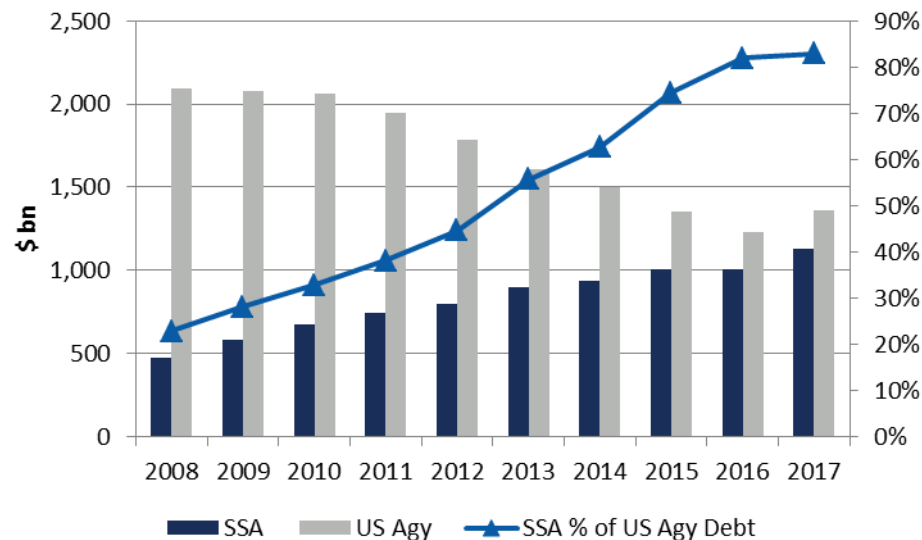


# Fixed Income Strategy

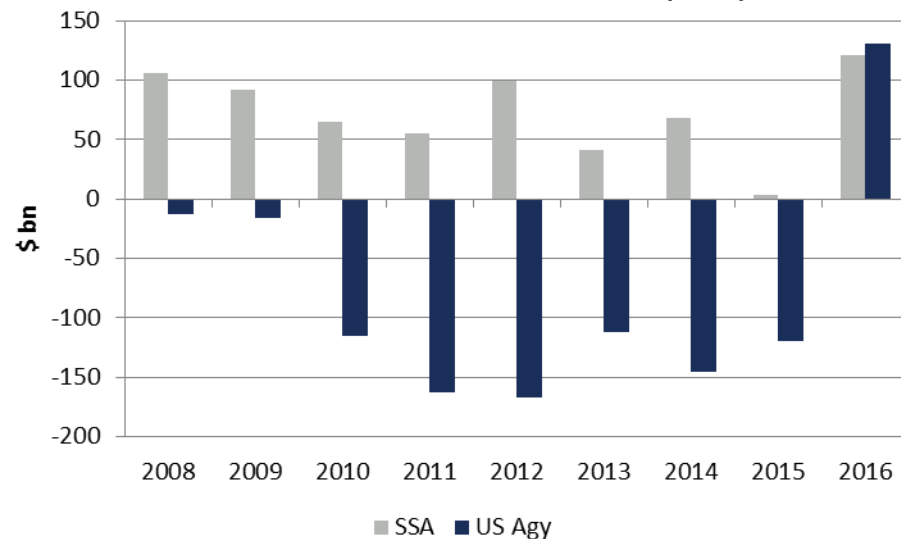
*Technicals: Name Diversification*

- US agency non-DN outstandings have shrunk by over \$700 bn since 2008, or by ~35%.
- The USD SSA market has grown to 83% of the non-DN US agency market, compared to 23% in 2008.
- Net Issuance since the financial crisis
  - US Agency: -\$720 bn
  - USD SSA: \$652 bn
- With agency debt more difficult to find, supranationals offer name diversification.

**USD Non-DN Debt Outstanding (\$ bn)**



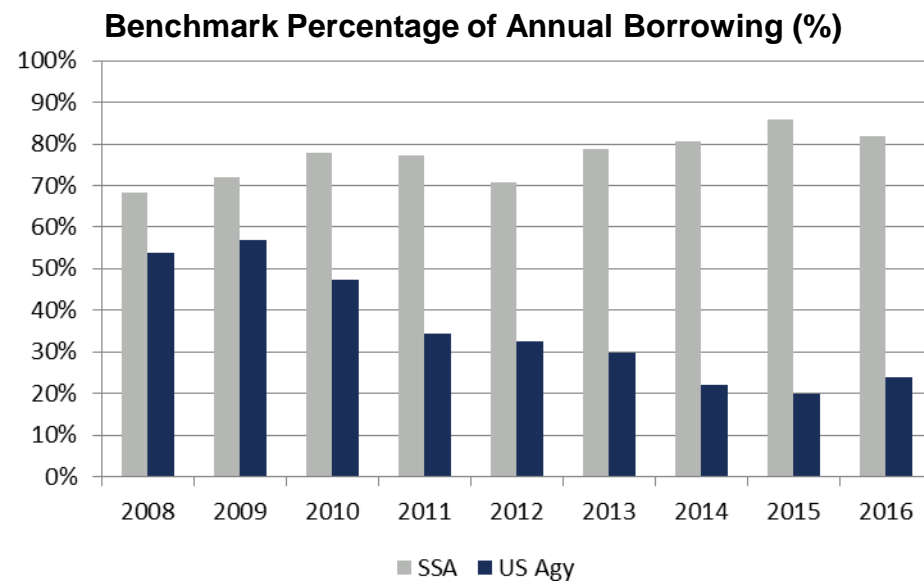
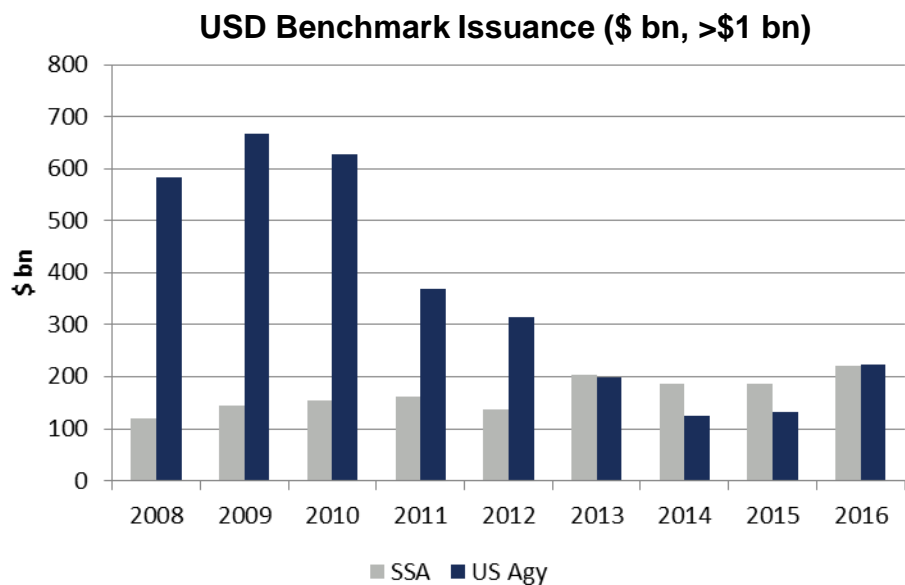
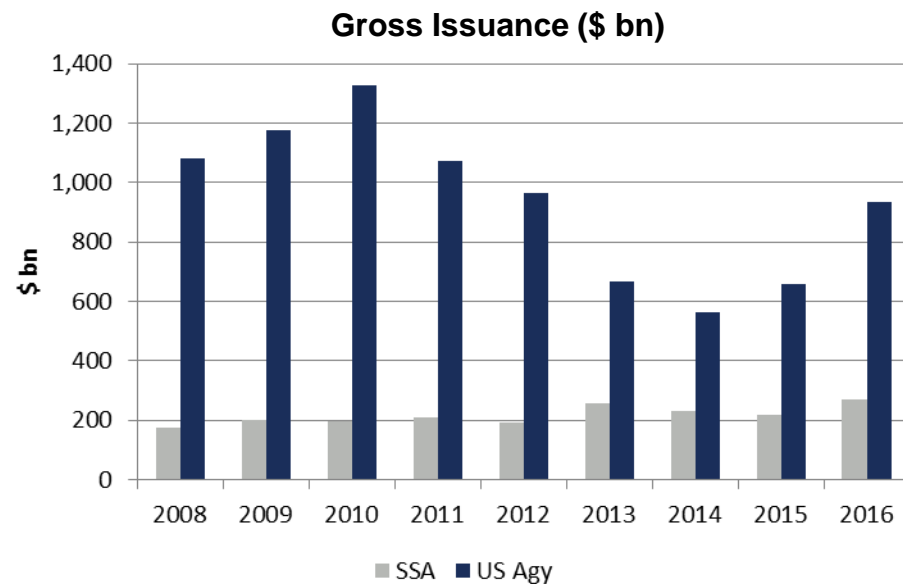
**USD Net Non-DN Debt Issuance (\$ bn)**



# Fixed Income Strategy

*Technical: Diversification of Product Type*

- While gross issuance in the agency market remains far larger than SSAs, SSAs issue more benchmarks than agencies.
- 82% of USD SSA funding comes from benchmarks, compared to 24% for agencies.
- Agencies and SSAs both offer all product types, but diversifying allows investors to target certain product types more easily.
  - SSAs->bullets, large deals.
  - Agencies-> Structured products, floaters

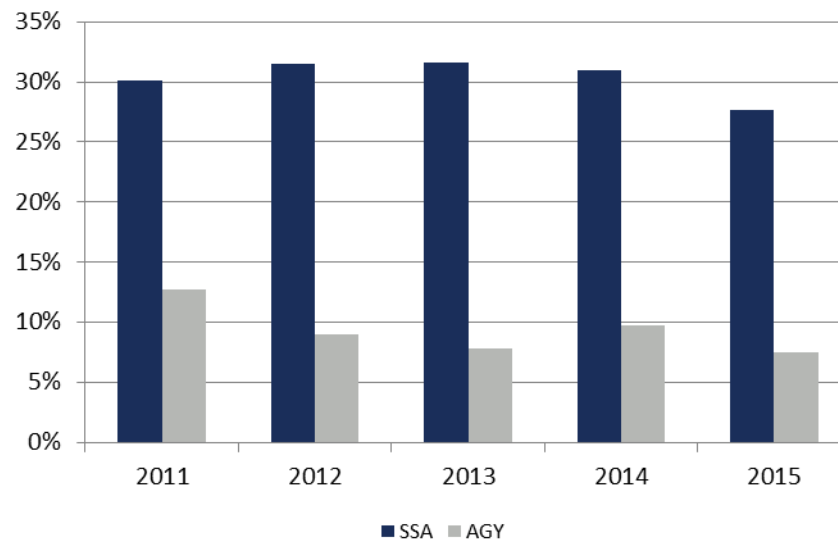


# Fixed Income Strategy

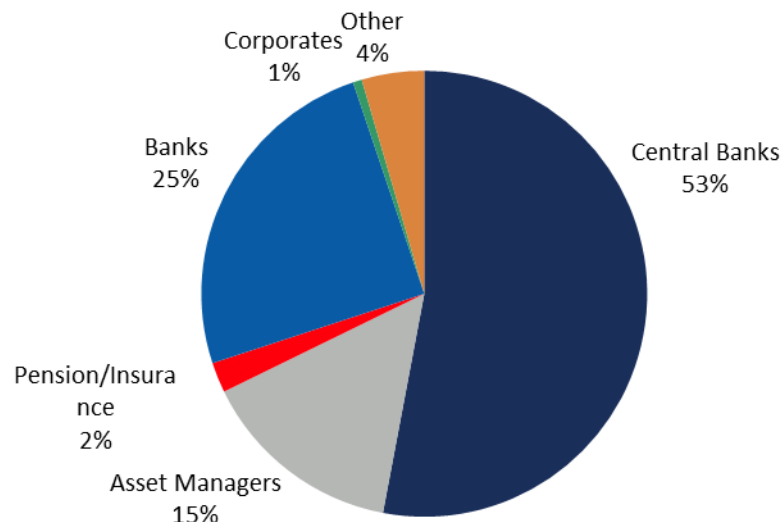
*Technical: Diversification of Buyer Base*

- SSA are mainly bought by banks and central banks around the world.
- Agencies are mainly bought by fund managers, banks, and state/local governments in the US.
- Diversification ensures portfolio liquidity.

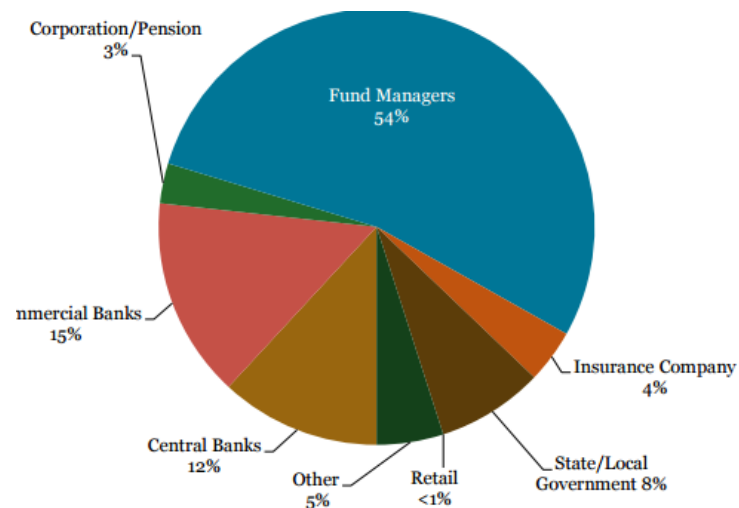
**Asia Percentage of New Issue Benchmarks (\$ bn)**



**Distribution of Post-Crisis New Issue SSA Deals (%)**



**Distribution of 2016 FNMA Benchmark Deals (%)**

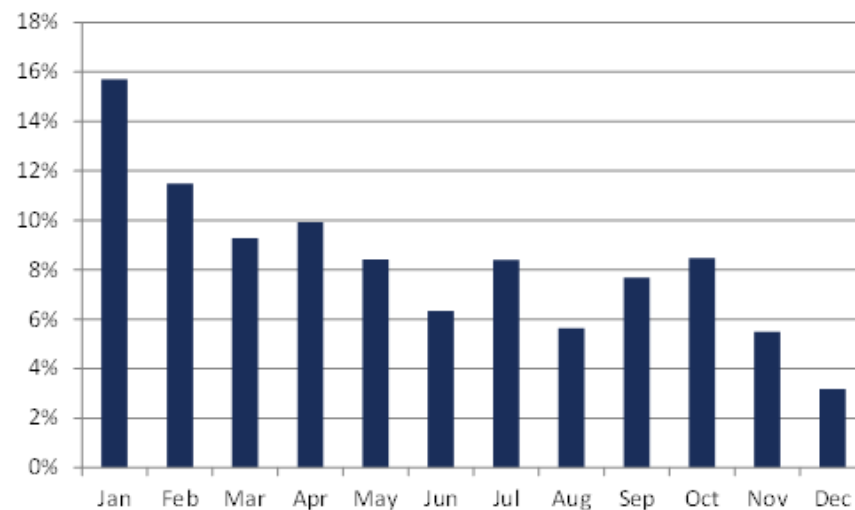


# Fixed Income Strategy

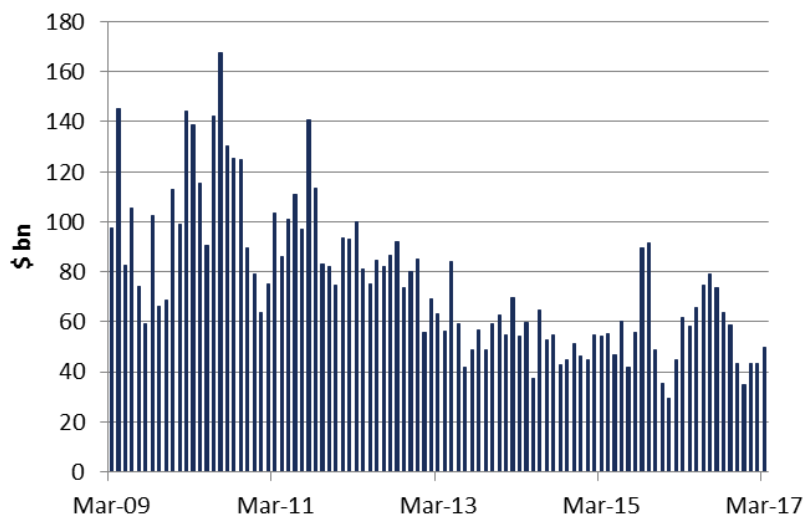
*Technical: Diversification of Funding Cycle*

- Supranationals fund according to an annual borrowing requirement, with heavy seasonality to issuance patterns.
- Agencies are needs-based funders, heavily dependent on redemptions to dictate when funding is required.
- Differing funding drivers mean supply likely to be there from one or the other most of the time.

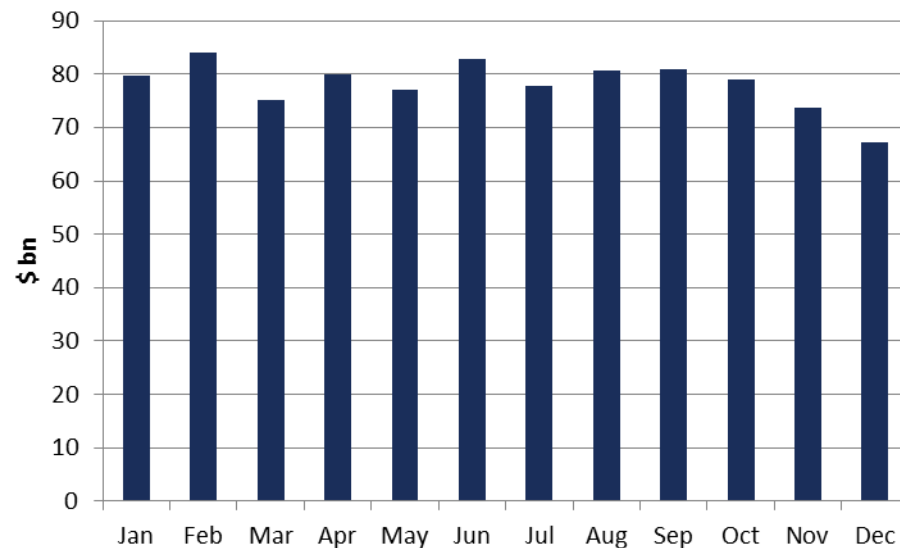
**Average Post-Crisis % of Annual SSA Issuance(%)**



**Agency Bullet/Callable Redemptions (\$ bn)**



**Average Post Crisis Monthly Gross Non-DN Issuance (\$ bn)**



# SSA Strategy

*Diversification of Risk Exposure*

## SSA Credit Risk Factors

- Credit rating dependent on capital of countries all around the world.
- Exposed to European risk
- Exposed to emerging market stress.
- Exposed to Trump risk.
- Insulated from US downgrade risk.
- Insulated from GSE reform risk.
- Insulated from US housing market risk.

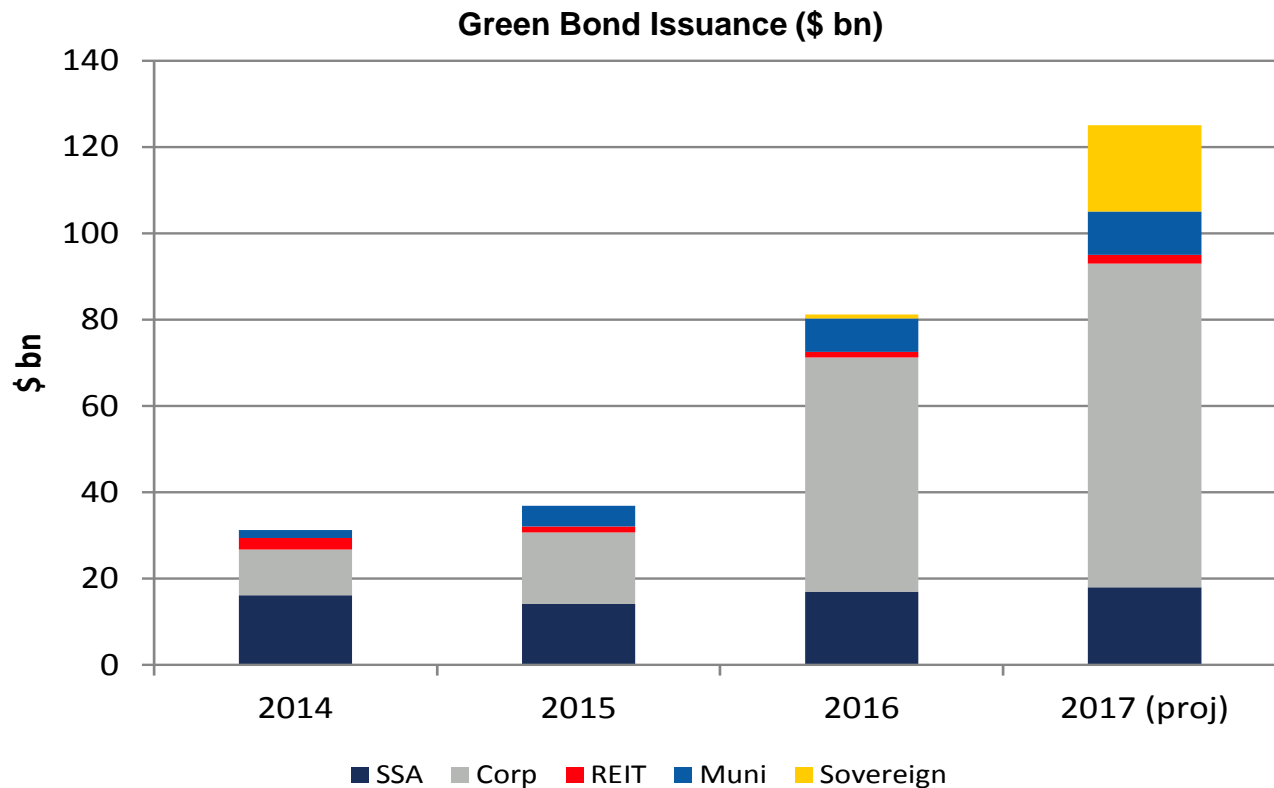
## Agency Credit Risk Factors

- Credit rating dependent on US rating.
- Insulated from European risk.
- Exposed to emerging market stress.
- Insulated from Trump risk.
- Exposed to US downgrade risk.
- Exposed to GSE reform risk.
- Exposed to US housing market risk.

# Fixed Income Strategy

*Supranationals are a Great Way to Add to Debt Used for Sustainable Purposes*

- SSA borrowers were the very first issuers in the green bond market.
- SSA institutions are experts in the green bond space, with green frameworks and reporting standards greatly exceeding the standards of other borrowers.



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