WHEN TO CHOOSE A SINGLE OVER A DOUBLE

Credit Risk Comparison between AA and A-Rated Corporate Bonds

Research Highlights

The ratio of roughly 3 to 1 single-A vs. double-A issuers suggests a liquid market sector and potential for better risk diversification.

Average one-year default probability by a single-A corporate issuer was 0.1% in the last 10 years. Investing in single-A securities would have incurred cumulative credit losses of 1.1% over a five-year span based on data tracing back 33 years. Such benign data includes the periods of the dot com era of 1999-2003 and financial crisis of 2007-2008.

Forty five years of historical data reveals better ratings upgrade potential by single-A bonds (2.4 %) than double-A's (0.9 %) in any given year. Favorable ratings migration is often associated with better potential for principal value appreciation.

The bond market rewarded investors of single-A bonds with an additional 1.35% a year in total return over double-A corporate bonds in the 6 years since the financial crisis.

Although corporate treasurers often consider potential yield pickup as the deciding factor of selecting a single-A investment policy mandate, a stronger argument for them can be made in their better risk diversification benefits and more investment choices. Due to limited supply of AA corporate bonds, investors may be better served by adding fundamentally sound single-A securities to their corporate cash portfolio.

January 27, 2005
Revised: August 14, 2015

Lance Pan, CFA
Director of Investment
Research and Strategy
Main: 617.630.8100
Research: 617.244.9466
lpan@capitaladvisors.com

Introduction

Investment-grade corporate bonds are widely viewed as a core fixed income asset class for the vast majority of investors that desire attractive yield, dependable income, safety, diversity and market liquidity. Among corporate treasury accounts managed by Capital Advisors Group, about 82% permit corporate bonds in their portfolios, and 71% view bonds rated A or better as eligible investments in their investment guidelines[1].

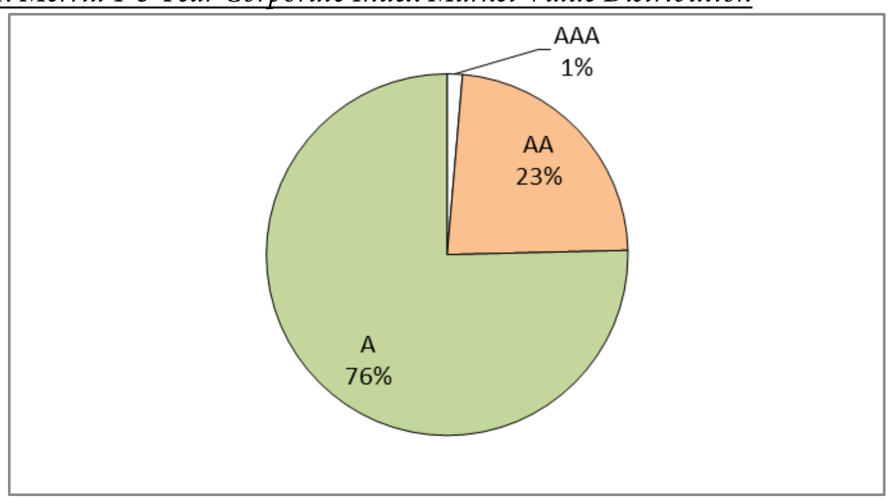
In this article, we provide a comparison of risk characteristics and portfolio considerations between corporate bonds rated single-A and those rated AA by the major rating agencies (refer to the Appendix for ratings definitions). It is our belief that a portfolio including A-rated corporate bonds would achieve better risk diversification and better yield potential without compromising a conservative credit bias essential to today's treasury management functions.

For data analysis, we use corporate securities in the Merrill Lynch 1-3 Year Corporate Index as of June 30, 2015, which resembles typical corporate holdings in a cash management account. In our experience, the results are applicable to accounts with shorter maturities.

A Large and Liquid Sector

According to the Federal Reserve Flow of Funds Accounts published in June 2015, the corporate bond market has a total market value of $11.7 trillion, compared to $21.0 trillion of Treasury and agency debt outstanding[2]. The large size, in addition to daily trading volume of $31.4 billion, provides ample liquidity and enhances price efficiency for fixed income investors[3].

Figure 1: Merrill 1-3 Year Corporate Index Market Value Distribution

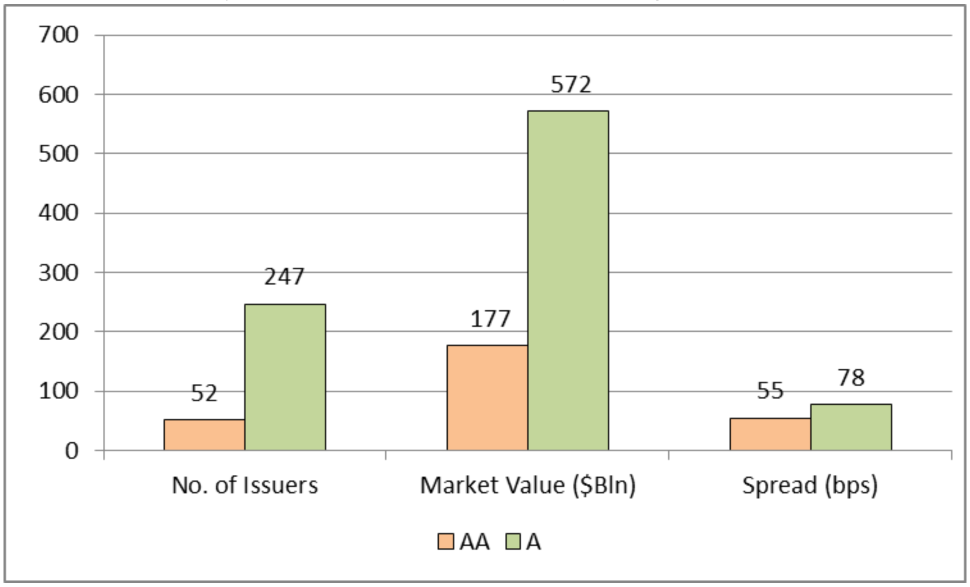


Source: Merrill Lynch Global Index System as of June 30th, 2015

As illustrated in Figure 1, about 76% of corporate bonds rated A and above carry credit ratings of single-A, compared to 23% for AA-rated securities. The chart excludes BBB-rated debt, a segment of the index that may not be appropriate for certain treasury accounts.

Figure 2 provides a more in-depth comparison. Counting corporate issuers at the ultimate parent company level, there are 247 corporate borrowers rated single-A in the index, about 4.8 times as many as double-A rated entities (52). The aggregate market value of $572.2 billion also overshadows that of AA borrowers. We will revisit the spread figures later in this article.

Figure 2: Comparison of 1-3 Year Corporate Debt by Ratings



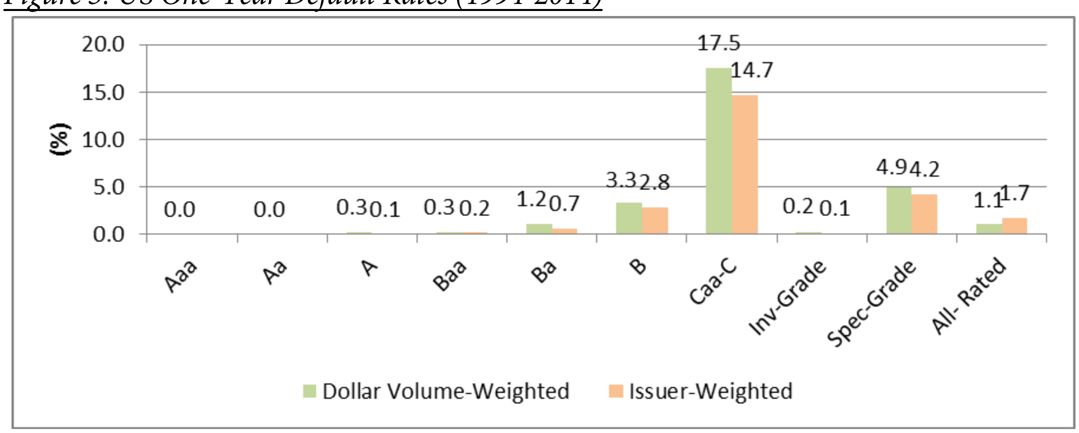
Source: Merrill Lynch Global Index System as of June 30th, 2015

Minimal Incremental Default Risk

Even though default risk is a remote probability for either rating class, it helps to put things in perspective by including results of the most recent default study published by Moody's Investors Service in March 2015.

Figure 3 indicates that about 0.3% of *dollar weighted* A-rated corporate debt defaulted in a one-year period between 1994 and 2014. By contrast, only 0.1% of the issuers rated A were responsible for the defaults, a benign number in a time period that includes both the 1999 dot com bubble burst and the 2008 financial crisis.

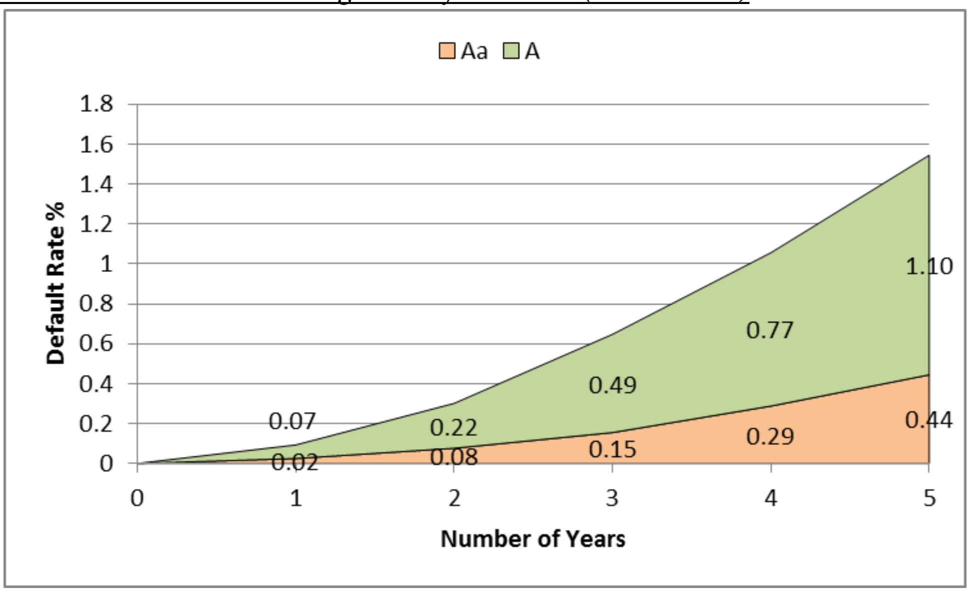
Figure 3: US One-Year Default Rates (1994-2014)



Source: Corporate Default and Recovery Rates, Moody's, March 2015.

To drive the point home, we provide a historical example of how default risk increases over time for the two rating categories. On an issuer-weighted basis, bonds rated A have a 0.07% probability of default at the end of year 1, and this increases to 1.10% at the end of year 5. This compares to 0.02% and 0.44% for an AA-rated corporate name, respectively. Despite the increased risk on an absolute basis, the non-default ratio of 98.9% over a five-year period remains very high. Considering that treasury accounts rarely purchase bonds out to five-year maturities, the economic significance of a default event is minuscule.

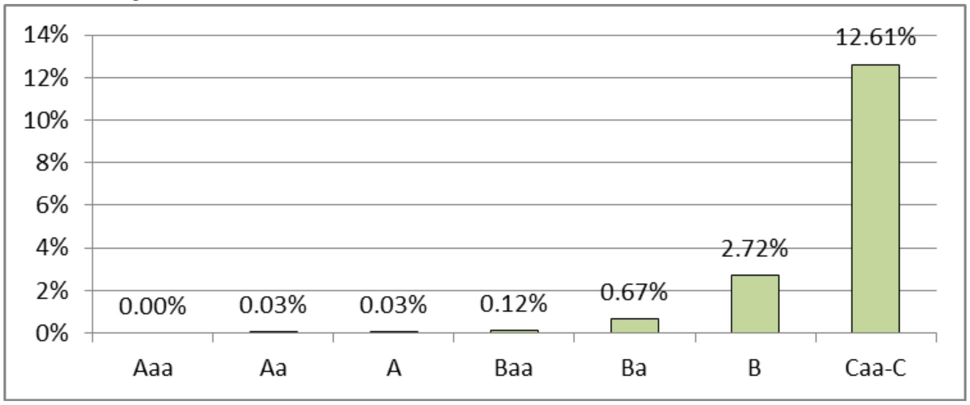
Figure 4: Cumulative Issuer-Weighted Default Rates (1983 – 2014)



Source: Corporate Default and Recovery Rates, Moody's, March 2015.

Lastly on the subject of default, Figure 5 combines the probability and severity of default to arrive at an expected loss rate. Single-A issuers have the same average credit loss rate with double-A rated names (0.03%) over a one-year period on average in the last 33 years.

Figure 5: Average One-Year Credit Loss Rates (1982-2014)



Source: Corporate Default and Recovery Rates, Moody's, March 2015.

Favorable Ratings Migration

An interesting phenomenon about ratings migration is that a single-A rated bond is more likely to be upgraded and less likely to be downgraded than a double-A rated bonds. Historical experience argues in favor of holding the former, as it provides better upside potential while limiting downside risk.

Figure 6: Global One-Year Rating Transitions (% of Issuers: 1970 – 2014)

From/To:	Aaa	Aa	A	Baa	Ba	B	Caa	Ca-C	WR	Default
Aaa	87.32	8.15	0.62	0.00	0.03	0.00	0.00	0.00	3.87	0.00
Aa	0.89	84.55	8.45	0.49	0.07	0.02	0.01	0.00	5.51	0.02
A	0.05	2.41	86.15	5.54	0.54	0.11	0.03	0.00	5.12	0.06
Baa	0.04	0.16	3.96	85.42	3.83	0.71	0.15	0.02	5.56	0.16
Ba	0.01	0.05	0.33	5.59	75.78	7.33	0.58	0.06	9.26	1.00
B	0.01	0.03	0.11	0.29	4.42	73.57	6.07	0.55	11.52	3.45
Caa	0.00	0.01	0.01	0.10	0.36	8.37	63.55	3.45	12.34	11.80
Ca-C	0.00	0.00	0.06	0.00	0.35	1.94	8.91	36.54	15.04	37.17

Source: Corporate Default and Recovery Rates, Moody's, March 2015.

Using Moody's ratings migration information dating back to 1970, Figure 6 demonstrates that an A-rated name would have a 2.4% chance of being upgraded and 5.5% chance of a downgrade. They are more favorable than that of a double-A entity, which has an upside potential of 0.9% and a downgrade risk of 8.5%.

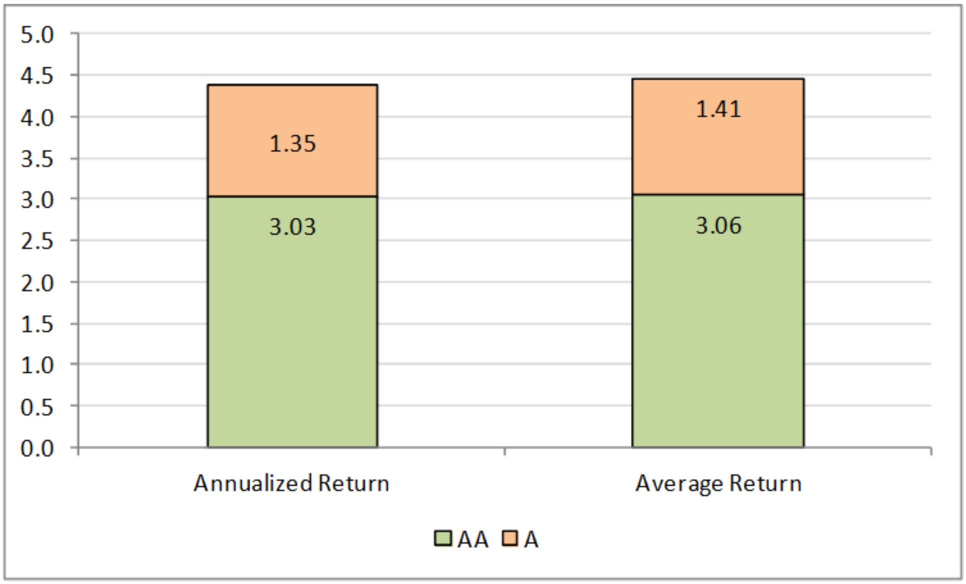
Ratings migration patterns are an important factor to consider because of potential market value gains and losses associated with ratings upgrades and downgrades.

Incremental Yield Advantage

Under normal market conditions, investors demand more yield from bonds with lower credit ratings to compensate for more assumed risk. Both empirical data and market perception confirm that A-rated bonds properly compensate investors in additional yields over double-A rated bonds.

The practice of investing in higher yielding securities while avoiding interest rate risk is particularly popular when interest rates are low and are expected to remain low for some time. This practice is sometimes called the "carry" trade or "clipping the coupon."

Figure 7: Excess Return of Corporate Bonds (2009 – 2014)



Source: Merrill Lynch Global Index System as of December 31st, 2014.

As Figure 7 indicates, despite large numbers of credit downgrades, A-rated bonds still managed to outperform the better rated AA category by an average of 135 basis points a year on an annualized basis in the six years since the financial crisis. A simple average of the annual over the same period produced a similar result of 140 basis points.

Referring back to Figure 2, the A-rated bond yields remain attractive, as they, on an aggregate basis, are earning an excess spread of 78 basis points a year over treasury securities, and a 23 bps advantage over double-A rated bonds with comparable maturities.

Efficient Trading and Portfolio Management

Although it is difficult to demonstrate empirically, an investment guideline that allows A-rated securities generally results in faster trade execution and more efficient portfolio management.

The fixed income market is largely a market-maker's market, which means investments are available only through offerings by bond dealers throughout the market hours. Unlike a stock exchange that offers all publicly traded companies at all times, a clear shortcoming of the bond market structure is that not all corporate names are available at all times.

In a market that lacks supply, broader investment guidelines allow a treasury portfolio to be fully invested more quickly, therefore earning a higher yield than a money market fund, than one that waits on the availability of a double A-rated bond to be offered by a dealer. In addition, broader guidelines and faster execution allow a portfolio manager to implement any portfolio strategy changes in a more efficient manner.

Conclusion

Rating agency and market data confirm the view shared by most Capital Advisors Group corporate cash accounts that A-rated corporate bonds are a valid investment class that provides better liquidity, enhanced yield potential, better chances of rating upgrades, and improved risk diversification, while the increased default risk is negligible.

The comparison between A and AA-rated bonds was done on a random basis without the benefit of in-depth fundamental credit research. It is our belief that effective research capabilities will further reduce a portfolio's overall credit risk and increase yield potential relative to an unmanaged index.

Appendix: Ratings Definitions

There are three nationally recognized statistical rating agencies on corporate debt: Moody's Investors Service, Standard & Poor's, and Fitch Ratings Ltd. Generally, an investment-grade issuer is rated by at least two of the three agencies. Each uses a letter rating system that evaluates a company's likelihood of timely repayment of principal and interest. The rating scales are largely comparable, although different credit assessment may lead to different ratings for the same corporate issuer.

Here we provide a ratings table and the "official" definition of double-A and single-A ratings from each agency. As a matter of market convention, a simple reference of a letter rating (e.g. single-A) includes all three numerical levels (e.g. A1, A2, A3), not the mid-point alone (A2).

Moody's

Aa: Obligations rated Aa are judged to be of high quality and are subject to very low credit risk.

A: Obligations rated A are considered upper-medium grade and are subject to low Credit risk.

Source: https://www.moodys.com

Standard & Poor's
AA: An obligation rated 'AA' differs from the highest-rated obligations only in small degree. The obligor's capacity to meet its financial commitment on the obligation is very strong.

A: An obligation rated 'A' is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligations in higher-rated categories. However, the obligor's capacity to meet its financial commitment on the obligation is still strong.

Source: http://www.standardandpoors.com

Fitch Ratings
AA: Very high credit quality. 'AA' ratings denote a very low expectation of credit risk. They indicate very strong capacity for timely payment of financial commitments. This capacity is not significantly vulnerable to foreseeable events.

A: High credit quality. 'A' ratings denote a low expectation of credit risk. The capacity for timely payment of financial commitments is considered strong. This capacity may, nevertheless, be more vulnerable to changes in circumstances or in economic conditions than is the case for higher ratings.

Source: http://www.fitchratings.com

CREDIT RATINGS

Credit Risk	Moody's	Standard & Poor's	Fitch Ratings
INVESTMENT GRADE			
Highest quality	Aaa	AAA	AAA
High quality (very strong)	Aa	AA	AA
Upper medium grade (strong)	A	A	A
Medium grade	Baa	BBB	BBB
NOT INVESTMENT GRADE			
Lower medium grade (somewhat speculative)	Ba	BB	BB
Low grade (speculative)	B	B	B
Poor quality (may default)	Caa	CCC	CCC
Most speculative	Ca	CC	CC
No interest being paid or bankruptcy petition filed	C	C	C
In default	C	D	D

Source: An Investors' Guide to Corporate bonds, The Bond Market Association, 2004

[1] Capital Advisors Group's Investment Guideline Matrix as of 6/30/2015
[2] Flow of Funds Report section L.4 Credit Market Debt, All Sectors, by Instrument, dated June 11, 2015
[3] U.S. Corporate Bond Trading Volume file (1Q15 from SIFMA's Statistics website).