Decomposition of a Deal and Debt

Corporate mergers and acquisitions pose risks to investors

Investing in corporate debt can provide investors additional portfolio diversification and enhanced returns; however, those benefits do not come without risk. As the market and corporations continue to transform and restructure themselves, investors must be cognizant of how their holdings may perform in certain circumstances. Investors can mitigate some of the negative outcomes by staying acutely aware of market fundamentals and how they affect their portfolio. An in-depth understanding of the bond indentures allows investors the ability to limit or better understand certain risks inherent to individual bond issues.

Qualcomm Inc. (QCOM), a leader in the wireless communication chip industry, recently reminded investors of corporate merger and acquisition risks. Seeking to diversify their wireless chip business, QCOM entered into an agreement to purchase NXP Semiconductors (NXPI) on October 27, 2016. NXPI is a leader in the application of semiconductors in automobiles and other mobile devices; an acquisition would help QCOM diversify their business away from mobile phones. QCOM's $45 billion acquisition of NXPI required them to access the debt markets, raising $11 billion on May 19, 2017. Even though the closing date of the acquisition was many months away, QCOM wanted to prefund the deal to lock in favorable financing terms.

Prefunding a purchase or upcoming maturity is very common in the debt markets as issuers try to be as opportunistic as they can when placing debt. When QCOM placed $11 billion of new bonds into the market, their risk was the deal to purchase NXPI could fall apart, and they would be left with an additional $11 billion in debt on their balance sheet. Placing $11 billion in new debt was a financial transaction QCOM would not have done without a plan to acquire NXPI. Given this risk, QCOM structured specific provisions into their debt offering, allowing them to redeem some of the debt if the deal did not close.

Special mandatory redemption (SMR) clauses attached to specific bonds allow for the issuer to redeem the debt at a specific price if certain conditions are not met. In the case of the QCOM debt issuance, four of the nine issues of debt included a SMR clause, encompassing $4 billion of the $11 billion issued. The debt covenants allow QCOM to purchase back the debt at a price of $101 if the acquisition does not close on or before June 1, 2018. The bonds were issued at prices slightly below or at $100. If the acquisition was terminated the day after the debt issuance, investors would be in a position to record a positive return on their investment (given interest rates remained constant). As time moves on and interest rates fluctuate, these considerations may become more complex.

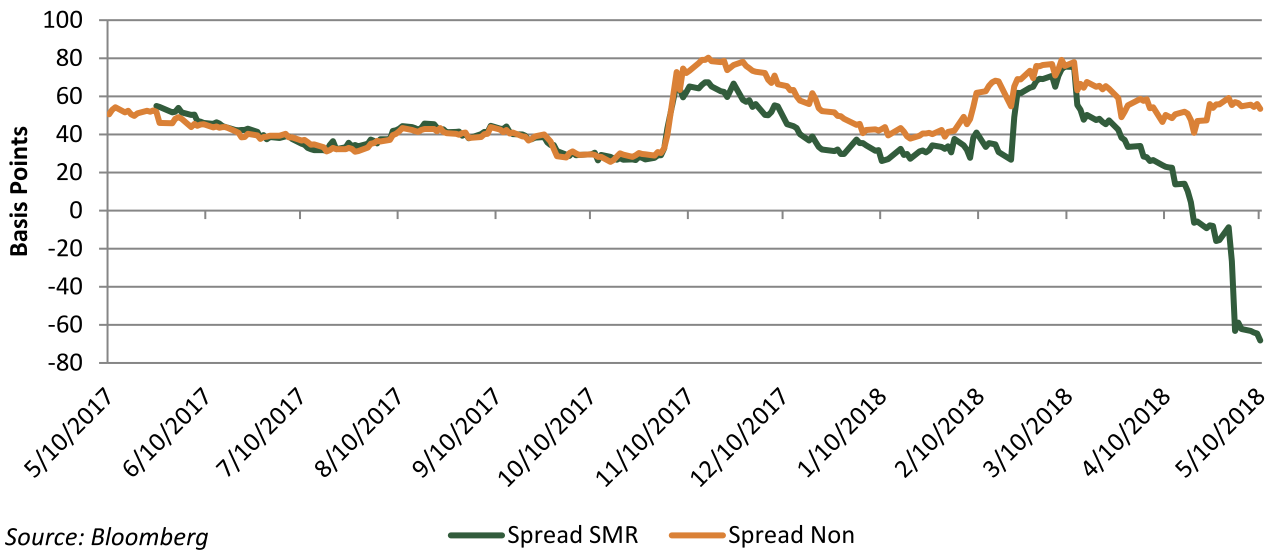
After the newly issued debt is placed into the market, multiple market forces start to determine relative value of the newly issued securities. Several factors can change the valuation of the newly issued securities, such as the current interest rate environment, new details about the acquisition, and overall market sentiment. It is difficult to isolate each force, but coincidently QCOM has a bond from a previous debt issuance that has the exact same maturity, similar coupon, and deal size. Although the debt issues are very similar, the latter does not have an SMR clause. Given the two debt issues are near substitutes besides one specific clause, analyzing performance during the time period between issuance and closing/termination/ redemption can be very insightful.

The time period between announcing an acquisition and closing/ termination can be a chaotic time for both debt and equity investors.

For clarity, we will be labeling the debt issue with an SMR as "QCOM SMR" and the other debt issue as "QCOM NON". Performance data from both issues can be extracted and decomposed to analyze the effect of incoming news upon the two issues.

The graph below shows the spread (in basis points) to a similar maturity Treasury security - the additional yield/compensation investors are paid to take on risk for each bond. Not only do credit spreads increase or decrease based on market sentiment, but they are also based on specific covenant language in the bond prospectus.

Credit Spread Relationship between QCOM SMR and QCOM NON



Source: Bloomberg

Using the timeline of events below, significant insight can be gained by the market reaction to incoming news and potential credit implications:

TIMELINE OF SIGNIFICANT EVENTS

QCOM Acquisition of NXPI

- **5/19/2017:** QCOM issued $11 billion in debt to help fund the acquisition of NXPI. At new issue, the QCOM SMR bonds traded slightly wider (cheaper) than the existing QCOM NON bonds. The reason for difference in valuation was because QCOM needed to offer a new issue concession to entice investors to purchase their new debt. For the next six months, the two bonds traded in tandem as the deal moved forward.
- **11/6/2017:** Broadcom LTD, a competitor to QCOM, makes an unsolicited bid to buy QCOM. This action sent spreads much wider as Broadcom is a much lower rated company and the market fears the combined company may end up with a significantly lower credit rating. The QCOM SMR bonds reacted similarly but with less magnitude. Given the combined size of QCOM/NXPI, investors felt Broadcom could not acquire both. If Broadcom cannot acquire both, the NXPI deal would be terminated and investors in QCOM SMR bonds would have their bonds redeemed. This hypothesis was shared by some, but others felt Broadcom could acquire both QCOM and NXPI.
- **11/13/2017:** QCOM rejects Broadcom's bid citing valuation reasons. QCOM felt it was worth much more and stated their intent to close the NXPI deal. QCOM did not categorically shoot down the acquisition; they felt the offer undervalued the company. After QCOM's rejection, spreads on both bonds tightened. The market felt the Broadcom deal would be tough to do and Broadcom would not increase their offer to QCOM's satisfaction. Within a couple months, the bonds started to trade near pre-Broadcom levels. During this time period, influential shareholders of NXPI started to demand a higher acquisition price from QCOM. With NXPI shareholders demanding a higher price, some investors felt QCOM may abandon the NXPI acquisition due to a rich valuation. Other investors felt Broadcom would only be able to acquire QCOM, making QCOM abandon the NXPI deal. These sentiments allowed the QCOM SMR bonds to trade tighter than the QCOM NON as investors felt the QCOM SMR bonds would be redeemed.

Timeline, continued

- **2/5/2018:** Broadcom increases their bid for QCOM, though still below QCOM's own valuation target. With an upcoming QCOM annual shareholder meeting, Broadcom nominated their own slate of board of directors for shareholders to consider. Early indications showed Broadcom's slate of directors were in a position to gain control of QCOM's board, and Broadcom was committed to get the deal done. Broadcom noted they would include NXPI into the acquisition. These comments led to spread widening for both bonds, but most interestingly a compression of the spread differential between QCOM NON and QCOM SMR. The compression occurred because the SMR covenants in the QCOM SMR bonds would become worthless if Broadcom acquired both companies. QCOM SMR still traded slightly tighter to QCOM NON because investors doubted the transaction would actually happen, for a variety of reasons.

- **2/14/2018:** QCOM and Broadcom meet and note they had a constructive meeting but still were far apart on QCOM's valuation. Spread widening continues as Broadcom's slate of directors is gaining momentum with QCOM equity investors.

- **2/20/2018:** QCOM increased their bid for NXPI, sealing the votes needed by shareholders to approve the deal. By increasing their bid for NXPI, the combined acquisition size for Broadcom becomes even larger to digest, and tougher to finance. Both QCOM bonds trade very close to each other as the NXPI deal seems very likely to close.

- **3/5/2018:** One day before QCOM's annual shareholder meeting, the Committee on Foreign Investment in the United States (CFIUS) ordered QCOM to delay their annual shareholder meeting by 30 days. CFIUS ordered a delay to the shareholder meeting because they were concerned about a foreign company buying QCOM which has top secret communications contracts with the US government.

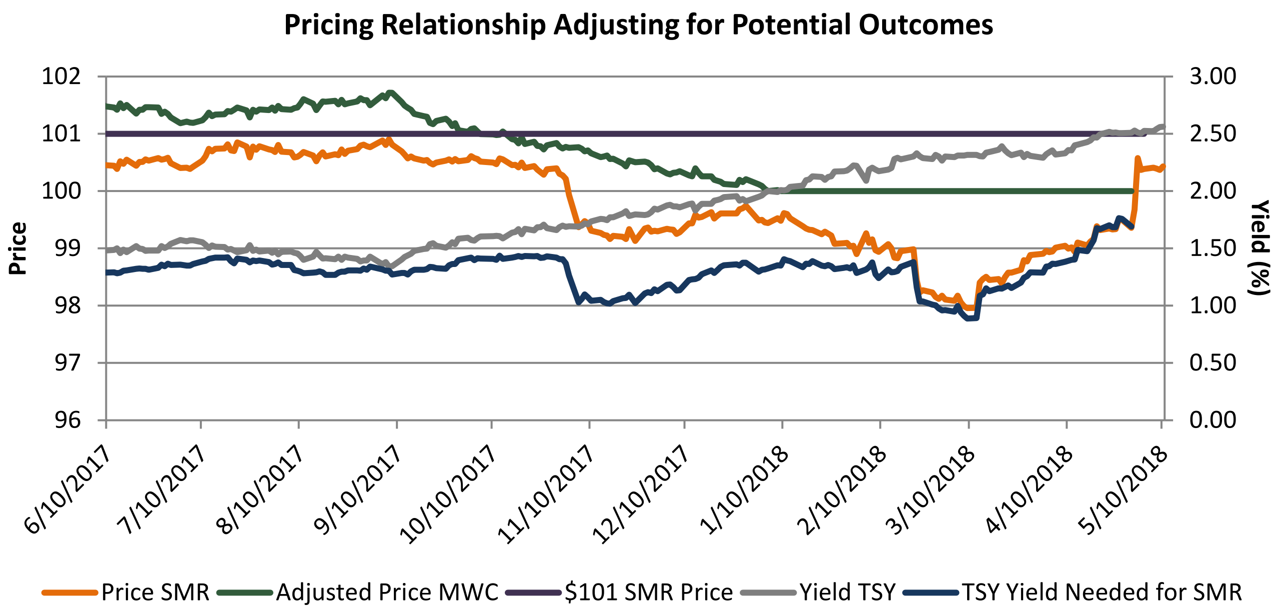
- **3/12/18:** The White House blocks Broadcom's take over. Spreads on both bonds quickly tightened, as the risk of a major credit downgrade diminished. As the US Government started to get involved in the deal, relations with China started to deteriorate. QCOM still needs China's regulatory body (Ministry of Commerce of the Government of China –MOFCOM) to approve QCOM's acquisition of NXPI. This is the last step QCOM needs for the purchase of NXPI to close. As trade relations with China deteriorate, investors feel the deal may not close by the June 1, 2018 SMR date. Overall spreads have tightened since the White House blocked Broadcom's acquisition, but the QCOM SMR bonds have tightened significantly more due to the overhanging risk that China may not approve the deal.

Throughout these events, investors had to weigh the probabilities of certain outcomes along with valuation characteristics. While the QCOM SMR issue has the special redemption clause, it also contains a clause where the issuer can call (redeem the bonds) at any time. Issuers will commonly insert a make-whole call provision in their debt issues to provide them flexibility within the capital structure. This provision allows the issuer to call the debt at a specific spread above a matched maturity Treasury security or at a price of $100, whichever is greater. When issuers exercise make-whole call provisions, the debt is redeemed by the issuer and is done at a valuation that is typically beneficial to the investor. The QCOM SMR issue contains a make-whole call provision where the issuer can call the bonds at any time at a spread of +10 basis points to a matched maturity Treasury or $100, whichever is greater. During the analysis period the bonds traded in a spread range between +25 and +80 basis points. A redemption at +10 would provide the investor a higher price than they would receive in the open market.

Without the make-whole call provision, and an increasing chance QCOM cannot close the acquisition of NXPI in time, the QCOM SMR bonds would likely trade close to the redemption price of 101. Since interest rates have increased significantly since the QCOM SMR debt was issued, QCOM would find it advantageous to utilize the make-whole-call provision. An informed investor should realize it is uneconomic for issuer to redeem the debt at 101, but rather execute the make-whole call provision. Issuers in this position will execute whichever option is economically advantageous as either method allows them to redeem the debt and investors must be aware of these motivations.

To complicate matters, the make-whole call/SMR logic above only holds if there is more than 30 days left until the June 1, 2018 SMR date. The make-whole call provision requires the issuer to give investors at least a 30 day notice of their intention to redeem the debt with the make-whole call. If the debt remains outstanding and has less than 30 days until the SMR date, the make-whole call consideration goes away. Investors will have to consider either receiving the SMR price of $101 or having the bonds trade back with QCOM NON if the deal were to close before the SMR date.

The graph below shows several interactions between prices and yields in order to determine which redemption option would be best for the issuer. The line labeled “Price SMR” is the historical trading price of the QCOM SMR bonds. The price never breached $101. Purchasing the security above $101 could leave an investor vulnerable to a $101 redemption. The line labeled “Adjusted Price MWC” represents the price QCOM would have to pay if they decided to exercise the make-whole call on the QCOM SMR debt. Understanding where the make-whole price is, in relation to the SMR price, will indicate which redemption method the issuer may utilize. Between May 2017 and roughly the end of October 2017, the make-whole price was above the SMR price, indicating QCOM would have been economically wise to exercise the $101 SMR. After the end of October 2017, if QCOM needed to redeem the QCOM SMR debt, the advantageous choice is to exercise the make-whole call provision as the price is below the SMR. Increasing Treasury yields over the past six months made the make-whole call redemption decision more economical. A significant decrease in interest rates, about 80 basis points on a similar maturity Treasury, would be needed for the SMR and make-whole call decision to be indifferent (as of May 1, 2018). As the debt moves into the 30 day period before the SMR date, the make-whole call is no longer a consideration.

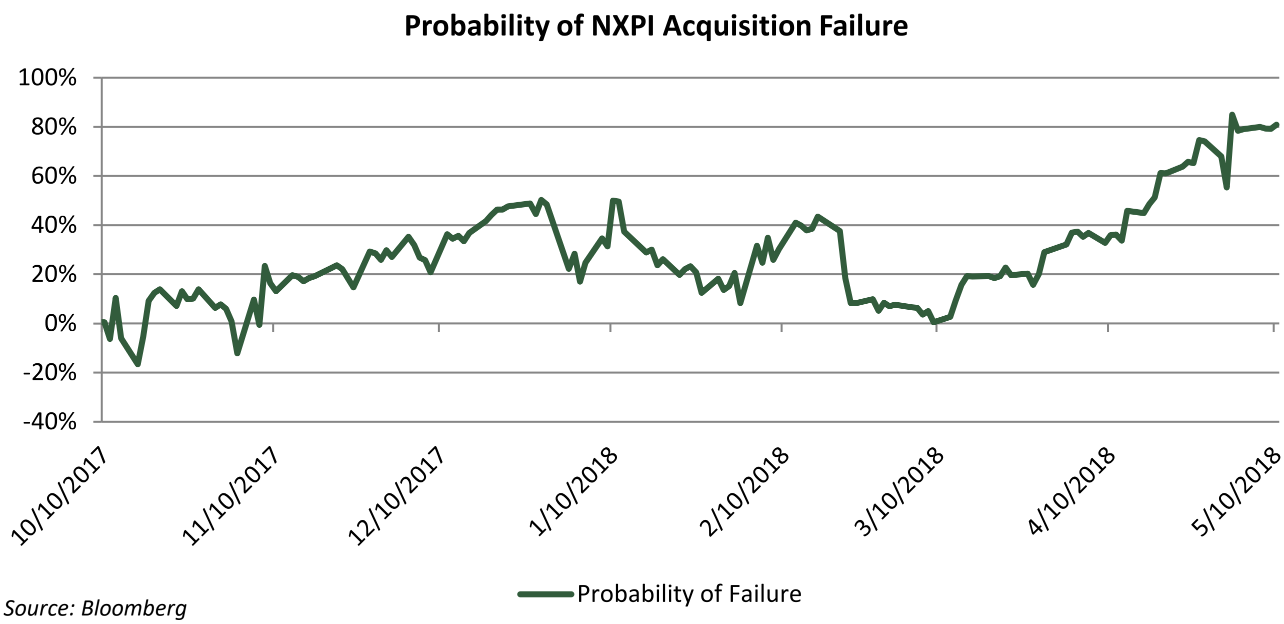


Source: Bloomberg

In a truly efficient market, security pricing information can provide insight into the market’s perception of the deal’s chance of success or failure. Between corporate press releases and political posturing, investors can express their views through their investment choices. In the case of the QCOM/NXPI acquisition, there is an upcoming deadline where the outcome of QCOM SMR debt is a binary event. Either the deal is approved by the final regulatory body, MOFCOM, and the deal can close, or the QCOM SMR debt will need to be redeemed. If the deal is approved by the SMR deadline, QCOM SMR debt should trade in line with QCOM NON since the SMR is not relevant.

Since the White House blocked the possible Broadcom acquisition of QCOM, notable information about QCOM's acquisition of NXPI has become scarce. QCOM SMR debt continues to trade with a richer valuation of QCOM NON debt, indicating market participants feel the NXPI deal will not be completed by the June 1, 2018 SMR deadline. Given the binary nature of the future outcome of the QCOM SMR debt, rough probabilities of success and failure can be calculated.

By calculating the price difference between the current QCOM SMR redemption price (make-whole or SMR price) and where QCOM SMR would trade if the deal closes (the price of QCOM NON), investors can decompose the differences into a market implied probability of failure/success. If QCOM SMR debt trades closer to the redemption price than the successful acquisition price, the market is implying a greater chance of failure. The graph below details a market estimate of the probability of the QCOM/NXPI deal not being approved by the June 1, 2018 deadline. As of May 10, 2018 the market is implying an 81% chance of the deal failing to close before June 1, 2018.



Source: Bloomberg

A strong correlation exists between the historical spread chart and the above chart representing an estimated probability of deal failure. When investors felt the QCOM/NXPI deal would fail, both the spread gap between QCOM NON and QCOM SMR widened and the probability of failure increased. The closer the QCOM SMR debt trades to the redemption price, the higher the implied probability of redemption. Most recently, the probability of failure has increased due to trade tensions with China.

> *A robust corporate bond investment program is needed to help uncover specific covenant issues as well as monitor the overall market for valuation and trading opportunities.*

Since the outcome of the QCOM/NXPI deal could be decided through a political lens, it is difficult for the market to put a truly educated probability on the deal chances. It is also difficult for investors to express their specific views in a situation like this because there may not be debt available in the market to transact. Liquidity inefficiencies as well as the overall conservative investment bias in the highly rated investment grade market may lead to some distortions in pricing fundamentals. As of May 10, 2018, if an investor purchased QCOM SMR debt today, he or she could realize a 0.60% gain if the deal were not to close by June 1, 2018. A potential 0.60% gain over a very short time horizon is hard to come by in the current investment grade corporate debt market. The potential gain draws investors in who think the market implied probabilities are wrong and they can earn excess returns on their investment.

Investing in corporate debt provides investors the ability to outperform a similar portfolio of government securities, but neglecting to analyze all aspects of a corporate bond may lead to considerable underperformance and trading losses. On the other hand, as of May 10, 2018, if the deal were to close before June 1, 2018 investors would experience a 2.4% loss in a very short period of time. In this case, purchasing QCOM SMR debt requires a careful analysis of all outcomes and probabilities. A detailed analysis of comparable bonds from the issuer and similar issuers may reveal pockets of safety and or opportunity. Debt covenants can be difficult to interpret, but during periods of acquisitions or other corporate actions, they will dictate how specific bond issues will be treated. A robust corporate bond investment program is needed to help uncover specific covenant issues as well as monitor the overall market for valuation and trading opportunities.

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Questions?

Please contact Chandler at info@chandlerasset.com, or toll free at 800-317-4747 with any questions or to learn about investment management solutions for public entity investment programs.