



# Investing With “Synthetic Bonds”

Creating and managing forward conversion arbitrage and collared stock positions

I use options to take long positions in equities that I believe will sell for more in the future than today. I use equity options for their inherent leverage to generate short and long-term capital gains. Because of the leveraged nature of these positions, I cannot invest all of my capital in these leveraged trades as it would create too much downside risk. This type of portfolio management means holding a relatively large cash position; on the order of 30% to 60% of the portfolio.

The cash amount is just too large to let it sit there. What will I do with this cash?

## **Bonds?**

In many portfolios there is a need to hold cash to assure that a volatile market cannot wipe out a portfolio. Modern Portfolio Theory (MPT) suggests holding bonds due to their safety and guaranteed income. If bonds are bought at issue and held to maturity, there is no price risk and one would receive the income associated with the bond; virtually no risk to principle or income.

While bond prices sometimes move opposite stock prices, most conservative investors are not trying to hedge their portfolios with the directional nature of bond prices. They are simply looking for the price security and guaranteed income.

Assume a portfolio that consists of 50% stocks and 50% bonds. The bonds pay 5% and, in a good market, the stocks are earning 10% (mostly capital gains). Blended, the portfolio is earning 7.5%.

In a market downturn of 10%, the value of the stocks will decline by 10% and the bonds by 0% for a blended downside of 5%. The bonds have hedged the portfolio downside risk to only half of the market risk. While the market remains down, the stocks are not creating any capital gains, but the bonds are still paying interest. So, this portfolio gains a greater return in a good market than it would lose in a down market. The portfolio is hedged.

## **Why not bonds?**

Interest rates are not “interesting” today. Getting reasonable interest rates requires going into riskier corporate bonds and even “junk” for a reasonable return.

Bond markets are “obtuse”. One cannot simply look into the market at large and make a purchase in the same way we trade equities. Purchasing bonds means going to a bond specialist to find a product with the maturity time and rate needed for the portfolio. Commissions will be relatively high.

Not all bonds are “marginable”. CDs and non-investment grade bonds are not marginable and thus deduct from the buying power of a margin account. Even those bonds which are marginable carry higher margin requirements even in a portfolio margin account. The option trader tends to hold cash in order to have a large buying power in the account, making bonds a poor choice for a secure cash replacement.

But what about bond funds? Bond funds are marginable securities, but they carry price risk. The risk to the price of the fund overwhelms the relatively small interest rates available in bond funds. Keep in mind that I want a secure price to replace cash. Bond funds defeat the entire purpose of using bonds as a cash enhancement strategy.

I use “Synthetic Bonds”. Here I will explore two types of Synthetic Bonds the Forward Conversion Arbitrage and Collared Stock.

### Forward Conversion Arbitrage (Synthetic Bond):

The synthetic bond is a combination of stock and equity options that results in a position that has little to no downside risk with a limited amount of or no potential appreciation over the life of the trade.

The structure of the arbitrage trade seems simple:

Buy 100 shares of the underlying equity.

Buy a LEAPS put at the money in the farthest out JAN series available.

Sell a LEAPS call in the same month at the same strike.

There are a lot of considerations when placing the trade. I can’t simply evaluate this in my head, so I always use a spreadsheet to analyze the trade before placing it. The spreadsheet used to analyze the trade is available at [www.terrywalters.com/tools.html](http://www.terrywalters.com/tools.html)

Consider the GE example below:

Conversion Arbitrage - Synthetic Bond Analysis	
Trade Setup	Actual Trade
Stock Ticker	GE
Expiration Date	1/17/2020
ATM Put Strike (Buy to Open)	18.00
OTM Call Strike (Sell to Open)	18.00
Trade Date	1/7/2018
Current Stock Price	18.57
ATM Put Price - Mark	\$2.27
OTM Call Price - Mark	\$3.20
Lot Size	1
Dividend Cycles	0
Quarterly Dividend	0
Simulate the trade at the Mid and the Natural	
DTE	740
Dividends: Quarterly Dividend * Dividend Cycles * Lot Size * 100	0.00
Stock Cost - Capital required to buy the stock	\$1,857.00
Put Cost - Dollars spent to buy the put	(\$227.00)
Call Credit - Dollars received for selling the call	\$320.00
Trade Credit (Debit): Call Credit - Put Cost	\$93.00
Put Notional Value- the "Cash"	\$1,800.00
Call Notional Value- the "Cap"	\$1,800.00
Max Loss and Max Gain are the same; an Arbitrage Gain.	\$36.00
Max Gain: Call Notional Value - Stock Cost + Trade Credit	\$36.00
Stock Cost Basis: Stock Cost - Trade Credit	\$1,764.00
Trade At Expiration	
Gain - Underlying trades above Call Strike: Max Gain + Dividends	\$36.00
Total Return On Capital: Gain / Stock Cost Basis	2.04%
Total Return On Capital Annualized	1.01%
Gain - Underlying is below Put Strike: Max Loss + Dividends	\$36.00
Total Return On Capital: Gain / Stock Cost Basis	2.04%
Total Return On Capital Annualized	1.01%
Max Value - Includes Dividends	\$1,800.00
Min Value - Cash Substitute - Can't go below this value.	\$1,800.00
Min Value - Cash Substitute with dividends	\$1,800.00

GE has been beaten down and thus its option premiums are relatively high. While I don't invest in "turn around stories", I might invest in something that does not need to turn around to make money. Notice that in the GE Actual Trade, the long put and the short call are at the same strike - 18. The short call pays enough that the trade will make about 1% annually no matter what happens. This "can't miss" combination of long stock/long put/short call is a Forward Conversion Arbitrage position. Stock goes up, stock goes down; no matter the trade still makes money. The arbitrage position cannot lose.

Let's review the math. The underlying stock is secured from price risk by the ATM put for the duration of the trade. The **Call Credit** is greater than the **Put Cost**, so there is an option **Trade Credit** of \$93.00. The call effectively caps the upside potential of the stock at \$18.00, while the put caps the downside at \$18.00. I bought the stock for \$1857.00, which is \$57.00 greater than the option strikes, but I got a **Trade Credit** of \$93.00. Thus, the **Stock Cost Basis** is the **Stock Cost** minus the **Trade Credit** or \$1764.00. Since no matter where the stock trades at expiration I will always get \$1800.00, I have effectively bought an \$18.00 stock for \$17.64. There is a **Max Gain** of \$36.00 built into this trade; this is the arbitrage gain.

**The Total Return on Capital** if the stock trades over \$18.00 at expiration will be 2.04%, or 1.01% annualized. **The Total Return on Capital** will be the same if the if the stock trades below \$18.00 at expiration.

#### **The Effect of Dividends:**

But wait; GE pays a dividend and I just bought the stock. Let's do the math assuming I get the dividends for the duration of the trade.

## Conversion Arbitrage - Synthetic Bond Analysis

Trade Setup	Actual Trade
Stock Ticker	GE
Expiration Date	1/17/2020
ATM Put Strike (Buy to Open)	18.00
OTM Call Strike (Sell to Open)	18.00
Trade Date	1/7/2018
Current Stock Price	18.57
ATM Put Price - Mark	\$2.27
OTM Call Price - Mark	\$3.20
Lot Size	1
Dividend Cycles	8
Quarterly Dividend	0.12
Simulate the trade at the Mid and the Natural	
DTE	740
Dividends: Quarterly Dividend * Dividend Cycles * Lot Size * 100	96.00
Stock Cost - Capital required to buy the stock	\$1,857.00
Put Cost - Dollars spent to buy the put	(\$227.00)
Call Credit - Dollars received for selling the call	\$320.00
Trade Credit (Debit): Call Credit - Put Cost	\$93.00
Put Notional Value- the "Cash"	\$1,800.00
Call Notional Value- the "Cap"	\$1,800.00
Max Loss and Max Gain are the same; an Arbitrage Gain.	\$36.00
Max Gain: Call Notional Value - Stock Cost + Trade Credit	\$36.00
Stock Cost Basis: Stock Cost - Trade Credit	\$1,764.00
<b>Trade At Expiration</b>	
Gain - Underlying trades above Call Strike: Max Gain + Dividends	\$132.00
Total Return On Capital: Gain / Stock Cost Basis	7.48%
Total Return On Capital Annualized	3.69%
Gain - Underlying is below Put Strike: Max Loss + Dividends	\$132.00
Total Return On Capital: Gain / Stock Cost Basis	7.48%
Total Return On Capital Annualized	3.69%
Max Value - Includes Dividends	\$1,896.00
Min Value - Cash Substitute - Can't go below this value.	\$1,800.00
Min Value - Cash Substitute with dividends	\$1,896.00

Since I will be in the trade for a little over two years, it is safe to assume that I will get all eight quarters of dividend payments. This assumes that GE will continue paying dividends. The total dividends will be \$0.12 per share times 100 times eight payments for a total of \$96.00. Add this to the trade **Gain** at expiration and I have \$132.00, which yields 7.48% to expiration or 3.69% per year.

Since there is assignment risk in these trades, the lower call strikes have relatively high IV down to the point where a short call would be assigned. If I pick lower strikes, the higher IV results in greater premiums for these trades. Note in this example with the stock trading at \$13.59, the 8 strike arbitrage position pays a much higher annualized return of 5.85%

## Conversion Arbitrage - Synthetic Bond Analysis

Trade Setup	Actual Trade
Stock Ticker	GE
Expiration Date	1/17/2020
ATM Put Strike (Buy to Open)	8.00
OTM Call Strike (Sell to Open)	8.00
Trade Date	6/26/2018
Current Stock Price	13.59
ATM Put Price - Mark	\$0.33
OTM Call Price - Mark	\$5.93
Lot Size	1
Dividend Cycles	6
Quarterly Dividend	0.12
Simulate the trade at the Mid and the Natural	
DTE	570
Dividends: Quarterly Dividend * Dividend Cycles * Lot Size * 100	72.00
Stock Cost - Capital required to buy the stock	\$1,359.00
Put Cost - Dollars spent to buy the put	(\$32.50)
Call Credit - Dollars received for selling the call	\$592.50
Trade Credit (Debit): Call Credit - Put Cost	\$560.00
Put Notional Value- the "Cash"	\$800.00
Call Notional Value- the "Cap"	\$800.00
Max Loss and Max Gain are the same; an Arbitrage Gain.	\$1.00
Max Gain: Call Notional Value - Stock Cost + Trade Credit	\$1.00
Stock Cost Basis: Stock Cost - Trade Credit	\$799.00
Trade At Expiration	
Gain - Underlying trades above Call Strike: Max Gain + Dividends	\$73.00
Total Return On Capital: Gain / Stock Cost Basis	9.14%
Total Return On Capital Annualized	5.85%
Gain - Underlying is below Put Strike: Max Loss + Dividends	\$73.00
Total Return On Capital: Gain / Stock Cost Basis	9.14%
Total Return On Capital Annualized	5.85%
Max Value - Includes Dividends	\$872.00
Min Value - Cash Substitute - Can't go below this value.	\$800.00
Min Value - Cash Substitute with dividends	\$872.00

### Watch Out for Ex-Dividend Dates:

Over the life of the trade, as the underlying price rises, the short call will become deeper and deeper in the money. At a point where the long put premium at the strike of the short call is less than the quarterly dividend, the short call is likely to be assigned, calling away my stock. Most likely I will have received several dividends by this time, but the stock is called away early. This is actually a happy problem as the trade will have achieved its goal of selling the stock for the price of the option strikes. I will have gotten all of my short call premium, plus some dividends and I will be left with a long put that I can sell for extra credit. The key factor is that these gains happen earlier than planned and thus the annualized return on capital will be higher than planned. I can immediately take the cash and re-invest it elsewhere.

But what happens if I chose strikes far below the current stock price in search of a very high **Total Return on Capital**? These trades often will not set up as a profitable arbitrage position. Note below, there is no Max Gain; it is actually a loss of (\$14.00). I have set the **Dividend Cycles** to "0" to simulate the worst-case trade. Since the trade is a loser without dividends, this means that the trade depends entirely on dividends to make a profit. The point here is that I must be sure that the trade that I enter has a positive **Gain** at expiration without counting the dividends. Thus, if my stock gets called away, I

can still sell the long put for a credit. But, in the case below if my arbitrage position is a loss, the put credit will not make up for the loss of the dividends. I will book about a 6% loss.

Conversion Arbitrage - Synthetic Bond Analysis		Assignment Risk	
<b>Trade Setup</b>	<b>Actual Trade</b>	<b>High Risk</b>	
Stock Ticker	GE	Approximate Ex Dividend Date 9/15/2018	
Expiration Date	1/17/2020		
ATM Put Strike (Buy to Open)	5.00		
OTM Call Strike (Sell to Open)	5.00		
Trade Date	6/26/2018		
Current Stock Price	13.82		
ATM Put Price - Mark	\$0.10		
OTM Call Price - Mark	\$8.78		
Lot Size	1		
Dividend Cycles	0		
Quarterly Dividend	0.12		
Sumulate the trade at the Mid and the Natural			
DTE	570	Assignment Gain Per Share	-\$0.14
Dividends: Quarterly Dividend * Dividend Cycles * Lot Size * 100	0.00	Long Put Value - Bid	\$0.07
Stock Cost - Capital required to buy the stock	\$1,382.00	Dividend Cycles	-
Put Cost - Dollars spent to buy the put	(\$9.50)	Potential Dividends	\$0.00
Call Credit - Dollars received for selling the call	\$877.50	Total gain	-\$0.07
Trade Credit (Debit): Call Credit - Put Cost	\$868.00	Total Gain Per Contract	-\$7.00
Put Notional Value- the "Cash"	\$500.00	Total Gain Per Lot	-\$7.00
Call Notional Value- the "Cap"	\$500.00	Total Gain ROC	-1.36%
Max Loss and Max Gain are the same.	(\$14.00)	Total Gain ROC Annualized	-6.1%
Max Gain (Loss): Call Notional Value - Stock Cost + Trade Credit	(\$14.00)		
Stock Cost Basis: Stock Cost - Trade Credit	\$514.00		
<b>Trade At Expiration</b>			
Gain - Underlying trades above Call Strike: Max Gain + Dividends	(\$14.00)		
Total Return On Capital: Gain / Stock Cost Basis	-2.72%		
Total Return On Capital Annualized	-1.74%		
Gain - Underlying is below Put Strike: Max Loss + Dividends	(\$14.00)		
Total Return On Capital: Gain / Stock Cost Basis	-2.72%		
Total Return On Capital Annualized	-1.74%		
Max Value - Includes Dividends	\$500.00		
Min Value - Cash Substitute - Can't go below this value.	\$500.00		
Min Value - Cash Substitute with dividends	\$500.00		

So, I must be careful when I enter a trade. As long as the **Max Loss** is actually a positive arbitrage position I can always make at least a little money even if my stock gets called away without receiving any dividends.

Early assignment is a good thing in an IRA where there are no tax consequences for exiting the trade at any time. But, this could be a problem in a taxable account If I want to hold the position until January of the expiration year in order to push capital gains out as far as possible. In this case, I may want to roll up the short call to avoid assignment.

### Rolling Up the Short Strike:

If this is an arbitrage position, why bother to pick an underlying with potential for continuing up and to the right? Because there may be an opportunity to roll the short call up a couple of strikes to capture more of the upside movement in the underlying. Rolling the short call up can enhance the potential gains of the synthetic bond in addition to the simply moving the short strike up to avoid assignment risk.

In the GE case below, if I roll the short 10 strike call to the 13 strike, it **Rolling Trade Credit (Debit)** will cost me (\$192.00). But, I will get an additional \$300.00 in gains at expiration for a 1 lot trade. The **New Total Cost of Trade** will be \$1127.00, my new stock cost basis. As long as the stock trades above \$13.00 at expiration I will now have a **Max Gain** of \$257.00, representing a 11.92% **ROC Annualized**. The choice is mine, if I am highly confident that the stock will go up and stay up, I roll the short call up.

Conversion Arbitrage - Synthetic Bond Analysis		Rolling the Short Call	
<b>Trade Setup</b>	<b>Actual Trade</b>		
Stock Ticker	GE		
Expiration Date	1/17/2020		
ATM Put Strike (Buy to Open)	10.00	Existing Call Strike	10
OTM Call Strike (Sell to Open)	10.00	Lot Size of Active Trade	1
Trade Date	2/18/2018	Date	6/26/2018
Current Stock Price	14.45	Stock Price	\$13.72
ATM Put Price - Mark	\$0.70	Existing Call Price	\$4.33
OTM Call Price - Mark	\$5.80	Pick a higher strike	13
Lot Size	1	New Call's Premium	\$2.41
Dividend Cycles	7		
Quarterly Dividend	0.12		
Simulate the trade at the Mid and the Natural			
DTE	698		
Dividends: Quarterly Dividend * Dividend Cycles * Lot Size * 100	84.00		
Stock Cost - Capital required to buy the stock	\$1,445.00		
Put Cost - Dollars spent to buy the put	(\$70.00)	Rolling Trade Credit (Debit)	(\$192.00)
Call Credit - Dollars received for selling the call	\$580.00	Additional Gain at Expiration	\$300.00
Trade Credit (Debit): Call Credit - Put Cost	\$510.00	Rolling Ratio	64%
Put Notional Value- the "Cash"	\$1,000.00		
Call Notional Value- the "Cap"	\$1,000.00		
#REF!	\$65.00		
Max Gain: Call Notional Value - Stock Cost + Trade Credit	\$65.00	New Total Cost of Trade	\$1,127.00
Stock Cost Basis: Stock Cost - Trade Credit	\$935.00	New Notional Long Call	\$1,300.00
<b>Trade At Expiration</b>		<b>Trade At Expiration</b>	
Gain - Underlying trades above Call Strike: Max Gain + Dividends	\$149.00	Max Gain	\$257.00
Total Return On Capital: Gain / Stock Cost Basis	15.94%	Total ROC	22.80%
Total Return On Capital Annualized	8.33%	ROC Annualized	11.92%
Gain - Underlying is below Put Strike: Max Loss + Dividends	\$149.00	Max Loss	(\$43.00)
Total Return On Capital: Gain / Stock Cost Basis	15.94%	Total ROC	-3.82%
Total Return On Capital Annualized	8.33%	ROC Annualized	-2.00%
Max Value - Includes Dividends	\$1,084.00		
Min Value - Cash Substitute - Can't go below this value.	\$1,000.00		
Min Value - Cash Substitute with dividends	\$1,084.00		

### Exiting the Trade:

What is the procedure to close the trade? That depends on the price of the underlying with respect to the option strikes.

Case 1 – The stock is trading below the long put strike.

In this case, the option trade will not make Max Gain until expiration. If the underlying trades below the long put, the option trade will be trading for a loss until very close to expiration. If the underlying pays a dividend, there will be more profits earlier in the trade, but I would likely wait until expiration.

At expiration I can simply sell the stock and sell the put. The gains on the put will make up for the losses on the stock. I can let the short call expire as income.

Case 2 – The stock is trading above the short call strike.

Again, the option trade will not make Max Gain until expiration. I could close early for a small gain, but that is not the reason for putting the trade on in the first place. If the underlying pays a dividend, there will be more profits earlier in the trade, but I would likely wait until expiration.

At expiration I can simply let the stock get called away and let the long put expire worthless. This way I am assured of getting Max Gain.

Note that in taxable accounts I want to wait until close the trade at expiration. This forces any taxable consequences into the year of the expiration and any taxes due will be payable about fifteen months from expiration. The tax consequences of these trades are very complex; let your tax software or your tax attorney sort them out.

### **Splitting the Option Strikes – Collared Stock (Synthetic Bond):**

The Synthetic Bond can be traded directionally by splitting the option strikes. Strictly speaking this is no longer an arbitrage position. The position can be setup to that the trade can't lose money but only achieves Max Gain if the underlying increases in value by expiration.

The structure of a collar is a long put at the money and a short call above the underlying's price with enough premium to pay for the cost of the long put and of course buy the stock.

In the case of NFLX below, if the stock trades above the 450 short call strike at expiration, the trade will have an annualized **Gain** of 6.2%. But if the stock trades below the long put strike of 410 at expiration the trade will not make any gains.

I will have to decide if the benefit of 6.2% is worth the risk of my money doing nothing for about a year and a half. If I understood the NFLX business model and thought that institutional investors would continue to support the company, I might take the trade. The current stock price is \$401.35, so NFLX has to increase in value by about 10% in the next year and a half for me to achieve **Max Gain** at expiration. At least the trade cannot lose money and 6.2% annualized gain is attractive.

## Conversion Arbitrage - Synthetic Bond Analysis

Trade Setup	Actual Trade
Stock Ticker	NFLX
Expiration Date	1/17/2020
ATM Put Strike (Buy to Open)	410.00
OTM Call Strike (Sell to Open)	450.00
Trade Date	6/22/2018
Current Stock Price	401.35
ATM Put Price - Mark	\$77.58
OTM Call Price - Mark	\$68.90
Lot Size	1
Dividend Cycles	
Quarterly Dividend	
Simulate the trade at the Mid and the Natural	
DTE	574
Dividends: Quarterly Dividend * Dividend Cycles * Lot Size * 100	0.00
Stock Cost - Capital required to buy the stock	\$40,135.00
Put Cost - Dollars spent to buy the put	(\$7,757.50)
Call Credit - Dollars received for selling the call	\$6,890.00
Trade Credit (Debit): Call Credit - Put Cost	(\$867.50)
Put Notional Value- the "Cash"	\$41,000.00
Call Notional Value- the "Cap"	\$45,000.00
Max Loss: Put Notional Value - Stock Cost + Trade Credit	(\$2.50)
Max Gain: Call Notional Value - Stock Cost + Trade Credit	\$3,997.50
Stock Cost Basis: Stock Cost - Trade Credit	\$41,002.50
<b>Trade At Expiration</b>	
Gain - Underlying trades above Call Strike: Max Gain + Dividends	\$3,997.50
Total Return On Capital: Gain / Stock Cost Basis	9.75%
Total Return On Capital Annualized	6.20%
Gain - Underlying is below Put Strike: Max Loss + Dividends	(\$2.50)
Total Return On Capital: Gain / Stock Cost Basis	-0.01%
Total Return On Capital Annualized	0.00%
Max Value - Includes Dividends	\$45,000.00
Min Value - Cash Substitute - Can't go below this value.	\$41,000.00
Min Value - Cash Substitute with dividends	\$41,000.00

### The Effect of Dividends:

AAPL pays a dividend. In the example below the long put is selected at the money. The long strike was selected at 190 so that there is no **Max Loss**; the option trade actually produces a gain. This means that if AAPL does not pay any more dividends the trade cannot lose money. If all dividends are paid and AAPL trades above the 190 short call at expiration the trade will yield 3.73% annualized.

An additional consideration is that AAPL may raise its dividend which would ultimately increase the potential returns.

## Conversion Arbitrage - Synthetic Bond Analysis

Trade Setup	Actual Trade
Stock Ticker	AAPL
Expiration Date	1/17/2020
ATM Put Strike (Buy to Open)	185.00
OTM Call Strike (Sell to Open)	190.00
Trade Date	6/26/2018
Current Stock Price	184.50
ATM Put Price - Mark	19.68
OTM Call Price - Mark	20.50
Lot Size	1.00
Dividend Cycles	6
Quarterly Dividend	0.73
Sumulate the trade at the Mid and the Natural	
DTE	570
Dividends: Quarterly Dividend * Dividend Cycles * Lot Size * 100	438.00
Stock Cost - Capital required to buy the stock	\$18,450.00
Put Cost - Dollars spent to buy the put	(\$1,967.50)
Call Credit - Dollars received for selling the call	\$2,050.00
Trade Credit (Debit): Call Credit - Put Cost	\$82.50
Put Notional Value- the "Cash"	\$18,500.00
Call Notional Value- the "Cap"	\$19,000.00
Max Loss calculation actually produces a gain in this case.	\$132.50
Max Gain: Call Notional Value - Stock Cost + Trade Credit	\$632.50
Stock Cost Basis: Stock Cost - Trade Credit	\$18,367.50
Trade At Expiration	
Gain - Underlying trades above Call Strike: Max Gain + Dividends	\$1,070.50
Total Return On Capital: Gain / Stock Cost Basis	5.83%
Total Return On Capital Annualized	3.73%
Gain - Underlying is below Put Strike: Max Loss + Dividends	\$570.50
Total Return On Capital: Gain / Stock Cost Basis	3.11%
Total Return On Capital Annualized	1.99%
Max Value - Includes Dividends	\$19,438.00
Min Value - Cash Substitute - Can't go below this value.	\$18,500.00
Min Value - Cash Substitute with dividends	\$18,938.00

In the next example, the short call strike has been set to the 200 strike. This raises the annualized Gain to 5.68%, but if AAPL trades below the long put strike at 185, the trade only returns 0.56%. But, that return depends on getting all six of the dividend payments of \$0.73 each in order to achieve the 0.56% minimum return.

Note that the Max Loss of the option trade is (\$272.50). This means that if AAPL does not pay the dividends and trades below the long put, the trade will lose money.

So, the decision is mine to make, if I am highly confident that AAPL will pay at least \$0.73 for each dividend and I believe that AAPL will trade above \$200 a year and a half from now, I would trade the 185/200 synthetic bond rather than the 185/190 position.

## Conversion Arbitrage - Synthetic Bond Analysis

Trade Setup	Actual Trade
Stock Ticker	AAPL
Expiration Date	1/17/2020
ATM Put Strike (Buy to Open)	185.00
OTM Call Strike (Sell to Open)	200.00
Trade Date	6/26/2018
Current Stock Price	184.50
ATM Put Price - Mark	19.68
OTM Call Price - Mark	16.45
Lot Size	1.00
Dividend Cycles	6.00
Quarterly Dividend	0.73
Simulate the trade at the Mid and the Natural	
DTE	570
Dividends: Quarterly Dividend * Dividend Cycles * Lot Size * 100	438.00
Stock Cost - Capital required to buy the stock	\$18,450.00
Put Cost - Dollars spent to buy the put	(\$1,967.50)
Call Credit - Dollars received for selling the call	\$1,645.00
Trade Credit (Debit): Call Credit - Put Cost	(\$322.50)
Put Notional Value- the "Cash"	\$18,500.00
Call Notional Value- the "Cap"	\$20,000.00
Max Loss: Put Notional Value - Stock Cost + Trade Credit	(\$272.50)
Max Gain: Call Notional Value - Stock Cost + Trade Credit	\$1,227.50
Stock Cost Basis: Stock Cost - Trade Credit	\$18,772.50
Trade At Expiration	
Gain - Underlying trades above Call Strike: Max Gain + Dividends	\$1,665.50
Total Return On Capital: Gain / Stock Cost Basis	8.87%
Total Return On Capital Annualized	5.68%
Gain - Underlying is below Put Strike: Max Loss + Dividends	\$165.50
Total Return On Capital: Gain / Stock Cost Basis	0.88%
Total Return On Capital Annualized	0.56%
Max Value - Includes Dividends	\$20,438.00
Min Value - Cash Substitute - Can't go below this value.	\$18,500.00
Min Value - Cash Substitute with dividends	\$18,938.00

### Watch Out for Ex-Dividend Dates:

Just like the Conversion Arbitrage trades, the split strike trades are subject to being assigned. If I set the option trade so that there is no Max Loss, an early assignment can't result in a loss.

### Rolling the Short Call:

There may be an opportunity to roll up the short call just as in the Conversion Arbitrage trade. I could add a little more capital to the trade to buy the call strike up. While this adds the risk of loss of the additional capital, it is one way to move the short call up and mitigate the risk of early assignment while increasing potential gains.

If I felt the underlying would remain above this new short call strike at expiration I would roll up.

### Exiting the Trade:

What is the procedure to close the split strike trade? That depends on the price of the underlying with respect to the option strikes.

Case 1 – The stock is trading below the long put strike.

This case is the same as for the Conversion Arbitrage trade.

At expiration I can simply sell the stock and sell the put. The gains on the put will make up for the losses on the stock. I can let the short call expire as income.

Case 2 – The stock is trading above the short call strike.

This case is the same as for the Conversion Arbitrage trade.

At expiration I can simply let the stock get called away and let the long put expire worthless. This way I am assured of getting Max Gain.

Case 3 – The stock is trading above the long put but below the short call.

In this case I would wait until expiration to close the trade in the hopes that the underlying would finally trade above the short call.

At expiration I can let the long put expire worthless and let the short call expire worthless. I have the choice to either keep the stock or sell it.

In taxable accounts the split strike trades are managed the same as the Conversion Arbitrage trades.

### **Getting the Trade to Fill:**

When trading LEAPS puts and calls, the Bid/Ask spreads can be very wide, especially when the option strike is far below the stock price. The spreadsheet includes a Simulated Trade analysis comparing a fill at the Mid and a fill at the Nat. This analysis must be done while the market is open; when the market is closed the option prices are not updating and the calculations will be misleading. The comparison allows me to see at a glance what the trade might fill for in the worst case; that is, at the Mid. If there is a large difference between the Mid and the Nat this means it is very important not to give up much edge. In the MSFT example below a fill at the Mid could achieve a 6.39% annualized yield versus a fill at the Nat for a 5.92% annualized yield. If I had to fill at the Nat the trade is still not bad.

## Conversion Arbitrage - Synthetic Bond Analysis

Trade Setup	Simulated Trade	
Stock Ticker	MSFT	
Expiration Date	1/17/2020	
ATM Put Strike (Buy to Open)	100.00	
OTM Call Strike (Sell to Open)	110.00	
Trade Date	6/27/2018	
Current Stock Price	\$99.55	
ATM Put Price - Mark	\$11.03	
OTM Call Price - Mark	\$8.23	
Lot Size	1	
Dividend Cycles	6	
Quarterly Dividend	0.42	
Sumulate the trade at the Mid and the Natural	<b>Mid</b>	<b>Nat</b>
DTE	569	569
Dividends: Quarterly Dividend * Dividend Cycles * Lot Size * 100	252.00	252.00
Stock Cost - Capital required to buy the stock	\$9,957.00	\$9,957.00
Put Cost - Dollars spent to buy the put	(\$1,097.50)	(\$1,140.00)
Call Credit - Dollars received for selling the call	\$822.50	\$795.00
Trade Credit (Debit): Call Credit - Put Cost	(\$275.00)	(\$345.00)
Put Notional Value- the "Cash"	\$10,000.00	\$10,000.00
Call Notional Value- the "Cap"	\$11,000.00	\$11,000.00
Max Loss: Put Notional Value - Stock Cost + Trade Credit	(\$232.00)	(\$302.00)
Max Gain: Call Notional Value - Stock Cost + Trade Credit	\$768.00	\$698.00
Stock Cost Basis: Stock Cost - Trade Credit	\$10,232.00	\$10,302.00
<b>Trade At Expiration</b>		
Gain - Underlying trades above Call Strike: Max Gain + Dividends	\$1,020.00	\$950.00
Total Return On Capital: Gain / Stock Cost Basis	9.97%	9.22%
Total Return On Capital Annualized	6.39%	5.92%
Gain - Underlying is below Put Strike: Max Loss + Dividends	\$20.00	(\$50.00)
Total Return On Capital: Gain / Stock Cost Basis	0.20%	-0.49%
Total Return On Capital Annualized	0.13%	-0.31%
Max Value - Includes Dividends	\$11,252.00	\$11,252.00
Min Value - Cash Substitute - Can't go below this value.	\$10,000.00	\$10,000.00
Min Value - Cash Substitute with dividends	\$10,252.00	\$10,252.00

Now look at this GE Conversion Arbitrage. A fill at the Mid yields 5.3% annualized. A fill at the Nat barely makes any money at all; 0.67% annualized. In this case I must be very careful to send a limit order at the Mid and wait to see if I get a fill. I must be careful to only change the order by a penny or two for each Cancel/Replace iteration to get filled. If I can't get my price, I may have to give up on this trade rather than take a bad trade just to fill it.

Conversion Arbitrage - Synthetic Bond Analysis		
Trade Setup	Simulated Trade	
	GE	
Stock Ticker	1/17/2020	
Expiration Date	8.00	
ATM Put Strike (Buy to Open)	8.00	
OTM Call Strike (Sell to Open)	6/27/2018	
Trade Date	\$13.93	
Current Stock Price	\$0.30	
ATM Put Price - Mark	\$6.18	
OTM Call Price - Mark	1	
Lot Size	6	
Dividend Cycles	0.12	
Quarterly Dividend	Mid	Nat
Simulate the trade at the Mid and the Natural		
DTE	569	569
Dividends: Quarterly Dividend * Dividend Cycles * Lot Size * 100	72.00	72.00
Stock Cost - Capital required to buy the stock	\$1,393.00	\$1,393.00
Put Cost - Dollars spent to buy the put	(\$30.00)	(\$35.00)
Call Credit - Dollars received for selling the call	\$617.50	\$565.00
Trade Credit (Debit): Call Credit - Put Cost	\$587.50	\$530.00
Put Notional Value- the "Cash"	\$800.00	\$800.00
Call Notional Value- the "Cap"	\$800.00	\$800.00
Max Loss and Max Gain are the same.	(\$5.50)	(\$63.00)
Max Gain: Call Notional Value - Stock Cost + Trade Credit	(\$5.50)	(\$63.00)
Stock Cost Basis: Stock Cost - Trade Credit	\$805.50	\$863.00
Trade At Expiration		
Gain - Underlying trades above Call Strike: Max Gain + Dividends	\$66.50	\$9.00
Total Return On Capital: Gain / Stock Cost Basis	8.26%	1.04%
Total Return On Capital Annualized	5.30%	0.67%
Gain - Underlying is below Put Strike: Max Loss + Dividends	\$66.50	\$9.00
Total Return On Capital: Gain / Stock Cost Basis	8.26%	1.04%
Total Return On Capital Annualized	5.30%	0.67%
Max Value - Includes Dividends	\$872.00	\$872.00
Min Value - Cash Substitute - Can't go below this value.	\$800.00	\$800.00
Min Value - Cash Substitute with dividends	\$872.00	\$872.00

The Synthetic Bond is far more complicated than I first thought, but I have the time and inclination to manage several of them in my accounts.

It's certainly better than just sitting on a pile of cash.