What are Swap Spreads?
Let’s start with the textbook definition of a swap spread: the spread an AA-rated financial institution would pay above the US Government to borrow money.

Said another way, the swap rate suggests cost of funds for a highly rated bank. Think Wells Fargo. If the swap spread was 10bps, then we would expect Wells to price 10yr bonds at 10T + 10bps.

Intuitively, this makes sense. A bank’s cost of funds for long term fixed rates is a little above the US government, who should be viewed as the least risky counterparty. This also led to an easy-to-explain calculation:

\[\text{Treasury Yield} + \text{Swap Spread} = \text{Swap Rate}\]

Too easy.

But what about those pesky 30yr swap spreads that have been negative since the crisis? Are you saying the government is more risky than an AA-rated financial institution? And if so, doesn’t that suggest a greater problem?

“It’s highly technical. It’s the way traders hedge the long end of the curve. And these are not the droids you seek.” And then I would wave my hand in front of your face, you’d realize no one cares about the 30 year part of the curve, and we would go back to discussing the important details of your specific financing.

And then on September 23rd, 10 year swap spreads went negative. The jedi mind trick wasn’t going to work anymore. Borrowers care about 10yr rates.

Before we go any further, let’s get some context of 10yr swap spreads over the last 10 years. The classical definition carried weight right up until the crisis. Once the government started backstopping every financial institution, spreads tightened to reflect the decreased (perceived) risk.

Wells Fargo bond buyers weren’t just buying Wells Fargo bonds, they were buying Wells Fargo bonds with a US Government Guaranty.
O Captain! My Captain!
Now that the formalities are out of the way, please stand up on your desk and rip your swap spread handbook apart. That definition is outdated.

From The Best Trader I Have Ever Known (TBTIHEK), “On net I think the way to think about swaps vs treasuries is to almost think of them as 2 separate asset classes in this environment. There are much fewer dealers/risk takers looking to warehouse risk, and in the short term there are a number of factors that are negative for treasuries specifically.”

In other words, the classical definition has been rendered irrelevant.

Let’s look at a couple of CNBC-type explanations that I heard recently for why spreads went negative.

1. *The market views government as an increasingly risky counterparty.* I don’t think the US government is riskless, but I could have sworn the bailout in 2008 wasn’t banks coming to the rescue of the government. This argument bothers me on an intuitive level because if the government is really that risky, I am supposed to believe that one of the companies propped up by that government is *safer!* If my kid has a credit card with me as a guarantor and I go bankrupt (these feel correlated, no?), is the credit card company safe because my kids have a
$300 savings account? And again look at the spreads across the curve – the US government is safer over the next two years but not the next 10? Something just doesn't feel right here.

2. **The rapid selloff in Treasurys** – Fair point, and probably a contributing factor. But why didn’t swap spreads go negative during the Taper Tantrum when the T10 jumped more than a point in a month? And the front end has sold off more than the long end on a relative basis, but 2 year swap spreads aren’t negative. Let’s dig a bit deeper here to be sure.

2012 – **10T vs 10yr Swap Spreads**
As you can see, the inverse correlation between 10T movements and spreads was apparent, at least initially. In March 2012, the 10T jumped more than 40bps and spreads fell about 5bps. A few months later the opposite happened while rates fell.
2013 Taper Tantrum – 10T vs 10yr Swap Spreads
The correlation appears to be in effect prior to the Taper Tantrum, but then as the 10T sold off and spiked more than 1.00% in a month, why didn’t spreads collapse? Spreads actually widened for much of the run up in Treasury yields.

Once the 10T pushed through 2.60% and made a run towards 3.00%, spreads began to fall again but never got close to going negative. In fact, they never got below 14bps.

If the recent 0.30% selloff in Treasurys is to blame for negative spreads, why didn’t we see negative spreads when the 10T sold off almost 1.40%?
2015 – 10T vs 10yr Swap Spreads
This is a graph showing the relationship over the past year. Although the correlation popped up again recently, it was nowhere to be found earlier in the year when the 10T yield plummeted to 1.64%. Or, even more recently, when both yields and spreads fell in lockstep.

The recent selloff in Treasurys is similar in size to what we saw in 2012. Back then, spreads fell 5bps. But over the last month, spreads have fallen about 15bps. If Treasury selloff is solely to blame, why aren’t the movements in spread more similar given a similar movement in Treasury yields?

I think the explanation that rates jump and spread tighten is a simple one, making it a convenient culprit. It’s a contributing factor, but needs to be viewed as part of a greater process in the works.

Real World No BS Explanations for Negative Spreads

We need to think the current environment as a confluence of events. The following explanations are intertwined and should be viewed as a collective force, rather than singular causes.

When I asked one of our option traders why he thought spreads were negative, he said, “In one word, Regulation.” Sounds like a good starting point.
1. Regulation
Basel III and Dodd-Frank have changed the rules.

*Basel III* – the capital requirements are much more stringent. This reduces credit risk, which exerts downward pressure on swap spreads. Banks are less risky than they were a few years ago, so pricing reflects that.

Also, Treasurys and swaps heavily rely on the repo market to fund positions, but capital restraints have limited the use of repo, which in turn has impacted swap trading volume and pricing. Hedge funds and prop desks would typically come into the market to reverse an inversion by using the repo market to buy Treasurys and enter into a pay fixed swap. Without the repo market, that trade has faded.

Just as importantly, Basel III capital requirements are measured at quarter end. That forces banks to sell bonds to free up capital at the end of each quarter. We’re coming back to this one in a bit, so don’t forget about it.

*Dodd-Frank* – you probably know DF as that cumbersome registration process prior to executing a trade, but that is just a small portion of the regulation. The meat and potatoes was to make swaps traded through an exchange. If you are reading this you probably haven’t done an exchange traded swap because you’ve qualified for an End User Exemption, but the Too Big to Fail Banks trade through an exchange. The exchange handles the collateral posting by all parties. If the other counterparty in your trade defaults, the exchange steps in and becomes your counterparty. This limits the contagion risk.

From TBTIHEK, “Since swaps are now exchange cleared, there is no longer a credit spread attached to swaps; prior to 2009 spreads were used as a proxy for credit weakness, so that would exert widening pressure during periods of stress as accounts used swaps to hedge credit risk. This flow/natural paying source has been removed from the market.”

2. Quarter End Selling
Basel III tests the capital reserves of financial institutions at the end of each quarter. This creates an interesting song and dance every three months.

Banks have bonds held as investments, but those tie up precious capital. So they sell these bonds (and other similar assets) to free up the cash before they get audited.

Here’s where things get interesting. You, Mr. Treasurer, were clipping a coupon at some rate, let’s say 4%. Now all of a sudden you are earning 0% to appease the regulators. What do you do?

You enter into a receive fixed swap, that’s what you do. Now you are receiving a fixed rate that replicates the coupon you were receiving right before you sold the bond. And since the payer side of the swap has the majority of the credit risk, your counterparty is the one that has to post the collateral, again keeping your capital free.

Sounds like a good plan, right? Here’s the rub – *everyone wants to be on the same side of that trade*. That means the fixed payer (your counterparty) is the prettiest girl at the bar when a bunch of Army recruits get their first leave. She is in total control. And that means she gets to pay less, if anything.
A pay fixed swap provider gets to dictate the rate since everyone is a receiver at quarter end. That means they can pay less than the US government’s cost of funds, right? Spreads collapse. And maybe even go negative if enough other factors show up in the market.

3. Treasury Sell-Off
In this case, think of the spread as the two curves rather than a simple spread. Picture the Treasury curve and then picture the Swap curve a few bps above it.

Central banks have been selling US Treasurys, trying to get in front of the upcoming tightening cycle. China, in particular, has been selling massive volume of Treasurys since they devalued in August. Higher rates are bad for bond prices, causing a loss. But unlike the banks mentioned above, central banks are owners, not hedgers.

When they sell, it puts upward pressure on the Treasury yield curve. If there is no corresponding movement on the Swap curve, then the spread between the two has narrowed and the swap spread has tightened.

The other thing a sell-off does is suddenly make new bond issuance more attractive because of the higher rates. Maybe investor demand wasn’t there when you were pricing off a 2% 10T, but all of a sudden there is enough demand when you’ll be pricing off a 2.30% 10T. That leads us to the next point.

4. Corporate Issuance
Corporate bond issuance has already broken the record for most in a year and we still have 6 weeks left in the year. Treasurers, like China, are trying to get in front of the Fed.

When corporations issue fixed rate bonds, they frequently swap them back to floating. There aren’t any exact numbers, but traders generally estimate about 35%-50% of all issuance is swapped back to floating.

If you are paying fixed on a bond and want to swap to floating, you need to receive fixed. Just like you did in #2.

The more receivers there are in the market, the more downward pressure on swap spreads. In a year of record issuance, there are a lot of receivers in the market. That pushes spreads down.

You may have noticed that I didn’t refer to this newsletter as the “Definitive Guide to Negative Swap Spreads”. I’ve learned over the years that there is far more going on than my puny brain can wrap its arms around, so I am trying to highlight the recurring themes I heard when I reached out so numerous traders.

Will negative spreads continue?

Not one trader I spoke with thought this was a short term aberration.
The consensus seems to be that we are in a low or negative spread environment for the foreseeable future. The return to positive spreads can certainly occur, but will likely require several of the explanations above to revert rather than a reversal in just one of those. The most common example is a Treasury rally – spreads may climb, but probably won’t get to 10bps unless the other factors reverse as well.

Most also felt like we would see volatility on a quarterly basis due to the quarter end capital issues. Not one trader thought double digit swap spreads would return anytime soon. In fact, more than one trader suggested a crisis of some kind would be needed before spreads could blow out to double digit levels.

With the right set of circumstances, we may see spreads fluctuate from current levels to +0.05%, but spreads will probably run out of steam at that level. All the traders we spoke with felt like negative spreads could persist for a while.

That probably means more CMBS term sheets with language for the base rate something like, “the higher of the 10 year Treasury or the 10 year swap rate”. Just another convenient way for banks to clip a few extra basis points because when a CMBS trader hedges the rate, he is using the 10yr swaps and not the Treasury.

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