

Horsepower, Rube Goldberg, Translating QT to BPS

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I find myself on the other side of another intellectual debate on rates. We started by addressing several war, inflation, Fed, QT, and other rates related issues in [Collecting Our Thoughts](#). The “feud” boiled over in [“Oh, Behave”](#) where rather than trying to divine whether inverted curves predicted recessions, we focused on forward rates and concluded that the market was far too comfortable pricing in a soft landing. Now, in our latest rant against the trend, we will argue that **trying to convert quantitative tightening into some rate hike equivalent may not only be futile, but harmful to your future investment decisions.**

**Weekend War Update**

Academy published our current thoughts on the “new” strategies being employed by Russia, Ukraine, the West, China, and India on Friday ([see report](#)).

The conclusions which are relevant here are:

- **Expect more supply chain disruptions and an economic downturn in Europe.**
- **Look for China, the Saudis, and others to reduce their exposure to the U.S. (including Treasury holdings).**
- **Food will be a bigger problem than energy because of the war as early as this summer.**

Our view is that these themes will impact markets and we argue for caution on equities and credit spreads.

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Back to the “goal” of translating quantitative tightening to bps of hiking. Yes, I understand the desire to be able to say that “every X billion of QT is equal to Y bps of hiking.” The sheer simplicity of such a formula would be elegant and might even be useful. On the other hand, I’m not sure comparing feet to hands is particularly useful. I believe the following:

- We don’t really understand hikes very well, so translating something into hikes has limited use (even if it works).
- QT behaves differently than hikes and trying to equate them takes us down the wrong path.

I would have said that comparing QT to hikes is like comparing apples to oranges or chalk and cheese, but I used that title last year regarding COVID data, so I’m going to run with “horsepower” and “Rube Goldberg.”

- **Horsepower is a semi-useful term.** It is kind of cool to think in terms of how many horses would generate this much power. Heck, for small numbers, it is even intuitive. My “issues” with horsepower are that even 400 horses hitched to a wagon won’t get that wagon to do 0-60 in 4 seconds because horses can’t run 60 mph. Also, no number of horses hooked to anything can generate flight (unless we find some long lost hidden breed of Pegasus descendants). So, there is some value in horsepower, but it is very limiting in terms of imagination and what horses (or horsepower) can do. This is the best case that can be accomplished by trying to compare QT to BPS, and I think I’m being overly generous.

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- **Rube Goldberg machines are famous for making a simple task overly complicated.** I am not sure why we are trying to convert balance sheet changes to hikes, when maybe we should just stick to the task of figuring out what balance sheet changes do. True balance sheet changes don't behave at all like rate hikes or cuts.

I will make two arguments in this report:

- We barely understand rates hikes, so converting something to something else that we don't fully understand makes little sense.
- Balance sheet changes behave differently and may have an identifiable impact on markets and the economy in a way that thinking about them in terms of rate changes is wrong.

### We Barely Understand Rate Hikes

Let's start with this assertion and see where it leads us.

#### **Rate hikes are very correlated with the Fed Funds Effective Rate.**

This is one thing that we know for certain as the Fed can participate in the market to ensure that the effective funds rate is in line with their policy goals every day.

I am willing to concede that if you tell me the Fed policy and Fed Target Rate, I can guess the Fed Funds Effective Rate within a couple of bps on most days (however, some weird year-end or quarter-end flows might make it tricky).

**So, the Fed Funds Effective Rate is almost 100% determined by Fed policy.** It is never encouraging when the first part of the analysis goes against the entire premise of the analysis, but bear with me.

#### **Fed policy is reasonably correlated with short-dated T-bills, SOFR, LIBOR, BSBY, CP, and other money market instruments.**

Notice the use of "reasonably" as opposed to "almost 100%". There are a lot of factors that influence each market. T-Bills, for example, are often posted as collateral. There can be immense demand for T-Bills that change their relationship with Fed Funds Effective Rates over time. Regulations also play a huge role in the relationship between T-Bills and Fed policy rates. This is similar to SOFR, which is based on overnight Treasury repo, where there are strong correlations to Fed policy, but deviations can occur due to market moves (the Fed has implemented facilities to reduce those moves).

Then you move into markets that have a "credit" component. We have seen major deviations in times of stress between these markets and other markets. In March 2020, "knowing" where Fed Funds Effective was trading was of little to no use in figuring out where CP would clear that day.

#### **So even in securities with a 1-to-3-month maturity, we cannot say with certainty where they will trade just knowing Fed rate policy.**

Yes, we have a "good" idea, but this is a very short timeframe and almost directly tied to the rate the Fed sets and we cannot say with "certainty" what it means.

#### **By the time we get to the 10-year Treasury, Fed policy can have competing influences.**

Yes, I skipped from 3 months to 10 years, but I'm on my way to Augusta and typing on planes gets old quickly, plus I think this makes my point well enough without gradually working our way here.

- Expectations of a higher terminal rate on Fed Funds should push 10-year Treasury yields higher.

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It seems logical that if you believe we can reach a “balanced” state, i.e., Fed Funds will be say, 2.5% for years, then the 10-year should reflect that plus some risk premium.

- If, on the other hand, you believe that the Fed will hike too quickly, slow demand and new supply, hit housing too hard, and create a drag on earnings as bond interest goes up, then you could see that the **10-year yield can move lower while the Fed Funds rate is moving higher.**

**I could not say with any degree of certainty, even over weeks, whether a higher Fed Funds Rate (i.e., rate hikes) means higher 10-year yields or lower 10-year yields.**

Maybe I’m wrong and it is obvious to everyone else how Fed Funds affect the 10-year, but I don’t see it. There are so many factors affecting 10-year Treasury yields, which are as important or more important on both short- and long-term horizons than Fed Funds. Mortgage markets and convexity hedging plays a big role. Corporate debt issuance can impact Treasury markets as they compete for dollars and regulatory rules can have an even bigger influence.

**Given 20s are yielding much more than 10s and 30s, which is unique to the U.S. (and discussed in more detail in “[Oh, Behave](#)”), I’d argue that Fed Funds tells us little about longer-dated yields.**

If we don’t know how Treasuries behave with respect to rate hikes, why would we have much confidence in how equities or the economy would respond? Valid questions, which I will attempt to address.

### Rate Hikes on the Economy (and Inflation)

Maybe, just maybe, the reason it is difficult to figure out where yields across the curve should be based on Fed policy has less to do with uncertainty around Fed policy and more to do with uncertainty of how Fed policy impacts the economy (inflation)?

**If we can’t figure out how Fed policy impacts the economy (and inflation), how can we figure out what Fed policy means for markets?**

- **Mortgage rates skyrocketed even before the first hike.** This might have more to do with anticipated QT in the mortgage arena, but nonetheless, we have had one measly little hike and mortgage rates have shot up. Housing data went from “insanely hot” to mixed (at least in some regions). With mortgage rates so much higher, could housing, one of the inflationary pressures the Fed is planning to fight (for a year or more with non-stop hikes, if various forecasts are to be believed), already be stalling? **What if the thing you are fighting has already yielded?**
- **Energy prices.** I will focus on this for a moment. As you know, I’ve been arguing for aggressive spending on building out sustainable energy while reinvesting in existing energy sources and infrastructure so we can have a feasible long-term plan that doesn’t leave us at the mercy of foreign suppliers (like Europe has found itself caught up in). So far D.C. isn’t heading down this path, but with the likes of Jamie Dimon championing “Marshall Plans for Energy” I am hopeful. I don’t see how higher yields help. If I’m an energy company, and my borrowing costs go up, I probably pass that cost on to whoever is buying my energy (seems logical). If we finally decide to build a new refinery (or pipeline) in the U.S., the costs will be higher. I don’t see how that doesn’t get factored into the decision-making progress. **In a supply constrained market, raising rates only hurts the supply side of the equation.** Maybe enough demand destruction can offset that supply issue, but that seems to be anybody’s guess.

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- **All commodities.** I highlighted energy, but I think the battle of reducing demand more than hampering supply (without hurting the producers) is tricky and will not be successful across all products and markets.
- **Timing.** Supposedly it takes 3 to 6 months for a rate hike to show up in the economy. But, if the series of rate hikes has been so telegraphed, will it show up sooner? Maybe the mortgage market and housing market is a good example of that. Or will it show up later, as companies and individuals try to finish things ahead of the rate hikes? Could we see signs of last-ditch growth that aren't reflective of future prospects as companies and individuals respond to the threats of ongoing rate hikes?

**I think at best we have a “general” and “theoretical” view of how rate hikes impact the economy, but it is general and I am not sure that this applies well in a world experiencing supply chain issues and possibly a realignment of geopolitical issues.**

### Educated Suppositions vs Scientific Method

The Scientific Method would demand that:

- You have two similar groups.
- One group is “tested” and the other is the “control.”
- Neither should know if they are the control or the tested group.

Basically, the scientific method is meant to test a hypothesis and does this by comparing it to the “not tested” group. The idea that neither the tested nor the control “know” which they are serves to add validity to the results.

Monetary policy doesn't have the ability to “test” hypothesis and “prove” what happens when it is applied. We can apply something and see what happens and assume some causation. We can look at different countries at various times and see what was done and what happened and reach some seemingly “logical” conclusions. But there are a lot of “leaps of faith” in that analysis. It is the best we have, but it is not definitive.

For those of you who have been reading T-Reports for a long time, you know this is where I like to talk about **double pendulums**. Double pendulums are where you take a “normal” pendulum and attach another pendulum to the first one. What I find fascinating is how difficult it is to predict the motion of a double pendulum. With enough computer power and extremely precise measurements, the movement can be predicted, but using the human eye, something that “looks” the same at the start follows vastly different paths. **Starting conditions matter and that applies to the application of monetary policy in the past.**

Basically, even at its best, the application of monetary policy doesn't have conclusive/proven results and the starting conditions seem fairly unique right now.

### Monetary Policy Conclusion

Currently I'm in the mode that the markets are pricing in too “soft of a landing” in what are very treacherous conditions, and that is BEFORE I try to account for quantitative tightening.

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**Quantitative Tightening**

Given all my concerns about our ability to understand what Fed policy does, why are we so fixated on converting QT into a rate policy equivalent?

Why can't we look at QT as something different? Why would someone buying/selling/not buying assets behave anything at all like rate hikes?

Why would "selling" \$50 billion a month equate to some rate increase for that month? I'm not sure it is logical, at least not to me. I've seen people who can "walk" on their hands, but why would you? I've seen people who can "eat" with their feet, but why would you?

**Let's just for a moment pretend like two different things are actually different 😊.**

Buying, selling, or allowing to mature:

- When the Fed is growing their balance sheet it is adding bonds.
- When the Fed is reducing their balance sheet, it can do it in one of two ways:
  - **Allowing maturing bonds to roll off.** That is the "preferred" method and should have the least amount of impact in the market. No one is taking capital directly from another source to get rid of these bonds (except the original borrowers, who presumably have accounted for that).
  - **Selling bonds.** This is more "problematic" from my perspective, because it requires capital from an investor and creates a "chain reaction" where whatever that investor would have bought needs to have been bought by someone else, and so on and so forth. **The risk that the Fed may have to sell mortgage bonds (their maturity schedule doesn't fit well) may explain why the mortgage market has reacted so quickly and painfully – they are pricing in this selling pressure because it affects them directly.**

This is where I should run some models and equate Fed balance sheet size to rate policy, but I just cannot bring myself to do that because I don't think they act the same.

What we know (based on the minutes released this week):

- The Fed will mostly accomplish their targets in Treasuries with roll-off and will still have periodic re-investment and maybe some months of selling. But it is safe to say that we have mainly taken a buyer out of the market (on the Treasury side) rather than added supply.
- On the mortgage side, some amount of selling is likely, which is similar to adding more supply.

So how will this impact markets?

- If we need to issue fewer Treasuries than before, the effect should be minimal. In theory, we had to issue a lot of "extra" debt during the crisis that is now normalizing, so the event should be neutral. I'm not seeing that, especially as rising rates will increase our borrowing needs.
- Corporations have been issuing debt to "get ahead" of the hikes, so that supply is similar (so far) and not giving us any breathing room.
- Equity IPOs (including SPACs) have slowed dramatically. That lack of supply is a "positive" from the perspective of supply and demand of investment opportunities.

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Relative value:

- With some selling (of mortgages) and no buying of Treasuries, the supply of debt seems stable (for now) and yields are higher as you move down the curve than they have been. **I think investors of all stripes will take slightly less risk for the same potential return.**

I just keep thinking of Newton's cradle. The ball at one end was dropped (QE) and the ball at the far end spiked (riskiest assets in every asset class) and that ball is coming back. The effect will be muted, because it is more about roll-off than selling and it could be dissipated completely by having less supply as demand decreases, but we have a bit more turbulence in store.

**For me, QT is all about demand for assets, which has nothing to do with price or relative value and that process is now unwinding. The unwind will be smaller to the downside than it was to the upside, but expect it to hit and expect it do far more than "steepen" yield curves because every investor will have a decision to make, and this creates an opportunity for similar returns for less risk.**

### Maybe QE Was Just a Rate Cut?

Maybe QE was just a rate cut. Maybe I'm wrong about how QE behaved on the way higher, though I can't believe that X billion of anything is the same as going to negative yields (yes, I hate the concept of negative yields). So if the Fed could have achieved the same asset price response by going to -50 bps or something, I've wasted a couple hours of my life on this rant, but I just can't follow that to a conclusion that makes sense to me.

### Bottom Line

Between the war, the Fed tightening, and QT I am cautious on risk assets. If anything, I'm neutral on yields and think buying the 2-year could be interesting.

We need to price in something worse than the soft landing that seems to be priced in.

When everyone talks about QT as direct supply and demand for assets, I'll be more convinced it is priced in. In the meantime, watch supply of assets (especially Treasury issuance) closely.

**We will continue to do work on the impact of QT, but it will be in the context of roll-off versus selling, and overall supply of assets, rather than a mathematical effort to cram some level of balance sheet into some form of rate policy.**

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