TIPS 'n' STRIPS

By Vineer Bhansali| Aug 28, 2022

The following article was published here on forbes.com.

I am not a big fan of Fish 'n' Chips. But give me tips and strips and I am very happy! Having grown up vegetarian in India, I came to the United States when I was 18. The only on-campus job I could get was flipping burgers at the Red Door Café at Caltech, where I was told by the café boss that I "had to flip 'em, not eat 'em ". Adapting to the times, the Red Door now offers "smoked tofu", hummus, grain salad, and other vegan menu items.

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Hard work at the burger joint paid off, and I was sort of promoted to be waiter at the Caltech Athenaeum, where I had the distinct pleasure of serving (and once spilling soup on) the Richard Feynman, the Nobel Prize-winning physicist. Working in a student cafeteria gave me "optionality"; i.e., come whatever, I knew I was going to be able to at least survive on my own, and this resulted in "convexity" — i.e., large gains from small but important decisions at the right time. Lots of upside potential with limited downside.

I would like to discuss a couple of items on the government bond menu today that provide a similar kind of asymmetric risk-reward: TIPS (Treasury Inflation Protected Securities) and STRIPS (Separate Trading of Registered Interest and Principal of Securities). As of this writing, they offer meaty yields and above all, convexity under uncertain macro-economic conditions. Under the specter of a "resolute" Fed that might end up breaking financial markets to correct its massive errors in managing monetary policy and inflation, this choice provides a lot of protein for carb (stock) overloaded stock heavy portfolios.

"Convexity rises with volatility. So in a sense similar to options, Strips provide a call option on long-term interest rate volatility."

First TIPS: As I wrote a couple of weeks ago in this forum, TIPS pay a real coupon rate, which is typically quite low (since real yields equal nominal yields minus inflation), but the principal of these securities increases with inflation, based on the CPI inflation rate. For TIPS ETFs, like iShares' TIP, the increased principal is actually paid every month. So if inflation is running at 8%, say, each month the increased principal, assuming nothing else changes, will result in a distribution to the TIPS holder of record of a coupon of 8%/12 from the inflation component. Of course, if inflation falls to zero, there would be no inflation compensation. So an ETF like TIP currently offers an "indicated yield" of over 10%! (Source: Bloomberg) And this is for a Treasury that has no credit risk. If inflation is a tax on the common person, then for TIPS holders, the payout is a tax refund of sorts. TIPS are a call option on inflation.

Next STRIPS. STRIPS are basically zero-coupon bonds that are the building blocks of regular Treasuries, stripped away from their parent Treasuries for your consumption pleasure. As a matter of routine, the Treasury issues bonds that have both a coupon and principal. Due to demand from those who want bullet cashflows on one day in the future (for example, a lump sum payment against a single insurance obligation or to pay a defeasance), the government allows dealers to strip out the principal and the intermediate coupons, slap a new label on them, and sell them as separate, stripped bonds. I have previously called these type of zero-coupon bonds the "god particle of finance", because they ultimately are the building block of all financial instrument prices.

Because the principal strips belong to a specific bond, while the coupon strips can originate from many different bonds with the same coupon dates, there is a premium to the principal ("P") strips over the coupon ("C") strips in terms of a lower yield on the P strips. In the table below, I show the 3% coupon full bond issued in 2014, along with its zero coupon strips as an example (Source: Bloomberg, as of August 26, 2022).

Comparison of "full" November 2044 Treasury Bond and its stripped "coupon" and "principal" STRIP versions

Specifications	Full Bond	Coupon Strips	Principal Strips
CUSIP	912810RJ9	912834PB8	912803EK5
Maturity	11/15/2044	11/15/2044	11/15/2044
Coupon	3%	0%	0%
Price	92	44.62	45.39
Yield	3.52%	3.66%	3.59%
Duration	15.93	22.209	22.209
Modified Duration	15.64	21.809	21.818
dv01	14.54	9.733	9.9
Convexity	3.101	4.864	4.867
Size (in Billions)	42		5.8
Price Change for +100 bps shock	(14.37)	(9.72)	(9.89)
Price Change for -100 bps shock	14.40	9.74	9.91

Source: Bloomberg

For our discussion, the two kinds of strips may be treated the same. For example, if I were to buy a STRIP maturing in 2044, as of this writing it would cost me roughly 45 cents on the dollar, and in 2044, on maturity date, I would get 1 dollar back. The reason this is interesting is because of the convexity of the strips relative to the full bond with all of the coupons. Note that the percentage price movement, or duration, of the strips is more than 50% higher than the full bonds. The volatility of interest rates means that long-term strips are more convex than equivalent maturity coupon bonds, because the intermediate coupon payments don't weigh down the zero-coupon bond. In this example, if yields rise by 100 bps, the full bonds will lose 14.37 points, while the zero coupon bond will lose 9.7 points. Convexity rises with volatility. So in a sense similar to options, Strips provide a call option on long-term interest rate volatility.

So there we have it. TIPS are a call option on inflation rising, and STRIPS are a call option on yield volatility rising. With inflation raging, the Fed pledging to fight it at all costs, and a lot of macroeconomic uncertainty, the ability to own call options against macroeconomic volatility can be had today in the bond markets with TIPS and STRIPS, while receiving a nice yield at the same time. It's the equivalent of offering both burgers and vegan items on the menu, something everyone can like, lots of good protein for your portfolio, and healthy at the same time.

Important Disclosures

Vineer Bhansali, Ph.D. is the Founder and Chief Investment Officer of LongTail Alpha, LLC, an SEC-registered investment adviser and a CFTC-registered CTA and CPO. Any opinions or views expressed by Dr. Bhansali are solely those of Dr. Bhansali and do not necessarily reflect the opinions or views of LongTail Alpha, LLC or any of its affiliates (collectively, "LongTail Alpha"), or any other associated persons of LongTail Alpha. You should not treat any opinion expressed by Dr. Bhansali as investment advice or as a recommendation to make an investment in any particular investment strategy or investment product. Dr. Bhansali's opinions and commentaries are based upon information he considers credible, but which may not constitute research by LongTail Alpha. Dr. Bhansali does not warrant the completeness or accuracy of the information upon which his opinions or commentaries are based.

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