



THE REAL SOLUTION TO INTEREST RATE FUTURES

By Bart Chilton, Chas Mancuso & Sol Steinberg



THE REAL SOLUTION TO SWAP FUTURES

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INTRODUCTION

The Dodd-Frank regime materially changes the way swaps are traded and handled by market participants and regulators. Swaps have been forced to move onto exchanges, and work within a clearing house model in order to continue. Given the immediacy required by Dodd-Frank in regulating this regime, a handful of new providers have recently come to market adding their own solutions.

The core players of the swaps market today, resemble the biggest players of the swaps market before regulation - the InterContinental Exchange (ICE), CME Group, and Eurex were all first to provide solutions for the newly regulated market. Now, even the London Stock Exchange (LSE) and NASDAQ appear to be moving in a similar direction. The move toward more, but not obviously better solutions, has led some to question whether the market is big enough for this many service providers, and even if it is whether that creates its own set of problems.

Volumes on the swaps market are growing, but the market is already fragmented, and the creation of more exchanges only adds to the split. Existing liquidity tiers among market participants also exacerbates the problem. Banks often transact among themselves and their clients separately.

The crux of the regulation was to futurize the swaps market. Bringing contracts on to trading platforms and developing new and hopefully lower risk products. Yet, even as new platform providers might be coming to

markets like LSE and NASDAQ, others have been reticent to move forward on developing new products beyond swap futures.

The market already prefers futures because they are subject to a one day or two day value at risk (VaR) treatment over the five or even ten day treatment of some centrally cleared OTC products. However, these

CME introduced a new generation of deliverable swap futures in 2012, which has been making steady gains in market share. Eurex for its part offered the first swap futures contracts in Europe, backed by technology from Goldman Sachs. Elsewhere, financial institutions are making investments in smaller exchanges that are offering experimental products in hopes of finding a new proof of concept. Société

EXAMPLE OF A 10 YEAR EURODOLLAR STRIP



- Clearly having 40 line items is confusing and difficult to manage.
- Executing 40 contracts in various quantities with multiple prices is even more difficult.
- We require only 1 line item.

instruments may not provide an exact hedge, because cash flows may differ or maturities may not align.

The biggest providers on the market have “evolved” their products in a way to mask profits and create esoteric advantages for the largest firms while making the market more opaque for everyone else. The result was \$600 trillion in outstanding notional value on the OTC derivatives market, which has regulators worried.

In an effort to draw volume back to the US market, the largest providers - ICE, CME Group and Eurex are all examining new swaps futures products that might provide more exact hedges or at least more variety for market participants to explore.

Générale, State Street, Fidelity, and Morgan Stanley have all invested in Eris Exchange a small US venue that offers a range of new products for the space.



The floor has closed, trading complex derivatives has moved off the floor. End users have to trade the markets without the expert guidance of floor brokers, often losing money in trades due to lack of liquidity, or roll conventions

The real solution to Swap Futures

NOT ALL DERIVATIVES ARE CREATED EQUAL

Even if exchanges provide a more exacting swap future to the market, newly available interest rate products could provide a more optimal solution. Swap and swap futures are just two options in a growing list of instruments, including OTC interest rate products. In fact, interest rate products can expand the tool set available to investment managers to make trades more economic and align objectives.

The move toward intelligently designed products comes as fixed income is shifting more toward an agency market, away from a bank/dealer principal market. Traditional instruments were never meant to trade on SEFs, whereas the next generation of interest rate products is purpose built to exist within the new exchange framework.

Within the universe of those products, a range options are now available and some say these instruments are better than what you will find in the traditional swap futures market.

Next Level Derivatives Interest Rate Risk Futures are one such product and seek to address a wide gap in the OTC marketplace.

The 10-year treasury yield is one of the most widely watched benchmarks in the world, and is followed by both fixed income and equity traders. Hedging future interest rates as measured by the treasury yield benchmark, has emerged as one of the most critical aspects of active portfolio management. Yet, existing products do not provide a straightforward hedge.

The OTC forward treasury market or “WI” for “when issued,” is defined by a short trading period and requires bi-lateral credit lines for settlement.

Players are also required to assume a temporary coupon which often leads to cancel and correction orders once the actual coupon is known. This makes for a messy and cumbersome way to trade.

Managers are then forced to hedge future rate moves using the Active Cash Treasury and lock in a forward rate by securing term funding. In order to do that, players have to enter the Repo market, where term financing is often costly and illiquid. Repo based plays are balance sheet intensive, and do not properly protect from curve roll down which can limit

a manager’s options in certain market environments.

The 10 year “basket” future - another option - can also add a layer of complexity because of how the basket is designed and the impact of embedded options. This design creates negative convexity, and thus duration risk. Typically players are looking to reduce risk by putting on a hedge, not complicate or add additional risk.

Next Level Derivatives Interest Rate Risk Futures trade in yield without convexity and don’t require players to assume coupons. Taken together, these

PRODUCT COMPARISON

CME BASKET FUTURE				
Strikes are in dollar prices	Yield levels are not known	Important yield levels are often not represented	Breakevens are awkward	Premiums are quoted in 32nds making quoting spreads difficult
NLD TIRRF				
Strikes are in round Logical yield levels		Premiums are in basis points which are round numbers	Spreading is simple	

PRODUCT COMPARISON

	Description	Quoting convention	Valuation	Expiration/tenor	Delivery	Additional risks
Cash W1	When issued Treasury	Yield	Requires assumption of coupon	Short terms, days	FICC/FED Wire	Cancel and corrections
TIRRF	Future on W1 Treasury	Yield	Yield	Months or Years	FICC/FED Wire	None
CME Basket	Future on basket of current bonds	Price in 32nds	Complex, embedded options	Very illiquid beyond front	Physical	Value at risk can change

factors remove a lot of the complexity and duration risk concerns embedded in legacy fixed income futures. The TIRRF products also provide an alternative to the LIBOR curve, which has been plagued with its own price-fixing concerns in recent years.

Next Level Derivatives fixed income futures are also distributed on current stock exchanges, existing futures platforms as well as SEF/OTC platforms without incurring additional costs.

TIRRF EXPLAINED

In practice, interest rate futures trade in round forward risk units quoted in yield (price = 100-yield). The quantity delivered is determined by the dollar value of a basis point at expiration of the underlying bond or swap instead of at a fixed notional value. Because the units are clearly defined and round, investment managers can plan forward and manage risk in a more transparent way.

The first two categories of these products will be available as swap interest rate futures (SIRRF) and treasury interest rate futures (TIRRF).

The 10-year TIRRF will be a long dated listed future or standardized forward contract on the US Treasury quarterly 10 year refunding auction.

JUST THE BEGINNING

Going forward, if the CFTC and other market participants are serious about futurizing the derivatives market instruments like the SIRRF and TIRRF will become more common. Investors, regulators, and buy side players alike stand to gain from solutions that are independent of somewhat dubious benchmarks like LIBOR and also reduce complexity across the board.

TIRRF - HOW IT WORKS

10 year TIRRFs are long dated listed futures or standardized forward contracts on the U.S. Treasury quarterly 10 year Refunding Auctions

Unlike the case markets, TIRRFs can trade years out into the future

Quoting is in yield. The price is simply (100 yield).

Each basis point will equal a round fixed dollar value of \$100.

Hedging \$100,00.00 of risk per basis point would simply require 1,000 contracts.

The settlement yield and delivery price is determined by the corresponding Treasury Auction. This is another patent - pending mechanism that guarantees convergence.

The notional delivery amount in millions is calculated as follows: [# of Contracts * \$100] / Dollar Value of a Basis Point per million of the new W1 bond.



EXAMPLE OF AN OPTION TRADE

On day 1, an investor believes the FED is behind the curve and decides rates will move higher, only this time he wants to limit his risk to \$100,000.

He buys 500 put option contracts of the 10 year TIRRF at 3.25% (a price of 96.75) with a 6 month expiration for a premium of 2 basis points.

His cost is 500 contracts * 2 basis points * \$100 for a total premium of \$100,000. His breakeven is 96.73.

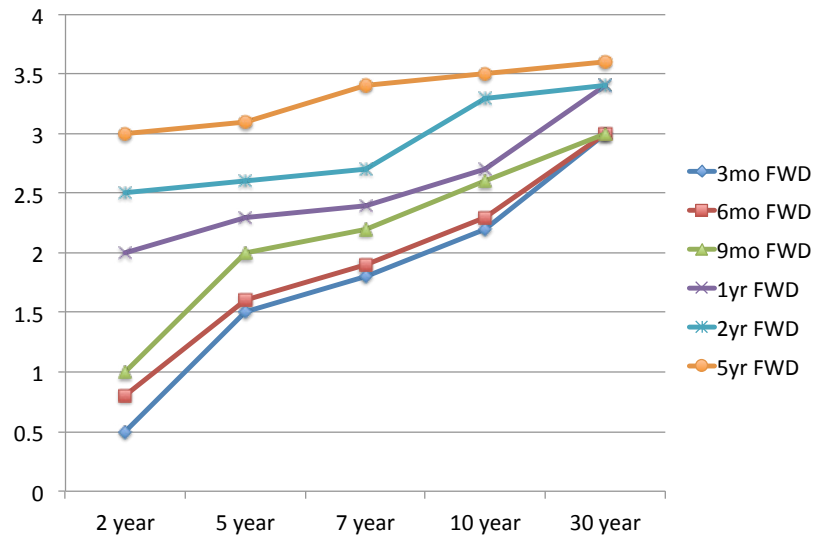
On day 2 the market sells off sharply and the option price moves from 2 basis point to 4. Mr Investor has a mark-to-market profit of \$100,000.

The investor can either hold his position into option expiration and become short 500 futures at 97.75 or he can realize the profit by closing out the transaction at 4 basis points

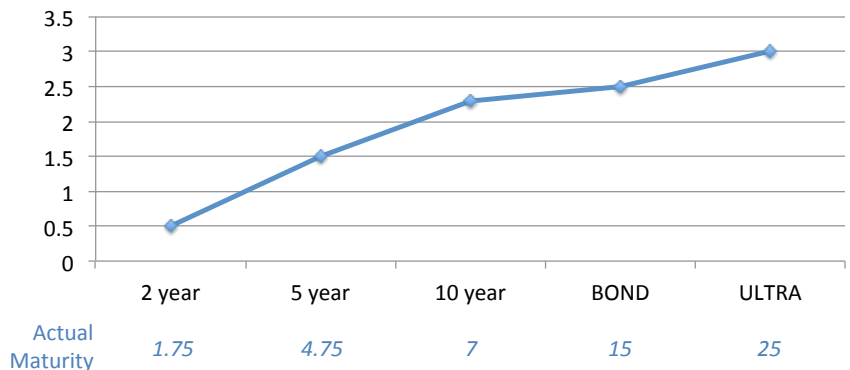
The investor was able to make an option transaction on a 10 year rate, 6 months forward, in an extremely simple and efficient format.

PROVIDES MULTIPLE FORWARD CURVES

- Logical liquid benchmarks
- No reliance on Repo
- Risk never changes
- Hedge ratios are simple
- Multiple products on multiple curves
- Thousands of strategies and relationships exist
- Logical option strikes where liquidity is concentrated



- Current Futures represent awkward and illiquid points on the curve as it is a "basket".
- Shifts in the Cheapest-to-Deliver can create massive changes in duration.
- Liquidity is sparse in deferred contracts as the basket of future bonds is unknown.
- Delivery is complex and can happen at any time during the delivery month.
- Huge tail risk exists as the contracts expire and the factor weightings shift to 1-1 relationship.



BART CHILTON

BIOGRAPHY



Senior Policy Advisor
DLA Piper

With a career spanning 30 years in government service, Commissioner Bart Chilton most recently served as a commissioner of the US Commodity Futures Trading Commission. Highly experienced in issues including financial services, agriculture, energy and the environment, he's a frequently quoted opinion leader on financial matters, and appears regularly on business television and on editorial pages. He came to the CFTC in 2007 following his nomination by President Bush and confirmation by the US Senate. In 2009, he was re-nominated by President Obama and reconfirmed by the Senate. He served as the chair of the CFTC's Energy and Environmental Markets Advisory Committee, and Global Markets Advisory Committee.

CHAS MANCUSO

BIOGRAPHY



Thought Leader
Next Level Derivatives

Innovative Thought Leader / Fixed Income Expert with 20+ years experience trading and managing large complex portfolios for top financial firms on Wall Street. Successfully transitioned from Trader to executive leadership role in spearheading innovative solutions for the industry in both products as well as infrastructure. Led the creation of a new derivatives clearing house for the NYSE and Depository Trust Clearing Corporation that provided unique margin efficiencies by combining cash and listed futures in netting down risks. Engaged Regulators and Exchanges for the adoption of a patent pending unique product set that will assist in accomplishing their goals of reducing Swaps Notional Value, reducing fails on the FED Wire and providing an alternative to LIBOR. Lend expertise in various consulting projects and have provided Expert Witness Testimony in lawsuits involving trading or financial products.

SOL STEINBERG

BIOGRAPHY



Founder
OTC Partners

Sol Steinberg founded OTC Partners in 2013. A boutique capital markets consulting firm, OTC Partners provides advisory, research, content creation, and business development services to clients of all sizes. As the founding principal of OTC Partners, Sol has become an accepted leader on global market issues. In this capacity, OTC partners helps clients across North America, Europe, Asia, and South America. Most recently Lima, Bogota, and Beijing.