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Single-Sided Swap Futures: A Better Way to Trade Interest Rate Swap Futures

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The 'futurization' of interest rate swap trading will take place in the next few years. But before swap futures trading can take off in popularity, a new contract design is needed. The Single Sided Swap Futures contract is the clear choice for the future, says Stonewyck Investments' Michael Hyland.

Nobody trades plain vanilla, over-the-counter, fixed vs. float interest rate swaps at a price of 102 19/32nds. So why would anyone want to trade a swap futures contract on a confusing price basis? No wonder the open interest and trading volume figures associated with existing swap futures products all over the world are moribund.

The swap market deserves a better futures product; preferably one that trades in the same units and vernacular as its underlying. Single Sided Swap Futures are that better tool.

These newly invented, patent pending futures contracts allow market participants to transact swap futures trades on the same terms as their OTC swap counterparts while still providing all of the benefits of the futures market (transparency, liquidity, standardization, netting, lower transaction and administration costs, etc.). These new futures contracts even offer the opportunity of "exchange for physical" trading (using only simple algebra) for the purposes of portfolio compression.

What Makes Single Sided Swap Futures Different?

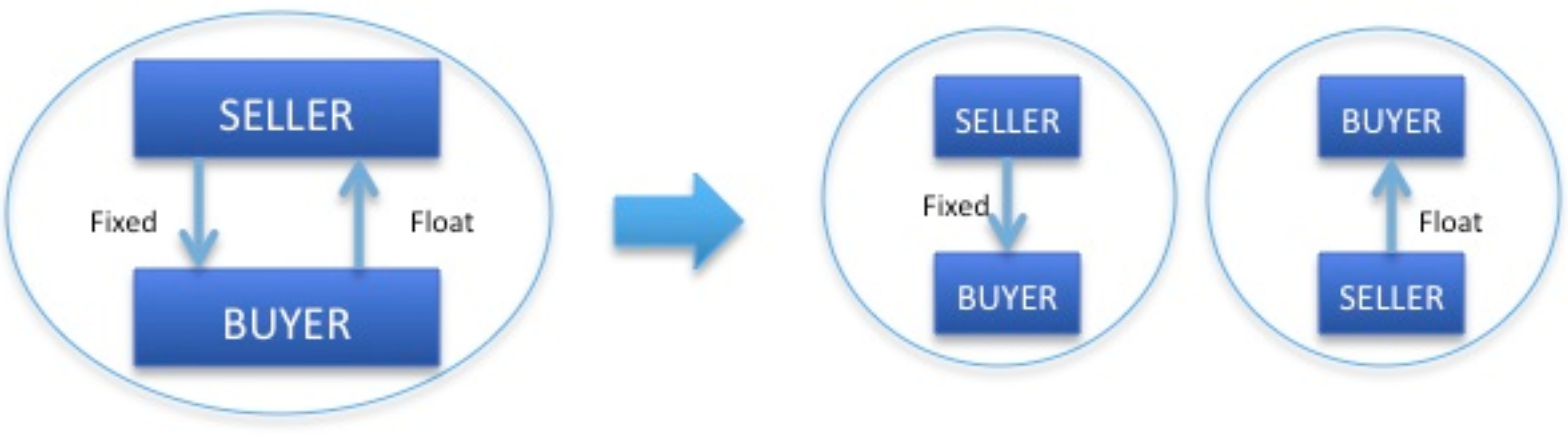
Single Sided Swap Futures differ from current swap futures in three distinct ways:

- Contract definition
- Fixed coupon amount
- Trading mechanism

These three differences allow Single Sided Swap Futures to be used like building blocks to recreate plain vanilla, fixed vs. float swaps of all notional and fixed rate amounts. And they are able to do so while enabling traders to execute swap futures trades in yield terms without having to exchange any upfront payments.

Different SSSF Contract Definition

The first SSSF change is to the contract definitions.



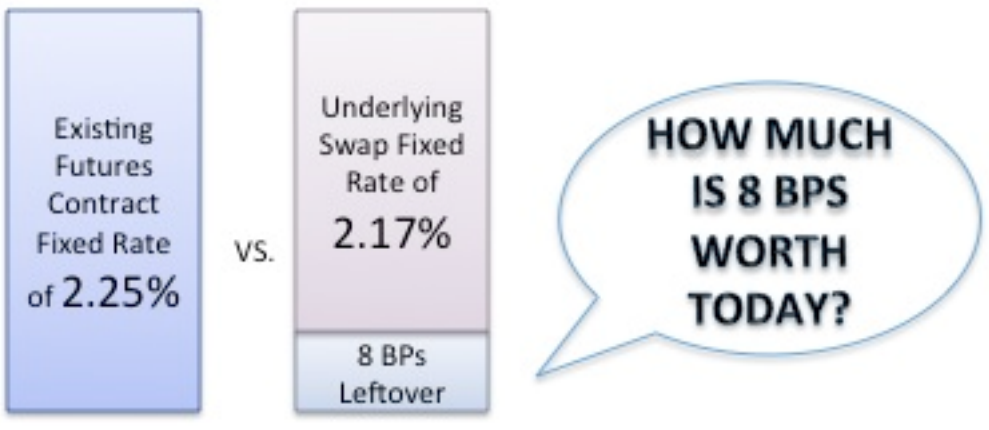
Current IRS futures contracts contain all of the cash flows of the Interest Rate Swap in one contract. SSSF contracts separate the cash flows into two contracts: one contract is for the floating leg of the swap (the "Float" contract) and one is for the fixed leg of the swap (the "Fixed" contract). The SSSF product gets its name from the fact that each futures contract represents only one single swap leg.

A comparison of sample contract details is found in the table below:

	CURRENT IRS FUTURE	SSSF "FIXED"	SSSF "FLOAT"
Fixed Rate Payer	Seller	Seller	---
Floating Rate Payer	Buyer	---	Seller
Notional Amount	$100,000	$100,000	$100,000
Floating Rate Option	USD-LIBOR-BBA	---	USD-LIBOR-BBA
Designated Maturity	3 Month	---	3 Month
IRS Effective Date	16-Sep-15	16-Sep-15	16-Sep-15
Termination Date	16-Sep-25	16-Sep-25	16-Sep-25
Fixed Rate Payment Dates	March & Sept 16	March & Sept 16	---
Floating Rate Payment Dates	Mar, Jun, Sep & Dec 16	---	Mar, Jun, Sep & Dec 16
Business Day(s)	NY and London	NY and London	NY and London
Business Day Convention	Modified Following	Modified Following	Modified Following
Fixed Rate Day Count	30/360	30/360	---
Floating Rate Day Count	Actual/360	---	Actual/360

Unit Rate of 1% for SSSF Fixed Leg

The second SSSF change is the definition of the coupon rate associated with the SSSF Fixed leg contract. Current IRS Futures contracts lock the fixed rate at some quasi-market round number and require upfront payments that are hard to intuitively understand.

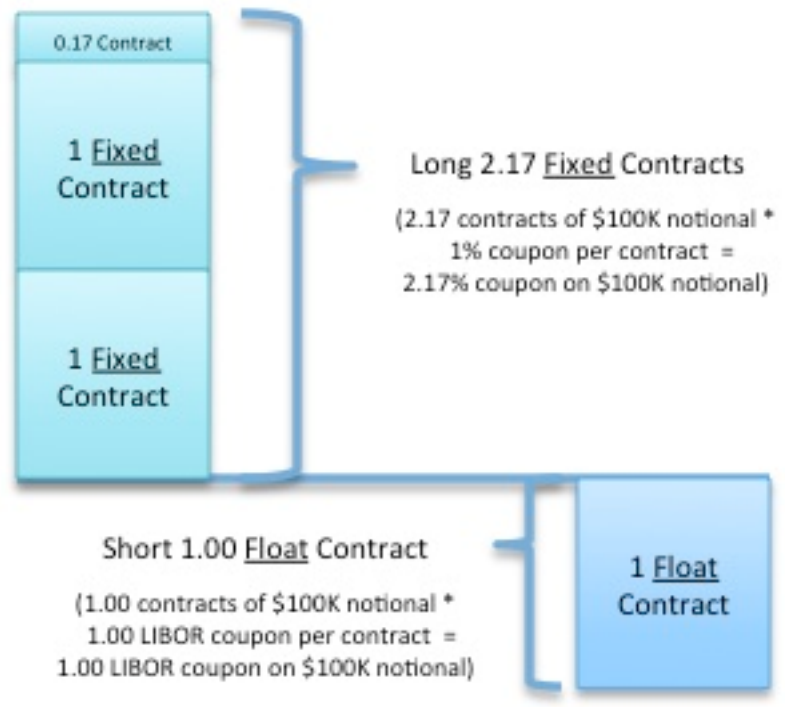


Rather than attempt to mimic a near market swap rate, SSSF contracts use a unit rate. Using a unit rate allows for a building block approach where the number of Fixed contracts traded is equal to the fixed rate of the underlying swap. For example, transacting at a yield of 2.17% just takes 2.17 SSSF contracts.

Spread Trading

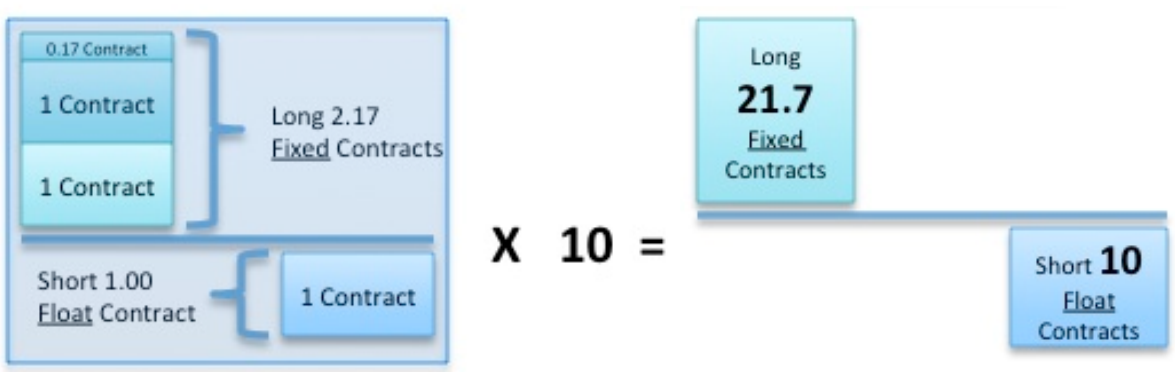
The third SSSF change is the way contracts are traded. The key to using SSSF contracts is to simultaneously buy one type of contract while selling the other type of contract via a spread trade. The ratio of contracts traded reflects the fixed of the underlying swap. No upfront payments are needed to complete the transaction.

For example, to replicate a receive fixed swap with a 2.17% coupon and a $100,000 notional:



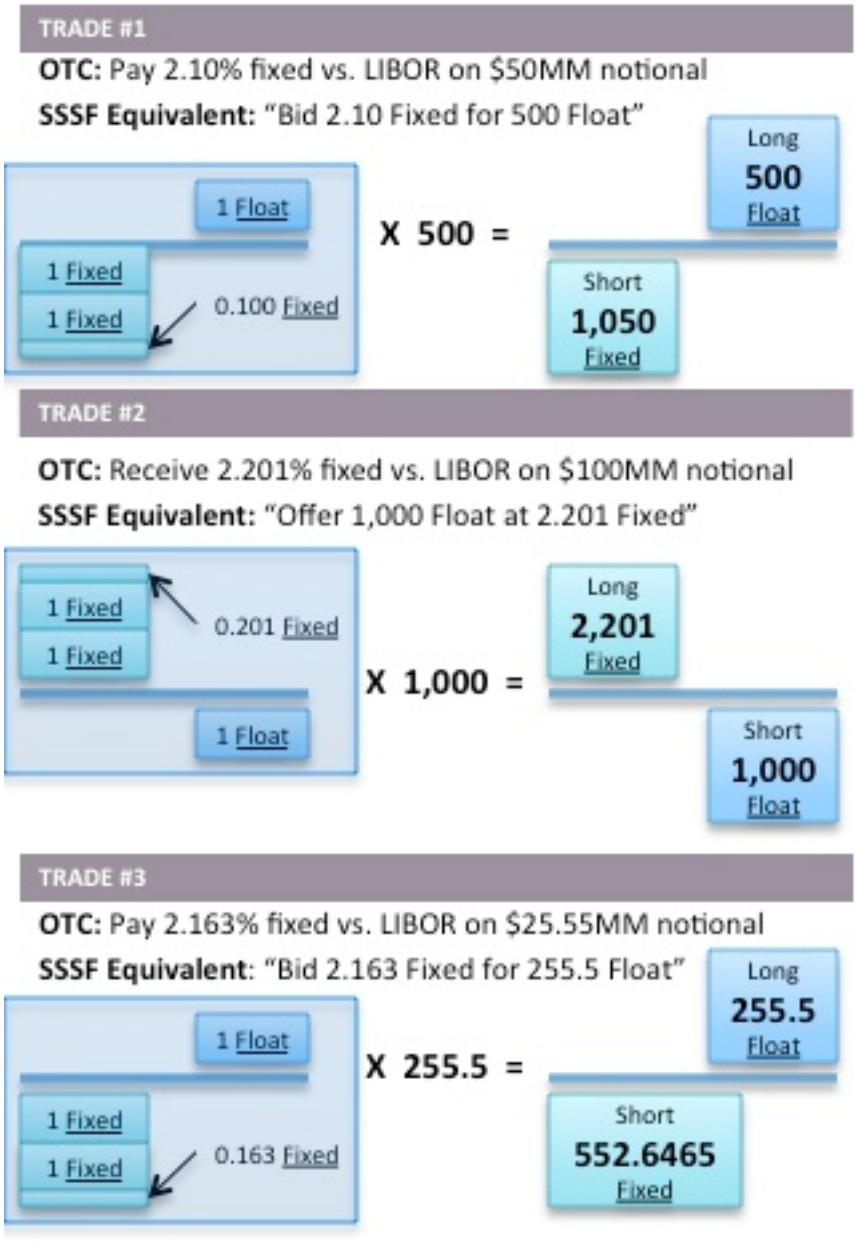
Anyone who was introduced to the interest rate swap concept as the simultaneous purchase and sale of fixed and floating rate bonds should see a parallel construction with the combination of the SSSF Fixed and Float contracts.

Increasing the notional of the desired underlying swap is as simple as trading the SSSF contract ratio in larger size. For example, to increase the notional of the preceding swap from $100,000 to $1,000,000 notional:



Netting

Just like all other types of futures contracts, the SSSF contracts would all be fungible and would all net. Float contracts would net against Float contracts, and Fixed contracts would net against Fixed contracts. For example, assume a counterparty executed the following three swap futures trades:



The resulting aggregate futures position would net as follows:

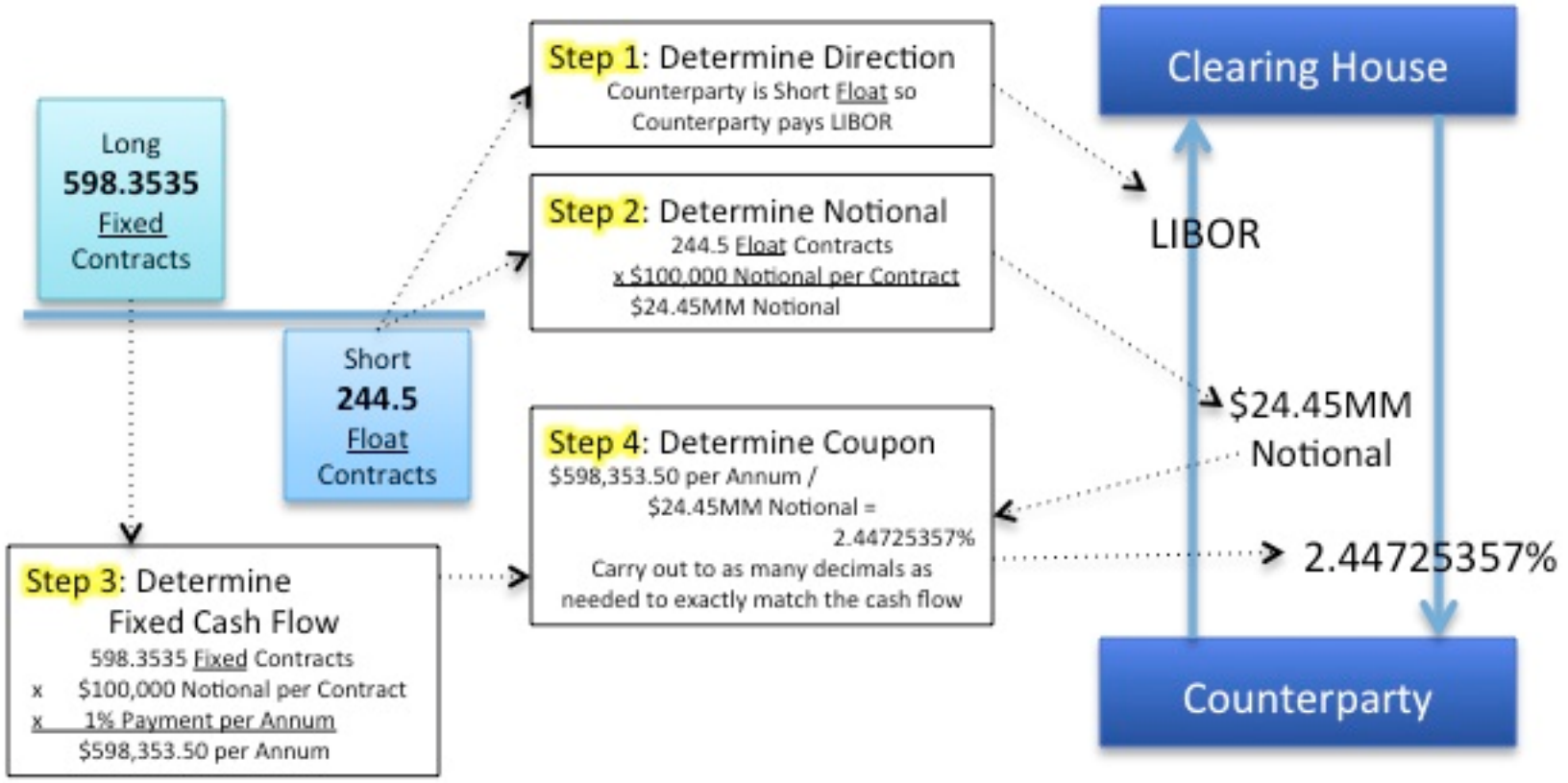
	SSSF "FIXED"	SSSF "FLOAT"
Trade #1	(1,050.00000)	500.00000
Trade #2	2,201.00000	(1,000.00000)
Trade #3	(552.64650)	255.50000
Net	**598.35350**	**(244.50000)**

Expiration

The expiration of SSSF contracts can be handled by either physical or cash settlement, depending on how the contract is implemented by the exchange.

Cash settlement would simply entail adopting one of the existing procedures used by current swap futures contracts and applying it to both the Fixed and Float SSSF contract individually.

Physical settlement into an OTC swap (presumably cleared by the same clearinghouse as the futures contracts) is more interesting to look at. A simple four-step process can convert any outstanding combination of Fixed and Float SSSF contracts to an OTC swap, as can be seen by the diagram below, which picks up from the netted futures positions above.



Daily Settlement Valuation

While SSSF contracts will predominantly trade as spread packages (as opposed to trading at a dollar price), it will be necessary for daily margin calculations for each contract to have a settlement price. This price should be consistent with the price of OTC swaps that are cleared by the same clearinghouse. Therefore, it is suggested that the same well-established methodologies that are already being used by clearinghouses for end-of-day, cleared OTC swap valuation also be adopted for SSSF contracts.

Note that the swap rate should be equal to the ratio of the Float vs. Fixed dollar prices

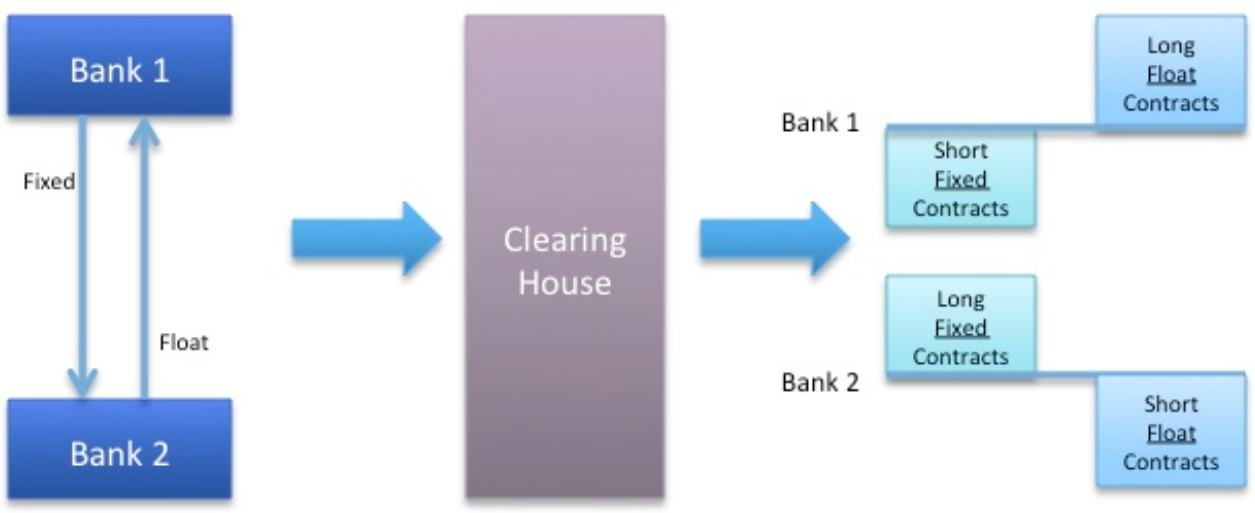
IMPLIED SWAP RATE	EXPIRATION MONTH	SSSFX "FIXED"	SSSFL "FLOAT"
2.00%	August	$9,038	$18,075
2.10%	September	$8,978	$18,853
2.15%	October	$8,939	$19,219
2.20%	November	$8,900	$19,581

Spread trading potential (in dollars)

Exchange for Physical

Swap counterparties will also be able to participate in SSSF contracts via "Exchange for Physical" transactions. As long as all of the details of a cleared OTC swap match the details of the SSSF contracts (dates, day counts, holidays, etc.), the SSSF contracts will provide the same economics as the cleared OTC swap and offer the benefit of netting with other SSSF trades. EFP transactions could facilitate either:

- newly traded spot start OTC swaps that were executed on a SEF and have the same spot trading date as the near month SSSF, or
- "old," previously executed trades where the remaining cash flow dates match the SSSF contract dates.



Conclusion

The “futurization” of interest rate swap trading will take place in the next few years. But before swap futures trading can take off in popularity, a new contract design is needed. The ability of Single Sided Swap Futures contracts to replicate the economics of any notional amount and fixed rate combination along with the intuition and ease associated with their use make the SSSF product the clear choice for the future.
