

10 Year Swaption Matrix



Definitions

Swap: A derivative in which one party exchanges cash flows based on a fixed interest rate (the swap rate) for cash flows based on 3 month LIBOR.

Forward: The forward 10 year swap rate.

Option Premium: Expressed as a percentage of portfolio value.

Option Strike: Expressed as basis points relative to the forward swap rate.

Receiver Swaption: An option to receive the fixed leg of a swap (i.e. long receiver is long duration).

Payer Swaption: An option to pay the fixed leg of a swap (i.e. long payer is short duration).

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10 yr Swap: 2.03%
10 yr Tsy: 1.89%
Swap Spread: 0.14%

		Receiver Swaption Premium					Payer Swaption Premium					
	Forward	-400 bps	-300 bps	-200 bps	-100 bps	0 bps	+100 bps	+200 bps	+300 bps	+400 bps	+500 bps	
Option Term	2-Year	2.59%	0.00%	0.00%	0.00%	0.86%	4.67%	2.15%	0.98%	0.46%	0.21%	0.10%
	3-Year	2.92%	0.00%	0.00%	0.09%	1.75%	5.73%	3.02%	1.57%	0.82%	0.43%	0.22%
	5-Year	3.32%	0.00%	0.01%	1.07%	3.17%	7.00%	4.26%	2.73%	1.86%	1.33%	0.99%
	10-Year	3.45%	0.00%	0.17%	2.28%	4.28%	7.75%	5.28%	3.64%	2.61%	1.95%	1.51%

For informational purposes only.

Premiums are based on current market characteristics and assumptions which change over time.

Past performance is not indicative of future results. There is a risk of loss.

Source: Bloomberg and The Clifton Group.

Historical Data available upon request: Info@TheCliftonGroup.com

Historical Swap Rates and Volatility

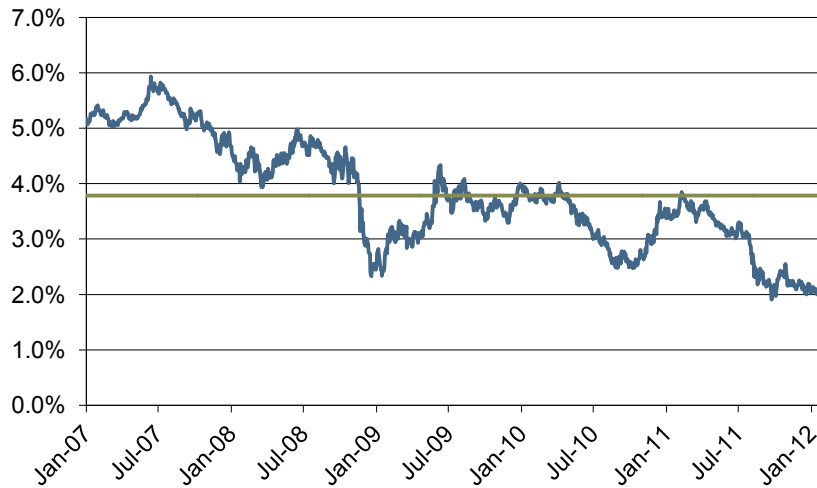


Definitions

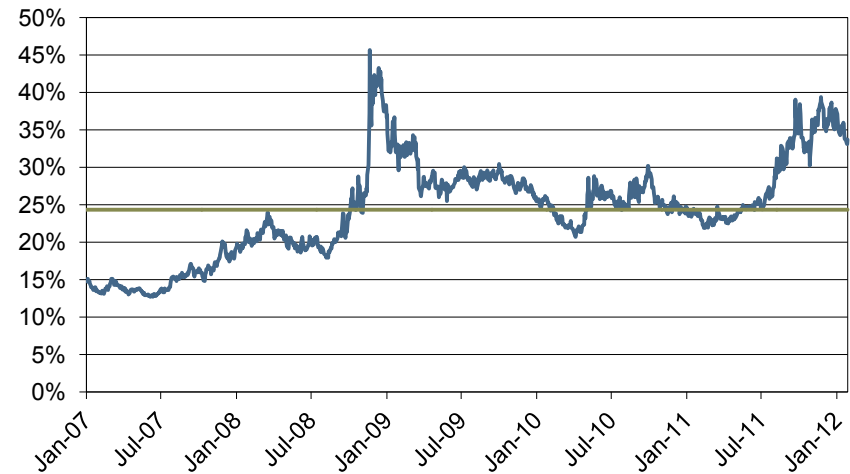
3yr x 10yr ATM: A 3 year option on a 10 year swap struck at the forward 10 year swap rate.

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10yr Swap Rates



3yr x 10yr ATM Volatility



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Source: Bloomberg

Historical Data available upon request: Info@TheCliftonGroup.com

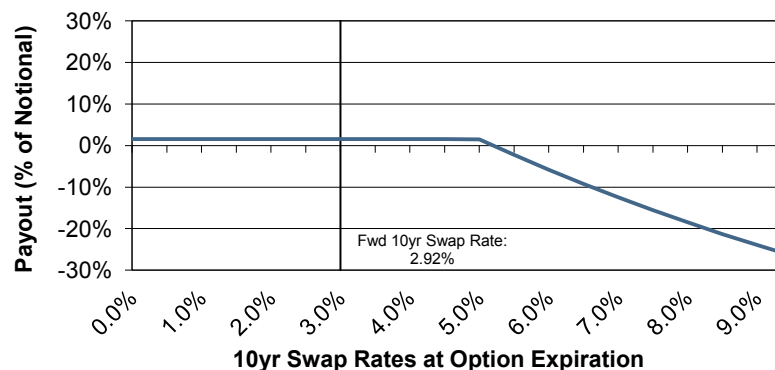
Swaption Trade Examples



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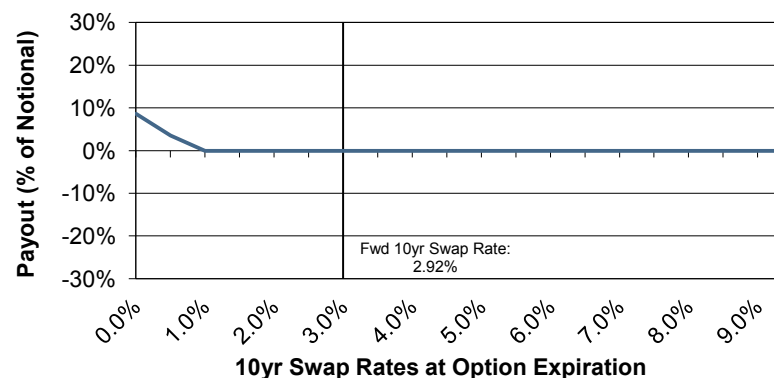
Example: Contingent Duration Extension

- Sell a 200 bps out of the money (4.9% Strike), 3yr option to pay fixed on a 10yr swap (3x10yr swaption).
- Collect 157 bps of premium upfront.
- If 10yr swap rates rise above the strike, replace swaption with a receiver swap consistent with tactically adding duration as rates rise.
- If 10yr swap rates remain below the strike, keep the premium.



Example: Hedging Risk of Declining Rates

- Buy a 200 bps out of the money (0.9% Strike), 3yr option to receive fixed on a 10yr swap (3x10yr swaption).
- Spend 9 bps of premium upfront.
- Collect if 10yr swap rates fall below option strike.
- If 10yr swap rates remain above the option strike, downside is limited to the premium paid.



Source: Bloomberg and The Clifton Group.

Historical Data available upon request: Info@TheCliftonGroup.com

HYPOTHETICAL PERFORMANCE RESULTS HAVE MANY INHERENT LIMITATIONS, SOME OF WHICH ARE DESCRIBED BELOW. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN. IN FACT, THERE ARE FREQUENTLY SHARP DIFFERENCES BETWEEN HYPOTHETICAL PERFORMANCE RESULTS AND THE ACTUAL RESULTS SUBSEQUENTLY ACHIEVED BY ANY PARTICULAR TRADING PROGRAM. ONE OF THE LIMITATIONS OF HYPOTHETICAL PERFORMANCE RESULTS IS THAT THEY ARE GENERALLY PREPARED WITH THE BENEFIT OF HINDSIGHT. IN ADDITION, HYPOTHETICAL TRADING DOES NOT INVOLVE FINANCIAL RISK, AND NO HYPOTHETICAL TRADING RECORD CAN COMPLETELY ACCOUNT FOR THE IMPACT OF FINANCIAL RISK IN ACTUAL TRADING. FOR EXAMPLE, THE ABILITY TO WITHSTAND LOSSES OR TO ADHERE TO A PARTICULAR TRADING PROGRAM IN SPITE OF TRADING LOSSES ARE MATERIAL POINTS WHICH CAN ALSO ADVERSELY AFFECT ACTUAL TRADING RESULTS. THERE ARE NUMEROUS OTHER FACTORS RELATED TO THE MARKETS IN GENERAL OR TO THE IMPLEMENTATION OF ANY SPECIFIC TRADING PROGRAM WHICH CANNOT BE FULLY ACCOUNTED FOR IN THE PREPARATION OF HYPOTHETICAL PERFORMANCE RESULTS AND ALL OF WHICH CAN ADVERSELY AFFECT ACTUAL TRADING RESULTS. FOR ILLUSTRATIVE PURPOSES ONLY. ACTUAL PORTFOLIO RETURNS WILL VARY AND NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN. ALL MATERIAL HAS BEEN OBTAINED FROM SOURCES BELIEVED TO BE RELIABLE, BUT ITS ACCURACY IS NOT GUARANTEED. THERE IS NO WARRANTY AS TO THE CURRENT ACCURACY OF, NOR LIABILITY FOR, DECISIONS BASED ON THIS INFORMATION.