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A current look at ISE FX Options using the US dollar/ Canadian dollar), a look at the “Loonie”

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For the sake of simplicity, the examples that follow do not take into consideration commissions and other transaction fees, tax considerations, or margin requirements, which are factors that may significantly affect the economic consequences of a given strategy. An investor should review transaction costs, margin requirements and tax considerations with a broker and tax advisor before entering into any options strategy.

Options involve risk and are not suitable for everyone. Prior to buying or selling an option, a person must receive a copy of CHARACTERISTICS AND RISKS OF STANDARDIZED OPTIONS. Copies have been provided for you today and may be obtained from your broker, one of the exchanges or The Options Clearing Corporation.

Any strategies discussed, including examples using actual securities price data, are strictly for illustrative and educational purposes and are not to be construed as an endorsement, recommendation or solicitation to buy or sell securities.

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Outline

- Current news on the Canadian “Loonie”
- What is CDD?
- Brief description of ISE FX options
- What are spreads?
- Debit, credit spreads defined
- Why an investor would use debit or credit spreads?
- The risk and reward of debit and credit spreads
- How can debit spreads be implemented using ISE FX options?
- Some potential trades in CDD
- Summary

Foreign currency market

- The FX market is the largest and most liquid market in the world
- The currencies are traded in pairs, investors buy the desired currency and sell the other currency
- The cash or spot market is available for the various currencies, a new trading alternative is the FX options market

ISE FX options are based on per US$

- Using the ISE FX options trading convention, the U.S. dollar is listed first, the valuation is expressed as the number of the units of the other currency per U.S. dollar.

- This trading convention makes it easy to remember, if you are bullish on the USD an investor could buy calls, if an investor is bearish the investor could buy puts

ISE FX option offerings (July 24)

- USD/EUR (ticker symbol, **EUI**) 63.74
  (0.6374 x 100)
- USD/GBP (ticker symbol, **BPX**) 50.35
  (0.5035 x 100)
- USD/JPY (ticker symbol, **YUK**) 107.84
  (107.84 x 1) the rate modifier is 1 for JPY
- USD/CAD (ticker symbol, **CDD**) 102.27
  (1.0227 x 100)
- USD/CHF (ticker symbol, SFC) 103.86
  (1.0386 x 100)
- USD/AUD (ticker symbol, AUX) 103.86
  (1.0386*100)

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How do I make my FX forecasts?

- If you are concerned about too much financial exposure to a certain currency an option hedging strategy may be appropriate
- Or, if an investor has a view on a specific currency, the investor may want to "pair" that currency with another currency with the reverse view (**CDD**, EUI, BPX, YUK, SFC and AUX)
- If you are familiar with equity options, think of currencies as a macro-economic view, rather than the micro-economic view for individual equities
- What do you think about the US dollar/Canadian dollar currently (CDD), are you bullish, bearish or neutral?

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Features Of ISE FX Options

- Options on exchange rates
- U.S. dollar based
- .50 strike prices
- Premium quoted in U.S. dollars
- European Exercise
- Cash-settled
- Noon Settlement/Option Friday
- Noon Buying Rate FRB of NY
- Available in a conventional U.S equity brokerage account
- Continuous Two-Sided Quotes
- Trading Hours 9:30 – 4:15 EST

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Views on FX can be implemented at ISE

- Using ISE cash settled FX options your views on FX can be easily implemented through the using of many of the familiar options strategies including using debit or credit spreads

Why Trade FX options?

- You can make a forecast on any of the SEC approved currency pairs and place the appropriate trade using ISE FX options
- For example, if you feel the U.S. economy is weak and will weaken and the Canadian economy is strong and will further strengthen you can execute that forecast using ISE cash settled FX options
- Or, an investor desires to hedge a particular currency risk
- Unlike most markets where you buy something outright, FX you are always buying one currency and selling another (currency pair)

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Options create choices

- Options allow investors the ability to forecast their views of the foreign exchange market with limited risk
- Calls, or call spreads can be purchased if you are bullish on CDD (USD/CAD)
- Puts, or put spreads can be purchased if you are bearish on CDD (USD/CAD)
- Debit spreads are defined as buying the strike price with more value (lower strike call or higher strike put) and selling the strike price with less value (higher strike call or lower strike put)

Credit spreads too

- Credit spreads allow investors a limited risk method of attempting to profit by selling options
- Credit call spreads could be implemented if you are bearish on the USD/CAD
- Credit put spreads could be implemented if you are bullish on the USD/CAD
- Credit spreads are defined as selling the strike price with more value (lower strike call or higher strike put) and buying the strike price with less value (higher strike call or lower strike put)

Views on FX can be implemented at ISE

- Using ISE cash settled FX options your views on FX can be easily implemented through the use of many of the familiar options strategies.
- The ISE now offers exchange traded options on the US dollar/ Canadian dollar exchange rate
- US dollar/Canadian dollar *100 = CDD
- If you are bearish on the USD/CAD rate simply buy puts if you are bullish on the USD/CAD buy calls

Spreads defined

- The simultaneous buying and selling of at least two options with different strike prices. The objective is to profit from the changing relationship of the spread itself
- The goal for a debit spread is for the spread to widen to the maximum amount (the difference between the two strikes), at expiry this will yield the maximum profit. The maximum loss is limited to the debit paid for the spread
- The goal for credit spread is for the spread to narrow to zero, however the maximum loss on a credit spread is the width of the spread less any premium received for the initial credit trade

Why trade spreads?

- Spread trading offers unique tradeoffs
  - Investors can hedge their volatility risk and their time decay risk if they so choose to
  - The trade off for reducing those risks is that you cap your potential gains at the strike price sold
    - This is true for both credit spreads and debit spreads although the process for calculating the maximum profit and maximum risk for the debit or credit spread strategy is different

Types of vertical spreads

- Bull call (debit spread)
- Bear call (credit spread)
- Bull put (credit spread)
- Bear put (debit spread)

Let’s first concentrate on debit spreads

- **The most an investor can lose on a debit spread is the initial debit paid**
- **Bull call spread-** Buy the lower strike call and sell the higher strike call with the same expiration month as a hedge
- **Bear put spread-** Buy the higher strike put and sell the lower strike put with the same expiration month as a hedge

Why use debit spreads?

- An investor would like to implement a price forecast, and would also like to possibly reduce their time decay and volatility risk
- The use of spreads allows for a pre-defined risk
- Unique tradeoffs are created by buying one option and selling another option as a hedge
- Hopefully the spread will widen after it is sold and the investor can earn a profit
- The ultimate goal is to earn the maximum profit for the debit spread which can earned at the higher strike call or the lower strike put at expiration

The use of debit spreads

- Debit spreads can be used by investors looking to reduce their risk of the purchased option by selling a higher strike call (or a lower strike put) as a hedge
- A full understanding of the strategy is very important
- Most importantly the debit spreads strategy should complement your overall market forecast

Complementing your forecast with the appropriate debit spread strategy

- If an investor is bullish on CDD- Bull call spreads may be the preferred debit spread strategy
- If an investor is bearish CDD- Bear put spreads may be the preferred debit spread strategy
- Remember CDD is calculated as follows:
  - USD/CAD *100
  - If the USD is rallying, CDD will be increasing
  - If the USD is sliding, CDD will be falling

Risk and reward of debit spreads

- The maximum profit can be earned at the strike price sold at expiration
- Maximum profit (at expiration) for a debit spread can be calculated as follows: the difference between the strike price less any premium paid for the spread is the debit spread buyer's maximum profit
- The maximum profit (at expiration) can only be earned if the underlying instrument closes at or above the higher strike sold at expiration (calls) or at or below the lower strike price sold at expiration (puts)

Risk and reward of debit spreads

- The maximum risk of buying a debit spread is the premium paid for the debit spread
- If the underlying closes at or below the strike price purchased (for calls) the investor can lose their debit paid for debit call spreads
- If the underlying closes at or above the strike price purchased (for puts) the investor can lose their debit paid for debit put spreads

And now let’s focus on credit spreads

- **The most an investor can lose on a credit spread is the difference in strike prices less any premium received**
- **Bear call spread-** Buy the higher strike call and sell the lower strike call with the same expiration month. The higher strike call is purchased as a hedge
- **Bull put spread-** Sell the higher strike put and buy the lower strike put with the same expiration month as a hedge

Credit spreads

- Why use credit spreads? Typically an investor would like earn money by selling options, but does not want the unlimited risk of selling naked options
- The use of spreads allows for a pre-defined risk
- Unique tradeoffs are created by buying one option and selling another option as a hedge
- Hopefully the spread will narrow after it is sold and the investor can earn a profit
- The ultimate goal is to earn the maximum profit for the credit spread which can earned at the lower strike call or the higher strike put at expiration

Credit spreads

- Credit spreads can be used by investors looking to reduce their risk of the option sold by buying a higher strike call (or a lower strike put) as a hedge
- A full understanding of the strategy is very important
- Most importantly the credit spreads strategy should complement your overall market forecast

Complimenting your forecast

- If an investor is bullish on CDD- Credit bull put spreads may be the preferred debit spread strategy
- If an investor is bearish CDD- Credit bear call spreads may be the preferred debit spread strategy
- Remember CDD is calculated as follows:
  - USD/CAD *100
  - If the USD is rallying, CDD will be increasing
  - If the USD is sliding, CDD will be falling

Risk and reward of credit spreads

- The maximum profit can be earned at the strike price sold at expiration or lower for credit call or higher for credit put spreads
- Maximum profit for a credit spread is the credit earned
- The maximum loss for a credit spread can be calculated as follows: the difference between the strike price less any premium received for the spread is the credit spread seller's maximum loss
- The maximum profit can only be earned if the underlying instrument closes at or above the higher strike sold at expiration (puts) or at or below the lower strike price sold at expiration (calls)

Debit or credit spreads which is better?

- Contrary to what many investors may believe, there is no inherent economic advantage in selecting credit spreads relative to debit spreads

- The risk and reward of each strategy must be weighed, each investor can decide based on their own goals and their own risk tolerances

Selection of strikes and months

- The selection of strike prices and months should be based on the investor's forecasts
- The options market pricing is based on risk and reward scenarios; out-of-the-money (OTM) spreads will be quoted at lower prices with a higher probability for remaining out-of-the-money compared to at-the money (ATM) spreads that will be quoted at higher quotations but with a greater chance of expiring in-the-money
- In-the-money (ITM) spreads cost the most in nominal terms, but have the highest probability of remaining in the money at expiration

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Selection of strikes and months

- Risk and reward must always be considered prior to entering any options transaction
- The selection of timing should be based on each investor's forecasts
- OTM option spreads with less time will tend to be quoted at lower prices compared to OTM spreads with more time

ITM, ATM, OTM which is best for buyers?

- Each spread has its own risk reward characteristics
- ITM spreads have the highest nominal (given short time durations) prices and highest probability of remaining in the money
- ATM spreads have lower nominal prices relative to ITM and less probability of expiring in the money at expiration
- OTM spreads have the lowest nominal prices of the three types, they also have the lowest probability of expiring in the money at expiration

Lots of choices for spreads (35 volatility, asset $136)

130/140 140/150 150/160	ITM	ATM	OTM
1 month	40 delta	36 delta	27 delta
4 months	12 delta	11 delta	10 delta
15 months	8 delta	6 delta	4 delta

The benefits of debit spreads

- Spreads in general move more moderately in price than the single legged strategies (this can be both an advantage and disadvantage depending on the underlying movement)

- Debit spreads can help mitigate both the time decay risk and volatility risk

Risk and reward for debit spreads

- Understanding probability can help investors select the best spreads to buy based on their own financial goals and their own risk tolerances

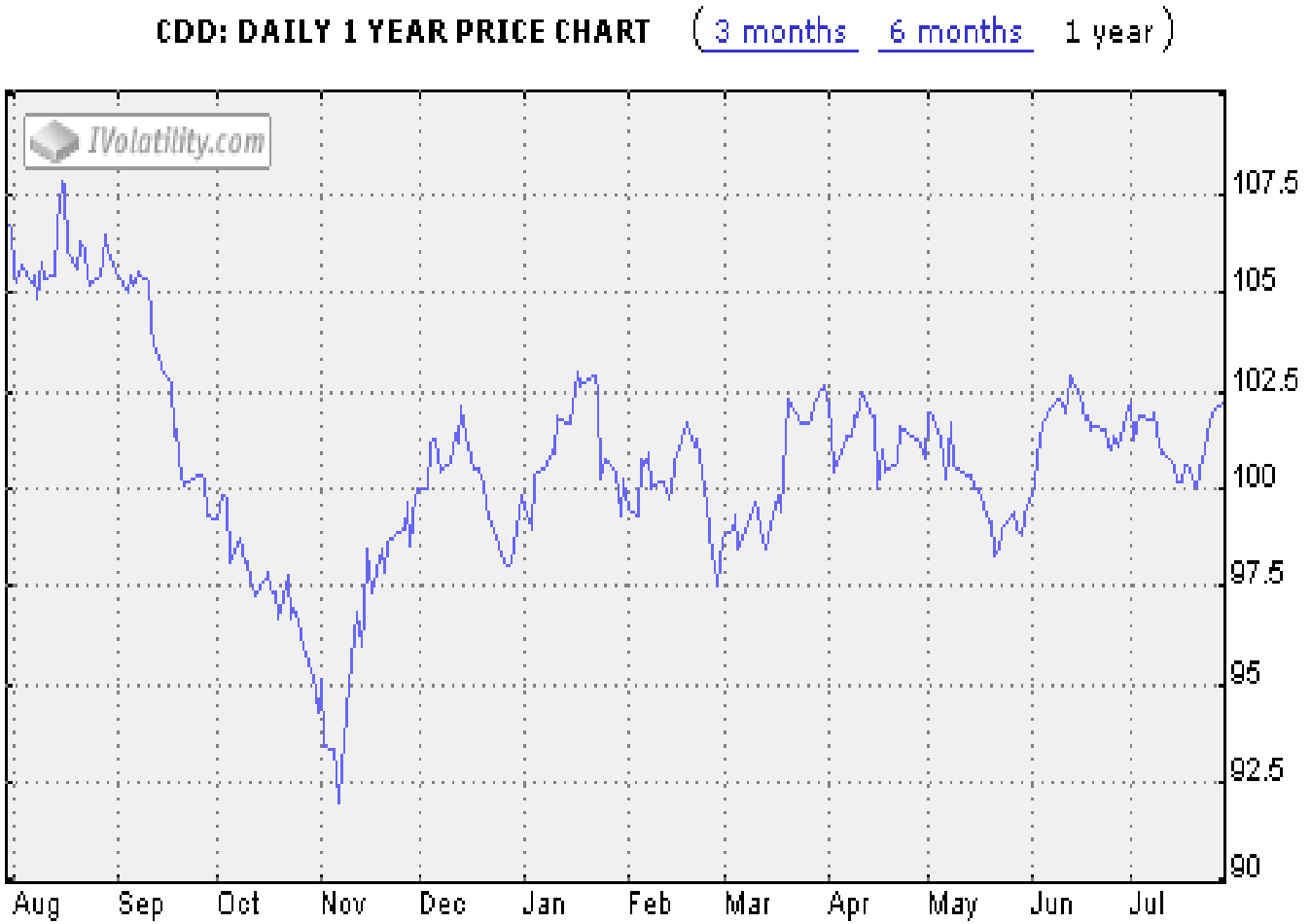
Option spreads can be used in many markets

- Equity option spreads
- ETF option spreads
- Equity broad index option spreads
- Equity narrow based index option spreads
- Foreign exchange option spreads

10 month changes in exchange rates

	9/09	7-24-08	Change
CDD	105.46	102.27	-3.02%
YUK	113.75	107.84	-5.19%
EUI	72.42	63.74	-11.98%
BPX	49.21	50.35	2.18%

CDD


CDD: DAILY 1 YEAR PRICE CHART
(3 months 6 months 1 year)
IVolatility.com
107.5
105
102.5
100
97.5
95
92.5
90
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul

Implied volatility of CDD

Using ISE FX options you can implement your FX views

- Spread trading allows investors to create unique payoffs
- Spreads allow for the reduced time decay risk and volatility risk
- Just remember, one disadvantage is that you limit your upside due to selling an option against your purchased option

Leverage from spreads

- The leverage from spreads will come from the distance from the exchange rate and the strike prices selected in your spread
- Deep-in-the-money options will be most expensive with the likelihood of success high
- At-the-money options will be less expensive with potential for success moderate
- Far-out-of-the-money options will be cheapest in nominal terms with the likelihood of success much lower

A CDD example 102.27 reference

Strike		2month call	3month call		2 month put	3 month put
98		4.36	4.61		.03	0.15
100		2.46	2.91		.10	0.43
102		0.96	1.58		.60	1.10
104		0.24	0.72		1.87	2.23
106		0.10	0.37		3.70	3.78

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CDD debit or credit spreads, you choose

102.27	2 month	3 month
98/102	3.40	3.01
100/104	2.22	2.19
102/06	0.86	1.21
Put spreads		
	2 month	3 month
106/102	3.10	2.68
104/100	1.77	1.80
102/98	0.57	0.95

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2 month call risk/reward tradeoffs

Debit call spread	Risk	Reward	Credit call spread	Risk	Reward
98/102	3.40	0.60	98/102	0.60	3.40
100/104	2.22	1.78	100/104	1.78	2.22
102/106	0.86	3.14	102/106	3.14	0.86

3 month call risk/reward tradeoffs

Debit call spread	Risk	Reward	Credit call spread	Risk	Reward
98/102	3.01	0.99	98/102	0.99	3.01
100/104	2.19	1.91	100/104	1.91	2.19
102/106	1.21	2.79	102/106	2.79	1.21

2 month put risk/reward tradeoffs

Debit put spread	Risk	Reward	Credit put spread	Risk	Reward
98/102	0.57	3.43	98/102	3.43	0.57
100/104	1.77	2.23	100/104	2.23	1.77
102/106	3.10	0.90	102/106	0.90	3.10

3 month put risk/reward tradeoffs

Debit call spread	Risk	Reward	Credit put spread	Risk	Reward
98/102	0.95	3.05	98/102	3.05	0.95
100/104	1.80	2.20	100/104	2.20	1.80
102/106	2.68	1.32	102/106	1.32	2.68

What is the future for US dollar/Can dollar rate?

- The symbol is CDD, it represents the USD/CAD *100
- The CDD rate used is 102.27
- During periods of a rising US dollar the value will increase, during periods of US weakness the value will decrease
- If you are bullish you can buy calls, call spreads, sell puts or put spreads
- If you are bearish you can buy puts, put spreads, sell calls or call spreads

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Debit or credit spreads?

- There is no inherent advantage of trading debit spreads or credit spreads
- Investors must be pre-approved for spread trading
- Spread trading allows for more moderate trading results due to the simultaneous selling of an option against the purchased option
- Debit or credit spreads both work. Theoretically, there isn't any advantage in one strategy or another
- Spreads allow investors to tailor the risk reward payoffs that are suitable for them based on the strike prices bought and sold and the resulting debit or credit amounts

Summary of trading debit spreads using ISE FX options

- ISE FX options allow you to implement your views on the foreign exchange market
- ISE FX options are European style, hence they cannot be exercised early (an advantage for option sellers)
- European style does not allow for early exercise, but investors can always close out their option positions on any trading day prior to expiration

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Summary of trading debit spreads using ISE FX options

- Trading debit spreads allow for the mitigation of both volatility and theta risks. Debit spreads have a limited pre-defined risk
- Trading credit spreads allow for a limited risk method of selling options
- The goal of buying debit call or put spreads is to the potential widening of the original spread bought
- The goal of selling credit call or put spreads is the potential narrowing of the original spread sold
- A full understanding of the desired spread strategy is recommended prior to entering any options transaction
- Most importantly the spread strategy should complement your overall market forecast

Commonly asked questions regarding ISE FX Options

- Do the “greeks” work? Yes, if an investor inputs the correct interest rate and dividend yield (US risk-free rate) option calculators will work and of course the volatility
- Can I get volatilities for the ISE FX pairs? Yes, Ivolatility.com has the data on their site
- How much do these options cost? Same as equity options, $1.50 options costs $150
- How does cash settlement work? If the exchange rate is above the strike price (calls) or below (puts) at expiry the options have intrinsic value. i.e. If an investor holds a 100 put and CDD closes at $97 the option is worth $3 and $300 is deposited into your account at expiry
- How does the term “pips” relate to ISE FX Options. Roughly speaking 100 pips equals 1 ISE point
- What does dollar relative mean? The base currency is the US dollar, if the US dollar increases relative to the foreign currency the value of the pair increases, if the dollar decreases the value of the pair decreases

More information on ISE FX options

- www.ise.com/fx
- www.ise.com/webinars
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