A VIX for Canada

October 14, 2010

See what others don't,
so you can do what others can't.™

What is VIX®?

- **Introduced in U.S. in 1993 by CBOE; reformulated in 2003.**

- **Benchmark for implied volatility for the U.S. equity market, as represented by the S&P 500.**

- **Commonly referred to as the "investor fear gauge"; widely used as a market indicator and trading signal.**

- **Measures constant 30 day implied volatility based on European style index option quotes.**
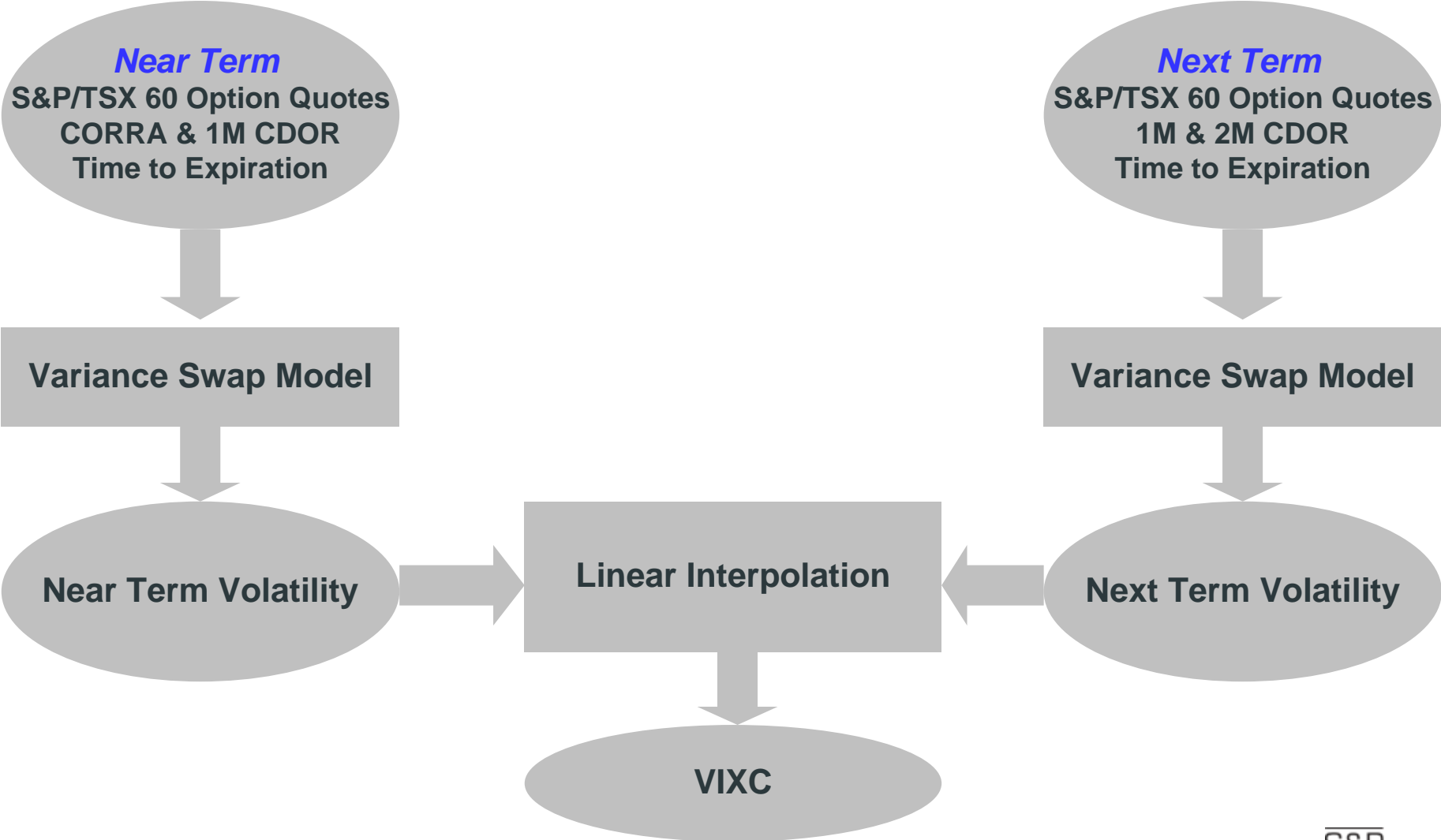
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Introducing…

S&P/TSX 60 VIX

- **A VIX for Canada will be launched on October 18, 2010. It will serve as a "Opportunity" gauge for the Canadian market.**

    - Real time index of 30-day implied volatility based on about 25,000 quotes per day on two near term options on S&P/TSX 60 index.

    - Same methodology as the CBOE VIX for the U.S. equity market, with slight tweak to accommodate the local market.

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VIXC Calculation in a Nutshell

Near Term
S&P/TSX 60 Option Quotes
CORRA & 1M CDOR
Time to Expiration

Next Term
S&P/TSX 60 Option Quotes
1M & 2M CDOR
Time to Expiration

Variance Swap Model

Variance Swap Model

Near Term Volatility

Linear Interpolation

Next Term Volatility

VIXC

S&P/TSX 60 VIX

$$R_1 = \frac{N_y}{N_{T_1}} \left\{ T_{on} R_{on} \left[\frac{N_{1m} - N_{T_1}}{N_{1m} - N_{on}} \right] + T_{1m} R_{1m} \left[\frac{N_{T_1} - N_{on}}{N_{1m} - N_{on}} \right] \right\}$$

$$R_2 = \frac{N_y}{N_{T_2}} \left\{ T_{1m} R_{1m} \left[\frac{N_{2m} - N_{T_2}}{N_{2m} - N_{1m}} \right] + T_{2m} R_{2m} \left[\frac{N_{T_2} - N_{1m}}{N_{2m} - N_{1m}} \right] \right\}$$

$$\sigma^2 = \frac{2}{T} \sum_i \frac{\Delta K_i}{K_i^2} e^{RT} Q(K_i) - \frac{1}{T} \left[\frac{F}{K_0} - 1 \right]^2$$

$$VIXC = \sqrt{ \frac{N_y}{N_m} \left\{ T_1 \sigma_1^2 \left[\frac{N_{T_2} - N_m}{N_{T_2} - N_{T_1}} \right] + T_2 \sigma_2^2 \left[\frac{N_m - N_{T_1}}{N_{T_2} - N_{T_1}} \right] \right\} } * 100$$

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VIX vs. VIXC

	S&P/TSX 60 VIX	S&P 500 VIX
Strikes	Same option selection criteria. Full strip of strikes with non-zero bid prices.	
Calculation	Same variance swap pricing mechanism of weighted averaging of entire strip of call and put quotes.	
Input Option Price	Option quotes (bid / ask)	
Rolling Convention	Rolls on the 5th calendar day prior to the expiration of near-term options.	Rolls when the near-term options have less than a week to expiration.
Risk Free Rate	Uses interpolated rates of CORRA, 1, 2 and 3 Month CDOR matching to relevant expiry date of underlying options.	Uses the bond-equivalent yield of the U.S. T-bill maturing closest to the expiration dates of relevant SPX options.

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VIXC vs. MVX

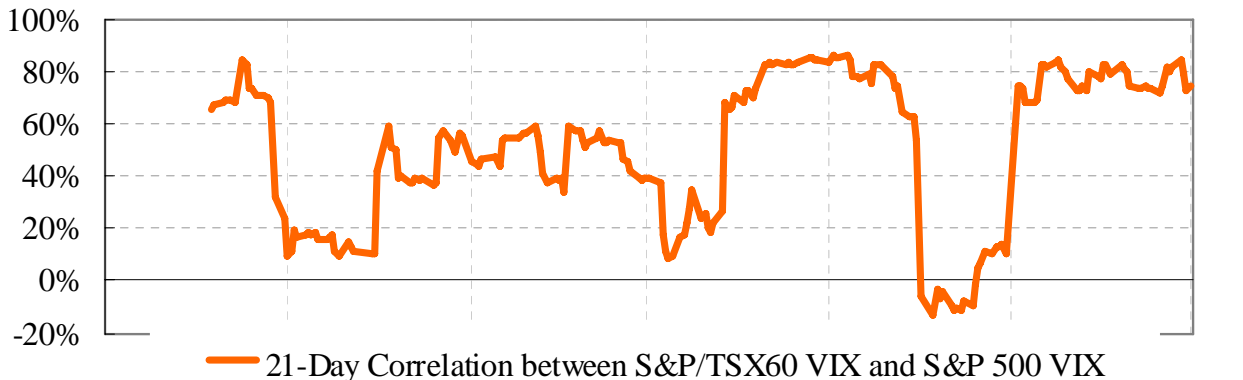|	S&P/TSX 60 VIX	MVX
Strikes	Full strip of strikes with non-zero bid prices.	At-the-money options only.
Calculation	Variance swap pricing mechanism of weighted averaging of entire strip of call and put quotes.	Black-Scholes model.

Chart legend: S&P/TSX 60 VIX (red), MVX (teal). Y-axis 0 to 40. X-axis from 10/1/09 to 10/1/10.
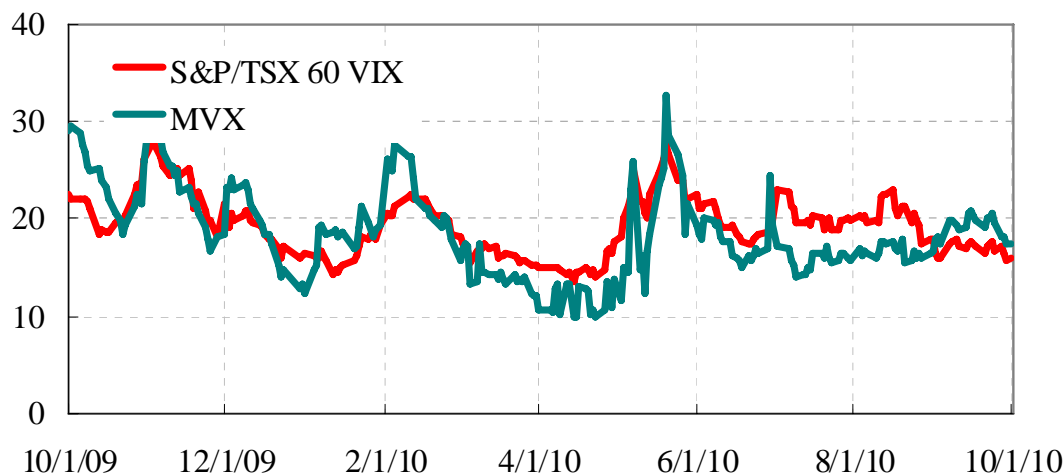
- Source, S&P Indices, Montreal Exchange. Data shown above is from October 1, 2009 through September 30, 2010. Charts and graphs are provided for illustrative purposes only. S&P Indices are rules based statistical composites and their returns do not include the payment of any sales charges or fees an investor would pay to purchase the securities the Indices represent. Such costs would lower performance. Past correlation and performance is not an indication of future results. It is not possible to invest directly in an Index. The S&P/TSX 60 VIX Index is currently not in existence and is planned to be launched on October 18, 2010 with a base date of October 1, 2009. All data presented reflects hypothetical historical performance based on a number of assumptions. Please see the Performance Disclosure at the end of this document for more information on some of the inherent limitations associated with back-tested Index data and performance information.
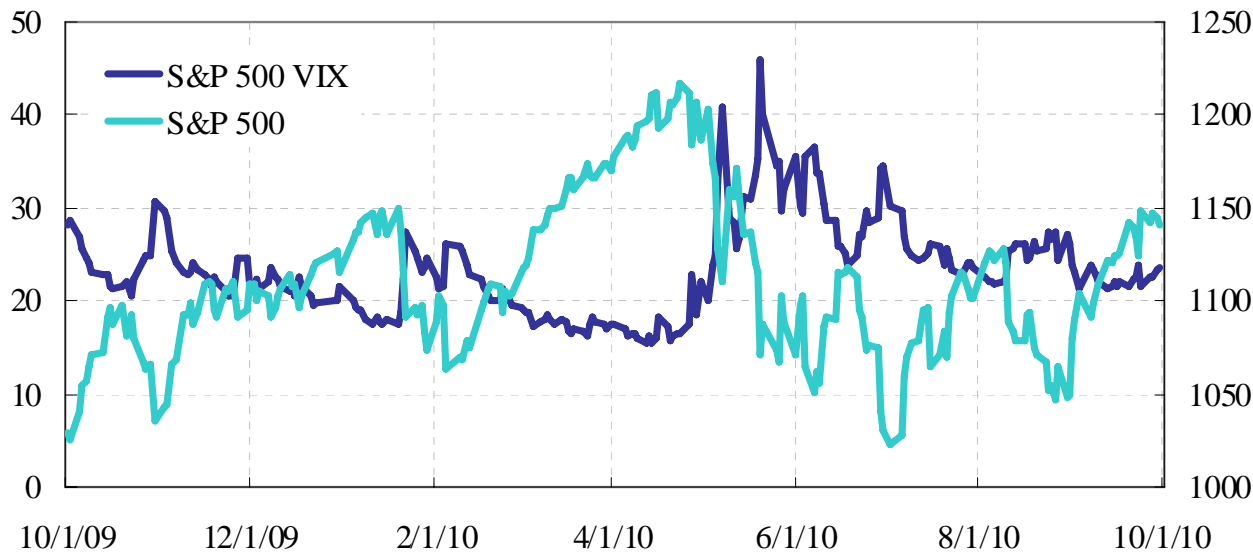
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S&P 500 VIX vs. S&P/TSX 60 VIX

Canada VIX is positively correlated to the U.S. VIX. The moving average of 21-day correlation since Oct-2009 is 52%.

Chart legend: S&P/TSX 60 VIX (red), S&P 500 VIX (blue)

21-Day Correlation between S&P/TSX60 VIX and S&P 500 VIX

Source, S&P Indices, Bloomberg. Correlations are calculated using daily returns from October 1, 2009 through September 30, 2010. Charts and graphs are provided for illustrative purposes only. S&P Indices are rules based statistical composites and their returns do not include the payment of any sales charges or fees an investor would pay to purchase the securities the Indices represent. Such costs would lower performance. Past correlation and performance is not an indication of future results. 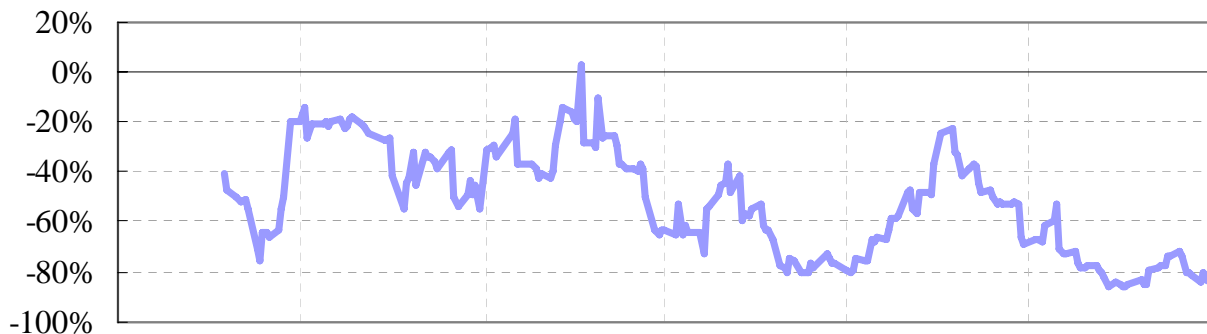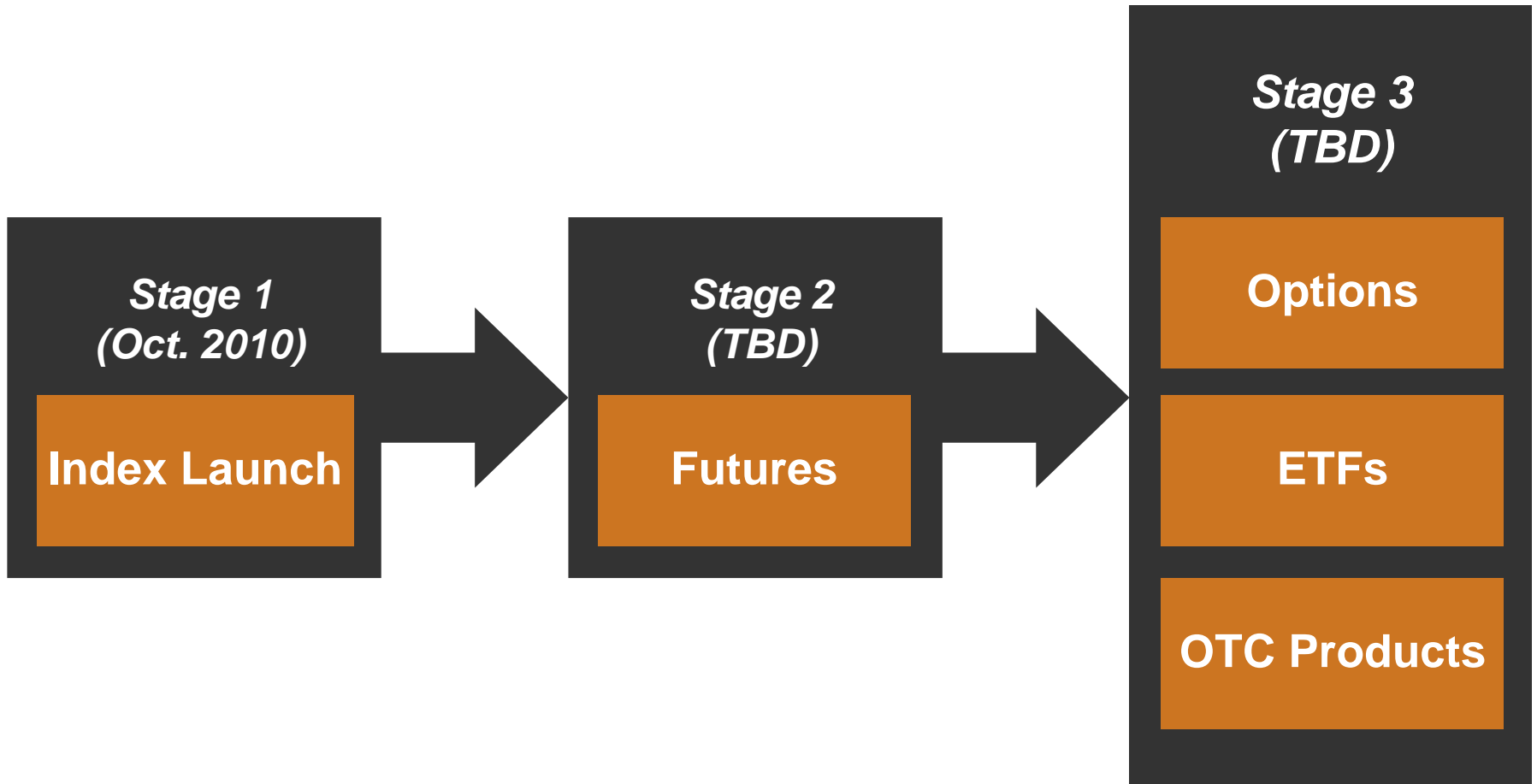It is not possible to invest directly in an Index. The S&P/TSX 60 VIX Index is currently not in existence and is planned to be launched on October 18, 2010 with a base date of October 1, 2009. All data presented reflects hypothetical historical performance based on a number of assumptions. Please see the Performance Disclosure at the end of this document for more information on some of the inherent limitations associated with back-tested Index data and performance information.

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Volatility vs. Equity – U.S.

Chart legend: S&P 500 VIX, S&P 500

10 Biggest Daily Drop in US Equity Market

Date	S&P 500	S&P 500 VIX
5/20/2010	-3.98%	25.96%
6/4/2010	-3.50%	18.59%
5/6/2010	-3.29%	27.52%
2/4/2010	-3.16%	18.85%
6/29/2010	-3.15%	16.29%
7/16/2010	-2.92%	4.32%
8/11/2010	-2.86%	12.66%
10/30/2009	-2.85%	21.47%
5/4/2010	-2.41%	16.62%
4/27/2010	-2.37%	26.67%
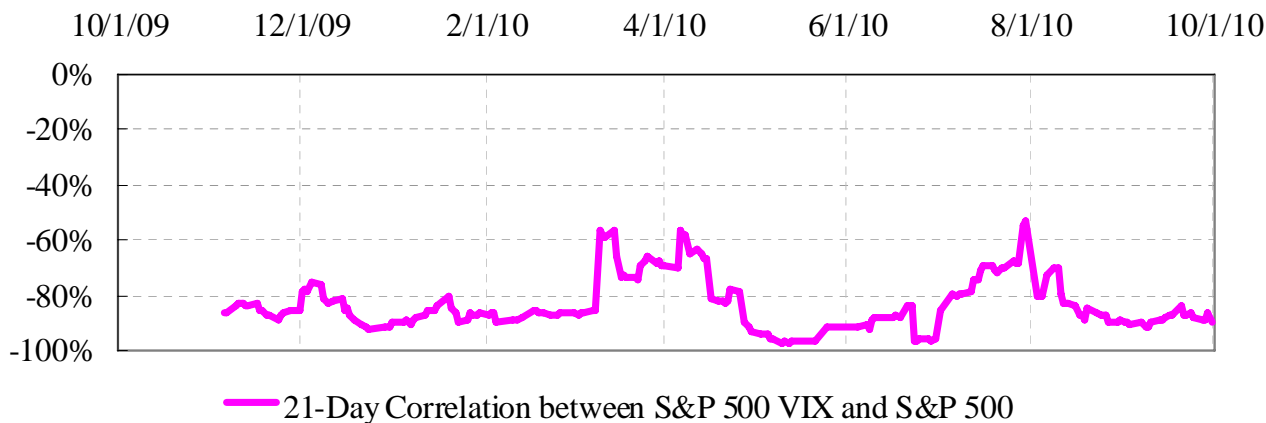
21-Day Correlation between S&P 500 VIX and S&P 500

Source, S&P Indices, Bloomberg. Correlations are calculated using daily returns from October 1, 2009 through September 30, 2010. Charts and graphs are provided for illustrative purposes only. S&P Indices are rules based statistical composites and their returns do not include the payment of any sales charges or fees an investor would pay to purchase the securities the Indices represent. Such costs would lower performance. Past correlation and performance is not an indication of future results. It is not possible to invest directly in an Index.

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Volatility vs. Equity - Canada
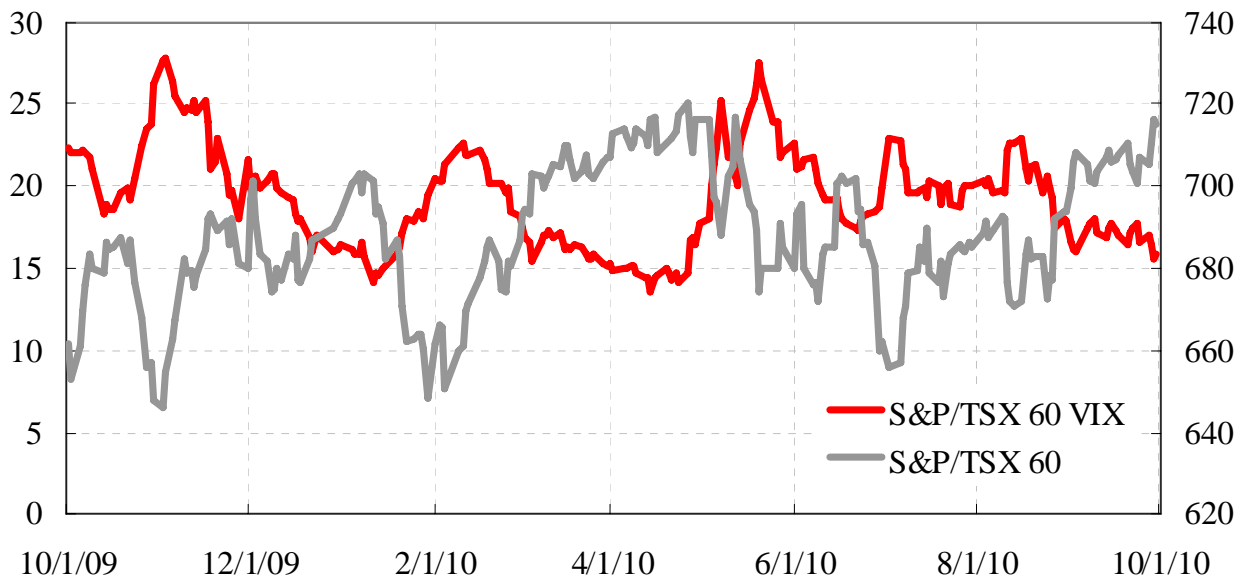
10 Biggest Daily Drop
in Canada Equity Market

Date	S&P/TSX 60	S&P/TSX 60 VIX
6/29/2010	-3.03%	1.13%
8/11/2010	-2.30%	12.32%
2/4/2010	-2.29%	4.89%
6/4/2010	-2.21%	2.11%
5/20/2010	-2.20%	4.94%
10/27/2009	-1.84%	3.92%
1/29/2010	-1.78%	7.32%
1/21/2010	-1.74%	5.93%
5/17/2010	-1.60%	8.38%
7/16/2010	-1.60%	4.67%

Source, S&P Indices, Bloomberg. Correlations are calculated using daily returns from October 1, 2009 through September 30, 2010. Charts and graphs are provided for illustrative purposes only. S&P Indices are rules based statistical composites and their returns do not include the payment of any sales charges or fees an investor would pay to purchase the securities the Indices represent. Such costs would lower performance. Past correlation and performance is not an indication of future results. It is not possible to invest directly in an Index. The S&P/TSX 60 VIX Index is currently not in existence and is planned to be launched on October 18, 2010 with a base date of October 1, 2009. All data presented reflects hypothetical historical performance based on a number of assumptions. Please see the Performance Disclosure at the end of this document for more information on some of the inherent limitations associated with back-tested Index data and performance information.

21-Day Correlation between S&P/TSX 60 VIX and S&P/TSX60

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Road Map

Questions or comments?

Performance Disclosure

- The S&P/TSX 60 VIX Index ("Index") measures the 30-day implied volatility of the S&P/TSX 60 options. It is not possible to invest directly in an S&P index. Past performance of an index is no indication of future results.

- The S&P/TSX 60 VIX Index is not currently in existence and is planned to be launched on October 18, 2010 with a base date of October 1, 2009. All data in this presentation is back-tested data that was calculated using the same methodology that will be in effect when the Index is launched. The index is calculated daily. No rebalancing is needed. Complete index methodology details we be available at www.indices.standardandpoors.com.

- Prospective application of the methodology used to construct the Index may not result in performance commensurate with the backtest returns shown. The backtest period does not necessarily correspond to the entire available history of the Index. Please refer to the methodology paper the index, available at www.standardandpoors.com for more details about the Index, including the manner in which it is rebalanced, and the timing of such rebalancing and index calculation. The index is rules based, although the Index Committee reserves the right to exercise discretion, when necessary.

- The Index performance shown has inherent limitations. The Index return shown does not represent the results of actual trading of investor assets. Standard & Poor's maintains the Index and calculates the Index levels and performance shown or discussed, but does not manage actual assets. Indices are statistical composites and their returns do not reflect payment of any sales charges or fees an investor would pay to purchase the securities they represent. The imposition of these fees and charges would cause actual and backtested performance to be lower than the performance shown. For example, if an index returned 10 percent on a $100,000 investment for a 12-month period (or $10,000) and an annual asset-based fee of 1.5 percent were imposed at the end of the period (or $1,650), the net return would be 8.35 percent (or $8,350) for the year. Over 3 years, an annual 1.5% fee taken at year end with an assumed 10% return per year would result in a cumulative gross return of 33.1%, a total fee of $5,375 and a cumulative net return of 27.2% (or $27,200).

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