

# **TDAM's Low Volatility Equity Funds**

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**Debbie Fong, CFA**  
Vice President & Director





# Agenda

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- Investment convictions
- Low-volatility equity portfolio structure
- Performance

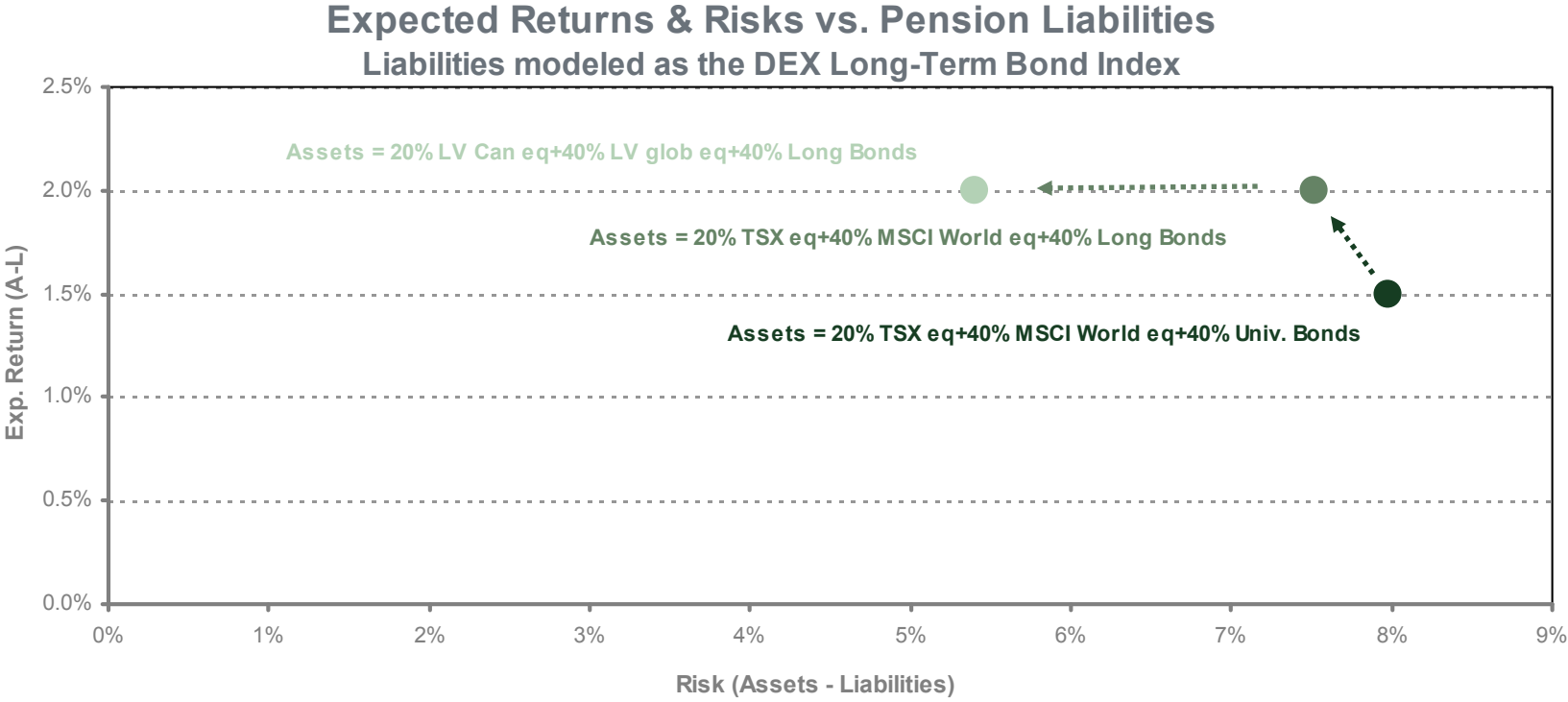
Appendix

# Investment Convictions





# Low Volatility Equities Can Help DB Plans Reduce Surplus Risk

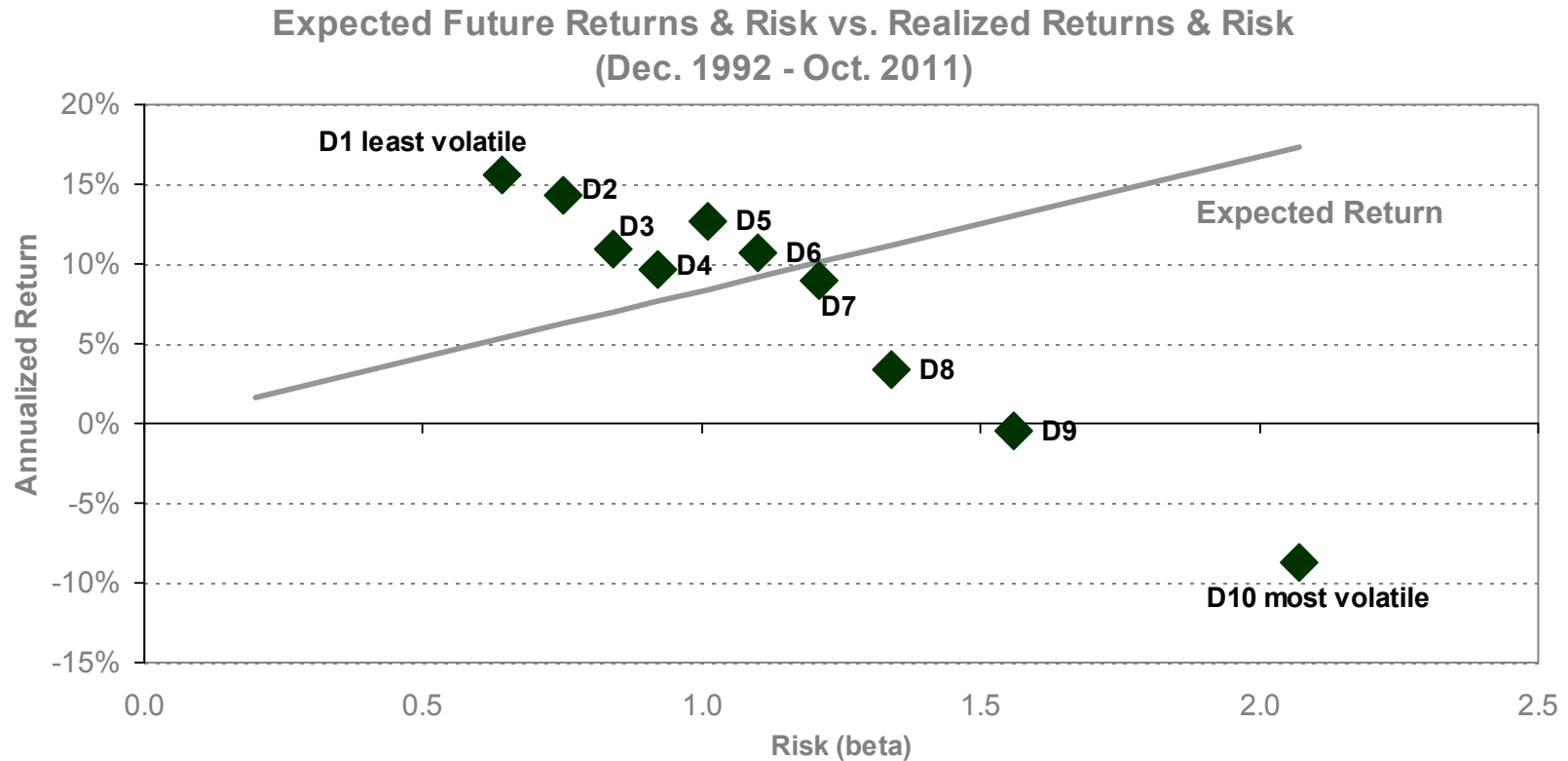


Notes: Simulated Low Volatility returns over the period October 2003-September 2011 used for risk estimates.  
Risk estimated using monthly returns over past 8 years. Expected returns set to current bond yields and 7% for all equities.  
For illustrative purposes only. Sources: TDAM, TMX and MSCI. Please see important disclosures at the end of the document on simulated returns.  
See important disclosures at the end of this document.

**Pension plans can reduce risk by re-arranging their bonds and equities**

# TDAM Low Volatility Strategies: Basic Premise

## Volatile Canadian Stocks Under-performed Less Volatile Stocks



Sources: TDAM & TMX Group. Annualized total returns on S&P/TSX Composite constituents from Dec. 1992 to Oct. 2011. Beta computed with the TDAM statistical risk model. Deciles represent equally-weighted portfolios constructed monthly from equities sorted by trailing beta. The results are similar to those reported in Black, Jensen, and Scholes (1972) and Fama and MacBeth (1973) for U.S. equities over a longer time periods. For illustrative purposes only.

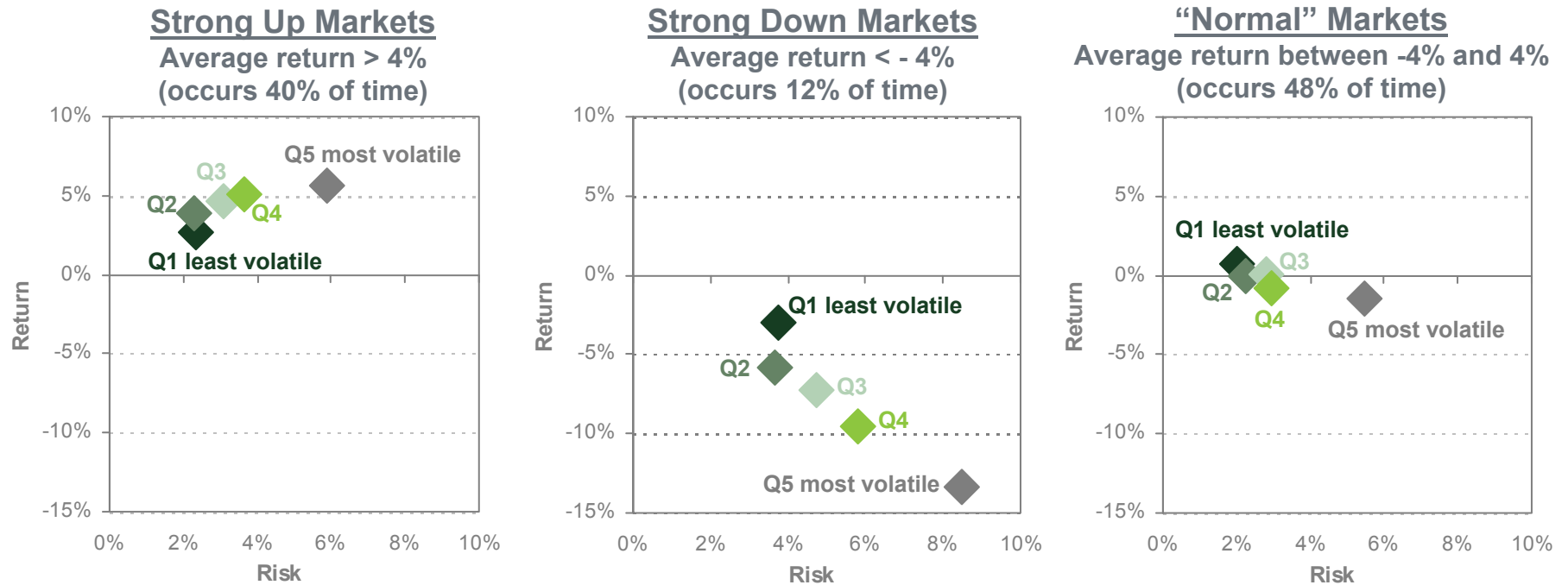
## Historical equity returns inconsistent with Capital Asset Pricing Model

# TDAM Low Volatility Strategies: Basic Premise

## Stock Expected Returns Do Not Increase With Risk Levels



### Market Direction and Pay-off For Holding Volatile Stocks Under Different Markets



Sources: TDAM & TMX Group.

Quintiles represent equally-weighted portfolios constructed monthly from equities sorted by trailing 60 months standard deviation.

Monthly net returns on S&P/TSX Composite constituents from Oct. 1991 to Oct. 2011. Risk computed as the standard deviation of monthly quintile returns over the entire period.

For illustrative purposes only.

**Less volatile stocks outperform more volatile stocks most of the time, except in very strong bull markets**

# Low Volatility Equities Within LDI Context

## Closer to Long-Term Bonds than Traditional Capitalization-Weighted Equities



### Tracking Error Risks of Equities vs. Long Bonds

Index / Strategy	MSCI ACWI	TD All World Low Vol	MSCI World ex-Canada	TD Global Low Vol	S&P/TSX	TD Canadian Low Vol
DEX RRB	13.8%	10.1%	14.1%	11.1%	15.0%	10.7%
DEX Long-Term Universe Bonds	14.0%	9.2%	14.6%	11.1%	15.1%	10.5%
DEX Long-Term Provincial Bonds	13.9%	9.3%	14.5%	11.1%	15.0%	10.4%
Periods used for computation	01/31/2002 - 12/31/2010		08/31/1998 - 12/31/2010		01/31/1990 - 12/31/2010	

Sources: TDAM, MSCI, and TMX Group. The TD Low Volatility Equity returns were simulated. See important disclosures on these simulations at the end of this presentation. All calculations performed with monthly bond and equity returns in Canadian dollars. The tracking error risk numbers are annualized

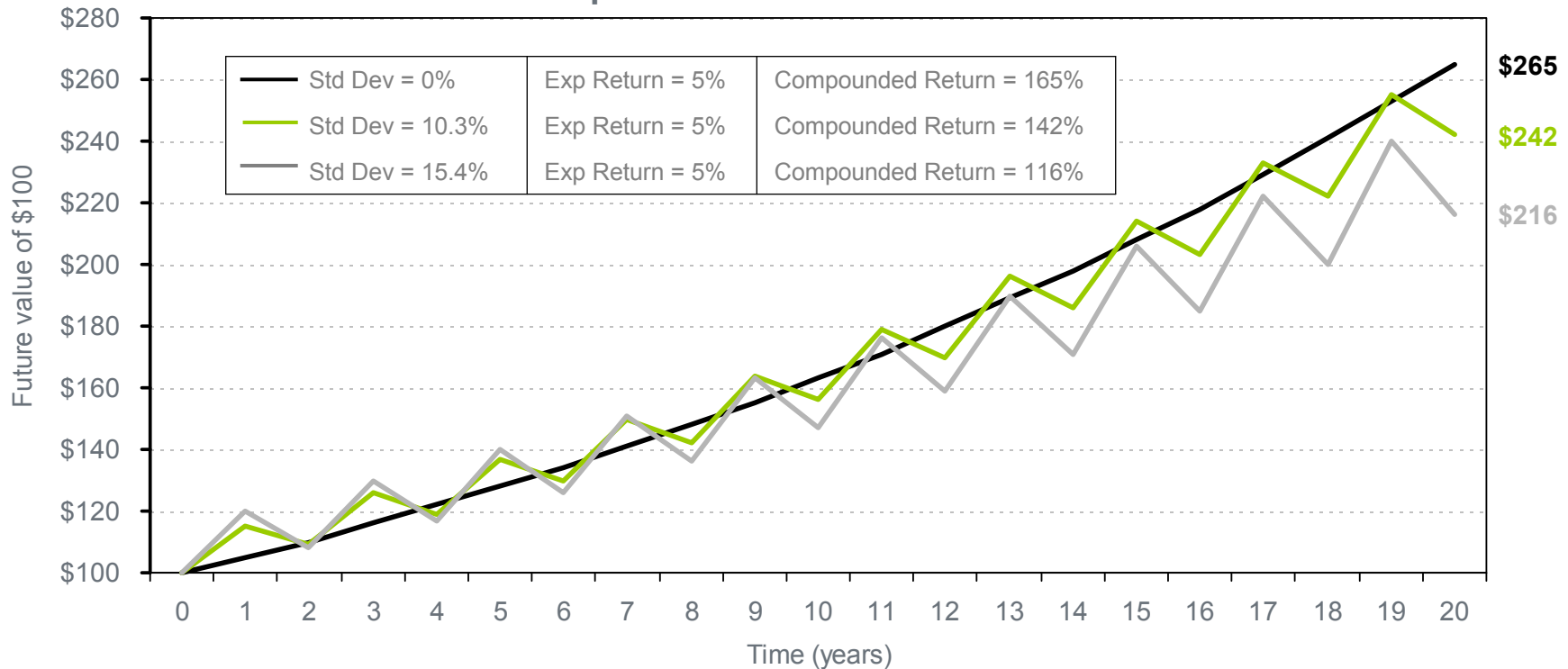
**Lower tracking errors**

# Mathematics of Compounding

## Rewards Low Volatility Investors



Future value of \$100  
Expected annual return = 5%



**Holding the expected return constant, the lower the volatility, the greater the expected compounded return**



## Hypotheses for Unexpected Return-Risk Pattern

- Investors like positively skewed returns
  - Lottery features which volatile stocks provide
- Investors think they can pick stocks
  - Bigger payoffs with volatile equities
- Investors believe high  $\beta$  stocks can help them out-perform their benchmark

Investor  $\neq$  homo economicus



**Empirical evidence aligns with behavioral finance theories**

## Large Body of Academic & Professional Research

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- Stock return – Market risk (Beta) relationship much flatter than predicted by theory
  - Black, Jensen & Scholes (1972)
  - Fama & MacBeth (1973)
- Riskier equities under-perform less volatile equities
  - US: Ang, Hodrick, Xing, and Zhang (2006)
  - International (including Canada) : Ang, Hodrick, Xing, and Zhang (2009)
  - Baker, Bradley, Wurgler (2011)
- Traditional indices (S&P/TSX, MSCI World, S&P 500) not as efficient as minimum variance combination of same equities:
  - Haugen & Baker (1991)
  - Blitz and van Vliet (2007)
  - MSCI BARRA (2008)
  - Bodjov and Masson (2009, TD Asset Management white paper)

**Recent poor equity returns led investors to rethink equity investment**

# Longevity of Low Volatility Strategies

## How Long Can Low Volatility Equities Provide Higher Risk Adjusted Returns?



- As long as most investors are concerned about performance and risk relative to traditional indices
  - Most managers do not deviate significantly from their benchmarks
- Hedge funds are unlikely to speed up the move to low volatility equities
  - Long low volatility / short high volatility would be a high risk hedge fund strategy
- Are low volatility equities just a fad?
  - Most of the evidence published between 1972 and 1991
  - Low volatility equities have delivered excellent returns since 1991
- What if low volatility becomes the norm?
  - Early adopters will realize gains

**Long runway of opportunity in low volatility strategies**

# **Low-volatility equity portfolio structure**



# What are Low Volatility Equity Portfolios?

## Portfolios Designed to Harvest the Performance of Less Volatile Equities

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- Long-only portfolios of equities selected to minimize return volatility
- Less volatile equities with low correlations
- Broad sector diversification, including utilities, consumer staples
- No derivatives, no shorting and no non-benchmark names

**Low volatility strategies have not sacrificed returns in recent decades**



# TDAM Low Volatility Equity Solution Set

TDAM Low Volatility Equity Funds	Cap-Weighted Index	Inception Date	AUM* (in \$ million)
TD <i>Emerald</i> Low Volatility Canadian Equity Pooled Fund Trust	S&P/TSX Composite Total Return Index	September 11, 2009	\$522
TD <i>Emerald</i> Low Volatility Global Equity Pooled Fund Trust	MSCI World ex-Canada Index	December 22, 2009	\$80
TD <i>Emerald</i> Low Volatility All World Equity Pooled Fund Trust	MSCI All Country World Index	May 9, 2011	\$112
TD Global Low Volatility Fund	MSCI All Country World Index	November 28, 2011	\$755

\* As of December 30, 2011

**Fifteen institutional investors, five target date funds, one mutual fund**

# Characteristics of TDAM Low Volatility Funds

## TD *Emerald* Low Volatility Canadian Equity PFT vs. S&P/TSX Composite Index



10 Largest Constituents	S&P/TSX Composite Index			Low Volatility Fund
	Capitalisation in C\$ billion	Index weight	Risk (std dev)	Weight
ROYAL BANK OF CANADA	74.8	5.26%	24.77%	-
TORONTO-DOMINION BANK	68.8	4.84%	22.37%	-
BANK NOVA SCOTIA	55.4	3.89%	20.41%	0.20%
SUNCOR ENERGY	46.3	3.25%	31.64%	-
BARRICK GOLD CORP	46.1	3.24%	32.55%	-
CANADIAN NAT RESOURCES	41.8	2.93%	29.52%	-
GOLDCORP	36.6	2.57%	38.92%	-
POTASH CORP SASKATCH.	36.1	2.53%	41.15%	-
BANK MONTREAL	35.7	2.51%	25.17%	-
CANADIAN NAT'L RAILWAY	35.7	2.51%	15.68%	3.06%
<b>Total</b>	<b>477.3</b>	<b>33.54%</b>	<b>-</b>	<b>3.26 %</b>

	S&P/TSX	Low Vol Fund	Risk Reduction
Risk (standard deviation)	14.9%	9.1%	39.3%
Number of securities	253	66	

Note: Standard deviations computed from monthly returns over 36 months in CAD and annualized.

Sources : TMX Group and TDAM. Data as of December 30, 2011

**Lower return volatility**

## Diversified & Different Portfolios

### Top 10 Holdings in the TD *Emerald* Low Volatility Canadian Equity PFT



#### Ten Largest Positions in Low Volatility Canadian Equity PFT as of December 30, 2011

Company Name	Ticker Symbol	Index Weight	Low Vol. Fund Weight	Standard Deviations of Returns
CANADIAN NAT'L RAILWAY	CNR	2.51%	3.06%	15.68%
ENBRIDGE	ENB	2.09%	3.05%	11.82%
BCE INC	BCE	2.32%	3.05%	12.54%
FORTIS	FTS	0.44%	3.04%	13.59%
BELL ALIANT INC.	BA	0.26%	3.03%	12.28%
THOMSON REUTERS CORP	TR	0.71%	3.03%	15.90%
Pembina Pipeline Corp.	PPL	0.35%	3.01%	12.86%
METRO A	MRU.A	0.38%	3.01%	15.94%
ROGERS COMMUNICATIONS B	RCI.B	1.19%	3.01%	15.74%
TRANSCANADA CORP	TRP	2.20%	3.00%	14.25%

Standard deviations computed from most recent 36 monthly returns. Sources: TDAM, TMX Group

**Less volatile equities from defensive sectors**



# Characteristics of TDAM Low Volatility Funds

## What Can You Expect From Low Volatility Equity Strategies?



Characteristics December 31, 2011	TD Emerald Low Volatility Canadian Equity	S&P/TSX	TD Emerald Low Volatility Global Equity	MSCI World ex-Canada	TD Emerald Low Volatility All World Equity	MSCI ACWI
Beta <sup>1</sup>	0.42	1.00	0.40	1.00	0.54	1.00
Annualized Std. Deviation of Return <sup>1</sup>	7.86%	12.86%	6.28%	10.58%	12.08%	18.92%
Sharpe Ratio	2.52	0.34	1.42	0.05	N/A	N/A
Tracking Error <sup>1</sup>	9.47%	N/A	7.80%	N/A	10.72%	N/A
# of Holdings	66	253	236	1513	195	2435
Market Capitalization (average, C\$ billion)	\$10.3	\$25.2	\$42.1	\$72.9	\$38.1	\$65.7
Dividend Yield (average)	3.64%	2.87%	2.93%	2.90%	3.11%	2.87%
Inception date	Sep 11, 2009		Dec 22, 2009		May 9, 2011	

<sup>1</sup> Calculated using daily returns, since inception.

The Sharpe Ratio is a ratio of returns generated by the fund, over and above the risk-free rate of return and the total risk associated with it.

Sources: Wilshire, TDAM

Note: Canadian dollar returns used for std. dev and tracking error calculations. Please see important disclosure at the end of this document.

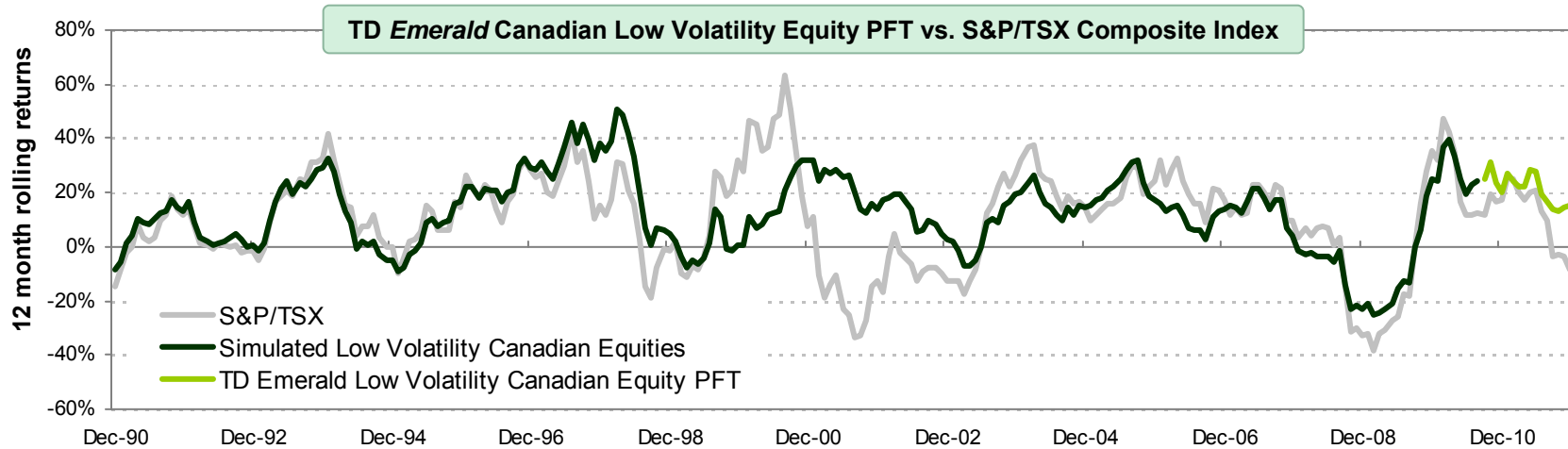
**Higher dividend yield & lower volatility**

# Performance of TDAM's low-volatility funds

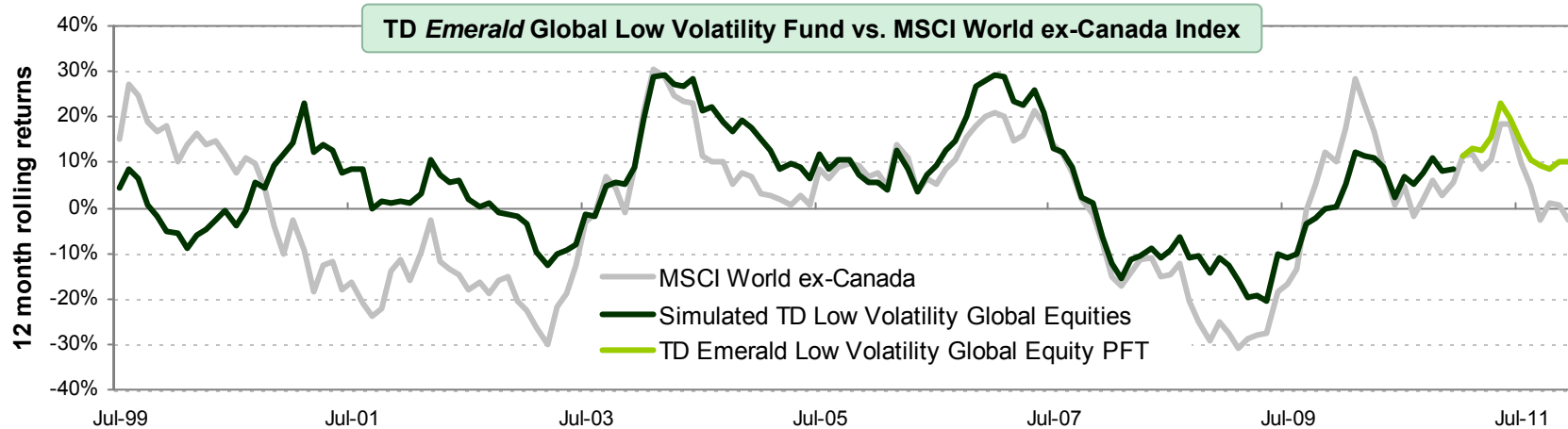


# TDAM Low Volatility Funds vs. Cap Weighted Indices

## Higher and Less Volatile Simulated and Live Returns



Sources: TDAM, TMX Group. Please see important disclosures at the end of the document on simulated returns.



Sources: TDAM, MSCI. Please see important disclosures at the end of the document on simulated returns.

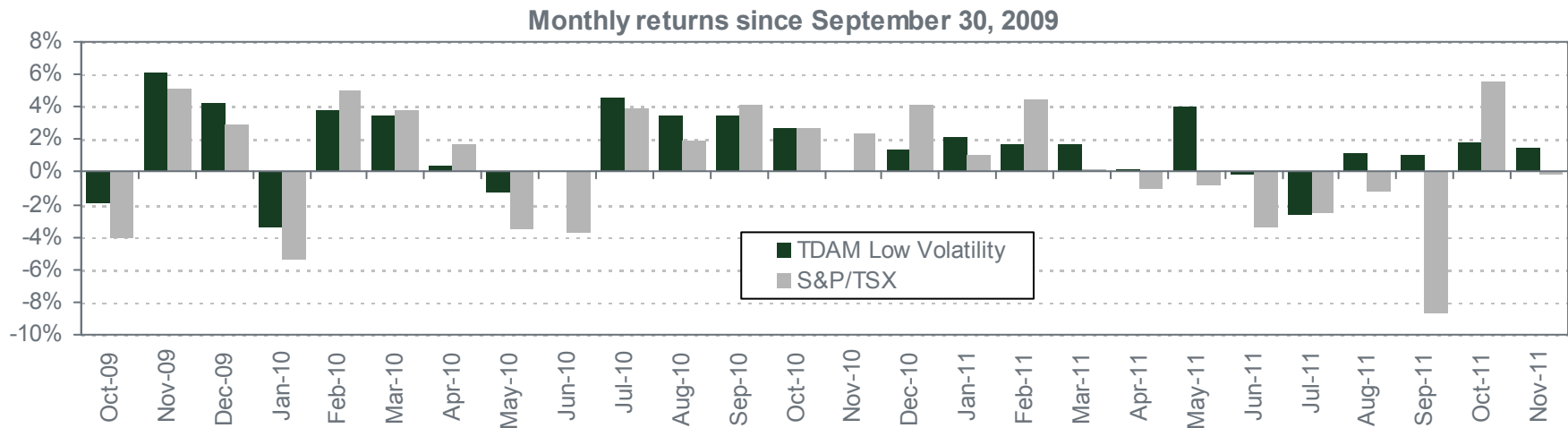
# TD *Emerald* Low Volatility Canadian Equity PFT

## Live Returns Since Inception



As of December 30, 2011	1 month	3 months	1 Year	2 Year	Since Inception <sup>1</sup>	Volatility <sup>2</sup>	Sharpe Ratio
TD <i>Emerald</i> Low Volatility Canadian Equity PFT	1.90%	5.25%	15.08%	17.53%	20.16%	7.86%	2.52
S&P/TSX Composite Index	-1.70%	3.59%	-8.71%	3.62%	5.48%	12.86%	0.34
<b>Difference</b>	<b>3.59%</b>	<b>1.65%</b>	<b>23.79%</b>	<b>13.91%</b>	<b>14.68%</b>	<b>-5.00%</b>	<b>2.18</b>

<sup>1</sup> Fund launched September 11, 2009. <sup>2</sup> Volatility is standard deviation of daily returns multiplied by square root of 252.  
 The Sharpe Ratio is a ratio of returns generated by the fund, over and above the risk-free rate of return and the total risk associated with it.  
 Returns are net of expenses and gross of fees. Sources: TDAM, TMX Group.



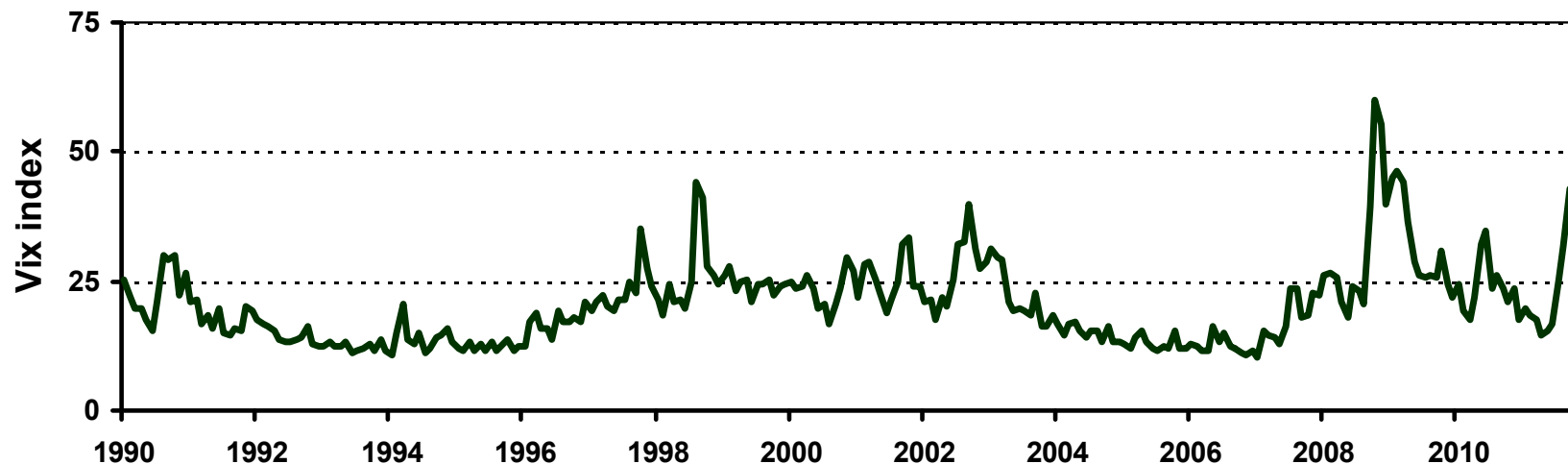
**Higher Sharpe ratio achieved via better performance in down markets**



## Low Volatility Equities Outperform in Flat or Falling Markets

- What are your expectations for the medium term?
  - High macro risks (sovereign debts, double dip recession)
  - Usual business risks remain (technologies, accidents, regulations)

Index Option Implied Volatility Index (VIX)



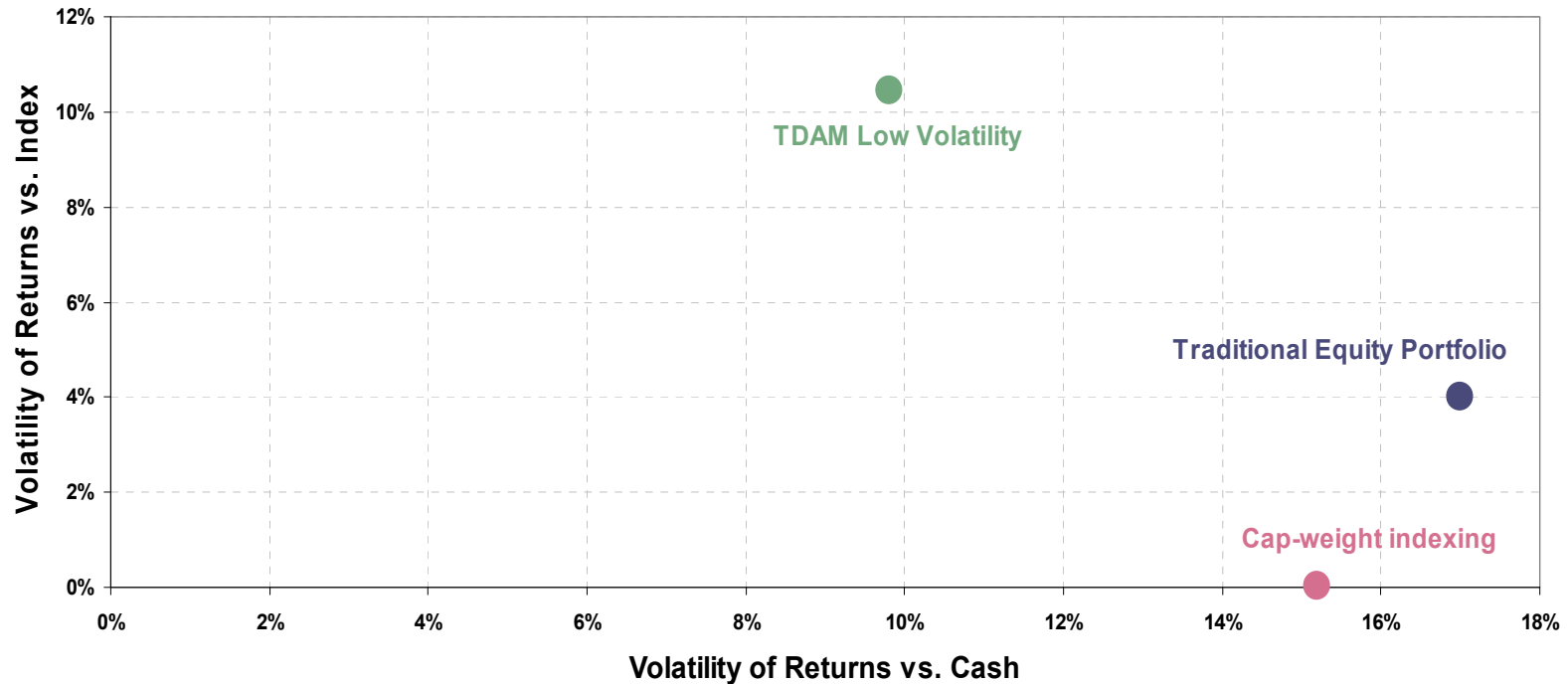
Sources: CBOE & Bloomberg

**We expect high market volatility in the medium term**

# What kind of risk do you care about most: Losing Capital Or Underperforming An Equity Benchmark?



### Volatility Spectrum of Equity Strategies



Stylized equity return volatilities. Source: TDAM. For illustration purposes only.

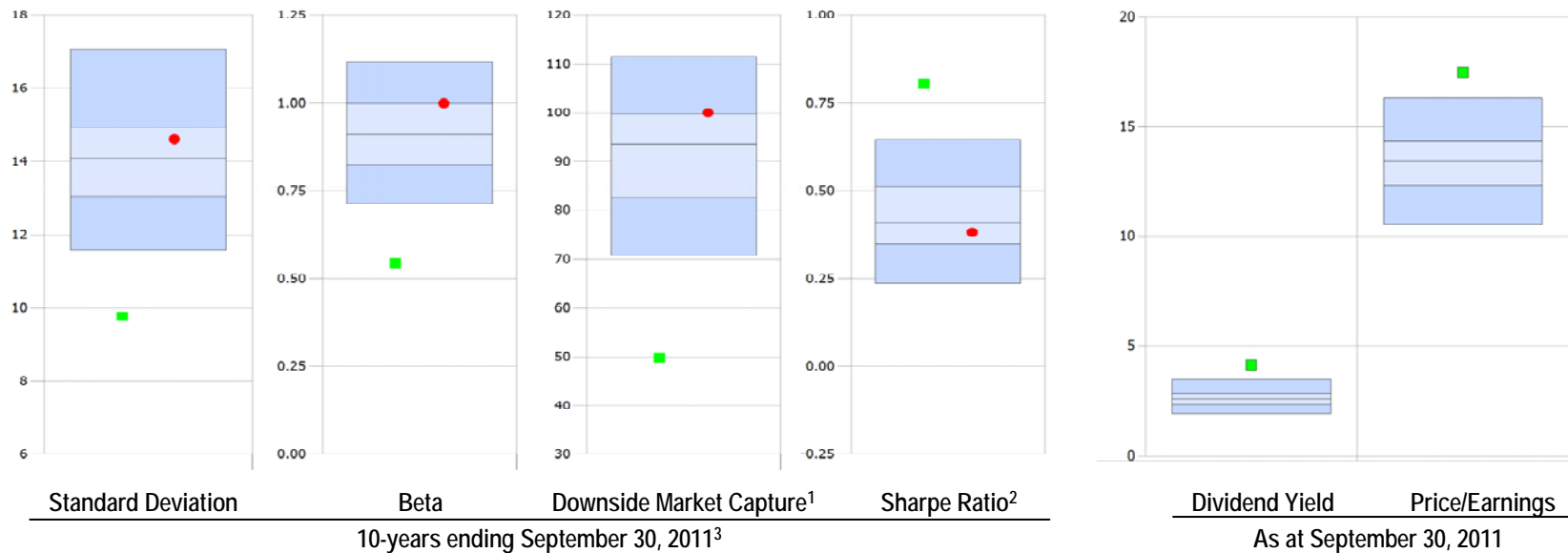
## Benchmark relative underperformance vs. capital preservation

# TDAM Low Volatility Strategies

## What Can You Expect From a Canadian Low Volatility Equity Strategy?



### Universe of Canadian Large Cap Equity Strategies



<sup>1</sup> Down markets defined by S&P/TSX Composite

<sup>2</sup> The risk free rate used is the CIBC WM 91-Day Treasury Bill

<sup>3</sup> TDAM Canadian Low Volatility simulated performance

■ TDAM Low Vol Canadian Equity - Simulated

● S&P/TSX Composite

Source: eVestment Alliance

Sharpe ratio: Sharpe Measure is a ratio of returns generated by the fund, over and above risk-free rate of return and the total risk associated with it and can change monthly. A high and positive ratio shows favourable performance and a low and negative ratio is an indication of unfavourable performance.

**TDAM low vol has the lowest standard deviation, beta and downside capture, and first quartile Sharpe Ratio relative to Canadian Large Cap strategies**

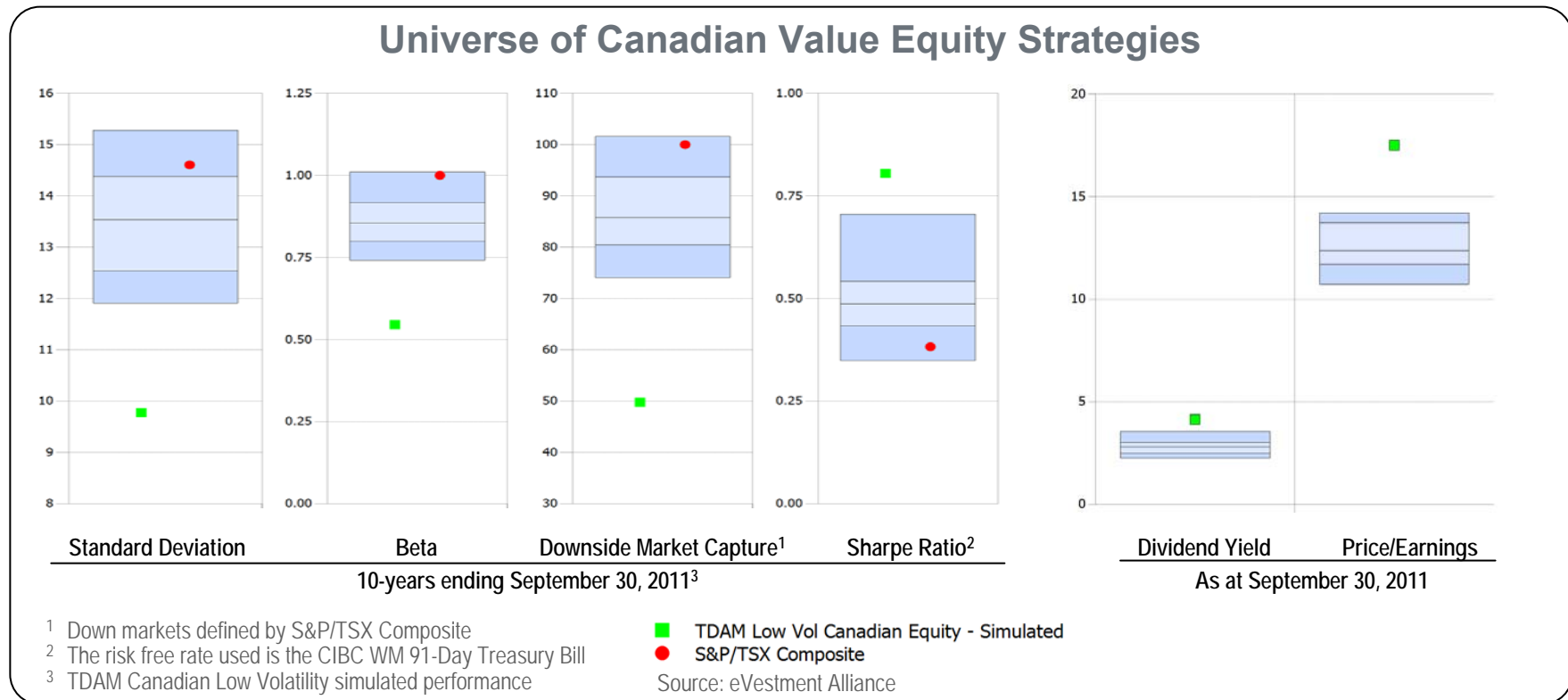
# TDAM Low Volatility Investing ≠ Value Investing

## ■ Value investing is price based:

- Buy undervalued equities to out-perform the benchmark
- Value portfolio may be less volatile than benchmark

## ■ Low volatility is risk based:

- Build a defensive portfolio with less volatile equities



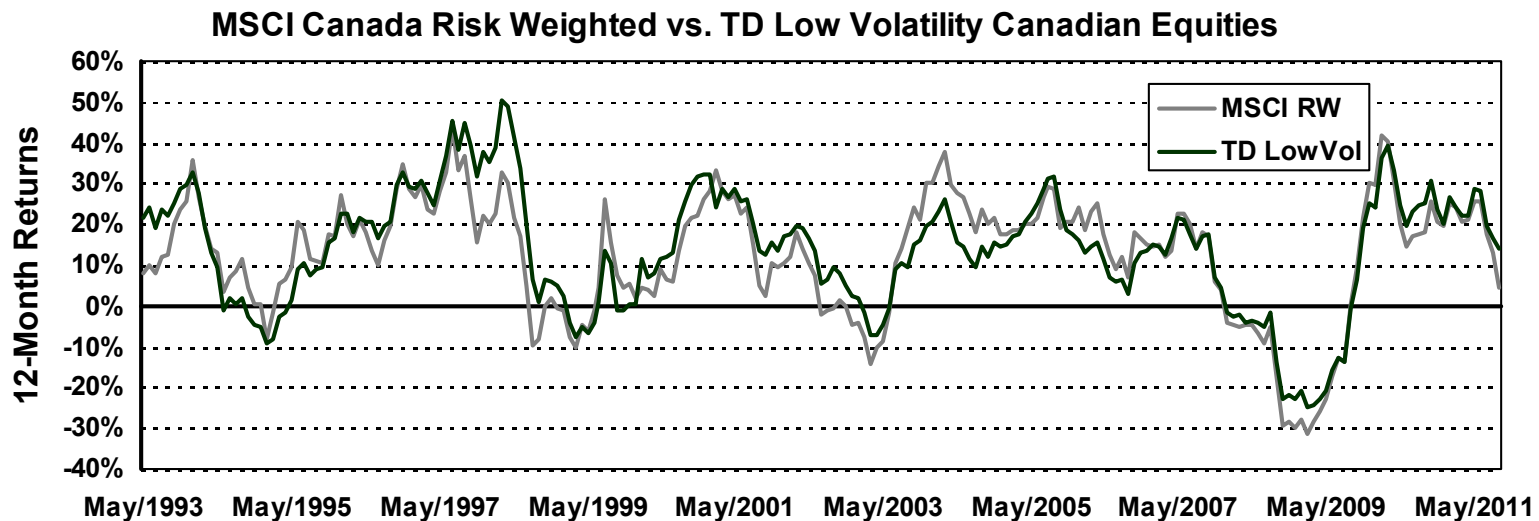
Sharpe ratio: Sharpe Measure is a ratio of returns generated by the fund, over and above risk-free rate of return and the total risk associated with it and can change monthly. A high and positive ratio shows favourable performance and a low and negative ratio is an indication of unfavourable performance.

**TDAM low vol has the lowest standard deviation, beta and downside capture, and highest Sharpe Ratio relative to Canadian value strategies**



## TDAM Low Volatility ≠ Risk Weighted

- Risk-weighted strategy
  - Stocks weights inversely proportional to realized stock volatility
  - Risk weighted strategy does not account for stock correlations
- Low volatility strategy uses volatilities and correlations



Sources: TDAM and MSCI. Low Volatility returns are in CAD and are simulated over the period Jun 1992 – Sep 2009. For illustration purposes only. Future returns may differ from past returns. See important disclosure at the end of the presentation.

**Higher risk-adjusted simulated returns for TD Low Volatility equities**



## Low Volatility Equities: Equity Returns With Less Return Volatility

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- Designed as defensive strategy
  - Expected to outperform traditional index in bear markets
  - Expected to underperform traditional index in strong bull markets
- High tracking error vs. cap-weighted indices
- Lower tracking error vs. liabilities

**Low volatility equities: A powerful de-risking tool**

# Appendix

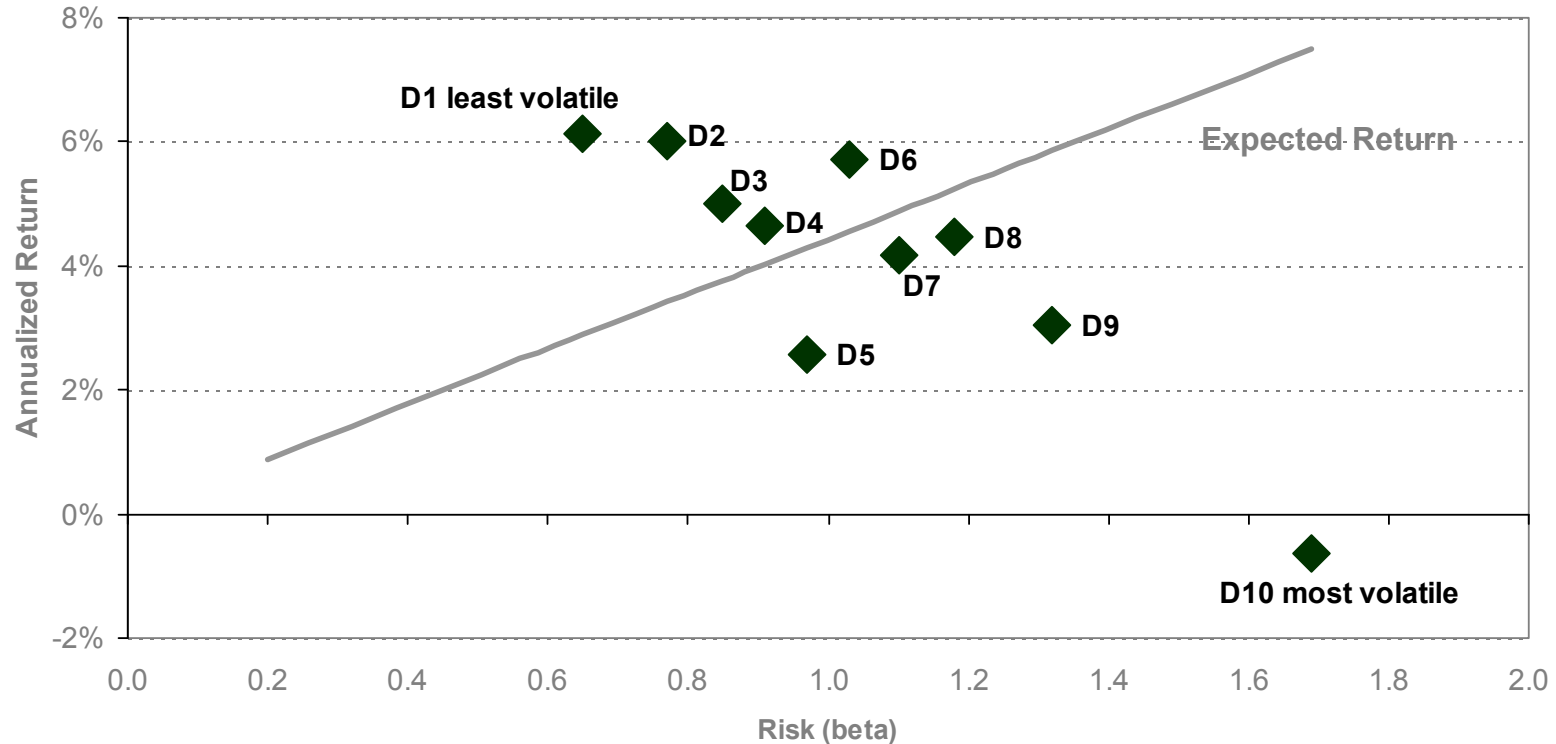


# TDAM Low Volatility Strategies: Basic Premise

## Volatile Global Stocks Under-performed Less Volatile Stocks



Expected Future Returns & Risk vs. Realized Returns & Risk  
(Aug. 1998 - Aug. 2011)



Sources: TDAM & MSCI. Annualized total returns on MSCI World constituents from Aug. 1998 to Aug. 2011. Beta computed with the TDAM statistical risk model. Deciles represent equally-weighted portfolios constructed monthly from equities sorted by trailing beta. The results are similar to those reported in Black, Jensen, and Scholes (1972) and Fama and MacBeth (1973) for U.S. equities over a longer time periods. For illustrative purposes only.

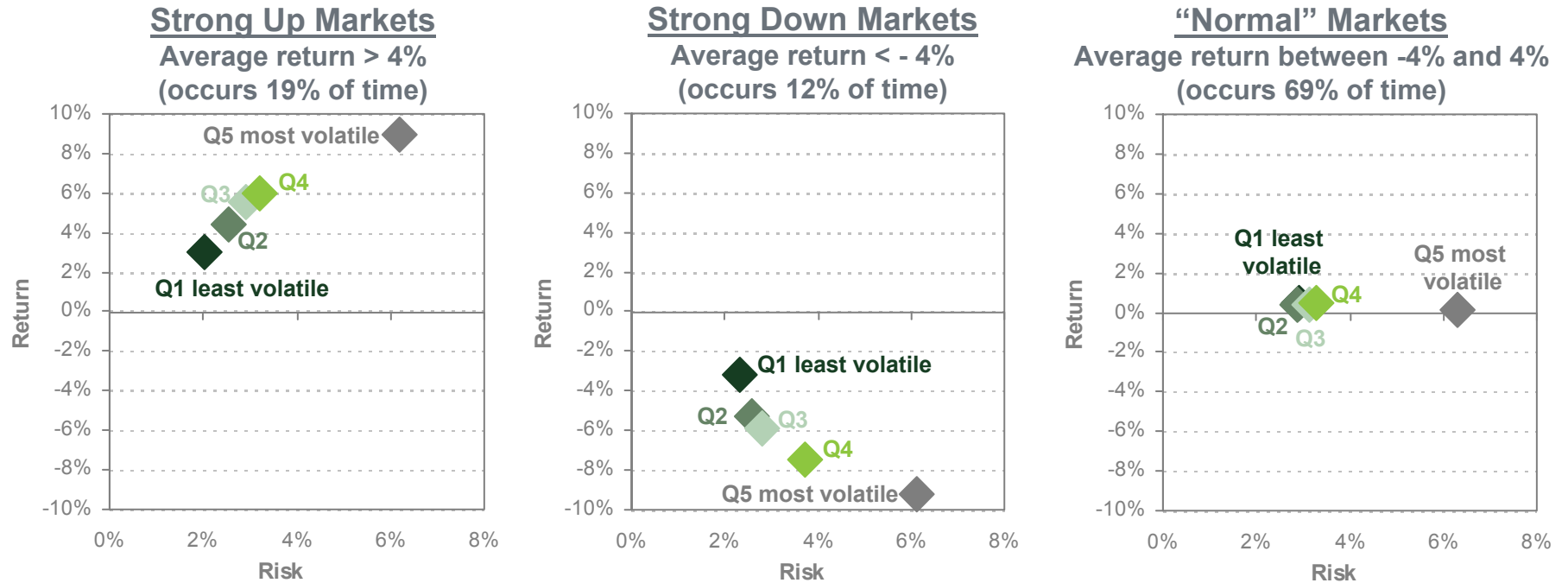
## Historical equity returns inconsistent with Capital Asset Pricing Model

# TDAM Low Volatility Strategies: Basic Premise

## Stock Expected Returns Do Not Increase With Risk Levels



### Market Direction and Pay-off For Holding Volatile Stocks Under Different Markets



Sources: TDAM & MSCI.

Quintiles represent equally-weighted portfolios constructed monthly from equities sorted by trailing 60 months standard deviation.

Monthly net returns on MSCI World constituents from Aug. 1998 to Aug. 2011. Risk computed as the standard deviation of monthly quintile returns over the entire period.

For illustrative purposes only.

**Less volatile stocks outperform more volatile stocks most of the time, except in very strong bull markets**

# Low Volatility Equities Out-Perform Cap-Weighted Equities Except in Strong Bull Markets



## Low Volatility Global Simulated Monthly Returns: Aug 1998 - Sep 2011

MSCI World ex-Canada monthly return = Index	Frequency	MSCI World ex-Canada avg. return	TD LowVol avg. return	TD LowVol-MSCI World ex-Canada	Frequency LV>MSCI
Index < - 4%	13.7%	-5.9%	-2.6%	3.4%	100.0%
-4% < Index +4%	67.5%	-0.1%	0.3%	0.4%	65.0%
Index > +4%	18.8%	5.4%	3.4%	-1.9%	27.3%

Sources: TDAM, MSCI. Please see important disclosures at the end of the document on simulated returns.

## Low Volatility Canada Simulated Monthly Returns: Jan 1990 - Sep 2011

S&P/TSX monthly return = index	Frequency	S&P/TSX avg. return	TD LowVol avg. return	TD LowVol-S&P/TSX	Frequency LV>TSX
Index < - 4%	11.1%	-6.7%	-3.7%	3.0%	100.0%
-4% < Index +4%	68.4%	0.5%	0.6%	0.1%	48.8%
Index > +4%	20.5%	5.9%	4.5%	-1.4%	12.0%

Sources: TDAM, TMX Group. Please see important disclosures at the end of the document on simulated returns.

**Low volatility equities perform relatively better in bear markets**

# Characteristics of TDAM Low Volatility Funds

## TD *Emerald* Low Volatility Global Equity PFT vs. MSCI World ex-Canada Index



10 Largest Constituents	MSCI World ex Canada Index			Low Volatility Fund
	Capitalisation in C\$ billion	Index weight	Risk (std dev)	Weight
EXXON MOBIL CORP	412.1	1.93%	17.08%	0.85%
APPLE	375.5	1.76%	19.33%	0.15%
IBM CORP	219.6	1.03%	12.52%	1.01%
CHEVRON CORP	213.1	1.00%	18.05%	0.49%
MICROSOFT CORP	195.7	0.92%	23.30%	-
NESTLE	190.6	0.89%	16.17%	0.79%
GENERAL ELECTRIC CO	189.9	0.89%	35.99%	-
PROCTER & GAMBLE CO	183.3	0.86%	14.49%	1.04%
JOHNSON & JOHNSON	179.7	0.84%	14.40%	0.54%
AT&T	179.2	0.84%	15.91%	-
<b>Total</b>	<b>2,338.7</b>	<b>10.96%</b>	<b>-</b>	<b>4.89%</b>

	MSCI World ex-Canada	Low Vol Fund	Risk Reduction
Risk (standard deviation)	13.1%	9.2%	29.5%
Number of securities	1,513	234	

Note: Standard deviations computed from monthly returns over 36 months in CAD and annualized.

Sources : MSCI and TDAM. Data as of December 30, 2011

**Lower return volatility**

## Diversified & Different Portfolios

### Top 10 Holdings in the TD *Emerald* Low Volatility Global Equity PFT



#### Ten Largest Positions in Low Volatility Global Equity PFT as of December 30, 2011

Company Name	Ticker Symbol	Index Weight	Low Vol. Fund Weight	Standard Deviations of Returns
KINDER MORGAN MANAGEMENT	KMR	0.03%	1.19%	14.87%
VERISIGN	VRSN	0.03%	1.13%	18.41%
MCDONALD'S CORP	MCD	0.48%	1.12%	15.77%
XCEL ENERGY	XEL	0.06%	1.09%	16.43%
ARCH CAPITAL GROUP	ACGL	0.02%	1.09%	16.72%
WISCONSIN ENERGY CORP	WEC	0.04%	1.08%	16.92%
YUM BRANDS	YUM	0.13%	1.08%	18.00%
KIMBERLY-CLARK CORP	KMB	0.14%	1.08%	14.57%
BG GROUP	BG/	0.34%	1.06%	17.46%
KRAFT FOODS A	KFT	0.29%	1.05%	15.93%

Standard deviations computed from most recent 36 monthly returns. Sources: TDAM, MSCI

**Less volatile equities from defensive sectors**



# TD *Emerald* Low Volatility Global Equity PFT

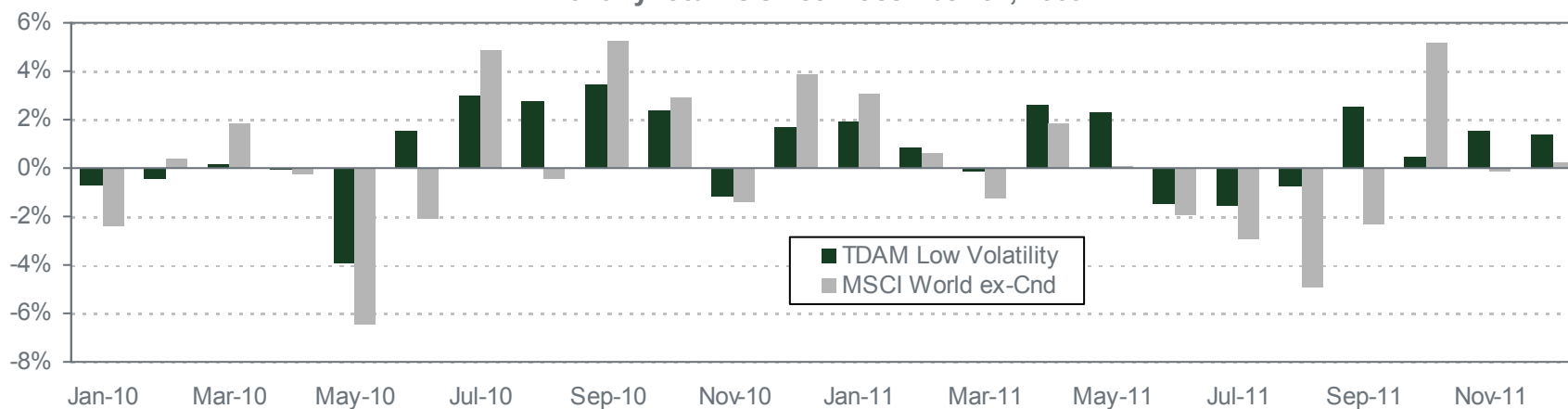
## Live Returns Since Inception



As of December 30, 2011	1 month	3 months	1 Year	Since Inception <sup>1</sup>	Volatility <sup>2</sup>	Sharpe Ratio
TD <i>Emerald</i> Low Volatility Global Equity PFT	1.40%	3.39%	9.96%	8.87%	6.28%	1.42
MSCI World ex-Canada Index (in CAD)	0.21%	5.27%	-2.77%	1.09%	10.58%	0.05
<b>Difference</b>	<b>1.19%</b>	<b>-1.88%</b>	<b>12.73%</b>	<b>7.79%</b>	<b>-4.30%</b>	<b>1.37</b>

<sup>1</sup> Fund launched December 22, 2009. <sup>2</sup> Volatility is standard deviation of daily returns multiplied by square root of 252.  
 The Sharpe Ratio is a ratio of returns generated by the fund, over and above the risk-free rate of return and the total risk associated with it.  
 Returns are net of expenses and gross of fees. Sources: TDAM, MSCI.

Monthly returns since December 31, 2009



**Higher risk-adjusted returns since inception**

# Characteristics of TDAM Low Volatility Funds

## TD *Emerald* Low Volatility All World Equity PFT vs. MSCI All Country World Index



10 Largest Constituents	MSCI All Country World Index			Low Volatility Fund
	Capitalisation in C\$ billion	Index weight	Risk (std dev)	Weight
EXXON MOBIL CORP	412.1	1.60%	17.1%	0.74%
APPLE	375.5	1.46%	19.3%	-
IBM CORP	219.6	0.85%	12.5%	0.77%
CHEVRON CORP	213.1	0.83%	18.1%	0.31%
MICROSOFT CORP	195.7	0.76%	23.3%	-
NESTLE	190.6	0.74%	16.2%	0.65%
GENERAL ELECTRIC CO	189.9	0.74%	36.0%	-
PROCTER & GAMBLE CO	183.3	0.71%	14.5%	0.77%
JOHNSON & JOHNSON	179.7	0.70%	14.4%	0.60%
AT&T	179.2	0.70%	15.9%	-
<b>Total</b>	<b>2,338.7</b>	<b>9.08 %</b>	-	<b>3.85 %</b>

	MSCI All Country World Index	Low Vol Fund	Risk Reduction
Risk (standard deviation)	13.0%	8.7%	32.9%
Number of securities	2,435	195	

Note: Standard deviations computed from 36 monthly returns in CAD and annualized.

Sources : MSCI and TDAM. Data as of December 30, 2011

**Lower return volatility**

## Diversified & Different Portfolios

### Top 10 Holdings in the TD *Emerald* Low Volatility All World Equity PFT



#### Ten Largest Positions in Low Volatility All World Equity PFT as of December 30, 2011

Company Name	Ticker Symbol	Index Weight	Low Vol. Fund Weight	Standard Deviations of Returns
MCDONALD'S CORP	MCD	0.40%	0.90%	15.8%
CONSOLIDATED EDISON	ED	0.07%	0.84%	18.1%
VERISIGN	VRSN	0.02%	0.84%	18.4%
SOUTHERN CO	SO	0.15%	0.83%	18.0%
ODAKYU ELECTRIC RAILWAY	9007	0.02%	0.83%	19.5%
XCEL ENERGY	XEL	0.05%	0.83%	16.4%
ENBRIDGE	ENB	0.11%	0.82%	11.7%
KINDER MORGAN MANAGEMENT	KMR	0.03%	0.82%	14.9%
ARCH CAPITAL GROUP	ACGL	0.02%	0.82%	16.7%
CHEUNG KONG INFRASTRUCT.	1038	0.01%	0.82%	17.2%

Standard deviations computed from most recent 36 monthly returns. Sources: TDAM, MSCI

**Less volatile equities from defensive sectors**

# TD *Emerald* Low Volatility All World Equity Pooled Fund Trust

## Performance and Key Characteristics as of December 30, 2011



Simulated Performance as of December 30, 2011 (live performance after May 31, 2011)	1 Month	Since May 9, 2011	1 Year	3 Years	5 Years	Since Dec 31, 2001	Sharpe Ratio (Since Dec 2001)
TD <i>Emerald</i> Low Volatility All World Equity PFT	1.98%	4.48%	9.13%	7.41%	0.92%	7.58%	0.86
MSCI ACWI Index ND	-0.05%	-8.00%	-5.05%	5.05%	-4.51%	-0.34%	-0.03
<b>Difference</b>	<b>2.03%</b>	<b>12.48%</b>	<b>14.18%</b>	<b>2.36%</b>	<b>5.44%</b>	<b>7.92%</b>	<b>0.89</b>

Live results
  Simulated results

Inception Date: May 9, 2011

Fund returns are net of expenses

Sources: TDAM, MSCI, Wilshire

Sharpe ratio: Sharpe Measure is a ratio of returns generated by the fund, over and above risk-free rate of return and the total risk associated with it and can change monthly.

A high and positive ratio shows superior performance and a low and negative ratio is an indication of unfavourable performance.

All returns in Canadian dollars. Please see important disclosure at the end of this document.

Characteristics	TD <i>Emerald</i> Low Volatility All World Equity PFT	MSCI All Country World Index
Number of Securities	195	2,435
Dividend Yield <sup>1</sup>	3.11%	2.87%
Market Capitalization (average) <sup>1</sup>	38.1 billion	65.7 billion
Beta <sup>2</sup>	0.54	1.00
Total Risk <sup>3</sup>	12.08%	18.92%
Active Risk <sup>3</sup>	10.72%	N/A

<sup>1</sup> From Wilshire

<sup>2</sup> Calculated using daily returns since May 9, 2011

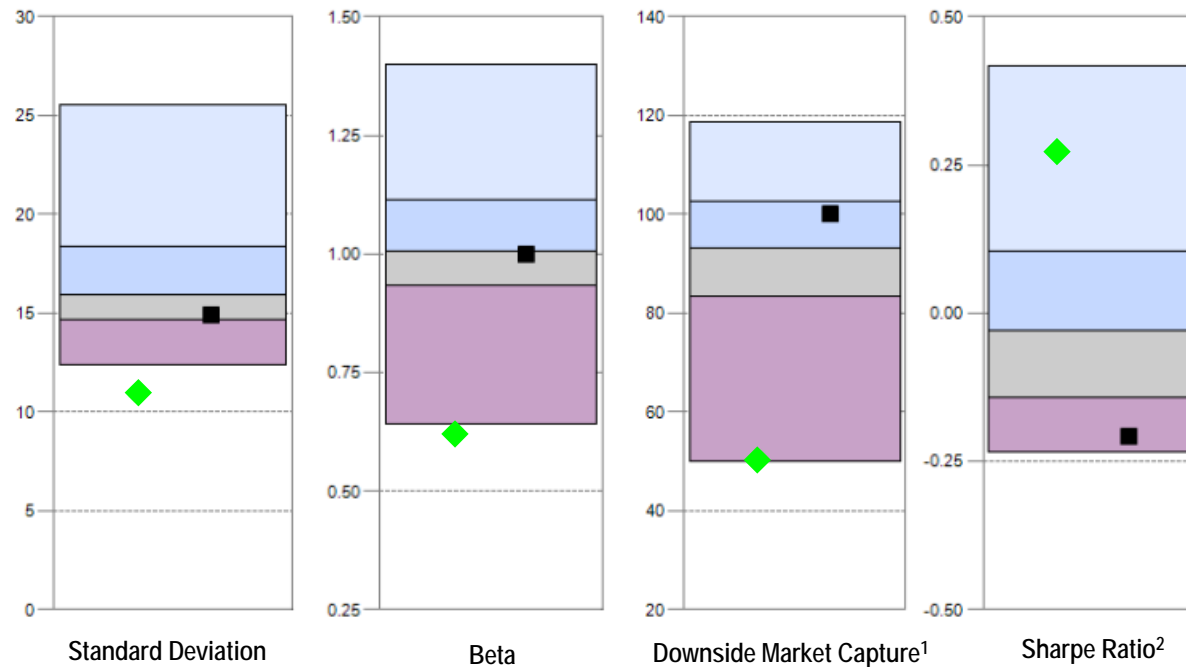
<sup>3</sup> Calculated using daily returns since May 9, 2011 and annualized by multiplying by the square root of 250

# TDAM Low Volatility Strategies

## What Can You Expect From a Global Low Volatility Equity Strategy?



### Universe of Global Equity Strategies 10 Years ending June 30, 2011



<sup>1</sup> Down markets defined by MSCI World Net-Dividends Index  
<sup>2</sup> The risk free rate used is the CIBC WM 91-Day Treasury bill  
<sup>3</sup> TDAM Global Low Volatility simulated performance

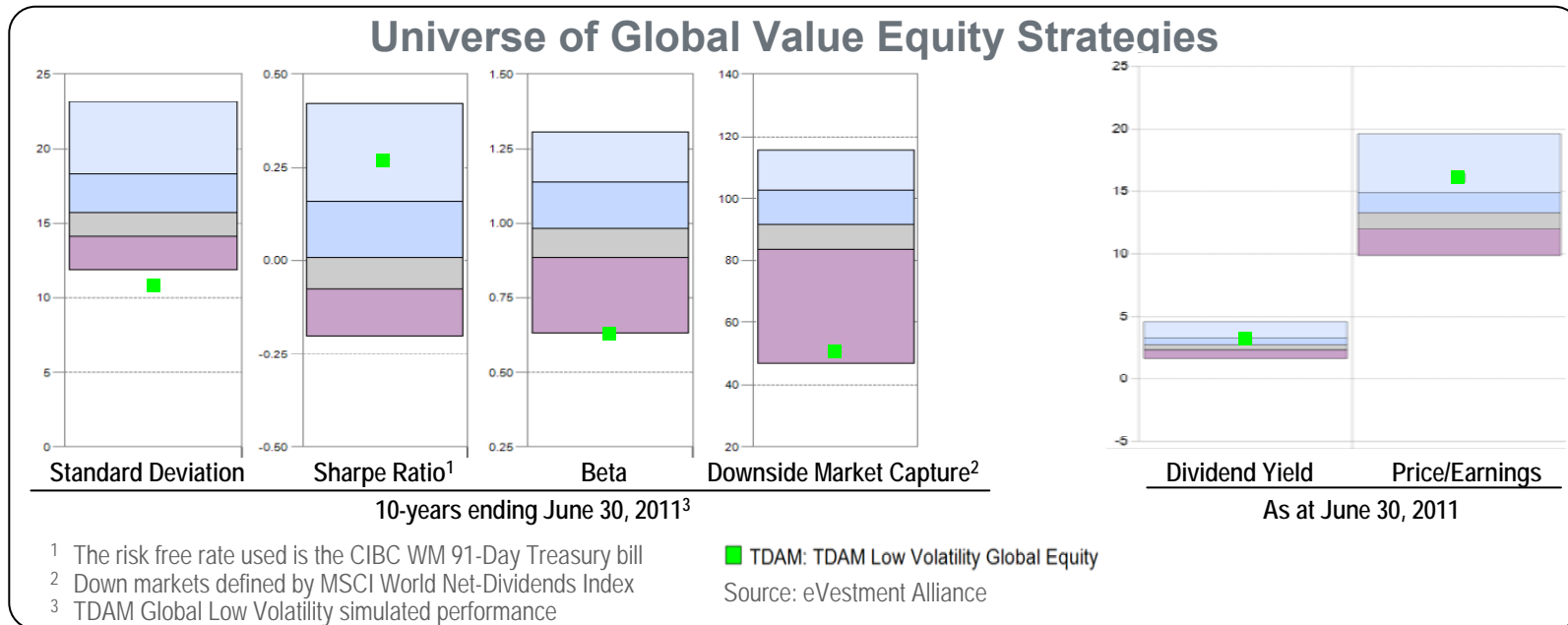
Source: eVestment Alliance

Sharpe ratio is a ratio of returns generated over and above risk-free rate of return, and divided by the total risk.

◆ TDAM Low Volatility Global Equity<sup>3</sup>  
 ■ MSCI World Net Div (C\$) (noon rate)

# TDAM Low Volatility Investing ≠ Value Investing

- Value investing is price based:
  - Buy undervalued equities to out-perform the benchmark
  - Value portfolio may be less volatile than benchmark
- Low volatility is risk based:
  - Build a defensive portfolio with less volatile equities



Sharpe ratio: Sharpe Measure is a ratio of returns generated by the fund, over and above risk-free rate of return and the total risk associated with it and can change monthly. A high and positive ratio shows favourable performance and a low and negative ratio is an indication of unfavourable performance.

**TDAM low vol has the lowest standard deviation, beta and downside capture, and first quartile Sharpe Ratio relative to global value strategies**



# Disclaimer

The information contained herein is based on material believed to be reliable. Where such information is based in whole or in part on information provided by third parties, it is not guaranteed to be accurate or complete. The information does not provide individual financial, legal, tax or investment advice and is for information purposes only. Graphs and charts are used for illustrative purposes only and do not reflect future values or changes. Past performance is not indicative of future returns. TD Asset Management Inc., The Toronto-Dominion Bank and its affiliates and related entities are not liable for any errors or omissions in the information or for any loss or damage suffered.

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Hypothetical performance is shown for illustration purposes only. Hypothetical performance returns are subject to inherent risks and limitations. No representations are being made that any proposal will achieve returns similar to the hypothetical returns shown above. Investors should not take this example or the data included in the chart as an indication, assurance, estimate or forecast of future or actual results. The actual performance returns may differ materially from the returns shown above for reasons including, but not limited to investment restrictions and guidelines, fees, timing of trade execution and fluctuations in the market. TD Asset Management Inc., The Toronto-Dominion Bank and its affiliates and related entities are not liable for any errors or omissions in the information or for any loss or damage suffered.

All simulated returns referenced in this presentation are expressed in Canadian dollars. Simulated returns are shown for illustrative purposes. Past performance is not indicative of future returns. Prior to November 2005, simulated All Country Low Volatility returns assume transactions costs (commissions and market impact) of 0.55%. After December 2005, simulated All Country Low Volatility returns are estimated using \$0.02 per share plus market impact from a volume-weighted average program as estimated by ITG version 2.3. All risk models used in the simulations are produced by TD Asset Management. Prior to November 2001, simulated Canadian Low Volatility returns assume transactions costs of 0.46%. After October 2001, simulated Canadian Low Volatility returns are estimated using \$0.02 per share plus market impact from a volume-weighted average program as estimated by ITG version 2.3. The risk model used in the simulations of the Canadian Low Volatility strategy is the MSCI Barra CNE4. Simulated Emerging Markets Low Volatility returns assume trading costs (commissions and market impact) of 0.85%. The portfolios were constructed using a proprietary statistical risk model created by TD Asset Management. Simulated Global Low Volatility returns assume trading costs (commissions and market impact) of 0.35%. They were realized with a custom global statistical risk model created by TD Asset Management.

All products contain risk. Important information about the pooled fund trusts is contained in their offering circular, which we encourage you to read before investing. Please obtain a copy. The indicated rates of return are the historical annual compounded total returns of the funds including changes in unit value and reinvestment of all distributions. Yields, investment returns and unit values will fluctuate for all funds. All performance data represent past returns and are not necessarily indicative of future performance. Pooled Fund units are not deposits as defined by the Canada Deposit Insurance Corporation or any other government deposit insurer and are not guaranteed by The Toronto-Dominion Bank.

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## Low Volatility Canadian Equity

### Statement of Compliance:

TD Asset Management claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. TD Asset Management has not been independently verified.

### Definition of the Firm:

The institutional division of TD Asset Management Inc. ("TD Asset Management") provides discretionary investment management services to institutional investors such as: pension plans, foundations, endowments, corporations and government organizations. The composites include all pooled investment vehicles and separately managed accounts under management by TD Asset Management, excluding those managed for TD Asset Management's retail and high-net-worth divisions and for The Toronto-Dominion Bank and its affiliates.

### Composite Description:

The Composite includes accounts and/or pooled investments vehicles (Accounts) that allow investments in Canadian equity instruments, which are weighted such that each Account aims to provide less return volatility than the S&P/TSX Composite Index. The base currency of the Accounts included in the Composite is the Canadian dollar.

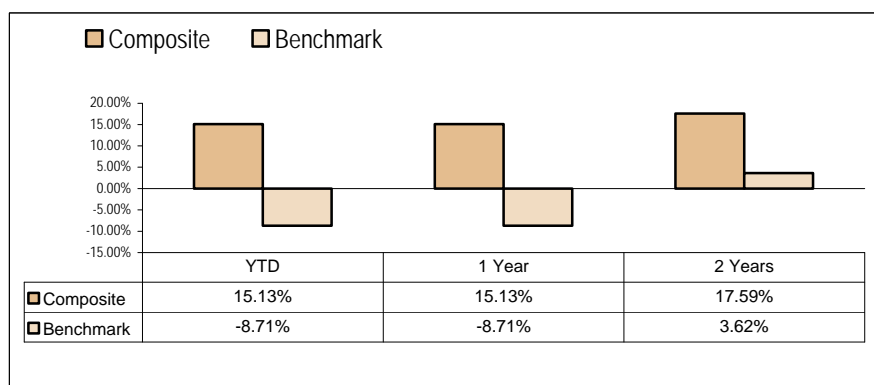
### Leverage and Derivatives:

The Composite does not include Accounts that use derivatives or leverage to achieve the investment objective.

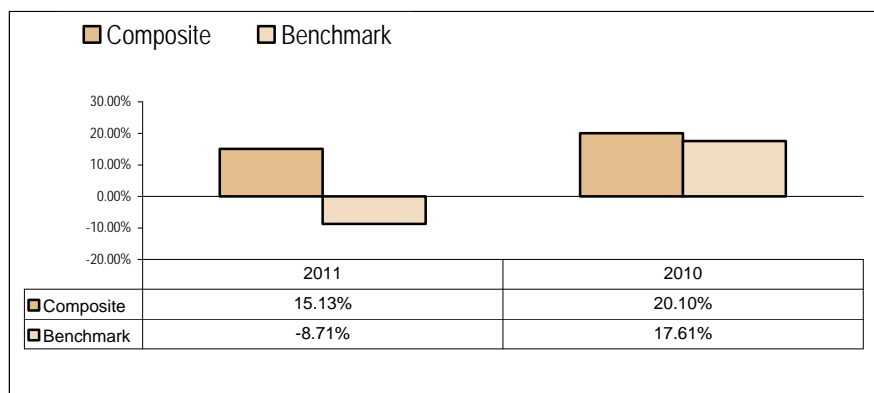
### Investment Objective:

The primary investment objective of the Accounts included in the Composite is to provide a better risk adjusted total return than the benchmark.

### Performance as of: December 31, 2011



Annualized Return versus 100% S&P/TSX Composite TR - C\$- as of December 31, 2011



Calendar Return versus 100% S&P/TSX Composite TR - C\$ as of December 31, 2011

Start Date: September 30, 2009

Returns are gross of management fees.

Returns are expressed in Canadian dollar.





## Composite Statistics:

Year	Composite 3-yr St Dev (%)	Benchmark 3-yr St Dev (%)	Number of portfolios	Dispersion (standard deviation %)	Composite Assets (\$)	Percentage of Firm's Assets (%)	Firm's Total Asset (\$)
YTD			<5	NM	522,179,362	0.7	69,897,011,703
2010			<5	NM	4,937,937	0.0	63,764,836,364
2009			<5	NM	4,106,215	0.0	62,298,168,554

## Calculation Methodology:

The Composite is calculated in the base currency of the Accounts as the unaudited, weighted average return of the Accounts based on the beginning monthly asset values. Composite returns are calculated by linking the monthly asset weighted composite returns. Returns are shown net of transaction costs, but gross of management fees and other administrative expenses. The dispersion calculation is based on the standard deviation of the Accounts that have appeared in the Composite for the entire calendar period. "NM" is defined as Not Measured and indicates that there are less than five accounts in the composite for the entire period, and therefore the statistic is not measured. Accounts are added into the Composite when they have one full calendar month of performance and are removed as of their last full calendar month of performance. Policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request.

## List of Composites:

A list of all composite descriptions is available upon request.

## Fee Schedule:

The following fee schedule and minimum asset size applies to pooled investments or separately managed accounts under management by TDAM with the same investment objective as the Accounts included in the Composite.

Management Fees (% per annum)			
Account	First \$20MM	Next \$80MM	> \$100MM
Pools	0.2	0.1	0.07
SMA	0.22	0.12	0.07

Minimum Annual Fee (\$ per annum)	
Pools	SMA
\$25,000	\$140,000

## Composite Creation Date: December 29, 2009

*The historical returns presented in this report are for illustrative purposes only, do not constitute an offer or solicitation to buy securities of the Composite and do not represent the returns of any individual account or fund managed by TDAM with a similar investment strategy (a "Client Account"). The performance returns and account composition of any particular Client Account may differ materially from that of the Composite due to different base currencies, investment restrictions and guidelines, different regulatory and tax regimes and timing of trade execution. Many factors may impact the actual return of a Client Account. Investors could not have acquired a security or other ownership interest, which would have generated returns identical to the Composite. Past performance is not indicative of future performance. Sources of data include TSX Group. Inclusion of the S&P/TSX Composite Index is not intended to imply that an investment in a Client Account is comparable to investments in the S&P/TSX Composite Index. Information contained in this document has been drawn from sources believed to be reliable, but the accuracy or completeness of the information is not guaranteed, nor in providing it does TDAM, The Toronto-Dominion Bank or its affiliates, assume any responsibility or liability. TDAM, TD Bank or its affiliates are not liable for any errors or omissions in the information or for any loss or damage suffered. TD Asset Management Inc. (TDAM) is a wholly-owned subsidiary of The Toronto-Dominion Bank (TD Bank).*

*The S&P/TSX Composite is the headline index and the principal broad market measure for the Canadian equity market. It includes common stock and income trust units.*

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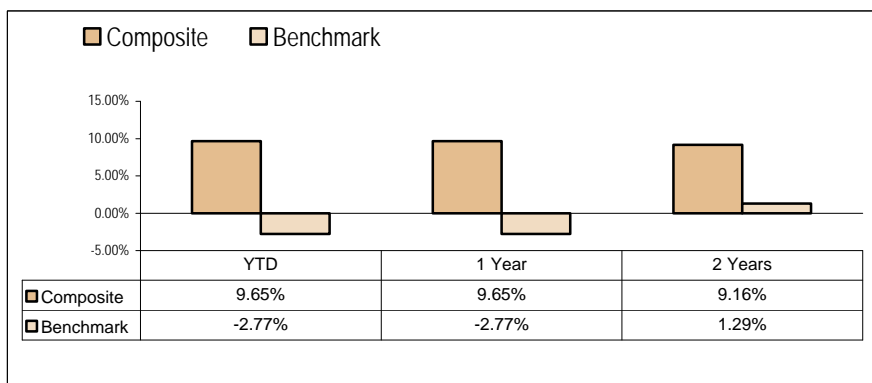
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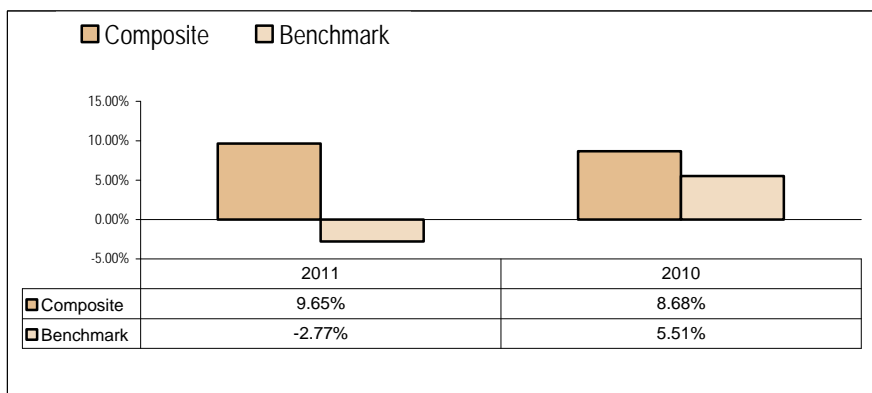
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### Performance as of: December 31, 2011



Annualized Return versus 100% MSCI World Ex Canada ND - C\$- as of December 31, 2011



Calendar Return versus 100% MSCI World Ex Canada ND - C\$ as of December 31, 2011

Start Date: December 31, 2009

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*The MSCI World ex-Canada Total Return Index (C\$), ND is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed countries, excluding Canada.*

*Returns are net of taxes withheld by local tax authorities on income received, such as dividends.*