



# Crisis Investing



Toronto Stock Exchange | TSX Venture Exchange | **Montréal Exchange** | Natural Gas Exchange | Montréal Climate Exchange | Boston Options Exchange

Canadian Derivatives Clearing Corporation | TMX Datalinx | Equicom | PC Bond | Shorcan

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# The Headlines...



## ● Jon Markman

- Get ready to party like it's 1991

## ● Bill Fleckenstein

- The trouble with techs right now

## ● Michael Brush

- Bank analysts see 'implosion' ahead

## ● Business Week

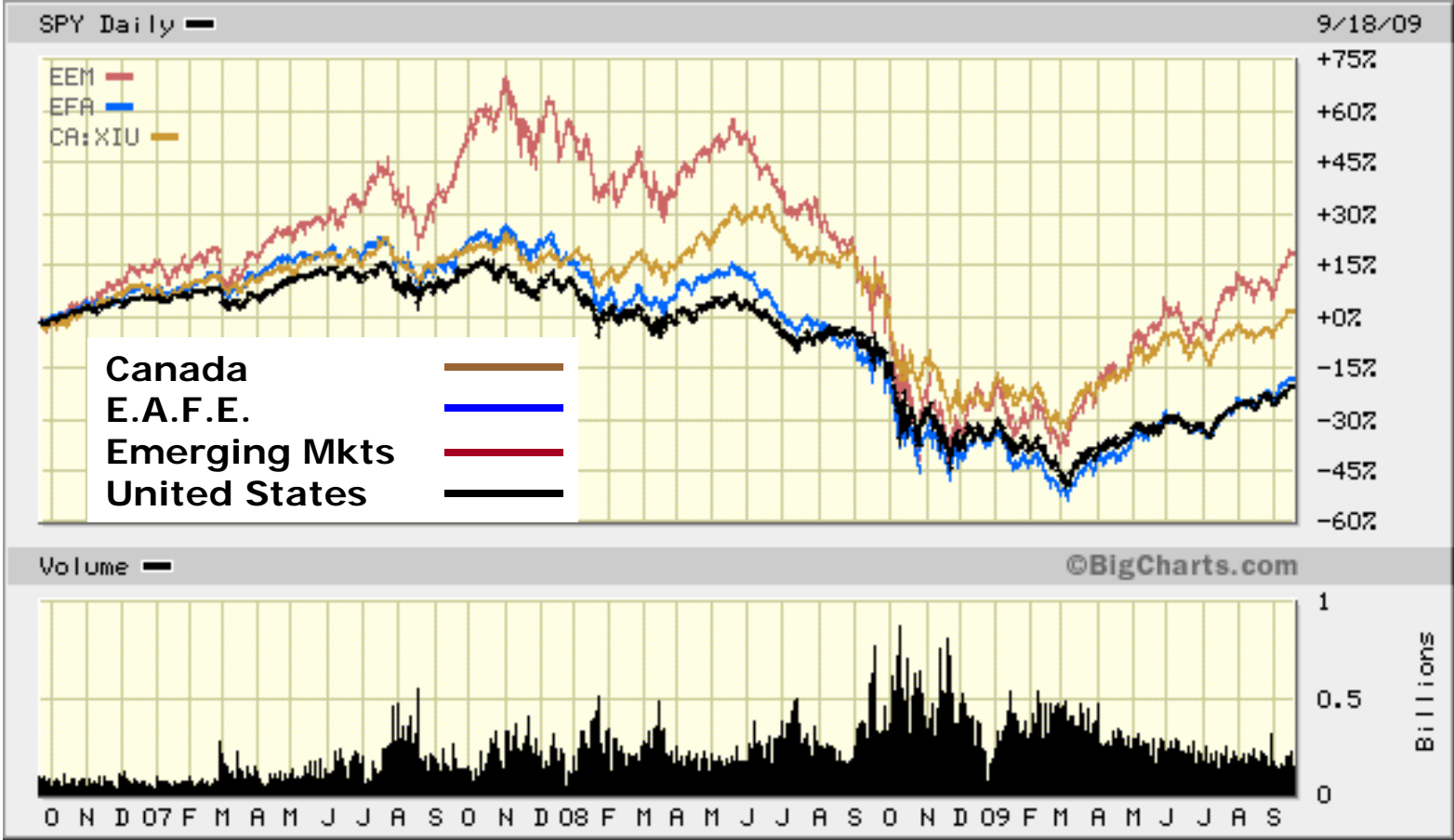
- Vital Signs: A More Upbeat Fed?

## ● Donald Luskin – Smart Money

- Just Remember, Everything Is Possible
  - Gold at \$2,000, 1970's style inflation



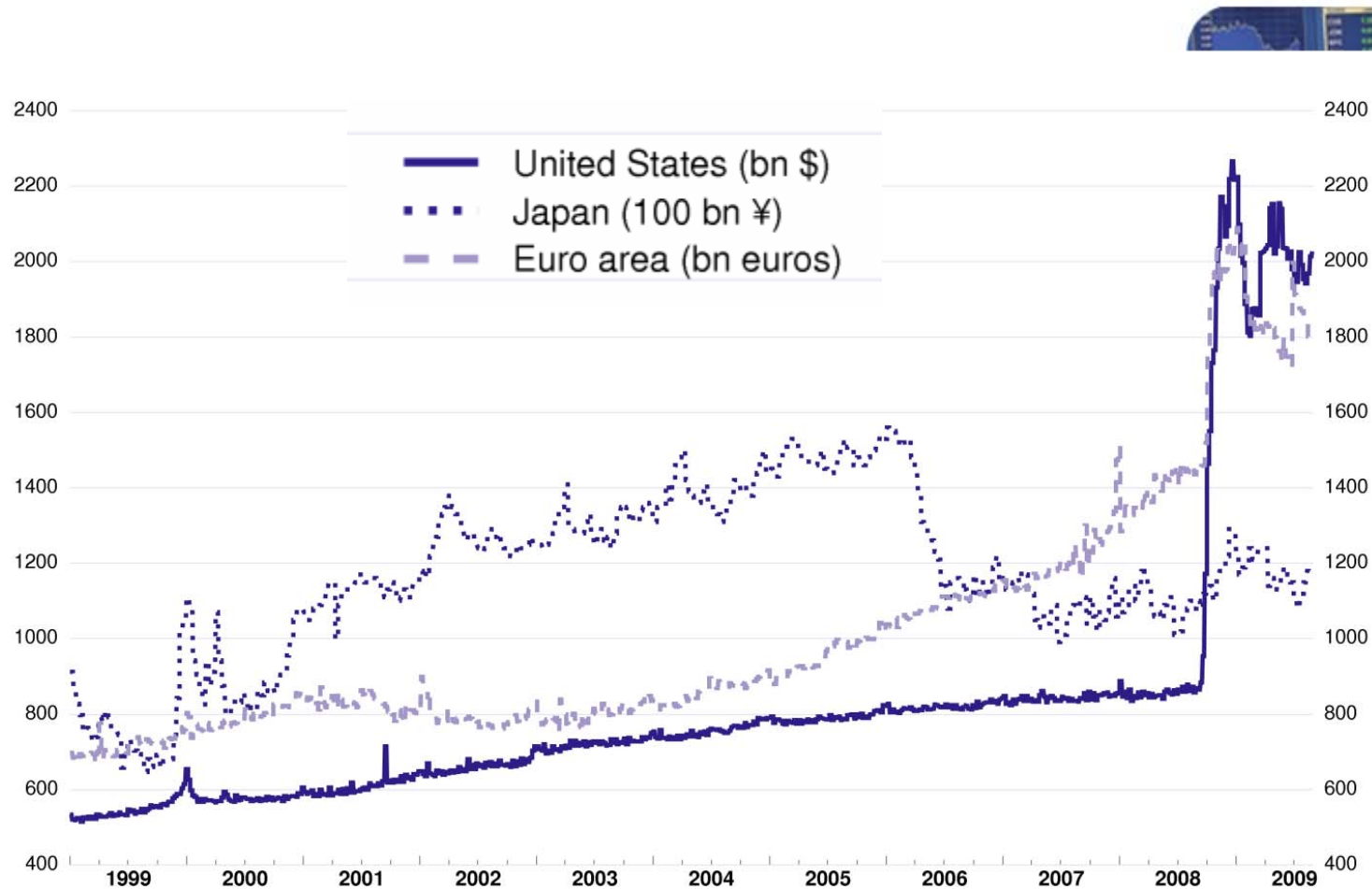
# The Charts – Stocks Rebound



Source: [www.bigcharts.com](http://www.bigcharts.com)



# Bloated Balance Sheets!

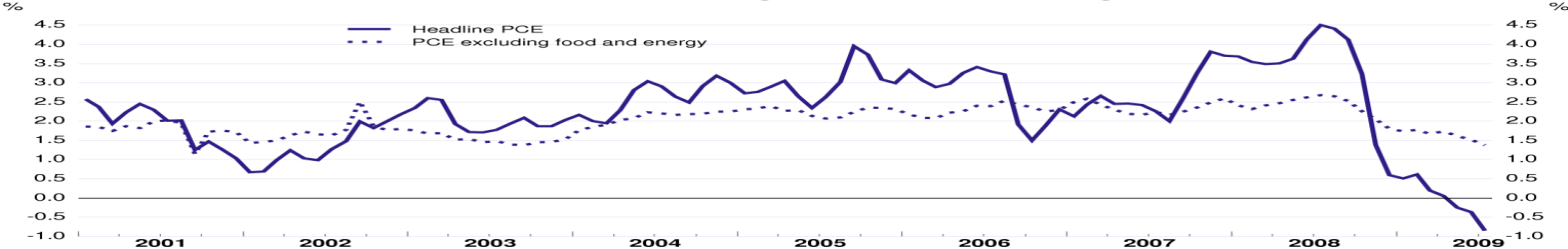


Source: OECD

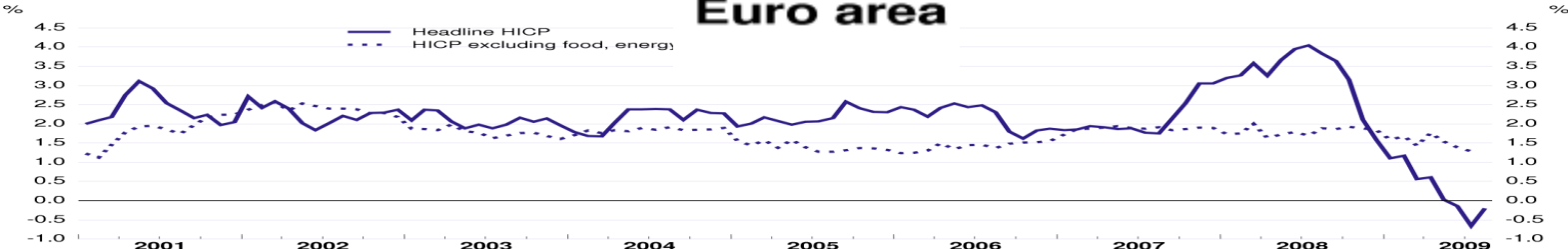
# Zero Inflation!



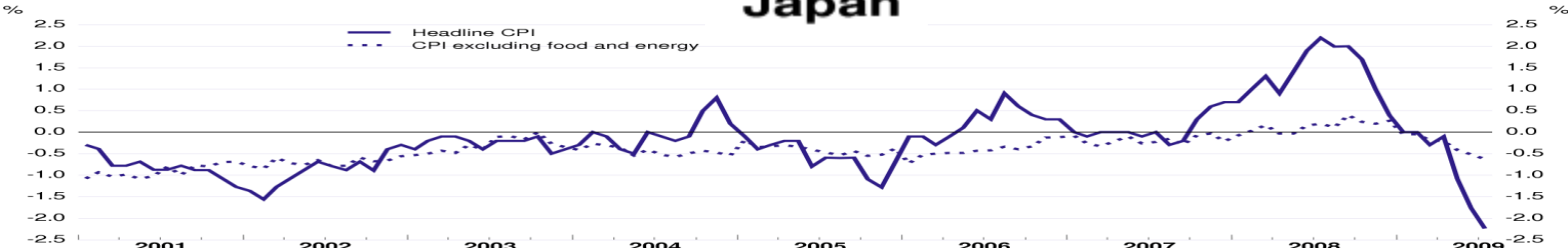
### United States (PCE deflator)



### Euro area



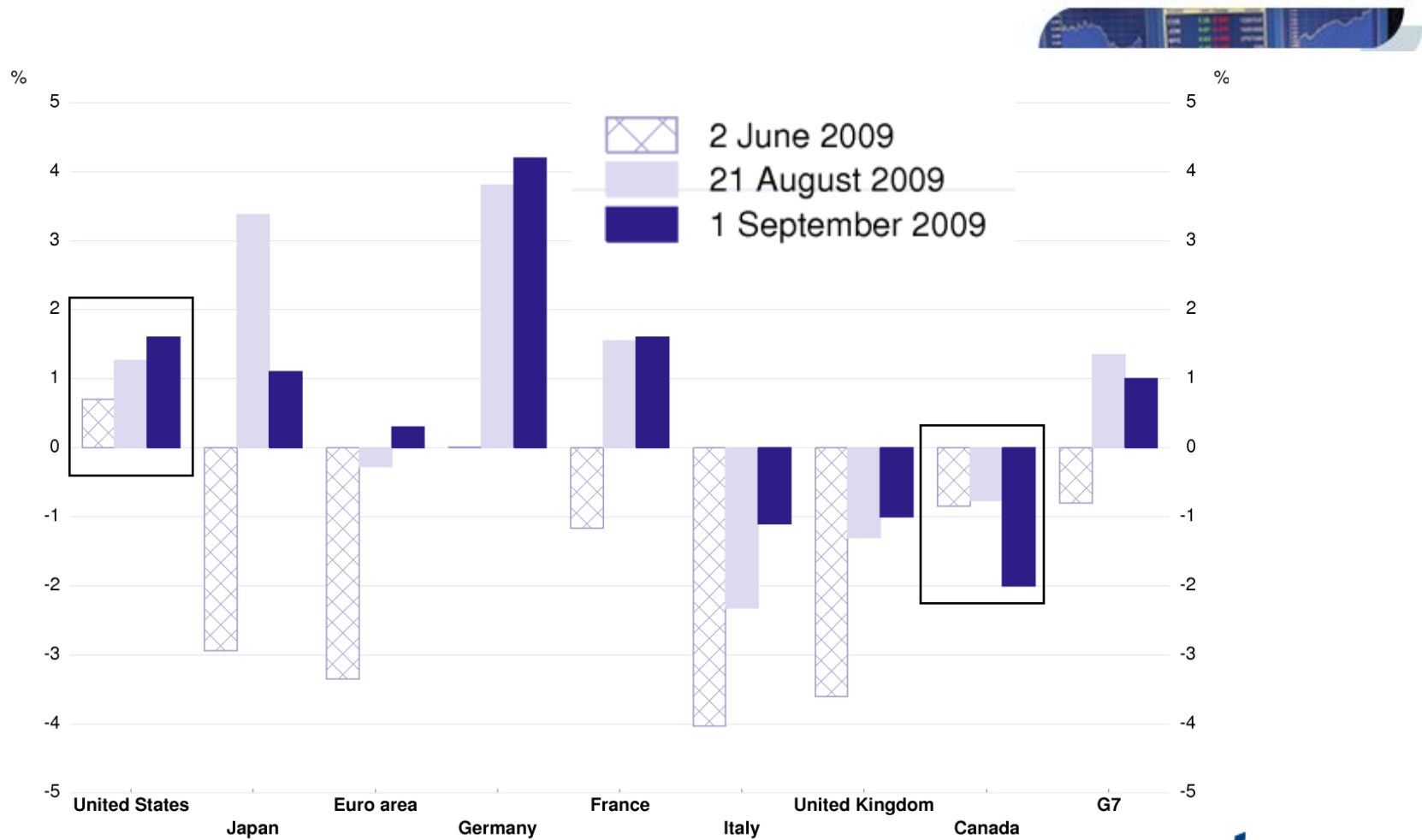
### Japan



Source: OECD

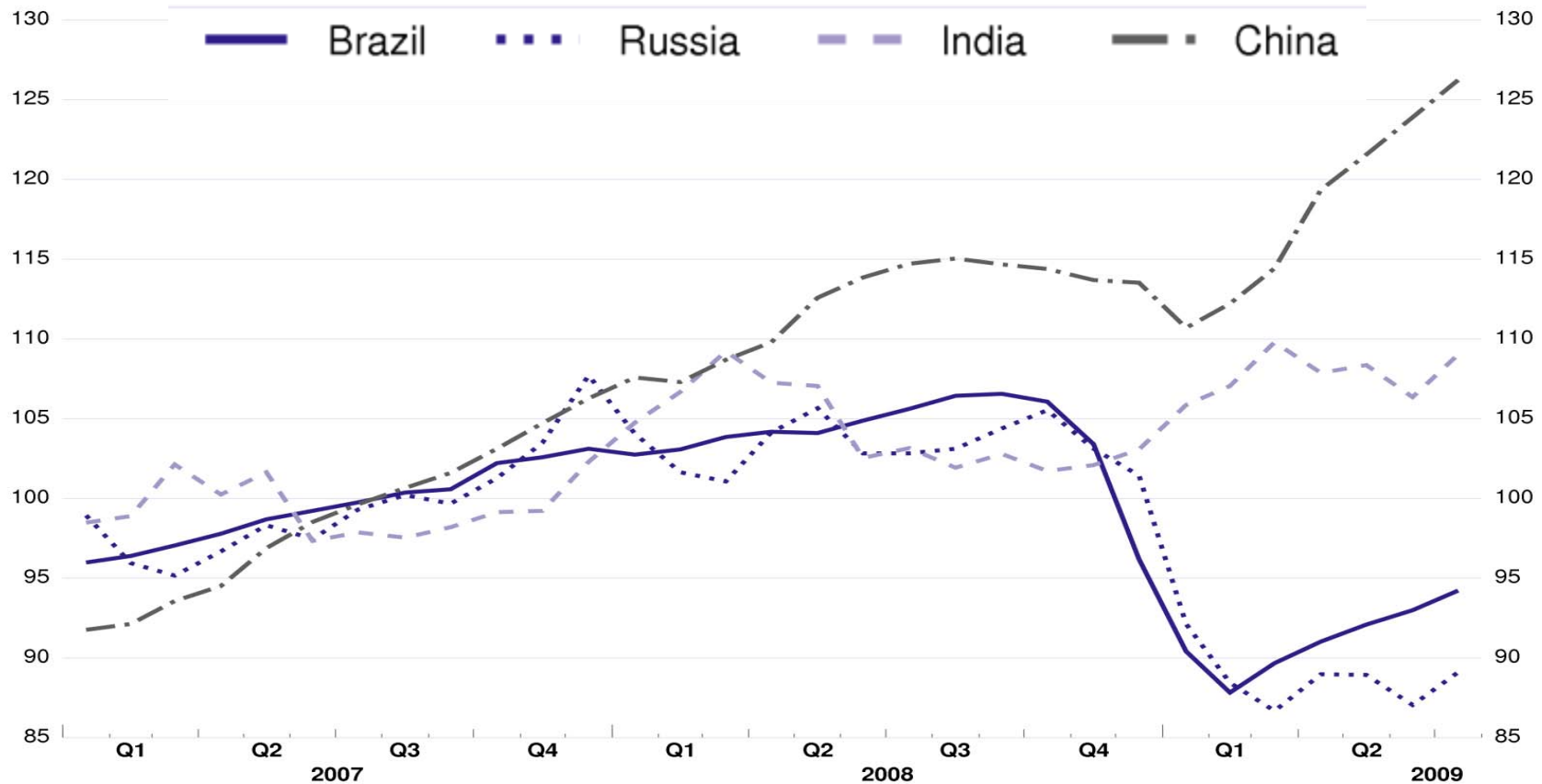


# Upward Revisions For Growth!



Source: OECD

# BRIC Recovery Underway!



Source: OECD

# An Investor's Decision Tree

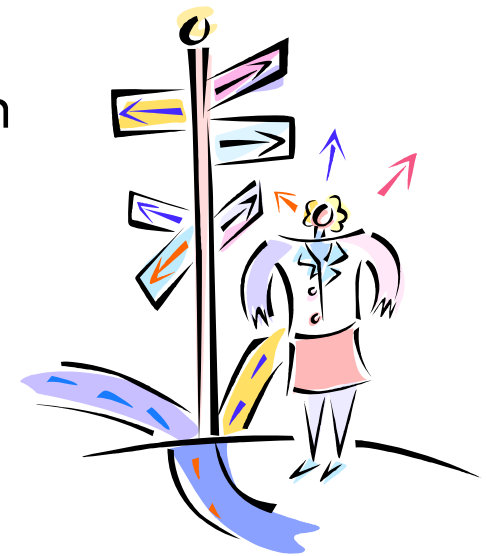


## What we know

Global stimulus packages are having an impact  
Interest rates will remain low  
Market volatility (i.e. Risk) will remain high

## What we think we know?

Stimulus packages may be inflationary  
Stock prices are forecasting a recovery  
But... too much too soon?  
In the end... markets are efficient



## What we don't know? Too much!



# The Objective



- Transition your investment strategy away from a long list of things “*we don’t know*” (defined as uncertainty) to “*things we know.*”

- We know that market volatility will remain high and we know that options price volatility
- If we really believe that markets are efficient, we can use option pricing to compensate us for the risk associated with the things we don’t know, effectively framing performance expectations.
- Because we know with certainty that options expire, we can strategically transition portfolios away from things we don’t know to things we know.



# The Option Strategy Matrix



	<b>CALL</b>	<b>PUT</b>	
<b>B U Y E R</b>	The right (but not the obligation) to buy	The right (but not the obligation) to sell	<b>STRADDLES</b>  <b>OR</b>  <b>STRANGLES</b>
<b>S E L L E R</b>	The potential obligation to sell  <b>SPREADS</b>	The potential obligation to buy  <b>SPREADS</b>	



# Valuing An Option



## Black-Scholes Formula

$$C(S, E, t, r, \sigma) = e^{-\delta t} S N(d_1) - E e^{-rt} N(d_2)$$

Where:

$$d_1 = [\ln(S/E) + (r - \delta + \sigma^2/2) t] / \sigma \sqrt{t}$$

$$d_2 = d_1 - \sigma \sqrt{t}$$



# Options Are Like Insurance



## Insurance Agent

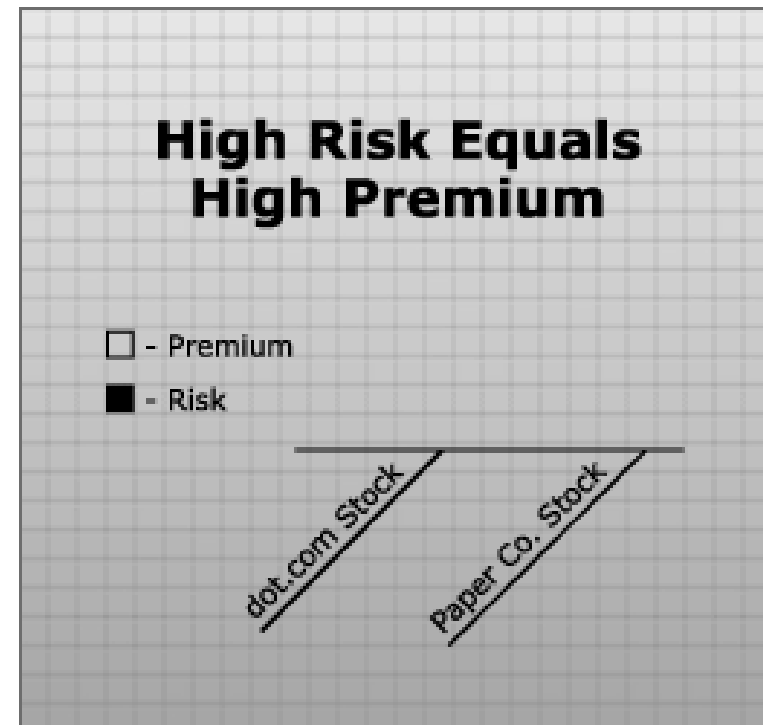
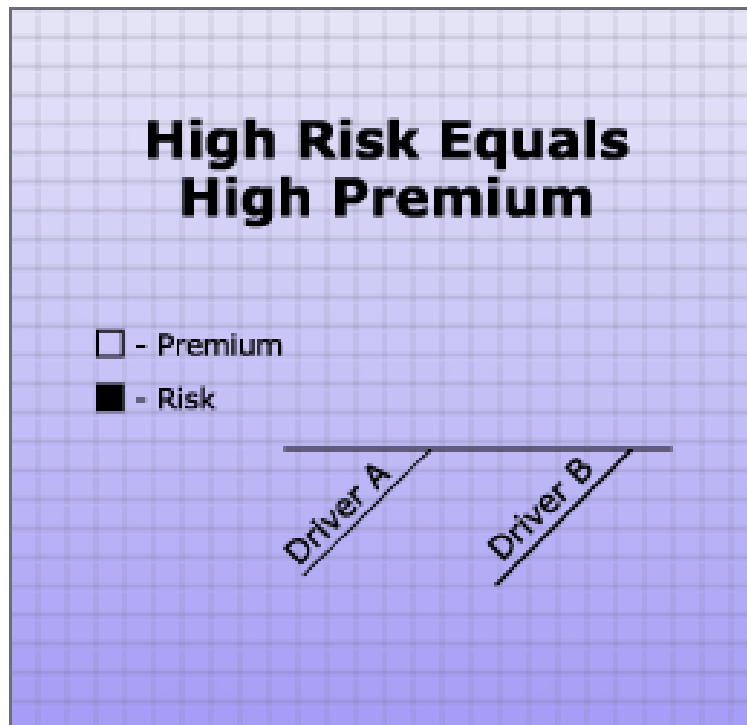
- Value of car
- Deductible
- Time span of policy
- Interest Rates
- Risk

## Options Trader

- Stock price
- Strike price
- Time to expiration
- Cost of money
- Volatility



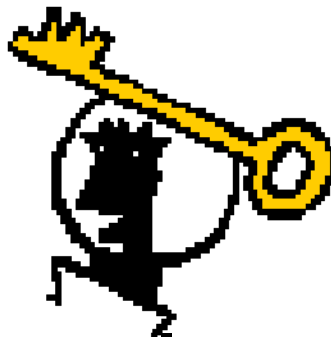
# Pricing Similarities



Source: CBOE



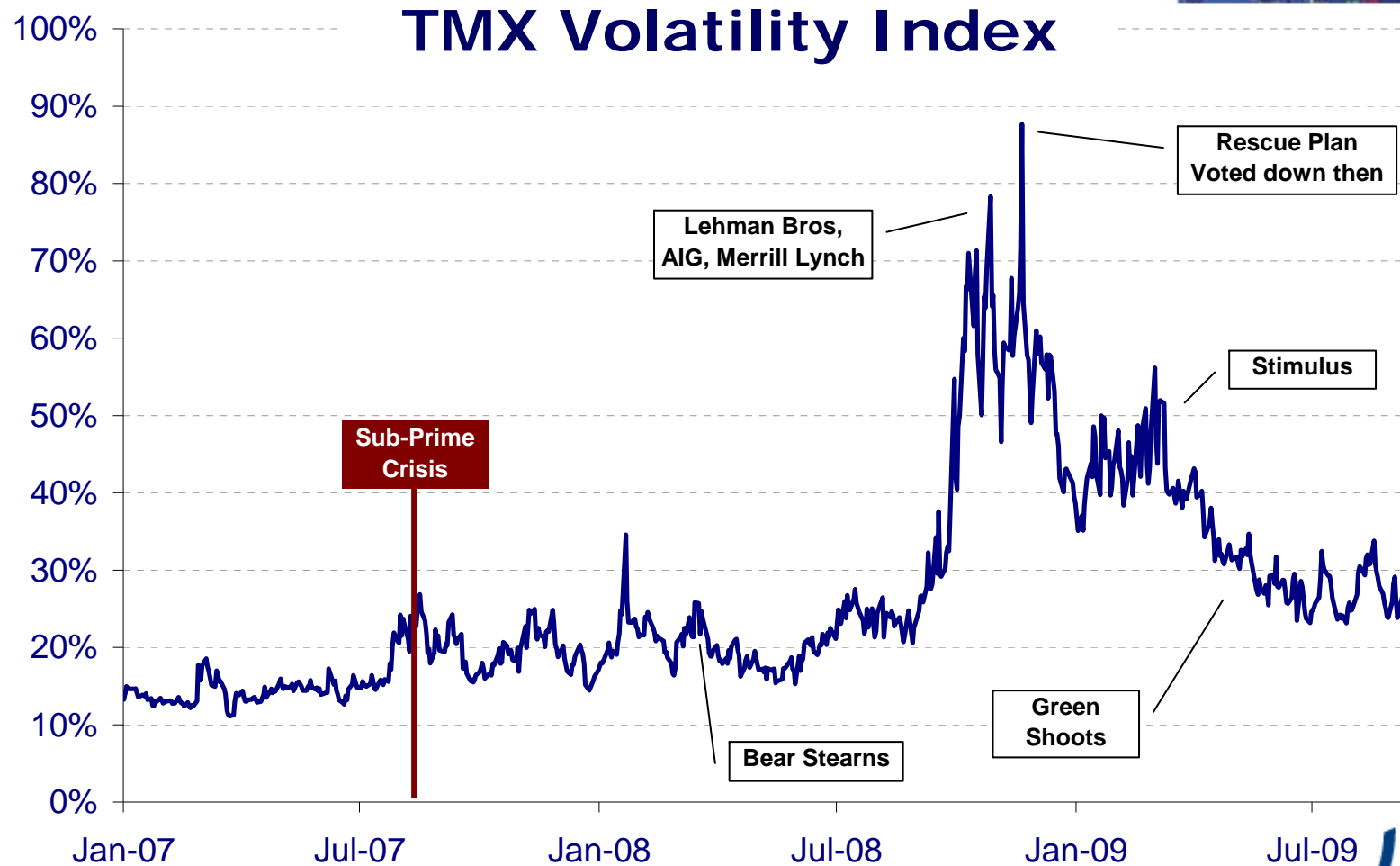
# Volatility Is Key



Understanding volatility is as important to an Options Trader as earnings are to a Securities Analyst.



# TMX Crisis In Pictures



# Impact Of Volatility



## The Option Pricing Formula

Stock Price	100
Strike Price	100
Days to Expiration	178
Quarterly Dividend	0.25
Annual Interest Rate	3%
Volatility	15%
<hr/>	
Call Price	\$ 4.47 \$
Put Price	\$ 3.86 \$



# Let's Play Football...



- Pittsburgh Steelers      Record: 11 – 0
- Detroit Lions              Record: 1 – 10
- Playing at Pittsburgh
- Who will win the game?



# Implied Trading Range



Trade Date: Sept 15-2009				S&P TSX 60	S&P TSX Comp
iShares S&P TSX 60 Index Fund				\$ 17.46	11,445.95
XIU	Dec-09	17.50	Call	\$ 0.75	491.66
XIU	Dec-09	17.50	Put	\$ 0.88	576.89

## Implied Trading Range - iShares S&P TSX 60 Index Fund

Upper Trading Band	\$ 17.50	+	\$ 1.63	=	\$ 19.13
Lower Trading Band	\$ 17.50	-	\$ 1.63	=	\$ 15.87

## Implied Trading Range - S&P TSX Composite Index

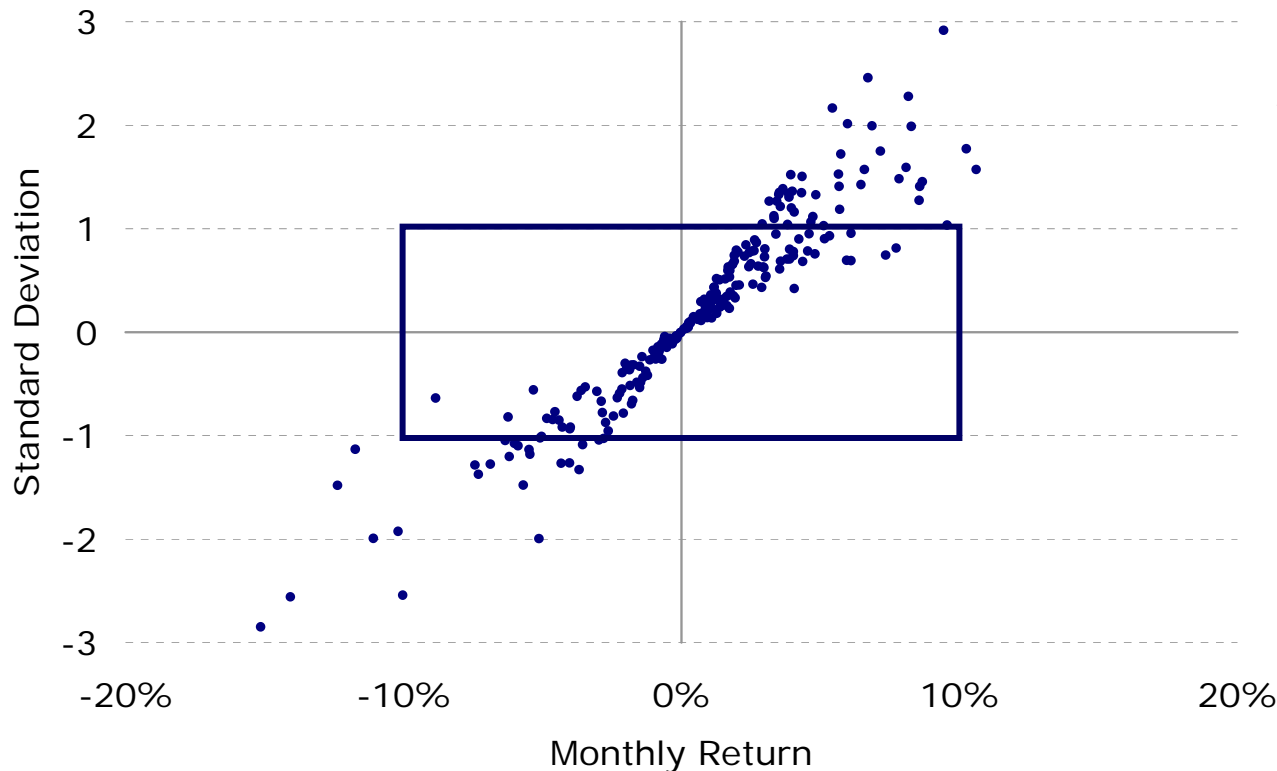
Upper Trading Band	11,500	+	1,068.55	=	12,568.55
Lower Trading Band	11,500	-	1,068.55	=	10,431.45



# Are Markets Really Efficient?



Monthly Returns 1990 - 2009  
Dow Jones Industrial Average



*Monthly option premium matched or exceeded the return of the underlying index 71.6% of the time based on 236 monthly observations from 1990 through Sept 2009*



# Covered Call Writing

Buying into the concept of efficient markets



- Establish a price at which you are willing to sell the stock
- Reduce your risk (i.e. downside price) by the premium received
- Create tax advantaged cash flow
  - Premium is taxed as a capital gain
- A strategy that historically, has consistently produced positive alpha



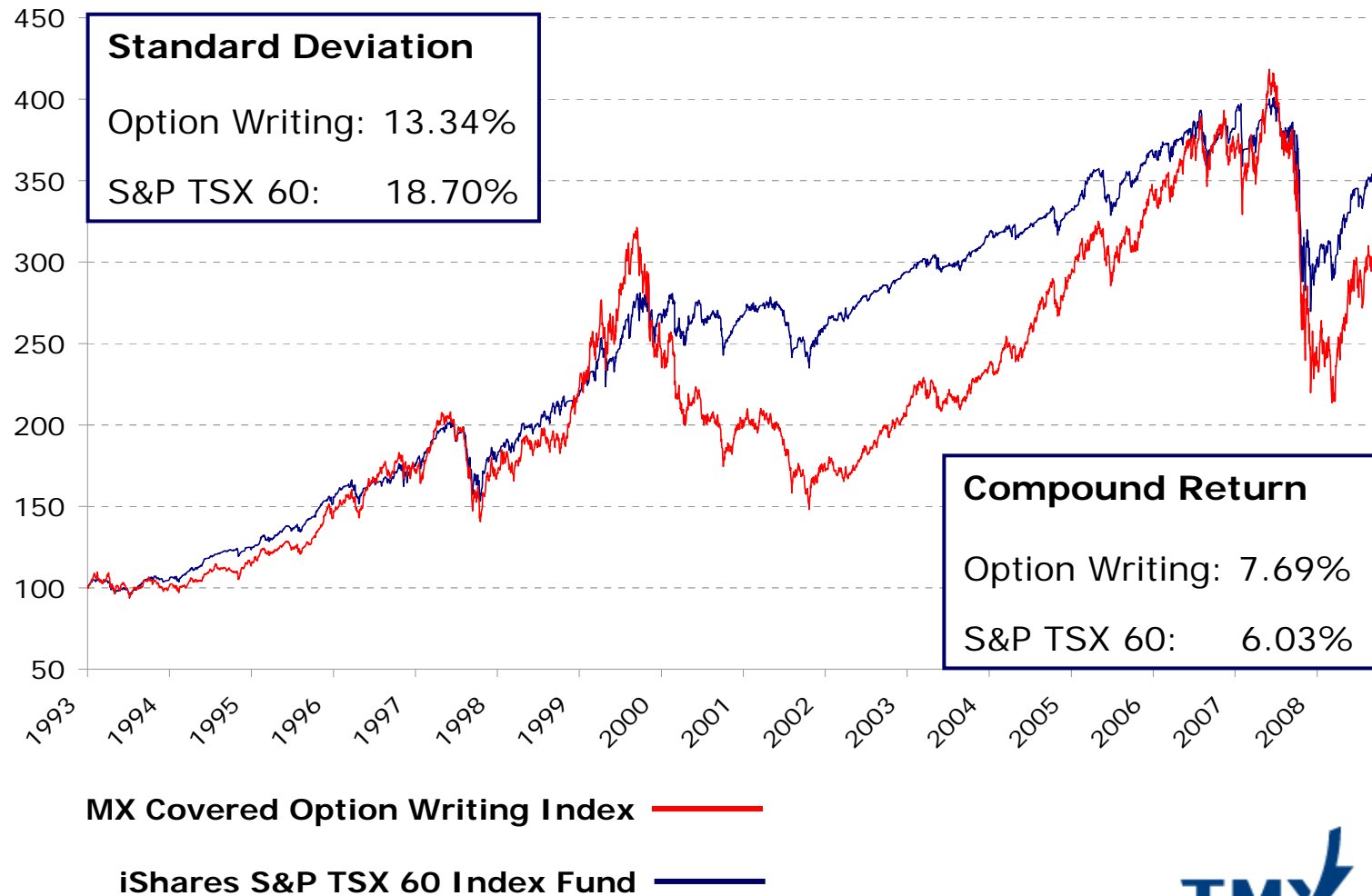
# What Is Positive Alpha?



- Measuring the risk adjusted returns of a strategy relative to an appropriate benchmark
  - The benchmark being buy and hold on an equity index
  - The strategy; covered call writing on an equity index
- Positive alpha results from;
  - Matching the benchmark performance with less risk
  - Beating the benchmark with the same or less risk
  - Significantly out-performing the benchmark by assuming additional risk



# TMX Covered Call Writers Index



# A Covered Write Example



Implied Volatility: ~41%



Trade Date: 18-Sep-09

	<u>Units</u>	<u>Price</u>	<u>Totals</u>
Buy Barrick Gold	1,000	39.65	39,650.00
Sell ABX January 40.00 calls	1,000	3.75	(3,750.00)
Per Share Dividend	0.11		
Number of Dividend Payments	1		

## The Outcome as of January-10

Share Price Above	40.00	11.76% *	35.46% **
Share price unchanged	39.65	10.78% *	32.51% **
Downside Break Even	\$ 35.79		-9.73%

\* Actual Return over time period

\*\* Annualized return



# Covered Calls To Manage Risk?



- Covered option writing outperforms if
  - Markets decline (you will lose less)
  - Markets are stable
  - Markets rise slightly
- The strategy underperforms if
  - Markets rise quickly and significantly



# Coming Full Circle

## Back To The Straddle



Trade Date:		18-Sep-09		Units	Price	Total
Buy	iShares S&P TSX 60 Index Fund			1,000	17.46	\$ 17,460
Sell	XIU	December	18.00 calls	10	0.45	\$ 450
Sell	XIU	December	17.00 puts	10	0.65	\$ 650

		Cost of Shares	\$ 17,460
Less	Call premium received		\$ 450
Less	Put premium received		\$ 650
Equals	Net out of pocket cost		\$ 16,360



# TSX Declines



iShares S&P TSX 60 Index Fund is trading below \$17 at expiration  
Short puts are assigned, calls expire worthless

		XIU
	Cost of initial shares	\$ 16,360
Plus	Additional purchase	\$ 17,000
Equals	Total capital outlay	\$ 33,360
Divided By	Total shares	2,000
Equals	Average price per share	\$ 16.68



# TSX Rises



iShares S&P TSX 60 Index Fund rises above \$18 at expiration  
Short calls are assigned, puts expire worthless

		XIU
	Cost of initial shares	\$ 17,460
Less	Call premium received	\$ 450
Less	Put premium received	\$ 650
Equals	Net out of pocket cost	\$ 16,360
Received from sale of shares		\$ 18,000
% Return		10.02%





# Questions

