



Citi Family Office



# 2009 Investment Outlook

## April 23<sup>rd</sup>, 2009



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Senior Investment Management Consultant

Investment Products: Not FDIC Insured • No Bank Guarantee • May Lose Value

## The Deterioration in Economic Outlook was Sharp and Dramatic

	12/07 Forecast		6/08 Forecast		12/08 Forecast	
	2008F	2009F	2008F	2009F	2008F	2009F
Global (YOY%)	3.4	3.7	3.0	2.8	2.6	0.5
US (YOY%)	2.3	2.9	1.3	1.4	1.3	-1.5
Developed Economies	2.0	2.5	1.5	1.4	1.0	-1.2
Developing Economies	6.9	6.5	6.3	6.0	5.8	3.8
US CPI	3.0	1.9	4.2	2.8	4.0	0.2

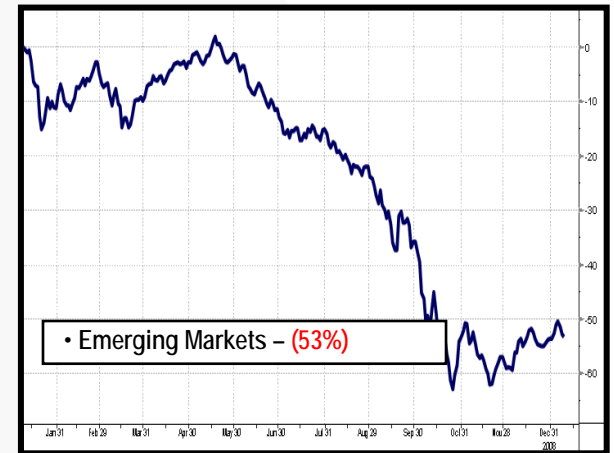
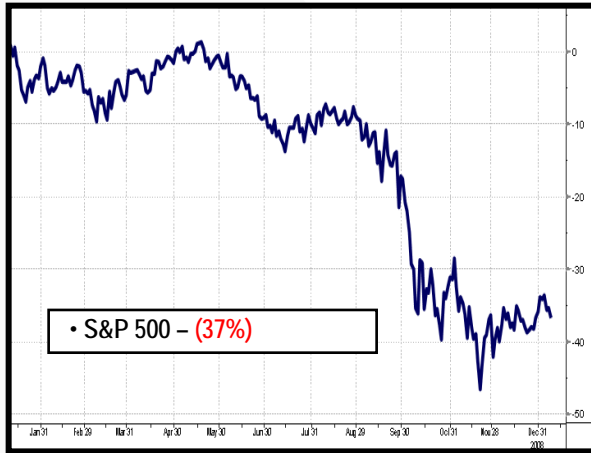
Source: Citi Economic & Market Analysis

For informational purposes only. An investment cannot be made directly in a market index. Past performance is no guarantee of future results.

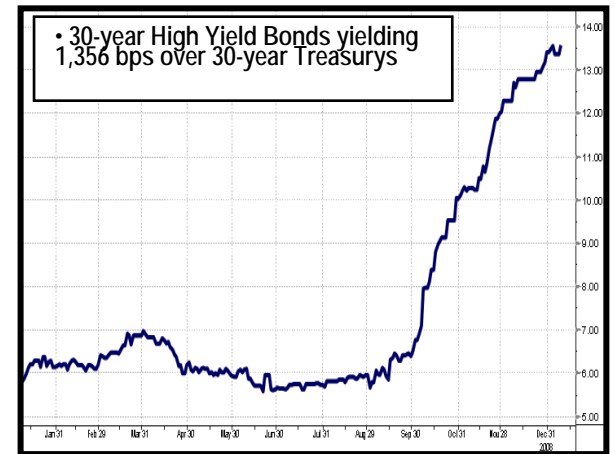
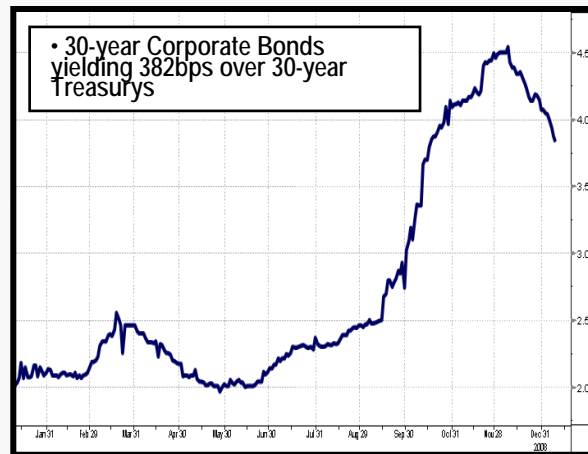
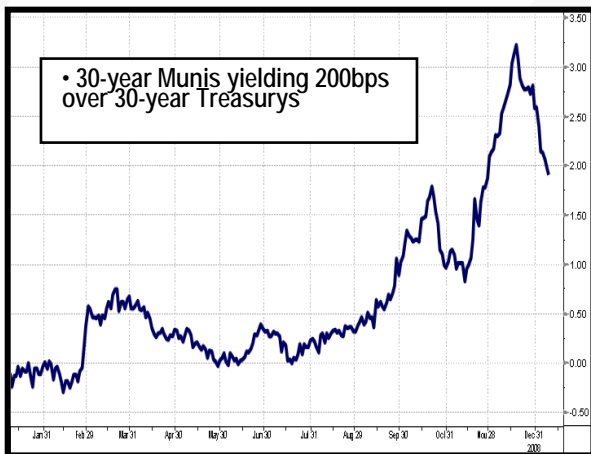
# And Markets Around the World Tumbled (Jan. 2008 – Jan. 2009)

Chart data through 1/9/09

## Equity Indices



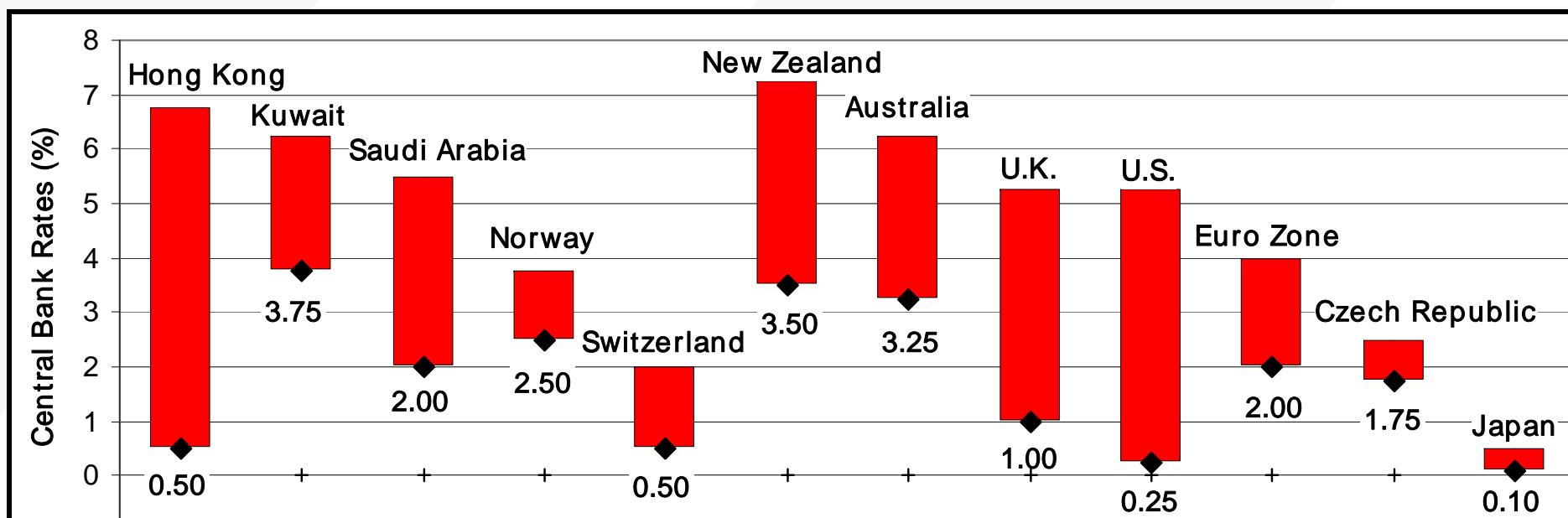
## Fixed Income Spreads



Source: Bloomberg. For informational purposes only. An investment cannot be made directly in a market index.

# Broad Actions to Combat the Economic Crisis: Conventional and Unconventional Policy Responses

Global Rate Cuts (Feb. 2007 – Feb. 2009)



Source: Bloomberg

# Aggressive Policy Initiatives to Continue in 2009: Fed Liquidity Initiatives

Program	Collateral	Participants	Size
28-day Term Repos	Treasury, agency and agency-backed MBS	Primary dealers	Variable
Term Auction Facility (TAF)	All assets eligible for the discount window	All US banks and branches with access to the discount window	\$600 bil
Forward TAF Auctions	Same as TAF	Same as TAF	\$300 bil
Term Securities Lending Facility (TSLF)	Treasuries, agencies, agency MBS and investment grade debt securities	Primary dealers	\$200 bil
TSLF Options Program (TOP)	Same as TSLF	Primary dealers	\$50 bil
Primary Dealer Credit Facility (PDCF)	Same collateral pledged in repo market	Primary dealers	Variable
Currency Swaps	Local rules apply	Banks and branches in foreign countries	Unlimited
ABCP Money Market Fund Liquidity Facility (AMLF)	Asset-back CP	Depository institutions, bank holding companies, US branches and agencies of foreign banks	Variable
Commercial Paper Funding Facility (CPFF)	Assets of SPV, which in turn purchases CP from issuers	Issuers of A1/P1/F1 CP	Variable
Money Market Investor Funding Facility (MMIFF)	US dollar-denominated CDs, bank notes, commercial paper issued with remaining maturities of 90 days or less	US money market mutual funds	Up to \$540 bil
Agency debt	Fed started purchasing GSE issued paper and will buy GSE-guaranteed MBS beginning next year.	Primary dealers, asset managers	\$600 billion

# Aggressive Policy Initiatives to Continue in 2009 : Fed Solvency Initiatives

2008

Program	Structure	Size
Bear Stearns	Maiden Lane LLC (a special purpose vehicle) holds assets, JPM takes first \$1.15 billion in loss.	\$29 billion
AIG	NY Fed gives AIG a loan collateralized by the companies' assets. Government acquires 79.9% equity stake in AIG. Loan repaid from proceeds of sale of the firm's assets.	\$123 billion
GSEs	Government placed Fannie and Freddie into conservatorship and guarantees their debt. GSEs to purchase \$40 billion/month in distressed mortgage-related securities.	Unlimited
TARP/FSP (Financial Stimulus Plan)	Government to recapitalize banks by purchasing distressed assets. Banks likely to require more than the \$190B of remaining funds.	\$700 billion
Term Asset-Backed Securities Loan Facility (TALF)	Asset-backed student, auto, credit card, and small business loans (guaranteed by SBA).	Up to \$1 Trillion
Automakers	Have received short-term financing from the TARP. Automakers are now under review by the bank steering committee and may require an additional \$40B in DIP (debtor-in-possession) financing to avoid bankruptcy.	\$17.4 billion +

Sources: Wrightson ICAP, NY Fed [http://www.ny.frb.org/markets/Forms\\_of\\_Fed\\_Lending.pdf](http://www.ny.frb.org/markets/Forms_of_Fed_Lending.pdf)

# Implications of Obama's Proposed Fiscal Policy

## ▣ Obama's Stimulus Package:

- The \$787B economic stimulus package was signed into law on Feb. 17th
- Package estimated to create or save 3.5 million jobs
- About \$282 billion is dedicated to tax cuts, for both individuals and businesses
- Aid to state and local governments
- Largest infrastructure initiative since the 1950s

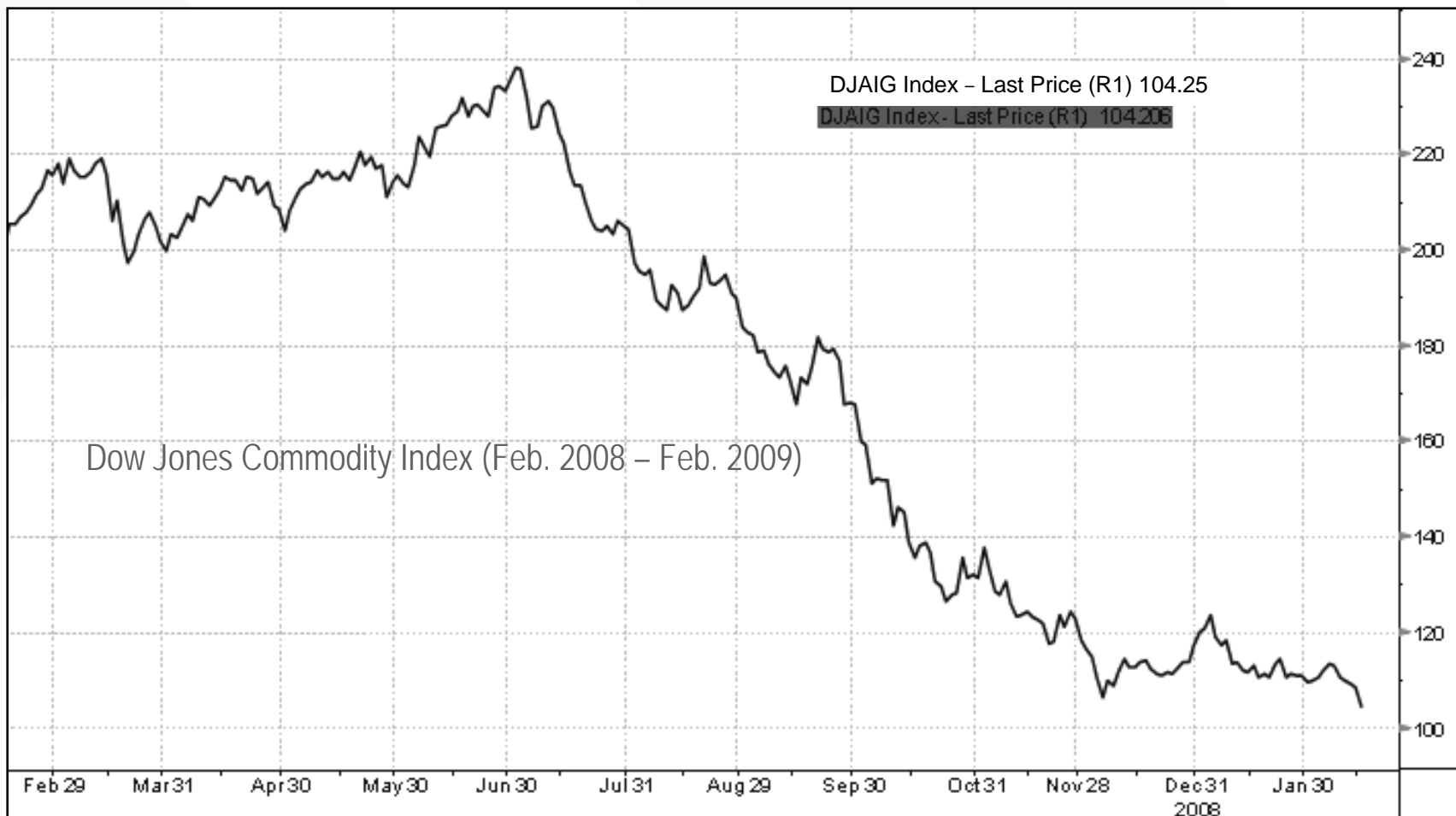
## ▣ Proposed Homeowner Affordability and Stability Plan: \$275B initiative aimed to assist as many as 9 million homeowners stay current on their mortgage payments

## ▣ A Global Fiscal Stimulus Effort Is Underway:

- China: Approved stimulus plan allocates over Rmb 4 trillion with 75%+ for infrastructure development, earthquake reconstruction and other projects.
- Euro Zone: Central banks targeting households and businesses via tax and subsidy changes, plus some investment
- Japan: Implementing subsidies to households as well as tax incentives for business investment

# Sharp Pullback in Commodities Prices is One Positive – At Least for Developed Markets

## Commodities Performance



Source: Bloomberg

For informational purposes only. An investment cannot be made directly in a market index.

# U.S. Economic Cycles and Equity Market Returns

Data Shown from 1929 – Present

Economic Cycle Peak to Trough	Recession Duration (Months)	Market Lead to Cycle Trough (Months)	U.S. Equity Market (% Decline)	U.S. Equity Market % Gain After Trough			Equity Trough to Prior Recession Peak Duration (Days)
				1 Month	6 Months	12 Months	
Aug-1929 - Mar-1933	43	9	-85	68	64	171	742
May-1937 - Jun-1938	13	3	-54	15	44	29	268
Feb-1945 - Oct-1945	8	7	-2	9	19	35	52
Nov-1948 - Oct-1949	11	5	-21	9	23	42	251
Jul-1953 - May-1954	10	9	-15	4	18	38	177
Aug-1957 - Apr-1958	8	6	-21	5	10	31	71
Apr-1960 - Feb-1961	10	4	-13	7	25	31	207
Dec-1969 - Nov-1970	11	6	-35	6	23	44	261
Nov-1973 - Mar-1975	16	6	-48	19	31	38	437
Jan-1980 - Jul-1980	6	4	-11	7	29	37	120
Jul-1981 - Nov-1982	16	4	-27	18	44	58	431
Jul-1990 - Mar-1991	8	6	-20	6	28	29	92
Mar-2001 - Nov-2001	8	-11	-36	15	11	34	526
Dec-2007 - ???	???	???	???	???	???	???	???
<i>Mean</i>	15	5	-31	12	26	45	326
<i>Median</i>	13	5	-27	9	26	36	268

Source: Bloomberg and NBER

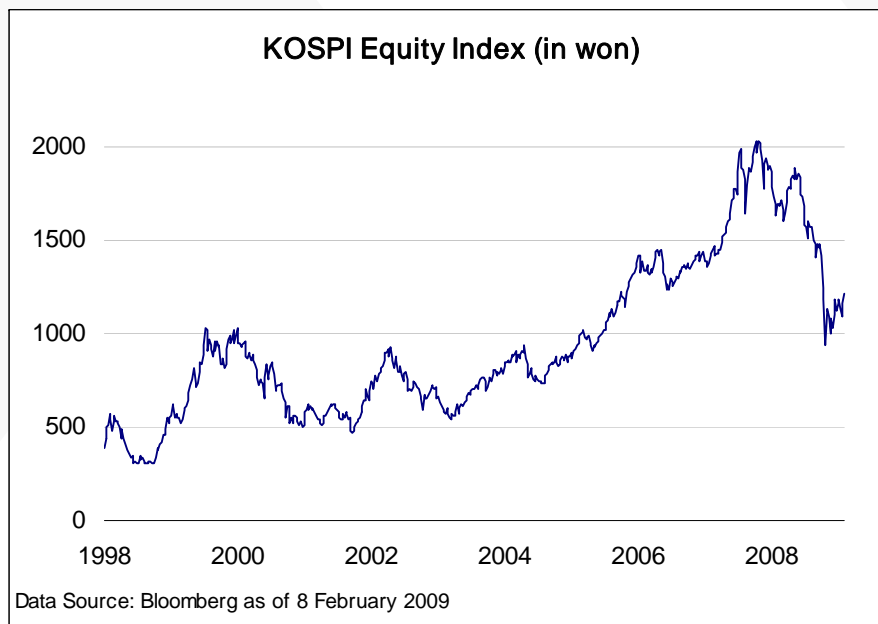
## 2009 Outlook

- ❑ Economies globally are in recession
- ❑ In our view, the scope and scale of policy responses will eventually work, with the US likely to recover first in the second half of 2009
- ❑ Stock markets tend to be leading indicators and bottom before the recession is over, but volatility will persist and investors will look for indications that the credit situation is stabilizing
- ❑ Spread sectors should outperform Treasurys as investor risk aversion abates
- ❑ We believe the dollar should outperform other developed market currencies. Some emerging market currencies are under extreme pressure (Eastern Europe) but others, mainly Asia, are likely to appreciate in 2009

# 9 in 09

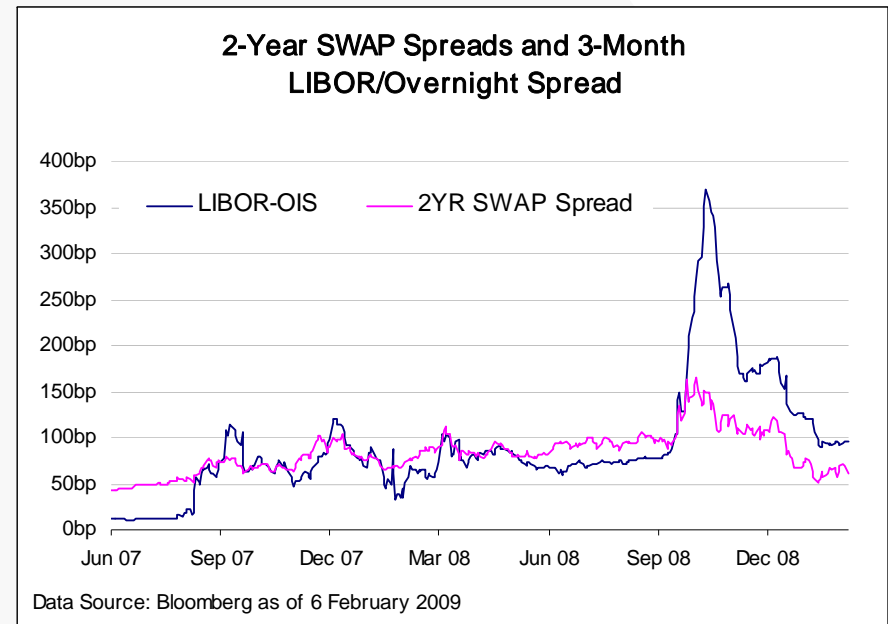
## 9 Recovery Signposts to Watch for in 2009

### 1) KOSPI Equity Index (in won)



- Korea's largest trading partners are China, the US, and Japan
- A pick-up in the KOSPI would be an early recovery signal for the global economy

### 2) 3-Month LIBOR/Overnight Index Swap Spread

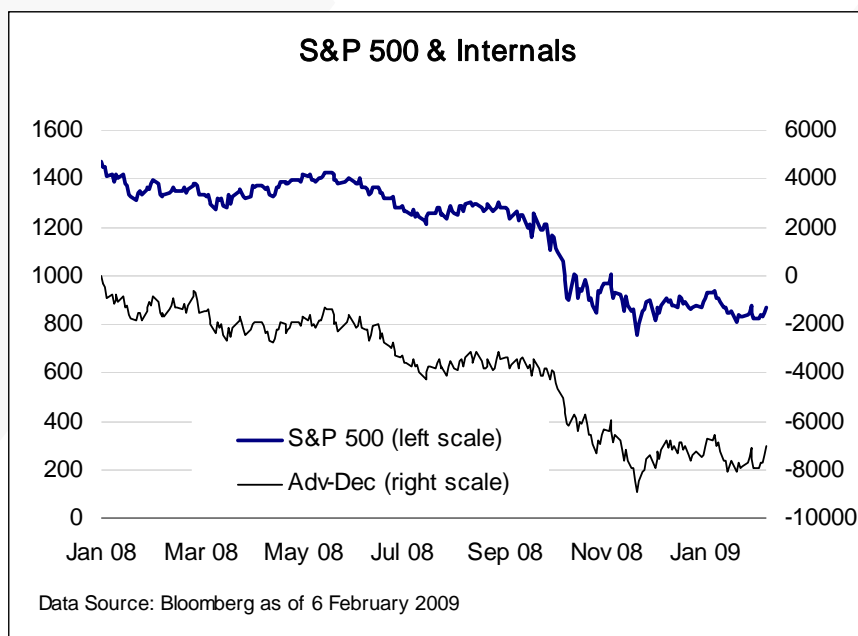


- The three-month US LIBOR-OIS spread is a proxy for corporate funding costs.
- A contraction would be considered positive, as credit markets begin to normalize

# 9 in 09

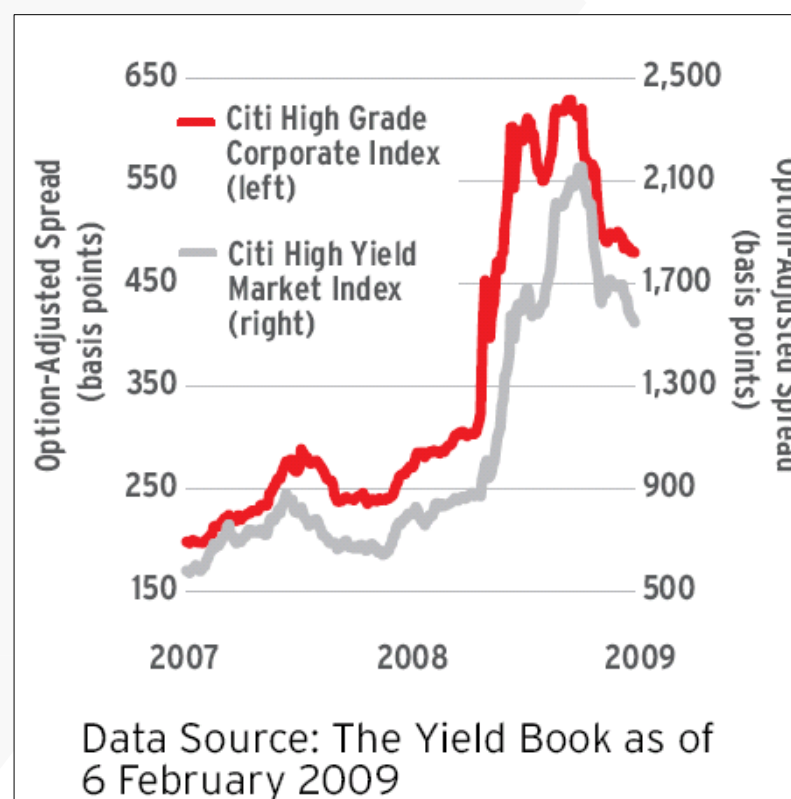
## 9 Recovery Signposts to Watch for in 2009

### 3) S&P 500 & Internals



□ If the advance-decline line is moving higher along with the index, it is a positive sign for stocks

### 4) US Corporate Bond Spreads

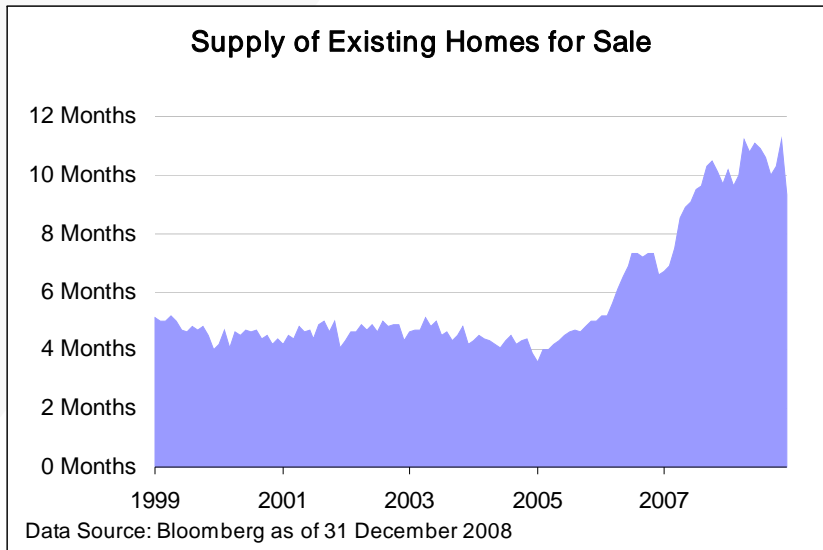


□ A decline in corporate bond spreads would be a good sign

# 9 in 09

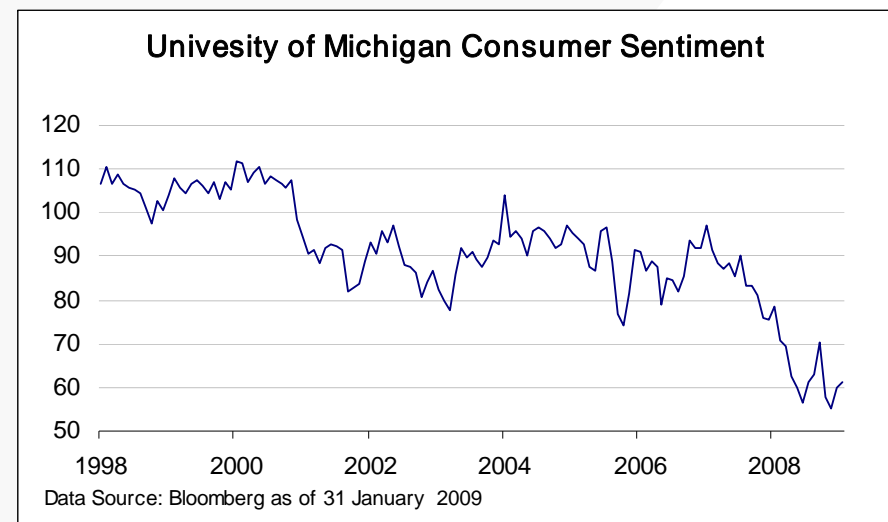
## 9 Recovery Signposts to Watch for in 2009

### 5) Supply of Existing Homes for Sale



□ **A decline in the supply of unsold existing homes would signal less downward pressure on home prices and possibly presage greater stability in this important economic sector**

### 6) University of Michigan Consumer Sentiment

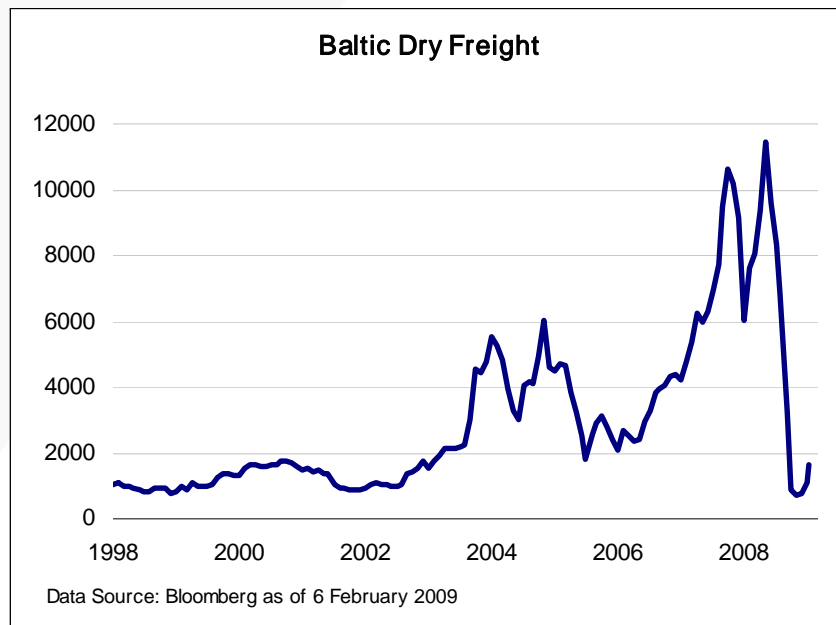


□ **Look for a rebound in consumer sentiment heading into the important 2009 back-to-school and holiday shopping seasons**

# 9 in 09

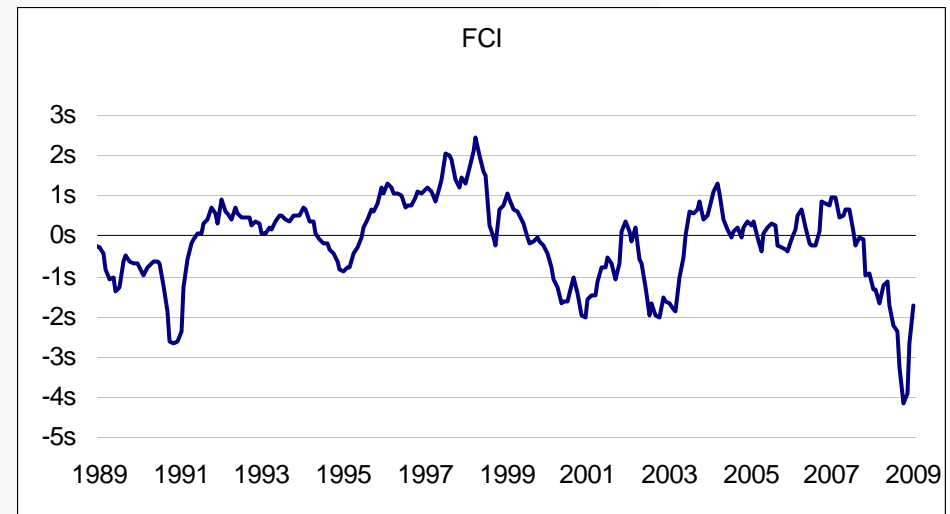
## 9 Recovery Signposts to Watch for in 2009

### 7) Baltic Dry Freight Index



- The Baltic Dry Freight index should be quick to record an improvement in global trade

### 8) Citigroup Financial Conditions Index



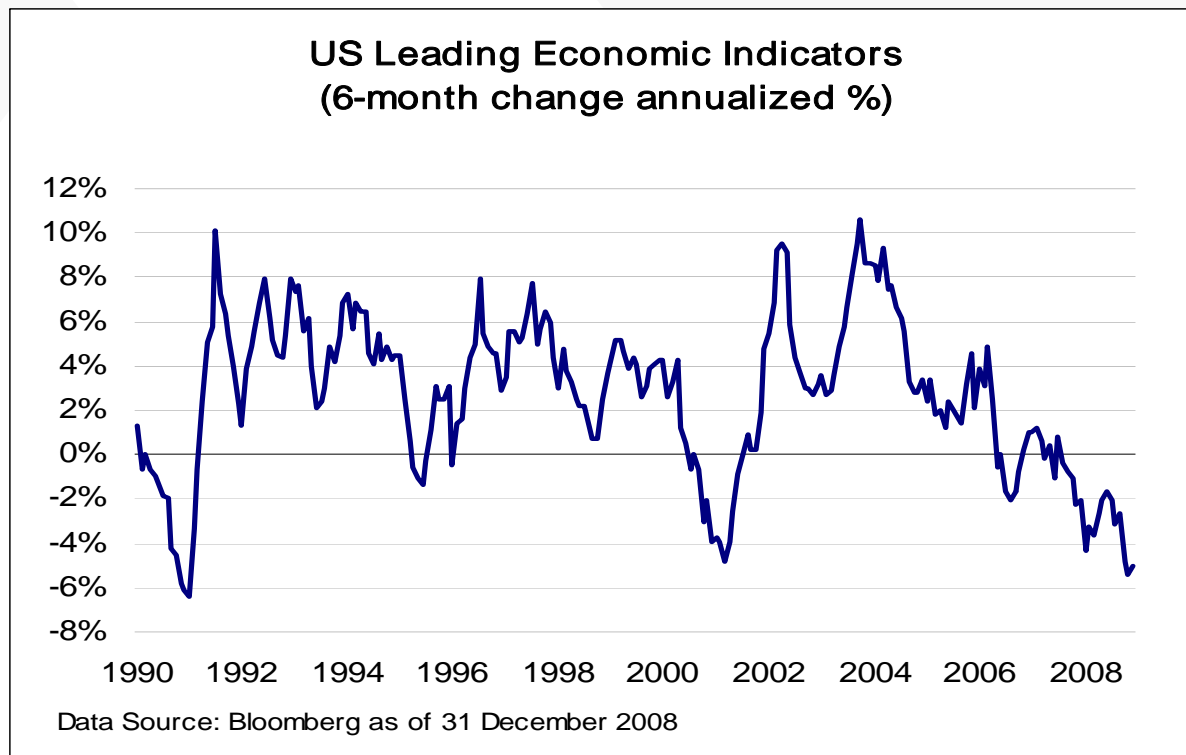
Source: Citi Economic & Market Analysis as of 6 February 2009

- The Citi Financial Conditions Index gauges the likely impact of financial conditions on economic activity
- The index is at extremely depressed levels, so any improvement will be welcome news

# 9 in 09

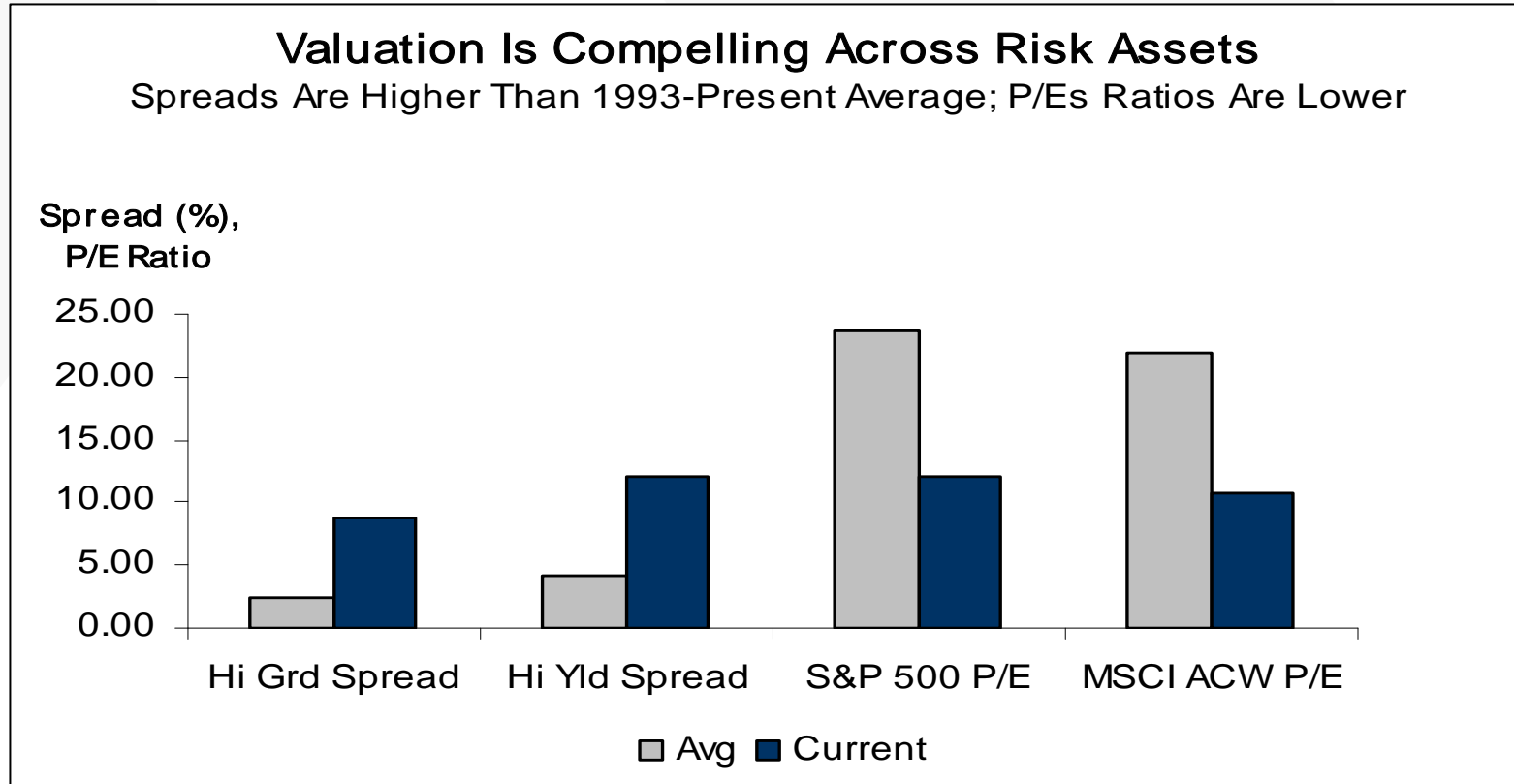
## 9 Recovery Signposts to Watch for in 2009

### 9) US Leading Economic Indicators (6-month change annualized %)



□ The 10 indicators in this index tend to turn up in advance of the economy

# Valuation Levels are Creating Opportunities Across the Investing Spectrum

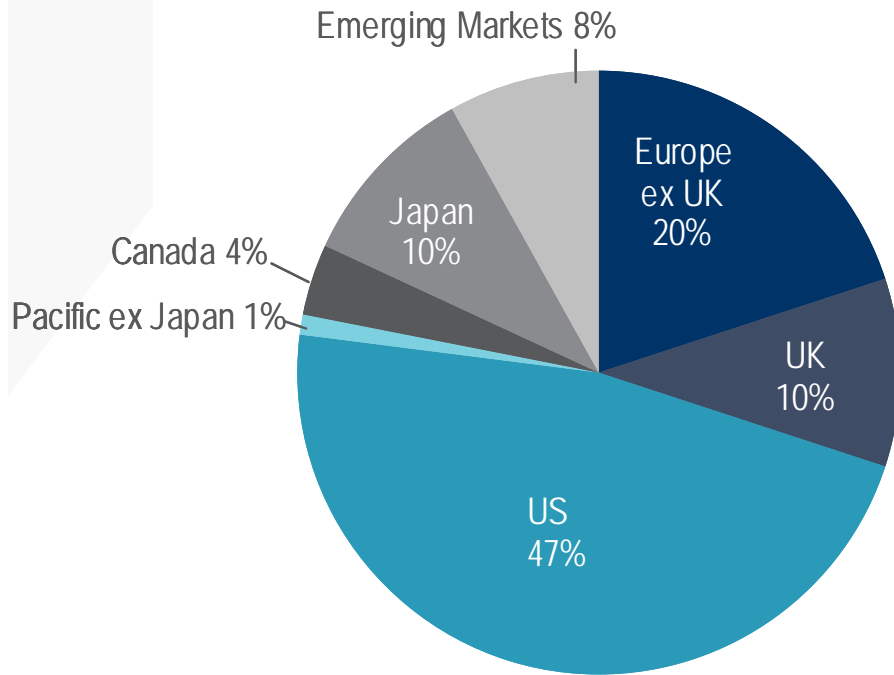


Data Source: Bloomberg and Citi Global Investment Committee

- Spreads are higher than two years ago; P/E ratios are lower
- Current valuations have come down, but remain well above historical averages

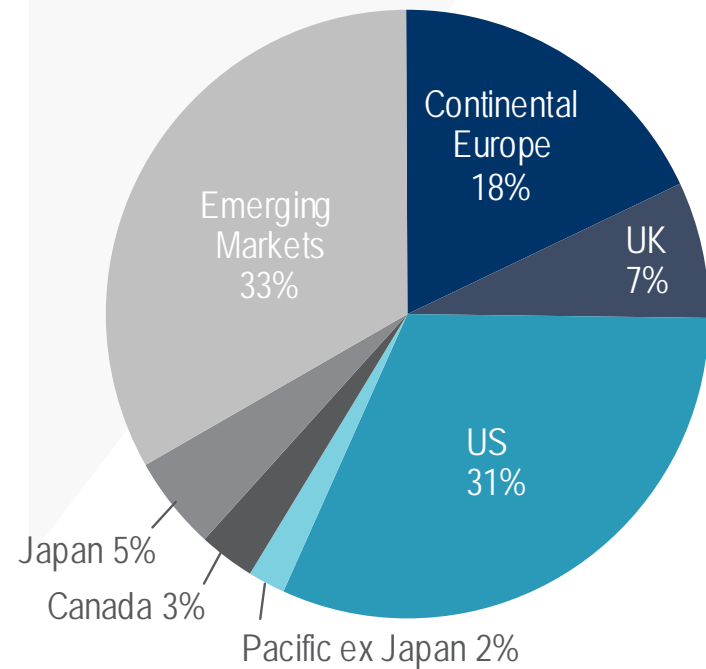
# Consider Global Trends – Market Capitalization

**2006 Global Equity Market-Cap Share  
(\$33.7 trillion total)**



**2020 Projected Regional Equity Market Cap**

(Convergence to Global Market-Cap-to-GDP Ratio\*)



Data Source: World Development Indicators and Citi Global Investment Committee as of 17 June 2008 and MSCI as of 19 June 2008

\* Does not total 100% due to rounding

# Consider Global Trends – Market Leadership

## Top 10 Cap-Weighted Names in Each Sector from MSCI World Index

By Company

Utilities	
Company	MSCI World Weight (%)
E.ON AG	0.45
GDF SUEZ	0.32
TOKYO ELEC POWER	0.24
RWE AG (NEU)	0.24
EXELON CORP	0.22
IBERDROLA SA	0.19
SOUTHERN CO	0.17
ENEL	0.16
NATIONAL GRID	0.14
KANSAI ELEC POWER	0.13

Consumer Staples	
Company	MSCI World Weight (%)
PROCTER & GAMBLE CO	1.09
NESTLE SA	0.89
WAL MART STORES INC	0.79
COCA COLA CO	0.56
PHILIP MORRIS INTL INC	0.54
PEPSICO INC	0.51
BRIT AMER TOBACCO	0.29
CVS CAREMARK CORPORATI	0.25
TESCO	0.24
UNILEVER NV	0.23

Telecomm Service	
Company	MSCI World Weight (%)
AT&T INC	1
VODAFONE GROUP	0.63
VERIZON COMMUNICATIONS	0.58
TELEFONICA SA	0.56
FRANCE TELECOM	0.3
DEUTSCHE TELEKOM	0.25
NTT DOCOMO	0.18
NIPPON TEL&TEL CP	0.16
KON KPN NV	0.16
KDDI CORP	0.12

Headquarters
Australia
Canada
Continental Europe
Japan
United Kingdom
USA

Increasingly more global leaders are located outside of the U.S.

Source: MSCI data; Vestek As of December 31, 2008

Investors cannot directly purchase an index.

# Consider Global Trends – Market Leadership

By Company

## Top 10 Cap-Weighted Names in Each Sector from MSCI World Index

Energy	
Company	MSCI World Weight (%)
EXXON MOBIL CORP	2.48
CHEVRON CORP NEW	0.91
BP	0.85
TOTAL	0.69
ROYAL DUTCH SHELL	0.55
CONOCOPHILLIPS	0.45
ROYAL DUTCH SHELL	0.4
ENI	0.36
SCHLUMBERGER LTD	0.3
OCCIDENTAL PETE CORP	0.29

Materials	
Company	MSCI World Weight (%)
BHP BILLITON LTD	0.43
BHP BILLITON PLC	0.25
MONSANTO CO NEW	0.23
BASF SE	0.22
BARRICK GOLD CORP	0.19
ANGLO AMERICAN	0.18
DU PONT E I DE NEMOURS	0.14
GOLDCORP INC NEW	0.14
AIR LIQUIDE(L')	0.13
POTASH CORP SASK INC	0.13

Health Care	
Company	MSCI World Weight (%)
JOHNSON & JOHNSON	1
PFIZER INC	0.71
NOVARTIS AG	0.7
ROCHE HLDGS AG	0.64
GLAXOSMITHKLINE	0.58
ABBOTT LABS	0.49
SANOFI-AVENTIS	0.4
MERCK & CO INC	0.39
AMGEN INC	0.37
ASTRAZENECA	0.35

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# Consider Global Trends – Market Leadership

By Company

## Top 10 Cap-Weighted Names in Each Sector from MSCI World Index

Consumer Discretionary	
Company	MSCI World Weight (%)
TOYOTA MOTOR CORP	0.53
MCDONALDS CORP	0.42
VOLKSWAGEN AG	0.24
DISNEY WALT CO	0.24
HOME DEPOT INC	0.23
VIVENDI SA	0.23
TIME WARNER INC	0.22
HONDA MOTOR CO	0.21
COMCAST CORP NEW	0.2
DAIMLER AG	0.19

Industrials	
Company	MSCI World Weight (%)
GENERAL ELECTRIC CO	1.02
SIEMENS AG	0.38
UNITED TECHNOLOGIES CO	0.29
3M CO	0.23
UNITED PARCEL SERVICE	0.22
ABB LTD	0.19
BOEING CO	0.18
EMERSON ELEC CO	0.17
LOCKHEED MARTIN CORP	0.17
CATERPILLAR INC DEL	0.16

Financials	
Company	MSCI World Weight (%)
WELLS FARGO & CO NEW	0.7
J P MORGAN CHASE & CO	0.69
HSBC HLDGS	0.69
BANK OF AMERICA CORPOR	0.54
BANCO SANTANDER	0.45
MITSUBISHI UFJ FIN	0.4
ALLIANZ SE	0.28
US BANCORP DEL	0.26
BBVA(BILB-VIZ-ARG)	0.26
UBS AG	0.24

Information Technology	
Company	MSCI World Weight (%)
MICROSOFT CORP	0.95
INTERNATIONAL BUSINESS	0.68
CISCO SYS INC	0.58
HEWLETT PACKARD CO	0.53
INTEL CORP	0.49
APPLE INC	0.45
GOOGLE INC	0.44
ORACLE CORP	0.44
QUALCOMM INC	0.35
NOKIA OYJ	0.35

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Increasingly more global leaders are located outside of the U.S.

Source: MSCI data; Vestek As of December 31, 2008

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## Important Disclosures

As further described in the offering documents, an investment in alternative investments can be highly illiquid, are speculative and not suitable for all investors. Investing in alternative investments is only intended for experienced and sophisticated investors who are willing to bear the high economic risks associated with such an investment. Investors should carefully review and consider potential risks before investing. Certain of these risks may include:

- loss of all or a substantial portion of the investment due to leveraging, short-selling, or other speculative practices;
- lack of liquidity in that there may be no secondary market for the fund and none is expected to develop;
- volatility of returns;
- restrictions on transferring interests in the Fund;
- potential lack of diversification and resulting higher risk due to concentration of trading authority when a single advisor is utilized;
- absence of information regarding valuations and pricing;
- complex tax structures and delays in tax reporting;
- less regulation and higher fees than mutual funds; and
- advisor risk.

Individual funds will have specific risks related to their investment programs that will vary from fund to fund.

Actual results may vary and past performance is no guarantee of future results.

Municipal Bonds may be subject to state and local taxes and you may also be subject to Alternative Minimum Tax (AMT). Official offerings may be made only by the final Official Statement. If sold prior to maturity you may receive more or less than your original investment.

Bonds are affected by a number of risks, including fluctuations in interest rates, credit risk and prepayment risk. In general, as prevailing interest rates rise, fixed income securities prices will fall. Bonds face credit risk if a decline in an issuer's credit rating, or creditworthiness, causes a bond's price to decline. High yield bonds are subject to additional risks such as increased risk of default and greater volatility because of the lower credit quality of the issues. Finally, bonds can be subject to prepayment risk. When interest rates fall, an issuer may choose to borrow money at a lower interest rate, while paying off its previously issued bonds. As a consequence, underlying bonds will lose the interest payments from the investment and will be forced to reinvest in a market where prevailing interest rates are lower than when the initial investment was made.

There may be additional risk associated with international investing, including foreign, economic, political, monetary and/or legal factors, changing currency exchange rates, foreign taxes, and differences in financial and accounting standards. These risks may be magnified in emerging markets. International investing may not be for everyone.

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Diversification does not ensure profit or protection against loss.



Citi Family Office

## Important Disclosures continued

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Additionally, the underlying collateral supporting non-Agency MBS may default on principal and interest payments. In certain cases, this could cause the income stream of the security to decline and result in loss of principal. Further, an insufficient level of credit support may result in a downgrade of a mortgage bond's credit rating and lead to a higher probability of principal loss and increased price volatility. Investments in subordinated MBS involve greater credit risk of default than the senior classes of the same issue. Default risk may be pronounced in cases where the MBS security is secured by, or evidencing an interest in, a relatively small or less diverse pool of underlying mortgage loans.

MBS are also sensitive to interest rate changes which can negatively impact the market value of the security. During times of heightened volatility, MBS can experience greater levels of illiquidity and larger price movements. Price volatility may also occur from other factors including, but not limited to, prepayments, future prepayment expectations, credit concerns, underlying collateral performance and technical changes in the market.

Please read offering documents and/or prospectus information carefully for the risks associated with the particular MBS security you are purchasing.

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## Glossary

**30 YR TREASURY:** A U.S. Treasury debt obligation that has a maturity of 30 years. The 30-year Treasury will generally pay a higher interest rate than shorter Treasuries to compensate for the additional risks inherent in the longer maturity. However, when compared to other bonds, Treasuries are relatively safe because they are backed by the U.S. government.

**ABS:** A security backed by a loan, lease or receivables against assets other than real estate and mortgage-backed securities. For investors, asset-backed securities are an alternative to investing in corporate debt.

**Alpha:** A coefficient which measures risk-adjusted performance, factoring in the risk due to the specific security, rather than the overall market.

**Bankruptcy:** A legal proceeding involving a person or business that is unable to repay outstanding debts. The bankruptcy process begins with a petition filed by the debtor (most common) or on behalf of creditors (less common). All of the debtor's assets are measured and evaluated, whereupon the assets are used to repay a portion of outstanding debt. Upon the successful completion of bankruptcy proceedings, the debtor is relieved of the debt obligations incurred prior to filing for bankruptcy.

**Beta:** A statistical measure of the relative volatility of a stock, fund, or other security in comparison with the market as a whole.

**BOVESPA INDEX :** The Bovespa Index is a total return index weighted by traded volume and is comprised of the most liquid stocks traded on the Sao Paulo Stock Exchange. The Bovespa Index has been divided 10 times by a factor of 10 since January 1, 1985, those dates are: 12/02/85, 04/14/89, 05/28/91, 01/26/93, 02/10/94, 08/29/8801/12/90, 01/21/92, 08/27/93, 03/03/97. Shares in Index displayed in Millions.

**CAC-40 INDEX:** The CAC-40 Index is a narrow-based, modified capitalization-weighted index of 40 companies listed on the Paris Bourse. The index was developed with a base level of 1,000 as of December 1, 1987. As of December 1, 2003 the index has become a free float weighted index.

**CDO:** An investment-grade security backed by a pool of bond, loans and other assets. CDOs do not specialize in one type of debt but are often non-mortgage loans or bonds.

**CDS:** A swap designed to transfer the credit exposure of fixed income products between parties.

**CLO:** A special purpose vehicle (SPV) with securitization payments in the form of different tranches. Financial institutions back this security with receivables from loans.

**CMBS:** A type of mortgage-backed security that is secured by the loan on a commercial property. A CMBS can provide liquidity to real estate investors and to commercial lenders. As with other types of MBS, the increased use of CMBS can be attributable to the rapid rise in real estate prices over the years.

**Citi Financial Conditions Index (FCI):** A proprietary index that is a composite of a number of financial measures. The index is a weighted-average of six variables, including option-adjusted corporate credit spreads, equity values, the money stock, the trade-weighted dollar, mortgage rates and energy prices. It is stated in terms of standard deviations from a mean value. A reading of plus one sigma, for example, would suggest financial conditions are imparting a strong tailwind to aggregate demand that could promote inflationary imbalances and therefore may be a signal that monetary policy is overly accommodative. A reading of minus one sigma is suggestive of financial drag on the outlook that may point to undesirable slowing and rising unemployment.

**Citi World Government Bond Index, ex Japan (WGBI):** The index includes all fixed-rate bonds with a remaining maturity of one year or longer and with amounts outstanding of at least the equivalent of \$25 million US Dollars. Those government securities that are excluded from the indices typically fall into three categories: floating- or variable-rate bonds (including index-linked bonds); securities aimed principally at non-institutional investors such as savings bonds in the United States and Canada; and private placement-type securities, where liquidity may be poor and where accurate information on outstandings, market coupon, and maturity structure may be difficult or impossible to obtain. This index is designed to directly address the growing interest in and implementation of currency-hedged bond investments by global investors as a means of achieving low-risk interest rate diversification in their portfolios. Currency-hedged returns are also reported for the overall non-base on a monthly basis. This index does not include Japan.

## Glossary

**Citigroup 90-Day T-Bill:** Equal dollar amounts of three-month Treasury bills are purchased at the beginning of each of three consecutive months. As each bill matures, all proceeds are rolled over or reinvested in a new three-month bill. The income used to calculate the monthly return is derived by subtracting the original amount invested from the maturity value. The yield curve average is the basis for calculating the return on the index. The index is rebalanced monthly by market capitalization.

**Corporate Bond:** A debt security issued by a corporation and sold to investors. The backing for the bond is usually the payment ability of the company, which is typically money to be earned from future operations. In some cases, the company's physical assets may be used as collateral for bonds.

**The CSFB/Tremont Hedge Fund Index:** It is an asset-weighted hedge fund index and includes only funds, as opposed to separate accounts. The Index uses the Credit Suisse/Tremont database, which track over 4500 funds, and consists only of funds with a minimum of US\$50 million under management, a 12-month track record, and audited financial statements. It is calculated and rebalanced on a monthly basis, and shown net of all performance fees and expenses.

**DOW JONES:** Covers 30 major NYSE industrial companies. The Dow represents about 25% of the NYSE market capitalization and less than 2% of NYSE issues. (This is the Russell/Mellon Calculation).

**DOW JONES COMMODITY INDEX:** The AIG Commodity Excess Return Index is designed to be a highly liquid and diversified benchmark for commodities as an asset class. The DJAIG Index is composed of futures contracts on 19 physical commodities. The index is quoted in USD Data disseminated from the CBOT.

**Federal Funds Rate:** The interest rate at which a depository institution lends immediately available funds (balances at the Federal Reserve) to another depository institution overnight.

**FTSE 100 INDEX:** The FTSE 100 Index is a capitalization-weighted index of the 100 most highly capitalized companies traded on the London Stock Exchange. The equities use an investibility weighting in the index calculation. The index was developed with a base level of 1000 as of January 3, 1984.

**Gold Bullion Price- New York:** Based upon US\$/Ounce.

**HFRI Distressed Securities Index:** Distressed Securities managers invest in, and may sell short, the securities of companies where the security's price has been, or is expected to be, affected by a distressed situation. Distressed securities managers invest primarily in securities and other obligations of companies that are encountering significant financial or business difficulties, including companies which (i) may be engaged in debt restructuring or other capital transactions of a similar nature while outside the jurisdiction of Federal bankruptcy law, (ii) are subject to the provisions of Federal bankruptcy law or (iii) are experiencing poor operating results as a result of unfavorable operating conditions, over-leveraged capital structure, catastrophic events, extraordinary write-offs or special competitive or product obsolescence problems. Managers will seek profit opportunities arising from inefficiencies in the market for such securities and other obligations.

**HFRI Equity Market Neutral:** Equity Market Neutral investing seeks to profit by exploiting pricing inefficiencies between related equity securities, neutralizing exposure to market risk by combining long and short positions. One example of this strategy is to build portfolios made up of long positions in the strongest companies in several industries and taking corresponding short positions in those showing signs of weakness.

**HFRI Fund of Funds Composite Index:** Fund of Funds invest with multiple managers through funds or managed accounts. The strategy designs a diversified portfolio of managers with the objective of significantly lowering the risk (volatility) of investing with an individual manager. The Fund of Funds manager has discretion in choosing which strategies to invest in for the portfolio. A manager may allocate funds to numerous managers within a single strategy, or with numerous managers in multiple strategies. The minimum investment in a Fund of Funds may be lower than an investment in an individual hedge fund or managed account. The investor has the advantage of diversification among managers and styles with significantly less capital than investing with separate managers.

## Glossary

**HFRI Long/Short Equity (Equity Hedge):** Equity Hedge investing consists of a core holding of long equities hedged at all times with short sales of stocks and/or stock index options. Some managers maintain a substantial portion of assets within a hedged structure and commonly employ leverage. Where short sales are used, hedged assets may be comprised of an equal dollar value of long and short stock positions. Other variations use short sales unrelated to long holdings and/or puts on the S&P 500 index and put spreads. Conservative funds mitigate market risk by maintaining market exposure from zero to 100 percent. Aggressive funds may magnify market risk by exceeding 100 percent exposure and, in some instances, maintain a short exposure. In addition to equities, some funds may have limited assets invested in other types of securities.

**HFRI Macro:** Macro involves investing by making leveraged bets on anticipated price movements of stock markets, interest rates, foreign exchange and physical commodities. Macro managers employ a "top-down" global approach, and may invest in any markets using any instruments to participate in expected market movements. These movements may result from forecasted shifts in world economies, political fortunes or global supply and demand for resources, both physical and financial. Exchange-traded and over-the-counter derivatives are often used to magnify these price movements.

**HFRI US Event Driven:** 'Event-Driven' is also known as 'corporate life cycle' investing. This involves investing in opportunities created by significant transactional events, such as spin-offs, mergers and acquisitions, bankruptcy reorganizations, recapitalizations and share buybacks. The portfolio of some 'Event-Driven' managers may shift in majority weighting between 'Risk Arbitrage' and 'Distressed Securities', while others may take a broader scope. Instruments include long and short common and preferred stocks, as well as debt securities and options. Leverage may be used by some managers. Fund managers may hedge against market risk by purchasing S&P put options or put option spreads.

**LB AGGREGATE INDEX:** The U.S. Aggregate Index covers the dollar-denominated investment-grade fixed-rate taxable bond market, including Treasuries, government-related and corporate securities, MBS passthrough securities, asset-backed securities, and commercial mortgage-based securities. These major sectors are subdivided into more specific sub indices that are calculated and published on an ongoing basis. In order to qualify for inclusion in the U.S. Aggregate Index, a bond or security must meet certain criteria.

**LB GOVT INDEX:** The treasury bond and agency bond indices (all public ally issued debt of agencies of the us got, quasi-federal corporations, & corporate debt guaranteed by the us got- no mortg backed sec) are combined to form the government bond index.

**LB HIGH YIELD INDEX:** The Lehman Brothers U.S. High Yield Index covers the universe of fixed rate, non-investment grade debt. Pay-in-kind (PIK) bonds, Eurobonds, and debt issues from countries designated as emerging markets (e.g., Argentina, Mexico, Venezuela, etc.) are excluded, but Yankee and global bonds (SEC registered) of issuers in non-EMG countries are included. Original issue zeroes and step-up coupon structures are also included. Liquidity Rules: All bonds included in the High Yield Index must be dollar-denominated and nonconvertible and have at least one year remaining to maturity and an outstanding par value of at least \$150 million. Quality Rating Rules: Securities in the index must be rated Ba1 or lower. If both Moody's and S&P provide a rating for a security, the lower of the two ratings is used. A small number of unrated bonds is included in the index; to be eligible they must have previously held a high yield rating or have been associated with a high yield issuer, and must trade accordingly. Components: The index has several subcomponents. Intermediate indices include bonds with remaining maturities of less than 10 years; long indices include bonds with remaining maturities of 10 years or more. The index also has subdivisions by credit quality, and sub indices are available that exclude securities in default.

**Lehman Muni Index:** The composite measure of the total return performance of the muni bond market for tax-exempt and fixed-rate bonds with maturities greater than two years and issues greater than \$50 million

**ML Global HY and Emerging Markets Index:** This index combines Merrill Lynch's closely followed Global High Yield Index with two new indices tracking the debt of Emerging Markets Sovereign and Corporate issuers

**MSCI AC ASIA PACIFIC EX JAPAN:** The MSCI AC (All Country) Asia Pacific ex Japan Index is a free float-adjusted market capitalization index that is designed to measure equity market performance in the Asia Pacific region excluding Japan. As of June 2006, the MSCI AC Asia Pacific ex Japan Index consisted of the following 13 developed and emerging market country indices: Australia, China, Hong Kong, India, Indonesia, Korea, Malaysia, New Zealand, Pakistan, Philippines, Singapore Free, Taiwan and Thailand.

# Glossary

**MSCI AC WORLD INDEX:** The MSCI ACWI (All Country World Index) Index is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global developed and emerging markets. As of December 2003 the MSCI ACWI consisted of the following 49 developed and emerging market country indices: Argentina, Australia, Austria, Belgium, Brazil, Canada, Chile, China, Colombia, Czech Republic, Denmark, Egypt, Finland, France, Germany, Greece, Hong Kong, Hungary, India, Indonesia, Ireland, Israel, Italy, Japan, Jordan, Korea, Malaysia, Mexico, Morocco, Netherlands, New Zealand, Norway, Pakistan, Peru, Philippines, Poland, Portugal, Russia, Singapore Free, South Africa, Spain, Sweden, Switzerland, Taiwan, Thailand, Turkey, the United Kingdom, the United States and Venezuela.

**MSCI Emerging Markets Index:** The MSCI Emerging Markets Index is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets. As of June 2006, the MSCI Emerging Markets Index consisted of the following 25 emerging market country indices: Argentina, Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Israel, Jordan, Korea, Malaysia, Mexico, Morocco, Pakistan, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand, and Turkey.

**MSCI EM LATIN AMERICA (GROSS):** The MSCI EM (Emerging Markets) Latin America Index is a free float-adjusted market capitalization index that is designed to measure equity market performance in Latin America. As of December 2003 the MSCI EM Latin America Index consisted of the following 7 emerging market country indices: Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. In This series approximates the maximum possible dividend reinvestment. The amount reinvested is the dividend distributed to individuals resident in the country of the company, but does not include tax credits.

**MSCI EAFE (GDP) (USD):** The MSCI GDP Index Series includes the MSCI GDP World, EAFE, Europe and EMU Indices. In the MSCI GDP Index Series country weights are based on the size of the country's economy rather than the size of its equity market. The MSCI GDP Index Series is rebalanced annually in May. The country weights are reset every year on the basis of the previous year's GDP figures. An average of the previous year's daily exchange rates is applied to calculate the USD-equivalent GDP figures used as country weights for these indices. Afterwards, the country weights fluctuate with changes in performance and market capitalization in the MSCI Standard Country Indices until the next rebalancing.

**MSCI EAFE (GROSS):** The MSCI EAFE Index (Europe, Australasia, Far East) is a free float-adjusted market capitalization index that is designed to measure developed market equity performance, excluding the US & Canada. As of December 2003 the MSCI EAFE Index consisted of the following 21 developed market country indices: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland and the United Kingdom. This series approximates the maximum possible dividend reinvestment. The amount reinvested is the dividend distributed to individuals resident in the country of the company, but does not include tax credits.

**MSCI EUROPE (NET):** The MSCI Europe Index is a free float-adjusted market capitalization index that is designed to measure developed market equity performance in Europe. As of June 2006, the MSCI Europe Index consisted of the following 16 developed market country indices: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

**MSCI USA (USD):** The MSCI USA Index is a free float-adjusted market capitalization index that is designed to measure equity market performance in the USA.

**MSCI THE WORLD INDEX (USD):** The MSCI World Index is a free float-adjusted market capitalization index that is designed to measure global developed market equity performance. As of December 2003 the MSCI World Index consisted of the following 23 developed market country indices: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom and the United States.

**NAR Median Sales Price: Total Existing Homes, United States (\$):** National Association of Realtors; NAR releases statistics on state-by-state existing-home sales and metropolitan area median home prices each quarter. The state existing-home sales report includes single-family houses, condos and co-ops. The price report reflects sales prices of existing single-family homes by metropolitan statistical area.

# Glossary

**NCREIF Property Index:** The NCREIF (National Council of Real Estate Investment Fiduciaries) Property Index is a quarterly time series composite total rate of return measure of investment performance of a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only. All properties in the NPI have been acquired, at least in part, on behalf of tax-exempt institutional investors – the great majority being pension funds. As such, all properties are held in a fiduciary environment.

**NIKKEI-225 INDEX:** The Nikkei-225 Stock Average is a price-weighted average of 225 top-rated Japanese companies listed in the First Section of the Tokyo Stock Exchange. The Nikkei Stock Average was first published on May 16, 1949, where the average price was ¥176.21 with a divisor of 225.

**Real Asset:** Physical or identifiable assets such as gold, land, equipment, patents, etc. They are the opposite of a financial asset.

**RMBS:** A security whose cash flows come from residential debt such as mortgages, home-equity loans and subprime mortgages. This is a type of mortgage-backed securities that focuses on residential instead of commercial debt.

**RTS INDEX (RTSI\$):** The Russian Trading System Index is a capitalized-weighted index that is calculated in USD. The index is comprised of stocks traded on the Russian Trading System and uses free-float adjusted shares. The index was developed with a base value of 100 as of September 1, 1995.

**RUSSELL 1000:** Russell 1000 Index measures the performance of the 1,000 largest companies in the Russell 3000 Index, which represents approximately 89% of the total market capitalization of the Russell 3000 Index. As of the latest reconstitution, the average market capitalization was approximately \$9.9 billion; the median market capitalization was approximately \$3.7 billion. The smallest company in the index had an approximate market capitalization of \$1,404.7 million.

**RUSSELL MID-CAP:** Russell Midcap Index measures the performance of the 800 smallest companies in the Russell 1000 Index, which represent approximately 35% of the total market capitalization of the Russell 1000 Index. As of the latest reconstitution, the average market capitalization was approximately \$3.7 billion; the median market capitalization was approximately \$2.9 billion. The largest company in the index had an approximate market capitalization of \$10.3 billion.

**Russell 1000 Growth Index:** The Russell 1000 Growth Index measures the performance of those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.

**Russell 1000 Value Index:** The Russell 1000 Value Index measures the performance of those Russell 1000 companies with lower price-to-book ratios and lower forecasted growth values.

**RUSSELL 2000:** The Russell 2000 Index measures the performance of the 2,000 smallest companies in the Russell 3000 Index, which represents approximately 11% of the total market capitalization of the Russell 3000 Index.

**RUSSELL 3000:** Russell 3000 Index measures the performance of the 3,000 largest US companies based on total market capitalization, which represents approximately 98% of the investable US equity market. As of the latest reconstitution, the average market capitalization was approximately \$3.7 billion; the median market capitalization was approximately \$793.3 million. The index had a total market capitalization range of approximately \$271.6 billion to \$221.9 million.

**RUSSELL TOP 200:** Russell Top 200 Index measures the performance of the 200 largest companies in the Russell 1000 Index, which represents approximately 65% of the total market capitalization of the Russell 1000 Index. As of the latest reconstitution, the average market capitalization was approximately \$34.9 billion; the median market capitalization was approximately \$20.3 billion. The smallest company in the index had an approximate market capitalization of \$10.4 billion.

**Security:** An instrument representing ownership (stocks), a debt agreement (bonds), or the rights to ownership (derivatives).

# Glossary

**SHANGHAI COMPOSITE INDEX:** The Shanghai Stock Exchange Composite Index is a capitalization-weighted index. The index tracks the daily price performance of all A-shares and B-shares listed on the Shanghai Stock Exchange. The index was developed on December 19, 1990 with a base value of 100.

**S&P 400 MIDCAP:** The S&P Midcap Index consists of 400 domestic stocks chosen for market size (median market capitalization of about \$610 million), liquidity, and industry group representation. It is a market weighted index (stock price \* shares outstanding), with each stock affecting the index in proportion to its market value.

**S&P 500 INDEX:** Covers 400 industrial, 40 utility, 20 transportation, and 40 financial companies of the US markets (mostly NYSE issues). The index represents about 75% of NYSE market cap and 30% of NYSE issues. It is a capitalization-weighted index calculated on a total return basis with dividends reinvested.

**Standard Deviation:** Standard deviation is a measure of how much the values in a distribution vary from the mean of the distribution.

**T-bill:** A short-term debt security of the U.S. government that is sold in minimum amounts of \$10,000 and multiples of \$5,000 above the minimum. These obligations may be purchased through brokers, commercial banks, or directly from the Federal Reserve.

**Thompson Municipal Market Data (MMD) AAA G.O. Scale:** This AAA G.O. curve is based on a daily market survey of 80+ Broker/Dealers and Buyside firms. The curve assumes par coupon bonds with a standard 10-year par call.

**Whole Loan:** A term used to distinguish between an original mortgage loan and a pass-through security.

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