

## **Deutsche Bank AG**

# Securities Linked to an Index and/or an Exchange Traded Fund, or a Basket of Indices and/or Exchange Traded Funds

Deutsche Bank AG may from time to time offer and sell certain securities or notes (collectively, the "Securities"), as part of our Global Notes Program, Series A, linked to an index and/or exchange traded fund, or a basket of indices and/or exchange traded funds, or other underlying assets. This underlying supplement describes potential indices and exchange traded funds to which the Securities may be linked, as well as related matters concerning the relationship, if any, between Deutsche Bank AG and the sponsor or publisher of the index or exchange traded fund, as applicable. Additional specific terms of any Securities that we offer, including any additions or changes to the terms specified in the product supplement relating to your Securities or the description of the index or exchange traded fund contained in this underlying supplement, will be described in a separate free writing prospectus, term sheet or pricing supplement, which we refer to as a "pricing supplement." If there is any inconsistency between the terms described in the relevant pricing supplement and those described in this underlying supplement or in the accompanying prospectus, prospectus supplement or product supplement, the terms described in the relevant pricing supplement will be controlling.

Investing in the Securities involves a number of risks. See "Risk Factors" in the relevant product supplement and "Selected Risk Considerations" in the relevant pricing supplement for risks related to an investment in the Securities.

Neither the Securities and Exchange Commission nor any other regulatory body has approved or disapproved of the Securities or passed upon the adequacy or accuracy of this underlying supplement or the accompanying prospectus, prospectus supplement or product supplement. Any representation to the contrary is a criminal offense.

The Securities are not bank deposits and are not insured by the Federal Deposit Insurance Corporation or any other governmental agency.

**Deutsche Bank AG** 

August 11, 2008

## ADDITIONAL INFORMATION ABOUT THE SECURITIES

You should read this underlying supplement together with the prospectus dated October 10, 2006, as supplemented by the prospectus supplement dated November 13, 2006, relating to our Series A global notes, of which these Securities are a part, and any relevant product supplement and pricing supplement that we may file with the SEC from time to time, which contains a description of the terms of particular categories of Securities or the specific terms of your Securities. You may access these documents on the SEC website at <a href="https://www.sec.gov">www.sec.gov</a> as follows (or if such address has changed, by reviewing our filings for the relevant date on the SEC website):

- Prospectus supplement dated November 13, 2006: http://www.sec.gov/Archives/edgar/data/1159508/000119312506233129/d424b3.htm
- Prospectus dated October 10, 2006: http://www.sec.gov/Archives/edgar/data/1159508/000095012306012432/u50845fv3asr.htm

Our Central Index Key, or CIK, on the SEC website is 0001159508. As used in this underlying supplement, "we," "us" or "our" refers to Deutsche Bank AG, including, as the context requires, acting through one of its branches.

You should carefully consider, among other things, the matters set forth in "Risk Factors" in the relevant product supplement, as the Securities involve risks not associated with conventional debt securities. We urge you to consult your investment, legal, tax, accounting and other advisers before deciding to invest in the Securities.

#### UNDERLYING SUPPLEMENT SUMMARY

This underlying supplement describes potential indices and exchange traded funds to which the Securities may be linked and the relationship, if any, between Deutsche Bank AG and the sponsor or publisher of the indices and exchange traded funds. If there is any inconsistency between the terms described in the relevant pricing supplement and those described in this underlying supplement, the terms described in the relevant pricing supplement will control. Any relevant pricing supplement should also be read in connection with this underlying supplement, the relevant product supplement, if any, and the accompanying prospectus and prospectus supplement.

In this underlying supplement, when we refer to the "Securities," we mean certain securities or notes that may be offered by Deutsche Bank AG from time to time linked to an index and/or exchange traded fund, or a basket of indices and/or exchange traded funds, or other underlying assets. Also, references to the "accompanying prospectus" and "prospectus supplement" mean, respectively, the accompanying prospectus, dated October 10, 2006, of Deutsche Bank AG and the prospectus supplement, dated November 13, 2006, of Deutsche Bank AG, and references to "relevant product supplement" refer to the relevant product supplement that we may file from time to time relating to the particular category of your Securities. References to the "relevant pricing supplement" mean the pricing supplement and any free writing prospectus that describe the specific terms of your Securities.

## **Specific Terms Will Be Described in Relevant Pricing Supplements**

The relevant product supplement describes some of the general terms that apply to each category of Securities and the general manner in which they may be offered. Deutsche Bank AG may also prepare one or more pricing supplements that describe particular issuances of Securities. The specific terms for your Securities will be described in the relevant pricing supplement, including any additions or changes to the terms specified in the relevant product supplement or the description of the relevant index or indices or exchange traded fund or funds set forth in this underlying supplement. Any relevant pricing supplement, including any free writing prospectus, should be read in connection with this underlying supplement, the relevant product supplement and the accompanying prospectus and prospectus supplement.

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#### **INDICES**

## The AMEX Hong Kong 30 Index

We have derived all information contained in this underlying supplement regarding the AMEX Hong Kong 30 Index (the "AMEX Index") including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information, and we have not participated in the preparation of, or verified, such publicly available information. Such information reflects the policies of, and is subject to change by, the American Stock Exchange LLC ("AMEX"). The AMEX Index was developed by, and is calculated, maintained and published by AMEX.

The AMEX Index is a broad-market index that measures the composite price performance of 30 stocks actively traded on the HKSE, designed to reflect the movement of the Hong Kong stock market as a whole. The AMEX Index was established June 25, 1993 with a benchmark value of 350.00. The AMEX Index is calculated and disseminated each New York business day based on the most recent official closing price of each of the component stocks as reported by the HKSE and a fixed HK\$/US\$ exchange rate.

#### Calculation of the AMEX Index

The AMEX Index is calculated by (i) aggregating the market capitalization of each stock comprising the AMEX Index and (ii) dividing such sum by an adjusted base market capitalization or divisor. On June 25, 1993, the market value of the underlying stocks was approximately H.K.\$1,152,829,149,500 and the divisor used to calculate the AMEX Index was 3,293,797,570. AMEX selected that particular divisor number in order, among other things, to ensure that the AMEX Index was set at a general price level consistent with other well recognized stock market indices. The divisor is subject to periodic adjustments as set forth below. The AMEX Index is calculated once each day by AMEX based on the most recent official closing prices of each of the stocks comprising the AMEX Index reported by the HKSE. Pricing of the AMEX Index is disseminated before the opening of trading via the Consolidated Tape Authority Network–B and continuously during each New York business day. The dissemination value, however, will remain the same throughout the trading day because the trading hours of the HKSE do not overlap with New York trading hours. Accordingly, updated price information is unavailable.

In order to maintain continuity in the level of the AMEX Index in the event of certain changes due to nonmarket factors affecting the stocks comprising the AMEX Index, as the addition or deletion of stocks, substitution of stocks, stock dividends, stock splits, distributions of assets to stockholders or other capitalization events, the divisor used in calculating the AMEX Index is adjusted in a manner designed to prevent any instantaneous change or discontinuity in the level of the AMEX Index and in order that the value of the AMEX Index immediately after change will equal the level of the AMEX Index immediately prior to the change. Thereafter, the divisor remains at the new value until a further adjustment is necessary as the result of another change. Nevertheless, changes in the identities and characteristics of the stocks comprising the AMEX Index may significantly affect the behavior of the AMEX Index over time.

## Eligibility Standards for the Inclusion and Maintenance of Component Stocks in the AMEX Index

The AMEX states that it selects securities comprising the AMEX Index based on their market weight, trading liquidity, and representativeness of the business industries reflected on the HKSE. The AMEX will require that each AMEX Index component security be one issued by an entity with major business interests in Hong Kong, listed for trading on the HKSE, and have its

primary trading market located in a country with which the AMEX has an effective surveillance sharing agreement. The AMEX will remove any AMEX Index component security that fails to meet any of the foregoing listing and maintenance criteria within 30 days after such a failure occurs. To ensure that the AMEX Index does not consist of a number of thinly-capitalized, low-priced securities with small public floats and low trading volumes, the AMEX has established additional listing and maintenance criteria:

- All component securities selected for inclusion in the AMEX Index must have, and thereafter maintain, an average daily capitalization, as calculated by the total number of shares outstanding times the latest price per share (in Hong Kong dollars), measured over the prior six month period, of at least HK\$3 billion (approximately US\$380 million);
- All component securities selected for inclusion in the AMEX Index must have, and thereafter maintain, a minimum free float value (total freely tradeable outstanding shares less insider holdings), based on a monthly average measured over the prior three month period, of US\$238 million, although up to, but no more than, three AMEX Index component securities may have a free float value of less than US\$238 million but in no event less than US\$150 million, measured over the same period;
- All component securities selected for inclusion in the AMEX Index must have, and thereafter maintain, an average daily closing price, measured over the prior six month period, not lower than HK\$2.50; and
- All component securities selected for inclusion in the AMEX Index must have, and thereafter maintain, an average daily trading volume, measured over the prior six month period, of more than one million shares per day, although up to, but no more than, three component securities may have an average daily trading volume, measured over the prior six month period, of less than one million shares per day, but in no event less than 500,000 shares per day.

Beginning in 1994, the AMEX has reviewed the AMEX Index's component securities on a quarterly basis, conducted on the last business day in January, April, July and October. Any component security failing to meet the above listing and maintenance criteria is reviewed on the second Friday of the second month following the quarterly review again to determine compliance with the above criteria. Any AMEX Index component stock failing this second review is replaced by a "qualified" AMEX Index component stock effective upon the close of business on the following Friday, provided, however, that if such Friday is not a business day, the replacement will be effective at the close of business on the first preceding business day. The AMEX will notify its membership immediately after it determines to replace an AMEX Index component stock.

The AMEX Index will be maintained by the AMEX and will contain at least thirty component stocks at all times. Pursuant to Exchange Rule 901C(b), the AMEX may change the composition of the AMEX Index at any time in order to reflect more accurately the composition and track the movement of the Hong Kong stock market. Any replacement component stock must also meet the component stock listing and maintenance standards as discussed above. If the number of AMEX Index component securities in the AMEX Index falls below thirty, no new option series based on the AMEX Index will be listed for trading unless and until the Securities and Exchange Commission approves a rule filing pursuant to section 19(b) of the Securities Exchange Act of 1934 reflecting such change.

## License Agreement with the American Stock Exchange LLC

We have entered into an agreement with AMEX providing us and certain of our affiliates or subsidiaries identified in that agreement with a non-exclusive license and, for a fee, with the right to use the AMEX Index, which are owned and published by AMEX, in connection with certain securities, including the securities.

The securities are not sponsored, endorsed, sold or promoted by AMEX (including its affiliates). AMEX has not passed on the legality or suitability of, or the accuracy or adequacy of descriptions and disclosures relating to the securities. The AMEX makes no representation or warranty, express or implied to the owners of the securities or any member of the public regarding the advisability of investing in securities generally or in the securities particularly, or the ability of the AMEX Index to track general stock market performance. AMEX has no relationship to Deutsche Bank AG other than the licensing of the AMEX Index and the related trademarks for use in connection with the securities, whose Indices are determined, composed and calculated by the AMEX without regard to Deutsche Bank AG or the securities. AMEX has no obligation to take the needs of Deutsche Bank AG or the owners of the securities into consideration in determining, composing or calculating the AMEX Index. The AMEX is not responsible for and has not participated in the determination of the timing of, prices at, or quantities of the securities to be issued or in the determination or calculation of the equation by which the securities are to be converted into cash. The AMEX has no liability in connection with the administration, marketing or trading of the securities.

AMEX is under no obligation to continue the calculation and dissemination of the AMEX Index and the method by which the AMEX Index are calculated and the name of any AMEX Index may be changed at the discretion of AMEX. No inference should be drawn from the information contained in this underlying supplement that AMEX makes any representation or warranty, implied or express, to you or any member of the public regarding the advisability of investing in securities generally or in the securities in particular or the ability of the AMEX Index to track general stock market performance. The American Stock Exchange has no obligation to take into account your interest, or that of anyone else having an interest in determining, composing or calculating the AMEX Index. The American Stock Exchange is not responsible for, and has not participated in the determination of the timing of, prices for or quantities of, the securities or in the determination or calculation of the equation by which the securities are to be settled in cash. The American Stock Exchange has no obligation or liability in connection with the administration, marketing or trading of the securities. The use of and reference to the AMEX Index in connection with the securities have been consented to by AMEX.

The American Stock Exchange disclaims all responsibility for any inaccuracies in the data on which the AMEX Index are based, or any mistakes or errors or omissions in the calculation or dissemination of the AMEX Index.

#### The Dow Jones Indices

We have derived all information contained in this underlying supplement regarding the Dow Jones Industrial Average<sup>SM</sup>, the Dow Jones U.S. Financials Sector Index, the Dow Jones U.S. Real Estate Index and the Dow Jones EURO STOXX 50<sup>®</sup> Index including, without limitation, their make-up, method of calculation and changes in their components, from publicly available information, and we have not participated in the preparation of, or verified, such publicly available information. Such information reflects the policies of, and is subject to change by, STOXX Limited. The EURO STOXX 50 Index is calculated, maintained and published by STOXX Limited.

## The Dow Jones Industrial Average<sup>SM</sup>

The Dow Jones Industrial Average<sup>SM</sup> is a price-weighted index comprise of 30 common stocks selected at the discretion of the editors of The Wall Street Journal (the "WSJ"), which is published by Dow Jones & Company, Inc. (the "Dow Jones"), as representative of the broad market of U.S. industry. There are no pre-determined criteria for selection of a component stock except that component companies represented by the Dow Jones Industrial Average<sup>SM</sup> should be established U.S. companies that are leaders in their industries. The Dow Jones Industrial Average<sup>SM</sup> serves as a measure of the entire U.S. market, including such sectors as financial services, technology, retail, entertainment and consumer goods, and is not limited to traditionally defined industrial stocks. Changes in the composition of the Dow Jones Industrial Average<sup>SM</sup> are made entirely by the editors of the WSJ without consultation with the component companies represented in the Dow Jones Industrial Average<sup>SM</sup>, any stock exchange, any official agency or us. In order to maintain continuity, changes to the component stocks included in the Dow Jones Industrial Average<sup>SM</sup> tend to be made infrequently and generally occur only after corporate acquisitions or other dramatic shifts in a component company's core business. When one component stock is replaced, the entire index is reviewed. As a result, multiple component changes are often implemented simultaneously. The component stocks of the Dow Jones Industrial Average<sup>SM</sup> may be changed at any time for any reason.

The Dow Jones Industrial Average<sup>SM</sup> is price-weighted rather than market capitalization-weighted. Therefore, the component stock weightings are affected only by changes in the stocks' prices, in contrast with the weightings of other indices that are affected by both price changes and changes in the number of shares outstanding. The value of the Dow Jones Industrial Average<sup>SM</sup> is the sum of the primary exchange prices of each of the 30 common stocks included in the Dow Jones Industrial Average<sup>SM</sup>, divided by a divisor. The divisor is changed in accordance with a mathematical formula to adjust for stock dividends, splits, spin-offs and other corporate actions such as rights offerings and extraordinary dividends. Normal cash dividends are not taken into account in the calculation of the Dow Jones Industrial Average<sup>SM</sup>. The current divisor of the Dow Jones Industrial Average<sup>SM</sup> is published daily in the WSJ and other publications. While this methodology reflects current practice in calculating the Dow Jones Industrial Average<sup>SM</sup>, no assurance can be given that Dow Jones will not modify or change this methodology.

The formula used to calculate divisor adjustments is:

New Divisor = Current Divisor 
$$x = \frac{\text{Adjusted Sum of Closing Prices}}{\text{Unadjusted Sum of Closing Prices}}$$

## The Dow Jones U.S. Financials Sector Index

The Dow Jones U.S. Financials Sector Index (a "**DJ U.S. Index**") measures the performance of the financial industry portion of the United States equity market. Dow Jones U.S. Financials Sector Index components are drawn from the Bank, Insurance and Financial Services supersectors. The Dow Jones U.S. Financials Sector Index is a subset of the Dow Jones U.S. Index which in turn is a subset of the Dow Jones World Index, a benchmark family that follows some 6,000 stocks from 46 countries.

#### The Dow Jones U.S. Real Estate Index

The Dow Jones Real Estate Index (also a "**DJ U.S. Index**") measures the performance of the real estate sector of the United States equity market. Component companies include those that invest directly or indirectly through development, management or ownership of shopping malls, apartment buildings and housing developments; and REITs that invest in apartments, office and retail properties. REITs are passive investment vehicles that invest primarily in income-producing real estate or real estate related loans and interests. The Dow Jones U.S. Real Estate Index is a subset of the Dow Jones U.S. Index which in turn is a subset of the Dow Jones World Index, a benchmark family that follows some 6,000 stocks from 46 countries.

## Methodology of the DJ U.S. Indices

The DJ U.S. Indices are market capitalization-weighted indices in which only the shares of each company that are readily available to investors — the "float" — are counted. DJ U.S. Index component candidates must be common shares or other securities that have the characteristics of common equities. All classes of common shares, both fully and partially paid, are eligible. Fixed-dividend shares and securities such as convertible notes, warrants, rights, mutual funds, unit investment trusts, closed-end fund shares, and shares in limited partnerships are not eligible. Temporary issues arising from corporate actions, such as "when-issued" shares, are considered on a case-by-case basis when necessary to maintain continuity in a company's index membership. REITs, listed property trusts and similar real-property-owning pass-through structures taxed as REITs by their domiciles also are eligible. Multiple classes of shares are included if each issue, on its own merit, meets the other eligibility criteria. Securities that have had more than ten nontrading days during the past quarter are excluded. Stocks in the top 95% of the index universe by free-float market capitalization are selected as components of the U.S. Index, skipping stocks that fall within the bottom 1% of the universe by free-float market capitalization and within the bottom .01% of the universe by turnover.

To be included in the Dow Jones U.S. Financials Sector Index, the issuer of the component securities must be classified in the financials industry as maintained by the Industry Classification Benchmark ("ICB"). To be included in the Dow Jones U.S. Real Estate Index, the issuer of the component securities must be classified in the real estate sector as maintained by the ICB.

The DJ U.S. Indices are reviewed by Dow Jones on a quarterly basis. Shares outstanding totals for component stocks are updated during the quarterly review. However, if the number of outstanding shares for an index component changes by more than 10% due to a corporate action, the shares total will be adjusted immediately after the close of trading on the date of the event. Whenever possible, Dow Jones will announce the change at least two business days prior to its implementation. Changes in shares outstanding due to stock dividends, splits and other corporate actions also are adjusted immediately after the close of trading on the day they become effective. Quarterly reviews are implemented during March, June, September and December. Both component changes and share changes become effective at the opening on the first Monday after the third Friday of the review month. Changes to the DJ U.S. Indices are implemented after the official closing values have been established. All adjustments are made before the start of the next trading day. Constituent changes that result from the periodic review will be announced at least two business days prior to the implementation date.

In addition to the scheduled quarterly review, the DJ U.S. Indices are reviewed on an ongoing basis. Changes in index composition and related weight adjustments are necessary whenever there are extraordinary events such as delistings, bankruptcies, mergers or takeovers

involving index components. In these cases, each event will be taken into account as soon as it is effective. Whenever possible, the changes in the index components will be announced at least two business days prior to their implementation date. In the event that a component no longer meets the eligibility requirements, it will be removed from the DJ U.S. Indices. You can find a list of the companies whose common stocks are currently included in the DJ U.S. Indices on the Dow Jones website at http://www.djindexes.com. Information included in such website is not a part of this pricing supplement.

## **Background on the ICB**

ICB, a joint classification system launched by FTSE Group and DJ U.S. Indices offers broad, global coverage of companies and securities and classifies them based on revenue, not earnings. ICB classifies stocks into groups of 10 industries, 18 supersectors, 39 sectors and 104 subsectors. The Financials industry is composed of the Banks supersector, the Insurance supersector and the Financial Services supersector. The Bank supersector includes companies in the Bank sector, the Insurance supersector includes companies in the nonlife insurance and life insurance sectors and the Financial Services supersector includes companies in the real estate, general financial, equity investment instruments and nonequity investment instrument sectors.

## **Calculation and Adjustments**

Input Data Sources.

Real-time stock prices are provided by Reuters, with the latest trading price used for index calculation. The number of shares is determined separately for each class of stock. This information is obtained from regulatory filings and a variety of data vendors or from the companies themselves. Corporate actions are sourced from public news services, regulatory filings, data vendors and the companies themselves. Float data are obtained from a variety of sources including data vendors, exchanges, regulators and the companies themselves.

Index Formula.

The DJ U.S. Indices are calculated using a Laspeyres formula. This formula is used for the calculation of the price return index. The only difference is that the divisor Dt is different for the two indexes. The index is computed as follows:

$$Index_{t} = \frac{\sum_{i=1}^{n} (p_{it} \ x \ q_{it})}{C_{t} \ x \sum_{i=1}^{n} (p_{io} \ x \ q_{io})} \ x \ Base \ Index \ Value = \frac{M_{t}}{B_{t}} \ x \ Base \ Index \ Value$$

$$Index_{t} = \frac{M_{t}}{D_{t}}$$

The above mentioned formula can be simplified as

 $D^{t} = \frac{B_{t}}{Base Index Value} = divisor at time (t)$ 

n = the number of stocks in the index

 $P^{i0}$  = the closing level of stock i at the base date (December 31, 1991)

 $q^{i0}$  = the number of shares of company i at the base date (December 31, 1991)

Pit = the price of stock i at time (t)

qit = the number of shares of company i at time (t)

Ct = the adjustment factor for the base date market capitalization

T = the time the index is computed

Mt = market capitalization of the index at time (t)

Bt = adjusted base date market capitalization of the index at time (t)

Dividend payments are not taken into account in the price index, whereas dividend payments are reinvested in the index sample of the total return index. Any dividend larger than 10% of the equity price is considered a special dividend, which requires a divisor adjustment. The adjustment protects the index from the effects of changes in index composition and the impact of corporate actions.

#### Divisor Adjustments.

Corporate actions affect the share capital of component stocks and therefore trigger increases or decreases in the index. To avoid distortion, the divisor of the index is adjusted accordingly. Changes in the index's market capitalization due to changes in the composition (additions, deletions or replacements), weighting (following quarterly reviews or changes of more than 10% in a single component's share number) or corporate actions (mergers, spinoffs, rights offerings, repurchase of shares, public offerings, return of capital, or special cash or stock distributions of other stocks) result in a divisor change to maintain the index's continuity. By adjusting the divisor, the index value retains its continuity before and after the event.

## Formulae for Divisor Adjustment.

The following formulae will be used for divisor adjustments. (Note: No divisor adjustments are necessary for stock splits, since market capitalization does not change and the share number and share price are adjusted prior to the opening of trading on the split's ex-date.)

$$D_{t+1} = D_t x \frac{\sum (p_{it} x q_{it}) + \Delta MC_{t+1}}{\sum (p_{io} x q_{io})}$$

 $D_t$  = divisor at time (t)  $D_{t+1}$  = divisor at time (t+1)

P<sub>it</sub> = stock price of company i at time (t)

q<sub>it</sub> = number of shares of company i at time (t)

ΔMC<sub>t+1</sub> = add new component's market capitalization and adjusted market capitalization (calculated with adjusted closing levels and shares effective at time t+1 and/or minus market capitalization of companies to be deleted (calculated with closing levels and shares at time t). If the current trading price of an issue is unavailable, the previous trading session's closing level is used. However, if the issue is affected by any corporate action that requires an adjustment, then the adjusted price is used.

## Adjustments for Corporate Actions.

An index divisor may decrease  $(\nabla)$  or increase  $(\Delta)$  or keep constant  $(\blacksquare)$  when corporate actions occur for a component stock. Assuming shareholders receive "B" new shares for every "A" share held for the following corporate actions:

- DIVISOR ∇ A) Cash dividend (applied for return index only) adjusted price = closing level dividend announced by the company
- DIVISOR  $\Delta$  B) Special Cash dividend (applied for price return index only) adjusted price = closing level dividend announced by the company
- DIVISOR C) Split and Reverse Split
  adjusted price = closing level \* A / B
  new number of shares = old number of shares \* B / A
- DIVISOR  $\Delta$  D) Rights Offering adjusted price = (closing level \* A + subscription price \* B) / (A + B) new number of shares = old number of shares \* (A + B) / A
- DIVISOR 

  E) Stock Dividend
  adjusted price = closing level \* A / (A + B)
  new number of shares = old number of shares \* (A + B) / A
- DIVISOR  $\nabla$  F) Stock Dividend of a Different Company Security adjusted price = (closing level \* A price of the different company security \* B) / A
- DIVISOR  $\nabla$  G) Return of Capital and Share Consolidation adjusted price = (closing level dividend announced by company) \* A / B new number of shares = old number of shares \* B / A

DIVISOR V H) Repurchase Shares-Self-Tender adjusted price = (closing level – dividend announced by company) \* A / B new number of shares = old number of shares \* B / A adjusted price = [(price before tender \* old number of shares) – (tender price \* number of tendered shares)] / (old number of shares – number of tendered shares) new number of shares = old number of shares – number of tendered shares

DIVISOR  $\nabla$  I) Spinoff adjusted price = (closing level \* A – price of spun-off shares \* B) / A

DIVISOR  $\Delta$  K) Stock Distribution and Rights (Neither Action is Applicable to the Other) adjusted price = [closing level \* A + subscription price \* C] / [A + B + C] new number of shares = old number of shares \* [A + B + C]

#### Computational Precision.

DJ U.S. Indices values are rounded to two decimal places and divisors are rounded to integers. Any values derived by the index calculation engine from a corporate action used for the divisor adjustments and index computations are rounded to seven decimal places.

### **License Agreement with Dow Jones**

We have entered into an agreement with Dow Jones providing us and certain of our affiliates or subsidiaries identified in that agreement with a non-exclusive license and, for a fee, with the right to use the Dow Jones Industrial Average<sup>SM</sup> and the DJ U.S. Indices, which are owned and published by Dow Jones, in connection with certain securities, including the securities.

The securities are not sponsored, endorsed, sold or promoted by Dow Jones. Dow Jones makes no representation or warranty, express or implied, to the owners of the securities or any member of the public regarding the advisability of investing in securities generally or in the securities particularly. Dow Jones' only relationship to Deutsche Bank AG is the licensing of certain trademarks, trade names and service marks of Dow Jones and of the Dow Jones Industrial Average<sup>SM</sup> and the DJ U.S. Indices, which are determined, composed and calculated by Dow Jones without regard to Deutsche Bank AG or the securities. Dow Jones has no obligation to take the needs of Deutsche Bank AG or the holders of the securities into consideration in determining, composing or calculating the Dow Jones Industrial Average<sup>SM</sup> or the DJ U.S. Indices. Dow Jones is not responsible for and has not participated in the determination of the timing, prices, or quantities of the securities to be issued. Dow Jones has no obligation or liability in connection with the administration, marketing or trading of the securities.

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#### The Dow Jones EURO STOXX 50® Index

The Dow Jones EURO STOXX 50® Index, which we refer to as the STOXX Index, was created by STOXX® Limited, a joint venture between Deutsche Boerse AG, Dow Jones & Company, Inc. and SWX Swiss Exchange. Publication of the STOXX Index began on February 28, 1998, based on an initial index value of 1,000 at December 31, 1991. The STOXX Index is published in The Wall Street Journal and disseminated on the STOXX Limited website: http://www.stoxx.com. Information included in such website is not a part of this underlying supplement. We obtained all information contained in this underlying supplement regarding the STOXX Index, including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information, and we have not participated in the preparation of, or verified, such publicly available information. That information reflects the policies of, and is subject to change by, STOXX Limited. STOXX Limited is under no obligation to continue to publish the STOXX Index and may discontinue publication of the STOXX Index at any time.

#### **STOXX Index Composition and Maintenance**

The STOXX Index is composed of 50 component stocks of market sector leaders from within the Dow Jones STOXX 600 Supersector Indices, which includes stocks selected from the Eurozone. The component stocks have a high degree of liquidity and represent the largest companies across all market sectors.

The composition of the STOXX Index is reviewed annually, based on the closing stock data on the last trading day in August. The component stocks are announced the first trading in September. Changes to the component stocks are implemented on the third Friday in September and are effective the following trading day. Changes in the composition of the STOXX Index are made to ensure that the STOXX Index includes the 50 market sector leaders from within the Euro STOXX Index.

The free float factors for each component stock used to calculate the STOXX Index, as described below, are reviewed, calculated and implemented on a quarterly basis and are fixed until the next quarterly review. Each component's weight is capped at 10% of the index's total free float market capitalization.

The STOXX Index is also reviewed on an ongoing basis. Corporate actions (including initial public offerings, mergers and takeovers, spin-offs, delistings and bankruptcy) that affect the STOXX Index composition are immediately reviewed. Any changes are announced, implemented and effective in line with the type of corporate action and the magnitude of the effect.

STOXX Index Calculation. The STOXX Index is calculated with the "Laspeyres formula," which measures the aggregate price changes in the component stocks against a fixed base quantity weight. The formula for calculating the STOXX Index value can be expressed as follows:

The "free float market capitalization of the STOXX Index" is equal to the sum of the products of the closing price, market capitalization and free float factor for each component stock as of the time the STOXX Index is being calculated.

The divisor for the STOXX Index is adjusted to maintain the continuity of the STOXX Index values across changes due to corporate actions. The following is a summary of the adjustments to any component stock made for corporate actions and the effect of such adjustment on the divisor, where shareholders of the component stock will receive "B" number of shares for every "A" share held (where applicable).

(1) Cash dividend:

Adjusted price = closing price - announced dividend x (1 - withholding tax)

Divisor: decreases

(2) Special cash dividend:

Adjusted price = closing price - announced dividend x (1 - withholding tax)

Divisor: decreases

(3) Split and reverse split:

Adjusted price = closing price x A / B

New number of shares = old number of shares x B / A

Divisor: no change

(4) Rights offering:

Adjusted price = (closing price x A + subscription price x B) / (A + B)

New number of shares = old number of shares x (A + B) / A

Divisor: increases

(5) Stock dividend:

Adjusted price = closing price x A / (A + B)

New number of shares = old number of shares x (A + B) / A

Divisor: no change

(6) Stock dividend of another company:

Adjusted price = (closing price x A - price of other company x B) / A

Divisor: decreases

(7) Return of capital and share consideration:

Adjusted price = (closing price - dividend announced by company x (1-withholding tax)) x A / B

New number of shares = old number of shares x B / A

Divisor: decreases

(8) Repurchase shares / self tender:

Adjusted price = ((price before tender x old number of shares) – (tender price x number of tendered shares)) / (old number of shares – number of tendered shares)

New number of shares = old number of shares - number of tendered shares

Divisor: decreases

(9) Spin-off:

Adjusted price = (closing price x A - price of spun-off shares x B) / A

Divisor: decreases

(10) Combination stock distribution (dividend or split) and rights offering:

For this corporate action, the following additional assumptions apply:

- Shareholders receive B new shares from the distribution and C new shares from the rights offering for every A shares held
- If A is not equal to one share, all the following "new number of shares" formulae need to be divided by A:

If rights are applicable after stock distribution (one action applicable to other):

Adjusted price =  $(closing price \times A + subscription price \times C \times (1 + B / A)) / ((A + B) \times (1 + C / A))$ 

New number of shares = old number of shares x ((A + B) x (1 + C / A)) / A

Divisor: increases

If stock distribution is applicable after rights (one action applicable to other):

Adjusted price = (closing price  $\times A + \text{subscription price } \times C$ ) / ((A + C)  $\times$  (1 + B / A))

New number of shares = old number of shares x ((A + C) x (1 + B / A))

Divisor: increases

Stock distribution and rights (neither action is applicable to the other):

Adjusted price = (closing price x A + subscription price x C) / (A + B + C)

New number of shares = old number of shares x (A + B + C) / A

Divisor: increases

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#### The FTSE™ 100 Index

We have derived all information contained in this underlying supplement regarding the FTSE™ 100 Index which we refer to as the "FTSE Index," including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information, and we have not participated in the preparation of, or verified, such publicly available information. Such information reflects the policies of, and is subject to change by,

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The FTSE Index, was first calculated on January 3, 1984 with an initial base level index value of 1,000 points. Publication of the FTSE Index began in February 1984. Real-time FTSE indices are calculated on systems managed by Reuters. Prices and FX rates used are supplied by Reuters.

The FTSE Index is a free float adjusted index which measures the composite price performance of stocks of the largest 100 companies (determined on the basis of market capitalization) traded on the LSE. The 100 stocks included in the FTSE Index (the "FTSE Underlying Stocks") are selected from a reference group of stocks trading on the LSE which are in turn selected by excluding certain stocks that have low liquidity based on public float, accuracy and reliability of prices, size and number of trading days. The FTSE Underlying Stocks are selected from this reference group by selecting 100 stocks with the largest market value.

FTSE, the publisher of the FTSE Index, is responsible for calculating, publishing and disseminating the FTSE Index. The FTSE Index is overseen by the FTSE's Europe/Middle East/ Africa Committee (the "FTSE EMEA Committee"), which is made up of independent senior industry representatives, which is responsible for the index review process.

FTSE can add, delete or substitute the stocks underlying the FTSE Index or make other methodological changes that could change the value of the FTSE Index. FTSE may discontinue or suspend calculation or dissemination of the FTSE Index. The FTSE EMEA Committee reviews the FTSE Underlying Stocks quarterly in March, June, September and December in order to maintain continuity in the index level. FTSE prepares information regarding possible companies to be included or excluded from the FTSE Index using the close of business figures from the Tuesday before a review. The review is then presented to the FTSE EMEA Committee for approval.

Changes to the constituents can be prompted by new listings on the exchange, corporate actions (e.g., mergers and acquisitions) or an increase or decrease in a market capitalization. The FTSE Underlying Stocks may be replaced, if necessary, in accordance with deletion/addition rules which provide generally for the removal and replacement of a stock from the FTSE Index if such stock is delisted or its issuer is subject to a takeover offer that has been declared unconditional or it has ceased, in the opinion of the FTSE EMEA Committee, to be a viable component of the FTSE Index. To maintain continuity, a stock will be added at the quarterly review if it has risen to 90th place or above and a stock will be deleted if at the quarterly review it has fallen to 111th place or below, in each case ranked on the basis of market capitalization. Where a greater number of companies qualify to be inserted in the FTSE Index than those qualifying to be deleted, the lowest ranking constituents presently included in the FTSE Index will be deleted to ensure that an equal number of companies are inserted and deleted at the periodic review. Likewise, where a greater number of companies qualify to be deleted than those qualifying to be inserted, the securities of the highest ranking companies which are presently not included in the index will be inserted to match the number of companies being deleted at the periodic review.

The FTSE Index is obtained by: (i) calculating the sum of the products of the per share price of each stock included in the FTSE Index by the number of their respective outstanding shares (such sum, the "FTSE Aggregate Market Value") as of the relevant current date and

(ii) dividing the FTSE Aggregate Market Value as of the relevant current date by a divisor which represents the adjustments to the FTSE Aggregate Market Value as of the base date. The divisor is continuously adjusted to reflect changes, without distorting the FTSE Index, in the issued share capital of individual underlying stocks, including the deletion and addition of stocks, the substitution of stocks, stock dividends and stock splits.

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#### The MSCI Indices

We have derived all information contained in this underlying supplement regarding the MSCI Emerging Markets Index<sup>SM</sup>, the MSCI EAFE® Index, the MSCI Singapore Index and the MSCI Taiwan Index<sup>SM</sup> (each an "**MSCI Index**", and together, the "**MSCI Indices**") including, without limitation, the make-up, method of calculation and changes in each MSCI Index's components, from publicly available information, and we have not participated in the

preparation of, or verified, such publicly available information. Such information reflects the policies of, and is subject to change by, MSCI. The MSCI Indices are calculated, maintained and published by MSCI.

On May 30, 2008, MSCI completed changes to the methodology used in its MSCI International Equity Indices, which include the MSCI Emerging Markets Index<sup>SM</sup>, the MSCI EAFE® Index, the MSCI Singapore Index and the MSCI Taiwan Index<sup>SM</sup>. MSCI enhanced its Standard Index methodology by moving from a sampled multi-cap approach to an approach targeting exhaustive coverage with non-overlapping size and style segments. The MSCI Standard Indices and the MSCI Small Cap Indices, along with the other MSCI equity indices based on them, transitioned to the Global Investable Market Indices methodology described below.

## The MSCI Emerging Markets Index<sup>SM</sup>

The MSCI Emerging Markets Index<sup>SM</sup> (the "**MSCI EM Index**") is a stock index calculated in U.S. dollars, published and disseminated daily by MSCI through numerous data vendors, on the MSCI website and every 60 seconds during market trading hours on Bloomberg Financial Markets and Reuters Limited. The MSCI EM Index was developed by MSCI as an equity benchmark for international stock performance and is designed to measure equity market performance in the global emerging markets.

The MSCI EM Index has a base date of December 31, 1987. As of July 28, 2008, the MSCI EM Index consisted of the following 25 emerging markets component 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. Each of the emerging markets component country indices is a sampling of equity securities across industry groups in such country's equity markets. In order to maintain the representativeness of the MSCI EM Index, structural changes to the MSCI EM Index as a whole may be made by adding or deleting emerging markets component country indices and the related emerging markets component securities. The MSCI EM Index is reported by Bloomberg Financial Markets under ticker symbol "MXEF." The MSCI EM Index includes components from all countries covered by the MSCI International Equity Indices that are designated by MSCI as Emerging Markets ("EMs").

## The MSCI EAFE® Index

The MSCI EAFE Indexs® was developed by MSCI and is calculated, maintained and published daily by MSCI, through numerous data vendors, on the MSCI website and every 60 seconds during market trading hours on Bloomberg Financial Markets and Reuters Limited. The MSCI EAFE Index® is intended to provide performance benchmarks for 21 developed equity markets in Europe, Australasia and the Far East, namely those of Australia, New Zealand, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, the Netherlands, Norway, Portugal, Singapore, Spain, Sweden, Switzerland and the United Kingdom. The MSCI EAFE Index is reported by Bloomberg Financial Markets under ticker symbol "MXEA." The MSCI EAFE® includes components from all countries in Europe, Australasia and the Far East that are designated by MSCI as Developed Markets ("**DMs**").

#### MSCI Singapore Index

The MSCI Singapore Index was developed by MSCI and is calculated, maintained and published daily by MSCI, through numerous data vendors, on the MSCI website and every 60

seconds during market trading hours on Bloomberg Financial Markets and Reuters Limited. The MSCI Singapore Index is intended to provide performance benchmarks the Singapore equity market. Singapore is classified by MSCI as a developed market, and the MSCI Singapore Index is reported by Bloomberg Financial Markets under ticker symbol "SGY."

#### MSCI Taiwan Index<sup>SM</sup>

The MSCI Taiwan Index<sup>SM</sup> was developed by MSCI and is calculated, maintained and published daily by MSCI, through numerous data vendors, on the MSCI website and every 60 seconds during market trading hours on Bloomberg Financial Markets and Reuters Limited. The MSCI Taiwan Index<sup>SM</sup> is intended to provide performance benchmarks the Taiwan equity market. Taiwan is classified by MSCI as an emerging market, and the MSCI Singapore Index is reported by Bloomberg Financial Markets under ticker symbol "TWY."

## **Constructing the MSCI Indices**

MSCI undertakes an index construction process, which involves: (i) defining the Equity Universe; (ii) determining the Market Investable Equity Universe for each market; (iii) determining market capitalization size segments for each market; (iv) applying Index Continuity Rules for the MSCI Standard Index; (v) creating style segments within each size segment within each market; and (vi) classifying securities under the Global Industry Classification Standard (the "GICS").

## **Defining the Equity Universe**

- (i) Identifying Eligible Equity Securities: The Equity Universe initially looks at securities listed in any of the countries in the MSCI Global Index Series, which will be classified as either Developed Markets ("DM") or Emerging Markets ("EM"). All listed equity securities, or listed securities that exhibit characteristics of equity securities, except mutual funds, ETFs, equity derivatives, limited partnerships and most investment trusts, are eligible for inclusion in the Equity Universe. Real Estate Investment Trusts ("REITs") in some countries and certain income trusts in Canada are also eligible for inclusion.
- (ii) Country Classification of Eligible Securities: Each company and its securities (i.e., share classes) are classified in one and only one country, which allows for a distinctive sorting of each company by its respective country.

## **Determining the Market Investable Equity Universes**

A Market Investable Equity Universe for a market is derived by applying investability screens to individual companies and securities in the Equity Universe that are classified in that market. A market is equivalent to a single country, except in DM Europe, where all DM countries in Europe are aggregated into a single market for index construction purposes. Subsequently, individual DM Europe country indices within the MSCI Europe Index are derived from the constituents of the MSCI Europe Index under the Global Investable Market Indices methodology.

The investability screens used to determine the Investable Equity Universe in each market are as follows:

(i) Equity Universe Minimum Size Requirement: This investability screen is applied at the company level. In order to be included in a Market Investable Equity Universe, a

- company must have the required minimum full market capitalization. A company will meet this requirement if its cumulative free float-adjusted market capitalization is within the top 99% of the sorted Equity Universe.
- (ii) Equity Universe Minimum Float-Adjusted Market Capitalization Requirement: This investability screen is applied at the individual security level. To be eligible for inclusion in a Market Investable Equity Universe, a security must have a free float-adjusted market capitalization equal to or higher than 50% of the Equity Universe Minimum Size Requirement.
- (iii) DM and EM Minimum Liquidity Requirement: This investability screen is applied at the individual security level. To be eligible for inclusion in a Market Investable Equity Universe, a security must have adequate liquidity. The Annualized Traded Value Ratio ("ATVR"), a measure that offers the advantage of screening out extreme daily trading volumes and taking into account the free float-adjusted market capitalization size of securities, is used to measure liquidity. In the calculation of the ATVR, the trading volumes in depository receipts associated with that security, such as ADRs or GDRs, are also considered. A minimum liquidity level of 20% ATVR is required for inclusion of a security in a Market Investable Equity Universe of a Developed Market, and a minimum liquidity level of 15% ATVR is required for inclusion of a security in a Market Investable Equity Universe of an Emerging Market.
- (iv) Global Minimum Foreign Inclusion Factor Requirement. This investability screen is applied at the individual security level. To be eligible for inclusion in a Market Investable Equity Universe, a security's Foreign Inclusion Factor ("FIF") must reach a certain threshold. The FIF of a security is defined as the proportion of shares outstanding that is available for purchase in the public equity markets by international investors. This proportion accounts for the available free float of and/or the foreign ownership limits applicable to a specific security (or company). In general, a security must have an FIF equal to or larger than 0.15 to be eligible for inclusion in a Market Investable Equity Universe. Exceptions to this general rule are made only in the limited cases where the exclusion of securities of a very large company would compromise the relevant MSCI Index's ability to fully and fairly represent the characteristics of the underlying market.
- (v) Minimum Length of Trading Requirement: This investability screen is applied at the individual security level. For an initial public offering ("IPO") to be eligible for inclusion in a Market Investable Equity Universe, the new issue must have started trading at least four months before the implementation of the initial construction of the index or at least three months before the implementation of a Semi-Annual Index Review. This requirement is applicable to small new issues in all markets. Large IPOs are not subject to the Minimum Length of Trading Requirement and may be included in a Market Investable Equity Universe and the Standard Index outside of a Quarterly or Semi-Annual Index Review.

#### Defining Market Capitalization Size Segments for Each Market

Once a Market Investable Equity Universe is defined, it is segmented into the following sizebased indices:

- Investable Market Index (Large + Mid + Small)
- Standard Index (Large + Mid)
- Large Cap Index

- Mid Cap Index
- Small Cap Index

Creating the Size Segment Indices in each market involves the following steps: (i) defining the Market Coverage Target Range for each size segment; (ii) determining the Global Minimum Size Range for each size segment; (iii) determining the Market Size-Segment Cutoffs and associated Segment Number of Companies; (iv) assigning companies to the size segments; and (v) applying final size-segment investability requirements and index continuity rules.

## **Index Continuity Rules for the Standard Indices**

In order to achieve index continuity, as well as provide some basic level of diversification within a market index, notwithstanding the effect of other index construction rules, a minimum number of five constituents will be maintained for a DM Standard Index and a minimum number of three constituents will be maintained for an EM Standard Index.

If after the application of the index construction methodology, a Standard Index contains fewer than five securities in a Developed Market or three securities in an Emerging Market, then the largest securities by free float-adjusted market capitalization are added to the Standard Index in order to reach five constituents in that Developed Market or three in that Emerging Market. At subsequent Index Reviews, if the free float-adjusted market capitalization of a nonindex constituent is at least 1.50 times the free float-adjusted market capitalization of the smallest existing constituent after rebalancing, the larger free float-adjusted market capitalization security replaces the smaller one.

## Creating Style Indices within Each Size Segment

All securities in the investable equity universe are classified into Value or Growth segments using the MSCI Global Value and Growth methodology.

## Classifying Securities under the Global Industry Classification Standard

All securities in the Global Investable Equity Universe are assigned to the industry that best describes their business activities. To this end, MSCI has designed, in conjunction with Standard & Poor's, the Global Industry Classification Standard. Under the GICS, each company is assigned uniquely to one sub-industry according to its principal business activity. Therefore, a company can belong to only one industry grouping at each of the four levels of the GICS.

#### Maintenance

The MSCI Global Investable Market Indices are maintained with the objective of reflecting the evolution of the underlying equity markets and segments on a timely basis, while seeking to achieve index continuity, continuous investability of constituents and replicability of the indices, and index stability and low index turnover.

In particular, index maintenance involves:

- (i) Semi-Annual Index Reviews ("**SAIRs**") in May and November of the Size Segment and Global Value and Growth Indices which include:
  - updating the indices on the basis of a fully refreshed Equity Universe;
  - taking buffer rules into consideration for migration of securities across size and style segments; and

updating FIFs and Number of Shares ("NOS").

The objective of the SAIRs is to systematically reassess the various dimensions of the Equity Universe for all markets on a fixed semi-annual timetable. A SAIR involves a comprehensive review of the Size Segment and Global Value and Growth Indices.

- (ii) Quarterly Index Reviews ("QIRs") in February and August of the Size Segment Indices aimed at:
  - including significant new eligible securities (such as IPOs that were not eligible for earlier inclusion) in the index;
  - allowing for significant moves of companies within the Size Segment Indices, using wider buffers than in the SAIR; and
  - reflecting the impact of significant market events on FIFs and updating NOS.

QIRs are designed to ensure that the indices continue to be an accurate reflection of the evolving equity marketplace. This is achieved by a timely reflection of significant market driven changes that were not captured in the index at the time of their actual occurrence but are significant enough to be reflected before the next SAIR. QIRs may result in additions or deletions due to migration to another Size Segment Index, and changes in FIFs and in NOS. Only additions of significant new investable companies are considered, and only for the Standard Index. The buffer zones used to manage the migration of companies from one segment to another are wider than those used in the SAIR. The style classification is reviewed only for companies that are reassigned to a different size segment.

(iii) Ongoing event-related changes. Ongoing event-related changes to the indices are the result of mergers, acquisitions, spin-offs, bankruptcies, reorganizations and other similar corporate events. They can also result from capital reorganizations in the form of rights issues, bonus issues, public placements and other similar corporate actions that take place on a continuing basis. These changes generally are reflected in the indices at the time of the event. Significantly large IPOs are included in the indices after the close of the company's tenth day of trading.

#### **Announcement Policy**

The results of the SAIRs are announced at least two weeks in advance of their effective implementation dates as of the close of the last business day of May and November.

The results of the QIRs are announced at least two weeks in advance of their effective implementation dates as of the close of the last business day of February and August.

All changes resulting from corporate events are announced prior to their implementation.

The changes are typically announced at least ten business days prior to the changes becoming effective in the indices as an "expected" announcement, or as an "undetermined" announcement, when the effective dates are not known yet or when aspects of the event are uncertain. MSCI sends "confirmed" announcements at least two business days prior to events becoming effective in the indices, provided that all necessary public information concerning the event is available. The full list of all new and pending changes is delivered to clients on a daily basis, at 5:30 p.m., US Eastern Time.

In exceptional cases, events are announced during market hours for same or next day implementation. Announcements made by MSCI during market hours are usually linked to late company disclosure of corporate events or unexpected changes to previously announced corporate events.

In the case of secondary offerings representing more than 5% of a security's number of shares for existing constituents, these changes will be announced prior to the end of the subscription period when possible and a subsequent announcement confirming the details of the event (including the date of implementation) will be made as soon as the results are available.

Both primary equity offerings and secondary offerings for U.S. securities, representing at least 5% of the security's number of shares, will be confirmed through an announcement during market hours for next day or shortly after implementation, as the completion of the events cannot be confirmed prior to the notification of the pricing.

Early deletions of constituents due to bankruptcy or other significant cases are announced as soon as practicable prior to their implementation.

#### **Index Calculation**

The MSCI Indices are calculated using the Laspeyres' concept of a weighted arithmetic average together with the concept of chain-linking. As a general principle, the level of the relevant MSCI Index level is obtained by applying the change in the market performance to the previous period level for such MSCI Index.

 $\begin{aligned} \textit{PriceIndexLeveIUSD}_t &= \textit{PriceIndexLeveIUSD}_{t\text{-}1} \times & \frac{\textit{IndexAdjustedMarketCapUSD}_t}{\textit{IndexInitialMarketCapUSD}_t} \\ \textit{PriceIndexLeveILocal}_t &= \textit{PriceIndexLeveILocal}_{t\text{-}1} \times & \frac{\textit{IndexAdjustedMarketCapForLocal}_t}{\textit{IndexInitialMarketCapUSD}_t} \end{aligned}$ 

## Where:

- PriceIndexLevelUSD<sub>t-1</sub> is the Price Index level in USD at time t-1
- IndexAdjustedMarketCapUSD<sub>t</sub> is the Adjusted Market Capitalization of the index in USD at time t
- ullet IndexInitialMarketCapUSD $_t$  is the Initial Market Capitalization of the index in USD at time t
- PriceIndexLevelLocal<sub>t-1</sub> is the Price Index level in local currency at time t-1
- IndexAdjustedMarketCapForLocal<sub>t</sub> is the Adjusted Market Capitalization of the index in USD converted using FX rate as of t-1 and used for local currency index at time t

Note: IndexInitialMarketCapUSD was previously called IndexUnadjustedMarketCapPreviousUSD

## Security Price Index Level

 $SecurityPriceIndexLevel_1 = SecurityPriceIndexLevel_{t-1} \times \frac{SecurityAdjustedMarketCapForLocal_t}{SecurityInitialMarketCapUSD_t}$ 

SecurityAdjustedMarketCapForLocal, =

 $\frac{IndexNumberOfShares_{t-1} \times PricePerShare_{t} \times InclusionFactor_{t} \times PAF_{t}}{FXrate_{t-1}} \times \frac{ICI_{t}}{ICI_{t-1}}$ 

 $SecurityInitialMarketCapUSD_{t} = \frac{IndexNumberOfShares_{t-1} \times PricePerShare_{t-1} \times InclusionFactor_{t}}{FXrate_{t-1}}$ 

#### Where:

- SecurityPriceIndexLevel<sub>t-1</sub> is Security Price Index level at time t-1
- SecurityAdjustedMarketCapForLocal<sub>t</sub> is the Adjusted Market Capitalization of security s in USD converted using FX rate as of t-1
- SecurityInitialMarketCapUSD<sub>t</sub> is the Initial Market Capitalization of security s in USD at time t
- IndexNumberOfShares<sub>t-1</sub> is the number of shares of security s at time t-1.
- PricePerShare<sub>t</sub> is the price per share of security s at time t.
- PricePerShare<sub>t-1</sub> is the price per share of security s at time t-1.
- InclusionFactor<sub>t</sub> is the inclusion factor of security s at time t. The inclusion factor can be
  one or the combination of the following factors: Foreign Inclusion Factor, Domestic
  Inclusion Factor Growth Inclusion Factor, Value Inclusion Factor, Index Inclusion Factor.
- PAF<sub>t</sub> is the Price Adjustment Factor of security s at time t.
- FXrate<sub>t-1</sub> is the FX rate of the price currency of security s vs USD at time t-1. It is the value of 1 USD in foreign currency.
- ICI<sub>t</sub> is the Internal Currency Index of price currency at time t. The ICI is different than 1 when a country changes the internal value of its currency (e.g. from Turkish Lira to New Turkish Lira ICI = 1,000,000).

*ICI<sub>t-1</sub>* is the Internal Currency Index of price currency at time t-1.

## **Index Market Capitalization**

 $IndexAdjustedMarketCapUSD_t =$ 

$$\sum_{s \in I, t} \underbrace{Index \ Number \ of \ Shares_{t-1} \times Price \ Per \ Share_{t} \times Inclusion \ Factor_{t} \times PAF_{t}}_{FXrate_{t}}$$

IndexAdjustedMarketForLocal, =

$$\sum_{s \in I, t} \left( \frac{Index \ Number \ of \ Shares_{t-1} \times Price \ Per \ Share_{t} \times Inclusion \ Factor_{t} \times PAF_{t}}{FXrate_{t-1}} \times \frac{ICI_{t}}{ICI_{t-1}} \right)$$

 $IndexInitialMarketCapUSD_t =$ 

$$\sum_{s \in I, t} \underbrace{Index \ Number \ of \ Shares_{t-1} \times Price \ Per \ Share_{t} \times Inclusion \ Factor_{t}}_{FXrate_{t-1}}$$

#### Where:

- IndexNumberOfShares, is the number of shares of security s at time t-1.
- PricePerShare, is the price per share of security s at time t.
- PricePerShare, is the price per share of security s at time t-1.
- InclusionFactor<sub>t</sub> is the inclusion factor of security s at time t. The inclusion factor can be
  one or the combination of the following factors: Foreign Inclusion Factor, Domestic
  Inclusion Factor, Growth Inclusion Factor, Value Inclusion Factor, Index Inclusion Factor.
- PAF, is the Price Adjustment Factor of security s at time t.
- FXrate<sub>t</sub> is the FX rate of the price currency of security s vs USD at time t. It is the value of 1 USD in foreign currency.
- FXrate<sub>t-1</sub> is the FX rate of the price currency of security s vs USD at time t-1. It is the value of 1 USD in foreign currency.
- ICI<sub>t</sub> is the Internal Currency Index of price currency at time t. The ICI is different than 1 when a country changes the internal value of its currency (e.g. from Turkish Lira to New Turkish Lira ICI = 1,000,000).
- *ICI<sub>t-1</sub>* is the Internal Currency Index of price currency at time t-1.

#### **Corporate Events**

Mergers and Acquisitions. As a general principle, MSCI implements M&As as of the close of the last trading day of the acquired entity or merging entities (last offer day for tender offers), regardless of the status of the securities (index constituents or nonindex constituents) involved in the event. MSCI uses market prices for implementation. This principle applies if all necessary information is available prior to the completion of the event and if the liquidity of the relevant constituent(s) is not expected to be significantly diminished on the day of implementation. Otherwise, MSCI will determine the most appropriate implementation method and announce it prior to the changes becoming effective in the indices.

Tender Offers. In tender offers, the acquired or merging security is generally deleted from MSCI Indices at the end of the initial offer period, when the offer is likely to be successful and /

or if the free float of the security is likely to be substantially reduced (this rule is applicable even if the offer is extended), or once the results of the offer have been officially communicated and the offer has been successful and the security's free float has been substantially reduced, if all required information is not available in advance or if the offer's outcome is uncertain. The main factors considered by MSCI when assessing the outcome of a tender offer (not in order of importance) are: the announcement of the offer as friendly or hostile, a comparison of the offer price to the acquired security's market price, the recommendation by the acquired company's board of directors, the major shareholders' stated intention whether to tender their shares, the required level of acceptance, the existence of pending regulatory approvals, market perception of the transaction, official preliminary results if any, and other additional conditions for the offer.

If a security is deleted from an index, the security will not be reinstated immediately after its deletion even when the tender offer is subsequently declared unsuccessful and/or the free float of the security is not substantially reduced. It may be reconsidered for index inclusion in the context of a quarterly index review or annual full country index review. MSCI uses market prices for implementation.

Late Announcements of Completion of Mergers and Acquisitions. When the completion of an event is announced too late to be reflected as of the close of the last trading day of the acquired or merging entities, implementation occurs as of the close of the following day or as soon as practicable thereafter. In these cases, MSCI uses a calculated price for the acquired or merging entities. The calculated price is determined using the terms of the transaction and the price of the acquiring or merged entity, or, if not appropriate, using the last trading day's market price of the acquired or merging entities.

Conversions of Share Classes. Conversions of a share class into another share class resulting in the deletion and/or addition of one or more classes of shares are implemented as of the close of the last trading day of the share class to be converted.

Spin-Offs. On the ex-date of a spin-off, a PAF is applied to the price of the security of the parent company. The PAF is calculated based on the terms of the transaction and the market price of the spun-off security. If the spun-off entity qualifies for inclusion, it is included as of the close of its first trading day. If appropriate, MSCI may link the price history of the spun-off security to a security of the parent company.

In cases of spin-offs of partially-owned companies, the post-event free float of the spun-off entity is calculated using a weighted average of the existing shares and the spun-off shares, each at their corresponding free float. Any resulting changes to FIFs and/or DIFs are implemented as of the close of the ex-date.

When the spun-off security does not trade on the ex-date, a "detached" security is created to avoid a drop in the free float-adjusted market capitalization of the parent entity, regardless of whether the spun-off security is added or not. The detached security is included until the spun-off security begins trading, and is deleted thereafter. Generally, the value of the detached security is equal to the difference between the cum price and the ex price of the parent security.

Corporate Actions. Corporate actions such as splits, bonus issues and rights issues, which affect the price of a security, require a price adjustment. In general, the PAF is applied on the ex-date of the event to ensure that security prices are comparable between the ex-date and the cum date. To do so, MSCI adjusts for the value of the right and/or the value of the special assets

that are distributed. In general, corporate actions do not impact the free float of the securities because the distribution of new shares is carried out on a pro rata basis to all existing shareholders. Therefore, MSCI will generally not implement any pending number of shares and/ or free float updates simultaneously with the event.

If a security does not trade for any reason on the ex-date of the corporate action, the event will be generally implemented on the day the security resumes trading.

Share Placements and Offerings. Changes in number of shares and FIF resulting from primary equity offerings representing more than 5% of the security's number of shares are generally implemented as of the close of the first trading day of the new shares, if all necessary information is available at that time. Otherwise, the event is implemented as soon as practicable after the relevant information is made available. A primary equity offering involves the issuance of new shares by a company. Changes in number of shares and FIF resulting from primary equity offerings representing less than 5% of the security's number of shares are deferred to the next regularly scheduled Quarterly Index Review following the completion of the event. For public secondary offerings of existing constituents representing more than 5% of the security's number of shares, where possible, MSCI will announce these changes and reflect them shortly after the results of the subscription are known. Secondary public offerings that, given lack of sufficient notice, were not reflected immediately will be reflected at the next Quarterly Index Review. Secondary offerings involve the distribution of existing shares of current shareholders' in a listed company and are usually pre-announced by a company or by a company's shareholders and open for public subscription during a pre-determined period.

Debt-to-Equity Swaps. In general, large debt-to-equity swaps involve the conversion of debt into equity originally not convertible at the time of issue. In this case, changes in numbers of shares and subsequent FIF and/or DIF changes are implemented as of the close of the first trading day of the newly issued shares, or shortly thereafter if all necessary information is available at the time of the swap. In general, shares issued in debt-to-equity swaps are assumed to be issued to strategic investors. As such, the post event free float is calculated on a pro forma basis assuming that all these shares are non-free float. Changes in numbers of shares and subsequent FIF and/or DIF changes due to conversions of convertible bonds or other convertible instruments, including periodical conversions of preferred stocks and small debt-to-equity swaps are implemented as part of the quarterly index review.

Suspensions and Bankruptcies. MSCI will remove from the MSCI Equity Index Series as soon as practicable companies that file for bankruptcy, companies that file for protection from their creditors and/or are suspended and for which a return to normal business activity and trading is unlikely in the near future. When the primary exchange price is not available, MSCI will delete securities at an over the counter or equivalent market price when such a price is available and deemed relevant. If no over the counter or equivalent price is available, the security will be deleted at the smallest price (unit or fraction of the currency) at which a security can trade on a given exchange. For securities that are suspended, MSCI will carry forward the market price prior to the suspension during the suspension period.

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#### The NASDAQ 100<sup>®</sup> Index

We have derived all information contained in this underlying supplement regarding the Nasdaq Index including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information, and we have not participated in the preparation of, or verified, such publicly available information. Such information reflects the policies of, and is subject to change by, Nasdaq. The Nasdaq Index was developed by, and is calculated, maintained and published by Nasdaq.

The NASDAQ 100<sup>®</sup> Index, which we refer to as the "**Nasdaq Index**," was first published in January 1985 and includes companies across a variety of major industry groups. As of July 31, 2008, the major industry groups covered in the Nasdaq Index (listed according to their respective capitalization in the Nasdaq Index) were as follows: technology (38.38%); consumer services (23.23%); health care (15.15%); industrials (13.13%); telecommunications (5.05%); consumer goods (3.03%) and basic materials (2.02%). The identity and capitalization weightings of the five largest companies represented in the Nasdaq Index as of July 31, 2008 were as follows: Apple Inc. (12.33%); QUALCOMM Inc. (6.81%); Microsoft Corporation (5.27%); Research in Motion Limited (4.21%); and Gilead Sciences, Inc. (3.07%). Current information regarding the market value of the Nasdaq Index is available from the Nasdaq as well as numerous market information services.

The Nasdaq Index share weights of the component securities of the Nasdaq Index at any time are based upon the total shares outstanding in each of those securities and are additionally subject, in certain cases, to rebalancing. Accordingly, each underlying stock's influence on the level of the Nasdaq Index is directly proportional to the value of its Nasdaq Index share weight.

## **Computation of the Nasdaq Index**

## **Underlying Stock Eligibility Criteria and Annual Ranking Review**

## **Initial Eligibility Criteria**

To be eligible for initial inclusion in the Nasdaq Index, a security must be listed on the Nasdaq and meet the following criteria:

- the security must be listed on The Nasdaq National Market (unless the security was dually listed on another U.S. market prior to January 1, 2004 and has continuously maintained that listing);
- the security must be of a non-financial company;
- the security may not be issued by an issuer currently in bankruptcy proceedings;
- the security must have an average daily trading volume on the Nasdaq of at least 200,000 shares;
- if the security is of a foreign issuer (a foreign issuer is determined based on its country
  of incorporation), it must have listed options on a recognized market in the United States
  or be eligible for listed-options trading on a recognized options market in the United
  States;
- only one class of security per issuer is allowed;
- the issuer of the security may not have entered into a definitive agreement or other arrangement which would result in the security no longer being Nasdaq Index eligible;
- the issuer of the security may not have annual financial statements with an audit opinion that is currently withdrawn;
- the security must have seasoned on the Nasdaq or another recognized market (generally, a company is considered to be seasoned if it has been listed on a market for at least two years; in the case of spin-offs, the operating history of the spin-off will be considered); and
- if the security would otherwise qualify to be in the top 25% of the securities included in the Nasdaq Index by market capitalization for the six prior consecutive month ends, then a one-year seasoning criteria would apply.

## **Continued Eligibility Criteria**

In addition, to be eligible for continued inclusion in the Nasdaq Index, the following criteria apply:

- the security must be listed on The Nasdaq National Market (unless the security was dually listed on another U.S. market prior to January 1, 2004 and has continuously maintained that listing);
- the security must be of a non-financial company;
- the security may not be issued by an issuer currently in bankruptcy proceedings;
- the security must have an average daily trading volume of at least 200,000 shares as measured annually during the ranking review process;
- if the security is of a foreign issuer, it must have listed options or be eligible for listedoptions trading, as measured annually during the ranking review process;

- the security must have an adjusted market capitalization equal to or exceeding 0.10% of
  the aggregate adjusted market capitalization of the Nasdaq Index at each month end. In
  the event a company does not meet this criterion for two consecutive month ends, it will
  be removed from the Nasdaq Index effective after the close of trading on the third Friday
  of the following month; and
- the issuer of the security may not have annual financial statements with an audit opinion that is currently withdrawn.

These Nasdaq Index eligibility criteria may be revised from time to time by the Nasdaq without regard to the Securities.

The Nasdaq Index securities are evaluated on an annual basis, except under extraordinary circumstances which may result in an interim evaluation, as follows (this evaluation is referred to herein as the "Ranking Review"). Securities listed on the Nasdaq Stock Market which meet the applicable eligibility criteria are ranked by market value. Nasdaq Index-eligible securities which are already in the Nasdaq Index and which are ranked in the top 100 eligible securities (based on market capitalization) are retained in the Nasdaq Index. A security that is ranked 101 to 125 is also retained, provided that such security was ranked in the top 100 eligible securities as of the previous Ranking Review. Securities not meeting such criteria are replaced. The replacement securities chosen are those Nasdaq Index-eligible securities not currently in the Nasdaq Index that have the largest market capitalization. The data used in the ranking includes end of October NASDAQ market data and is updated for total shares outstanding submitted in a publicly filed SEC document via EDGAR through the end of November.

Generally, the list of annual additions and deletions is publicly announced via a press release in the early part of December, and replacements are made effective after the close of trading on the third Friday in December. Moreover, if at any time during the year a Nasdaq Index security is no longer traded on the Nasdaq, or is otherwise determined by the Nasdaq to become ineligible for continued inclusion in the Nasdaq Index, the security will be replaced with the largest market capitalization security not currently in the Nasdaq Index and meeting the Nasdaq Index eligibility criteria listed above.

In addition to the Ranking Review, the securities in the Nasdaq Index are monitored every day by the Nasdaq with respect to changes in total shares outstanding arising from secondary offerings, stock repurchases, conversions or other corporate actions. The Nasdaq has adopted the following quarterly scheduled weight adjustment procedures with respect to those changes. If the change in total shares outstanding arising from a corporate action is greater than or equal to 5.0%, that change is made to the Nasdaq Index on the evening prior to the effective date of that corporate action or as soon as practical thereafter. Otherwise, if the change in total shares outstanding is less than 5.0%, then all those changes are accumulated and made effective at one time on a quarterly basis after the close of trading on the third Friday in each of March, June, September and December. In either case, the Nasdaq Index share weights for those underlying stocks are adjusted by the same percentage amount by which the total shares outstanding have changed in those Nasdaq Index securities. Ordinarily, whenever there is a change in the Nasdaq Index share weights or a change in a component security included in the Nasdaq Index, the Nasdaq adjusts the divisor to assure that there is no discontinuity in the level of the Nasdaq Index that might otherwise be caused by any of those changes.

## Rebalancing of the NASDAQ Index

The Nasdaq Index is calculated under a modified capitalization-weighted methodology, which is a hybrid between equal weighting and conventional capitalization weighting. This methodology is expected to: (1) retain in general the economic attributes of capitalization weighting; (2) promote portfolio weight diversification (thereby limiting domination of the Nasdaq Index by a few large stocks); (3) reduce Nasdaq Index performance distortion by preserving the capitalization ranking of companies; and (4) reduce market impact on the smallest Nasdaq Index securities from necessary weight rebalancings.

Under the methodology employed, on a quarterly basis coinciding with the Nasdaq's quarterly scheduled weight adjustment procedures, the Nasdaq Index securities are categorized as either Large Stocks or Small Stocks depending on whether their current percentage weights (after taking into account scheduled weight adjustments due to stock repurchases, secondary offerings or other corporate actions) are greater than, or less than or equal to, the average percentage weight in the Nasdaq Index (*i.e.*, as a 100-stock index, the average percentage weight in the Nasdaq Index is 1.0%).

This quarterly examination will result in a Nasdaq Index rebalancing if either one or both of the following two weight distribution requirements are not met: (1) the current weight of the single largest market capitalization Nasdaq Index security must be less than or equal to 24.0% and (2) the collective weight of those Nasdag Index securities whose individual current weights are in excess of 4.5%, when added together, must be less than or equal to 48.0%. In addition, the Nasdag may conduct a special rebalancing if it is determined necessary to maintain the integrity of the Nasdaq Index. If either one or both of these weight distribution requirements are not met upon quarterly review, or the Nasdag determines that a special rebalancing is required, a weight rebalancing will be performed. First, relating to weight distribution requirement (1) above, if the current weight of the single largest Nasdag Index security exceeds 24.0%, then the weights of all Large Stocks will be scaled down proportionately towards 1.0% by enough for the adjusted weight of the single largest Nasdaq Index security to be set to 20.0%. Second, relating to weight distribution requirement (2) above, for those Nasdaq Index securities whose individual current weights or adjusted weights in accordance with the preceding step are in excess of 4.5%, if their collective weight exceeds 48.0%, then the weights of all Large Stocks will be scaled down proportionately towards 1.0% by just enough for the collective weight, so adjusted, to be set to 40.0%.

The aggregate weight reduction among the Large Stocks resulting from either or both of the above rescalings will then be redistributed to the Small Stocks in the following iterative manner. In the first iteration, the weight of the largest Small Stock will be scaled upwards by a factor which sets it equal to the average Nasdaq Index weight of 1.0%. The weights of each of the smaller remaining Small Stocks will be scaled up by the same factor reduced in relation to each stocks relative ranking among the Small Stocks such that the smaller the Nasdaq Index security in the ranking, the less the scale-up of its weight. This is intended to reduce the market impact of the weight rebalancing on the smallest component securities in the Nasdaq Index.

In the second iteration, the weight of the second largest Small Stock, already adjusted in the first iteration, will be scaled upwards by a factor which sets it equal to the average Nasdaq Index weight of 1.0%. The weights of each of the smaller remaining Small Stocks will be scaled up by this same factor reduced in relation to each stock's relative ranking among the Small Stocks such that, once again, the smaller the stock in the ranking, the less the scale-up of its weight.

Additional iterations will be performed until the accumulated increase in weight among the Small Stocks exactly equals the aggregate weight reduction among the Large Stocks from rebalancing in accordance with weight distribution requirement (1) and/or weight distribution requirement (2).

Then, to complete the rebalancing procedure, once the final percent weights of each of the Nasdaq Index securities are set, the Nasdaq Index share weights will be determined anew based upon the last sale prices and aggregate capitalization of the Nasdaq Index at the close of trading on the Thursday in the week immediately preceding the week of the third Friday in March, June, September and December. Changes to the Nasdaq Index share weights will be made effective after the close of trading on the third Friday in March, June, September and December, and an adjustment to the Nasdaq Index divisor will be made to ensure continuity of the Nasdaq Index.

Ordinarily, new rebalanced weights will be determined by applying the above procedures to the current Nasdaq Index share weights. However, the Nasdaq may from time to time determine rebalanced weights, if necessary, by instead applying the above procedure to the actual current market capitalization of the Nasdaq Index components. In those instances, the Nasdaq would announce the different basis for rebalancing prior to its implementation.

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### The Nikkei 225 Index

We have derived all information contained in this underlying supplement regarding the Nikkei<sup>®</sup> 225 Index, including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information, and we have not participated in the preparation of, or verified, such publicly available information. Such information reflects the policies of, and is subject to change by Nikkei Inc. (known as Nihon Keizai Shimbun, Inc. prior to January 1, 2007). Nikkei Inc. has no obligation to continue to publish, and may discontinue publication of, the Nikkei<sup>®</sup> 225 Index.

The Nikkei® 225 Index, which we refer to as the Nikkei Index, is a stock index calculated, published and disseminated by Nikkei Inc. that measures the composite price performance of selected Japanese stocks. The Nikkei Index currently is based on 225 underlying stocks (the "Nikkei Underlying Stocks") trading on the Tokyo Stock Exchange ("TSE") representing a broad cross-section of Japanese industries. All 225 Nikkei Underlying Stocks are stocks listed in the First Section of the TSE. Stocks listed in the First Section of the TSE are among the most actively traded stocks on the TSE. Nikkei Inc. rules require that the 75 most liquid issues (one-third of the component count of the Nikkei Index) be included in the Nikkei Index.

The 225 companies included in the Nikkei Index are divided into six sector categories: Technology, Financials, Consumer Goods, Materials, Capital Goods/Others and Transportation and Utilities. These six sector categories are further divided into 36 industrial classifications as follows:

- Technology—Pharmaceuticals, Electrical Machinery, Automobiles, Precision Machinery, Telecommunications;
- Financials—Banks, Miscellaneous Finance, Securities, Insurance;
- Consumer Goods—Marine Products, Food, Retail, Services;
- Materials—Mining, Textiles, Paper and Pulp, Chemicals, Oil, Rubber, Ceramics, Steel, Nonferrous Metals, Trading House;
- Capital Goods/Others—Construction, Machinery, Shipbuilding, Transportation Equipment, Miscellaneous Manufacturing, Real Estate; and
- Transportation and Utilities—Railroads and Buses, Trucking, Shipping, Airlines, Warehousing, Electric Power, Gas.

The Nikkei Index is a modified, price-weighted index (*i.e.*, a Nikkei Underlying Stock's weight in the index is based on its price per share rather than the total market capitalization of the issuer) that is calculated by (i) multiplying the per share price of each Nikkei Underlying

Stock by the corresponding weighting factor for such Nikkei Underlying Stock (a "Weight Factor"), (ii) calculating the sum of all these products and (iii) dividing such sum by a divisor (the "Divisor"). The Divisor was initially set at 225 for the date of May 16, 1949 using historical numbers from May 16, 1949, the date on which the TSE was reopened. The Divisor was 24.424 as of July 28, 2008, and is subject to periodic adjustments as set forth below. Each Weight Factor is computed by dividing ¥50 by the par value of the relevant Nikkei Underlying Stock, so that the share price of each Nikkei Underlying Stock, when multiplied by its Weight Factor, corresponds to a share price based on a uniform par value of ¥50. The stock prices used in the calculation of the Nikkei Index are those reported by a primary market for the Nikkei Underlying Stocks (currently the TSE). The level of the Nikkei Index is calculated once per minute during TSE trading hours.

In order to maintain continuity in the Nikkei Index in the event of certain changes due to non-market factors affecting the Nikkei Underlying Stocks, such as the addition or deletion of stocks, substitution of stocks, stock splits or distributions of assets to stockholders, the Divisor used in calculating the Nikkei Index is adjusted in a manner designed to prevent any instantaneous change or discontinuity in the level of the Nikkei Index. Thereafter, the Divisor remains at the new value until a further adjustment is necessary as the result of another change. As a result of such change affecting any Nikkei Underlying Stock, the Divisor is adjusted in such a way that the sum of all share prices immediately after such change multiplied by the applicable Weight Factor and divided by the new Divisor (*i.e.*, the level of the Nikkei Index immediately after such change) will be equal to the level of the Nikkei Index immediately prior to the change.

A Nikkei Underlying Stock may be deleted or added by Nikkei Inc. Any stock becoming ineligible for listing in the First Section of the TSE due to any of the following reasons will be deleted from the Nikkei Underlying Stocks: (i) bankruptcy of the issuer, (ii) merger of the issuer with, or acquisition of the issuer by, another company, (iii) delisting of such stock, (iv) transfer of such stock to the "Seiri-Post" because of excess debt of the issuer or because of any other reason or (v) transfer of such stock to the Second Section. In addition, a component stock transferred to the "Kanri-Post" (Posts for stocks under supervision) is in principle a candidate for deletion. Nikkei Underlying Stocks with relatively low liquidity, based on trading value and rate of price fluctuation over the past five years, may be deleted by Nikkei. Upon deletion of a stock from the Nikkei Underlying Stocks, Nikkei Inc. will select a replacement for such deleted Nikkei Underlying Stock in accordance with certain criteria. In an exceptional case, a newly listed stock in the First Section of the TSE that is recognized by Nikkei Inc. to be representative of a market may be added to the Nikkei Underlying Stocks. In such a case, an existing Underlying Stock with low trading volume and deemed not to be representative of a market will be deleted by Nikkei Inc.

A list of the issuers of the Nikkei Underlying Stocks constituting the Nikkei Index is available from the Nikkei Economic Electronic Databank System and from the Stock Market Indices Data Book published by Nikkei Inc. Nikkei Inc. may delete, add or substitute any stock underlying the Nikkei Index. Nikkei Inc. first calculated and published the Nikkei Index in 1970.

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#### The Russell Indices

We have derived all information contained in this underlying supplement regarding the Russell 3000® Index, Russell 2000® Index, Russell 1000® Growth Index and the Russell 1000® Value Index (each a "Russell Index", and together, the "Russell Indices"), including, without limitation, their make-up, method of calculation and changes in its components, from publicly available information, and we have not participated in the preparation of, or verified, such publicly available information. Such information reflects the policies of, and is subject to change by, Russell Investments. The Russell Indices were developed by and are calculated, maintained and published by Russell Investments ("Russell").

### The Russell 3000® Index

The Russell 3000® Index is composed of the 3,000 largest U.S. companies as determined by market capitalization and represents approximately 98% of the U.S. equity market. The Russell 3000® Index is intended to provide a comprehensive, unbiased and stable barometer of the broad market and is completely reconstituted annually to ensure new and growing equities are reflected.

# The Russell 2000® Index

The Russell 2000<sup>®</sup> Index is designed to track the performance of the small capitalization segment of the U.S. equity market. The Index measures the composite price performance of stocks of approximately 2,000 companies (the "**Component Stocks**") domiciled in the U.S. and its territories and consists of the smallest 2,000 companies included in the Russell 3000<sup>®</sup> Index. The Russell 2000<sup>®</sup> Index represents approximately 10% of the total market capitalization of the Russell 3000<sup>®</sup> Index.

### The Russell 1000® Growth Index

The Russell 1000® Growth Index measures the composite price performance of certain stocks included in the Russell 1000® Index, the issuers of which are incorporated in the United States and its territories. The Russell 1000® Growth Index includes those stocks that have been determined by Russell Investments to be growth-oriented, with higher price-to-book ratios and higher forecasted growth values than other stocks included in the Russell 1000® Growth Index. All component stocks of the Russell 1000® Index are traded on either a major U.S. stock exchange or in the over-the-counter ("**OTC**") market.

#### The Russell 1000® Value Index

The Russell 1000® Value Index measures the composite price performance of certain stocks included in the Russell 1000® Index, the issuers of which are incorporated in the United States and its territories. The Russell 1000® Index includes those stocks that have been determined by Russell Investments to be value-oriented, with lower price-to-book ratios and lower forecasted growth values than other stocks included in the Russell 1000® Index. All component stocks of the Index are traded on either a major U.S. stock exchange or in the OTC market.

# Methodology

All Russell U.S. equity indices are subsets of the Russell 3000E Index, which contains the largest 4,000 companies by market capitalization incorporated in the U.S. and its territories. Sub-indices in the Russell 3000E Index are broken out by market capitalization and style. The members of the Russell 3000E Index and its subsets are determined each year during annual reconstitution and enhanced quarterly with the addition of initial public offerings ("**IPOs**").

## **Index Reconstruction**

On May 31st of each year, all eligible securities are ranked by their total market capitalization. The largest 4,000 eligible securities become the Russell 3000E Index, and the other Russell Indices are determined from that set of securities.

Since 2004, reconstitution has occurred on the last Friday in June. Sometimes this day precedes a long U.S. holiday weekend, when liquidity is low. In order to ensure proper liquidity in the markets, when the last Friday in June is the 28th, 29th or 30th, reconstitution will occur on the Friday prior.

# **Quarterly Initial Public Offerings**

Since September 2004, eligible IPOs have been added to Russell U.S. indices at the end of each calendar quarter. An IPO is defined as any security newly available truly for the first time to the public for general investment. IPOs are added each quarter to make sure new additions to the investing opportunity set are reflected in Russell's representative indices. If a security traded publicly previously, even on a restricted basis, it is not eligible for inclusion as an IPO. Such a stock may, however, be eligible during the next reconstitution period, along with all other eligible securities.

# Security Inclusion Criteria

U.S. Incorporated Companies and U.S. Benefit-Driven Incorporated Companies. U.S. incorporated companies are eligible for inclusion in the Russell U.S. indices. Beginning during reconstitution 2007, companies incorporated in the following countries/regions are also being reviewed for eligibility: Anguilla, Antigua, Bahamas, Barbados, Belize, Bermuda, British Virgin Islands, Cayman Islands, Channel Islands, Cook Islands, Faroe Islands, Gibraltar, Isle of Man, Liberia, Marshall Islands, Netherlands Antilles, Panama (added at reconstitution 2007), and Turks and Caicos Islands. Companies incorporated in these regions are considered Benefit-Driven Incorporation ("BDI") companies, because they typically incorporate in BDI regions for operations, tax, political or other financial market benefits. Not all companies incorporated in BDI regions are eligible for inclusion in Russell's U.S. equity index series. A company is considered eligible for the series if it meets either of the following criteria:

- the headquarters is in the U.S.; or
- the headquarters is in a BDI-designated country or region, and the primary exchange for local shares is in the U.S.

For new companies located in BDI countries that are eligible for the U.S. indices and that trade on multiple exchanges, the primary exchange will be determined by the average daily dollar traded volume ("ADDTV"). ADDTV is defined as the accumulated dollar traded volume divided by the actual number of trading days in the past year. ADDTV is assessed only for new companies entering the U.S. indices. Existing members will remain assigned to their primary U.S. exchange until the time when the ADDTV is higher on another exchange for the previous two consecutive years. If this occurs, the company will be removed from the U.S. and moved to the country with the highest exchange volume. The primary exchange is a factor for a company's inclusion only if both its incorporation and its headquarters are in a BDI country/region, or if multiple headquarters are listed in its SEC filings. If the company is primarily headquartered in a country other than the U.S. or the BDI country/region, it is not eligible, regardless of location of the primary exchange. For example, a company incorporated in the Cayman Islands, headquartered in the United Kingdom and having a primary listing on a U.S. exchange is not eligible for inclusion in the U.S. indices.

ADRs are not eligible for inclusion in the Russell U.S. equity indices. Headquarters and primary exchange location will be analyzed once a year during reconstitution, unless the security is delisted from the U.S. exchange.

### **Trading Requirements**

All securities eligible for inclusion in Russell Indices must trade on a major U.S. exchange. Bulletin board, pink sheet or over-the-counter traded securities are not eligible for inclusion.

Stocks must trade at or above \$1.00 on their primary exchange on May 31 to be eligible for inclusion in the Russell U.S. indices during annual reconstitution or during the IPO eligibility periods. However, if a stock falls below \$1.00 intra-year, it will not be removed from our indices until (if it is then still trading below \$1.00) the next reconstitution.

# Minimum Available Shares / Float Requirement

Companies with only a small portion of their shares available in the marketplace are not eligible for the Russell Indices. Large capitalization companies with 1% or less float, and small capitalization companies with 5% or less, will be removed from eligibility. Large and small capitalization is determined by the breakpoints established at reconstitution.

# **Company Structure**

Companies structured in the following ways are excluded from inclusion in Russell Indices:

- royalty trusts;
- · limited liability companies;
- closed-end investment companies (business development companies are eligible);
- blank check companies;
- special purpose acquisition companies ("SPACs"); and
- limited partnerships.

The exclusion of blank check companies and SPACs is effective first quarter of 2008. These types of companies will no longer be eligible for inclusion during the IPO process in first quarter or during reconstitution, yet existing members will be grandfathered until Reconstitution 2008.

#### Shares Excluded

Because Russell tries to capture performance of each company's primary equity vehicle, the following share types are not eligible for inclusion:

- preferred and convertible preferred stock;
- redeemable shares;
- · participating preferred stock;
- warrants and rights; and
- trust receipts.

### **Deadline for Inclusion**

Stocks must be listed on May 31 and Russell must have access to documentation on that date supporting the company's eligibility for inclusion. This includes corporate description, verification of incorporation, number of shares outstanding and other information needed to determine eligibility. IPOs are considered for inclusion quarterly. As a special exception, Berkshire Hathaway is also excluded, due to its similarity to a mutual fund and its lack of liquidity.

## Defining Membership by Size (Market Capitalization)

Russell calculates the total market capitalization of each security to determine whether it is large enough for inclusion in one or more of the Russell Indices. Total market capitalization is determined by multiplying total outstanding shares by the market price as of May 31 for those securities being considered at annual reconstitution. IPO eligibility is determined each quarter.

# **Determining Total Shares Outstanding**

Only common stock is used to determine market capitalization for a company. Any other form of shares . such as preferred or convertible preferred stock, redeemable shares, participating preferred stock, warrants and rights or trust receipts . are excluded from the calculation. If multiple share classes of common stock exist, they are combined. In cases where the common stock share classes act independently of each other (e.g., tracking stocks), each class is considered for inclusion separately.

# **Determining Price**

During annual reconstitution, the last price traded on May 31 on the primary exchange is used to determine market capitalization. In the case where multiple share classes exist, a primary trading vehicle is determined, and the price of that primary trading vehicle (usually the most liquid) is used in our calculations. The matrix below is used during the reconstitution process only. Please see corporate action methodology for determination of primary vehicle outside of the reconstitution process including the IPO process.

# **Primary Trading Vehicle**

Primary trading vehicles are determined by an objective equal-weighted matrix of relative trading volume, price and float-adjusted shares outstanding, as of May 31. The common share class with the highest trading volume, price and float-adjusted shares outstanding (or highest combination of the three) will be considered the primary trading vehicle, and its associated price and trading symbol will be included in the Russell U.S. indices.

Since reconstitution 2003, current members of the Russell 3000E Index with multiple common share classes are evaluated according to a secondary matrix if the original matrix signals a membership change at reconstitution. Used only to evaluate current Russell 3000E members at reconstitution time, this secondary matrix has been established to gauge materiality of the differences between variables. While maintaining objective criteria, the purpose of the secondary matrix is to prevent small differences from influencing membership and causing share turnover. Variables will be excluded from the matrix if the difference between the current and alternate class is immaterial. Materiality will be evaluated as follows:

- Float-adjusted shares (if difference is greater than 20%\*)
- Price (if difference is greater than 10%\*)
- 100-day average trading volume (if difference is greater than 20%\*)

\*Percentage differences will be based on current member class variables relative to other classes.

In the event this matrix results in a tie preference will be given to the class having a combination of both materially higher trading volume and float-adjusted shares outstanding. Otherwise, when the matrix results in a "tie," preference is given to the existing member.

Primary trading vehicles will be determined at reconstitution and maintained until the following reconstitution, unless significant corporate action occurs. In the event of significant corporate action, the primary vehicle will be re-evaluated and could change on the basis of the most current available information. In the event that the primary trading vehicle matrix has missing or identical data for each class, the primary trading vehicle will be determined on the basis of available market information.

# **Determining Index Membership**

Once the market capitalization for each security is determined by use of total shares and price (as described above), each security is placed in the appropriate Russell market capitalization-based index. The largest 4,000 securities become members of the Russell 3000E Index. All remaining Indices are a subset of this index. A market capitalization breakpoint is determined by the break between the companies below.

Index	Companies Included (based on descending total market capitalization)	
Russell 3000E® Index	Companies #1 - 4,000	
Russell 3000 <sup>®</sup> Index	Companies #1 - 3,000	
Russell Top 200 <sup>®</sup> Index	Companies #1 - 200	
Russell 1000 <sup>®</sup> Index	Companies #1 - 1,000	
Russell Midcap® Index	Companies #201 - 1,000	
Russell 2000 <sup>®</sup> Index	Companies #1,001 - 3,000	
Russell 2500™ Index	Companies #501 - 3,000	
Russell Microcap® Index	Companies #2,001 - 4,000	

After the initial market capitalization breakpoints are determined by the ranges listed above, new members are assigned on the basis of the breakpoints and existing members are reviewed to determine if they fall within a cumulative 5% market cap range around these new market capitalization breakpoints. If an existing member's market cap falls within this cumulative 5% of the market capitalization breakpoint, it will remain in its current index rather than be moved to a different market capitalization-based Russell Index. Companies that fall on the edge of market capitalization breakpoints are often still within the manager's opportunity set, since they have not significantly grown or declined in market capitalization.

Exceptions: There will be no percentile banding at the bottom of the Russell 3000 Index (stock 3000) or the Russell 3000E Index (stock 4000). In addition, due to the small market cap percentage, the Russell Microcap Index will be banded at 1% around stock 2000.

Steps in calculating percentile ranges of the new index:

- Sort the Russell 3000E Index members in descending order by total market capitalization.
- Calculate the total market capitalization of the Russell 3000E Index by summing all members' total market capitalizations.
- Calculate percentiles for each company in the Russell 3000E by dividing the cumulative market cap associated with each member by the total market cap of the Russell 3000E index.
- Calculate a range of five percentiles around the newly determined market cap breakpoints, by subtracting, and then adding, 2.5% from/to the calculated percentile of the market cap breakpoint.

# Adjustments to Members. Shares Outstanding (Float)

After membership is determined, a security's shares are adjusted to include only those shares available to the public. The purpose of this adjustment is to exclude from market

calculations the capitalization that is not available for purchase and is not part of the investable opportunity set. Stocks are weighted in the Russell U.S. indices by their available (also called float adjusted) market capitalization, which is calculated by multiplying the primary closing price by the available shares.

# **Capitalization Adjustments**

The following types of shares are removed from total market capitalization to arrive at free float or available market capitalization, based on information in SEC filings or other reliable sources in the event of missing or questionable data:

Cross-ownership by another Russell 3000E Index or Russell Global Index member. Shares held by another member of a Russell index (including Russell global Indices) is considered cross-ownership, and all shares will be adjusted regardless of percentage held.

Large corporate and private holdings: Shares held by another listed company (non-member) or by private individuals will be adjusted if they are greater than 10% of shares outstanding. Share percentage is determined by those shares held by either an individual or a group of individuals acting together. Not included in this class, however, are institutional holdings, including investment companies, partnerships, insurance companies, mutual funds, banks or venture capital firms.

*Unlisted share classes*: Classes of common stock that are not traded on a U.S. exchange are adjusted.

*IPO lock-ups*: Shares locked up during an initial public offering are not available to the public and will be excluded from the market value at the time the IPO enters the index.

Government Holdings: Those holdings listed as government are considered unavailable and will be removed entirely from available shares. Shares held by government investment boards and/or investment arms will be treated similar to large private holdings and removed if the holding is greater than 10%. Any holding by a government pension plan is considered institutional holdings and will not be removed from available shares.

# **Determining Style**

Russell uses a non-linear probability method to assign stocks to the growth and value style indices. The term probability is used to indicate the degree of certainty that a stock is value or growth, based on its relative book-to-price ratio ("**B/P**") and I/B/E/S forecast long-term growth mean. This method allows stocks to be represented as having both growth and value characteristics, while preserving the additive nature of the indices.

The process for assigning growth and value weights is applied separately to the stocks in the Russell 1000 Index and Russell 2000 Index and to the smallest 1000 stocks in the Russell Microcap indices. Russell believes that treating the Russell 1000, Russell 2000 and smallest Russell Microcap stocks separately prevents the possible distortion to relative valuations that may occur if the Russell 3000E is used as the base index. For each base index (the Russell 1000 and Russell 2000, and the smallest 1000 in Russell Microcap), stocks are ranked by their adjusted BP and their I/B/E/S forecast long-term growth mean (IBESLT). These rankings are converted to standardized units and combined to produce a composite value score ("CVS"). Stocks are then ranked by their CVSs, and a probability algorithm is applied to the CVS distribution to assign growth and value weights to each stock. In general, a stock with a lower

CVS is considered growth, a stock with a higher CVS is considered value and a stock with a CVS in the middle range is considered to have both growth and value characteristics, and is weighted proportionately in the growth and value index. Stocks are always fully represented by the combination of their growth and value weights; e.g., a stock that is given a 20% weight in a Russell value index will have an 80% weight in the same Russell growth index.

# **Market Capitalization of Growth and Value Indices**

Approximately 70% of the available market capitalization is classified by Russell as all-growth or all-value. The remaining 30% of stocks have some portion of their market value in either the value or growth index, depending on their relative distance from the median value score. Because the percentage of capitalization between the first quartile and the third quartile is 50%, we would expect that 50% of the capitalization would be found in both indices. However, the capitalization from 50% to 30% is not included due to Russell's decision to institute a small position cutoff rule. If a stock's weight is more than 95% in one style index, we increase its weight to 100% in that index. This rule eliminates many small weightings and makes passive management easier.

The market capitalization of the growth and value style Indices may not each equal 50% of their base index because asymmetry in the capitalization distributions within the second and third quartiles results in a skewed distribution of CVS. When CVS is normally distributed, 50% will be in each index.

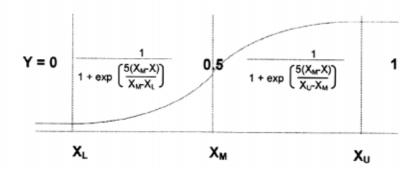
Stocks with missing or negative values for B/P or missing values for IBESLT (negative IBESLT is valid) are allocated by using the mean value score of the base index industry or sector group into which the company falls. Each missing (or negative BP) variable is substituted with the industry or sector group independently. An industry must have five members or the substitution reverts to the sector. Russell believes this method produces the fewest distortions.

# **Book Value Adjustments**

Correct book value is critical in determining the B/P measure. Therefore, the following method is used to estimate the proper adjustments to B/P and book value.

A company's reported book value is adjusted to reflect write-offs stemming from the Financial Accounting Standards Board issued Statement of Financial Accounting Standards numbers 106 and 109 (FAS 106 & 109) since June 30, 1993. Assuming that each company amortized the FAS 106 & 109 transition obligation over a 20-year period beginning with year of adoption, the unamortized portion of the write-off is added back to the reported book value. During reconstitution 2007, Russell also made an adjustment to book value for FASB 158. The date companies were required to be compliant left uncomparable book values across companies for reconstitution in June. However, in 2008, all companies are required to comply with the standard making companies evenly compared and the adjustment unnecessary. The adjusted book-to-price ratio is calculated by use of this adjusted book value; the adjusted ratio is used in place of reported book-to-price when ranking companies for style.

Russell Non-Linear Probability Algorithm



# **Corporate Action Driven Changes**

Changes to the Russell U.S. indices are made when an action is final. To determine whether an action has been completed, Russell uses a variety of reliable public sources, including company press releases, SEC filings, exchange notifications and Bloomberg or other sources Russell deems reliable. If it is determined that an action was not final after communication was given to clients, the changes to the index will still occur.

Prior to the completion of an action, Russell estimates the effective date of the corporate action on the basis of the same above sources. As new information becomes available, Russell will revise the anticipated effective date and ultimately move it to a final, confirmed status.

Depending upon the time an action is determined to be final, Russell will either apply the action after the close of the current market day (t), or apply the action after the close of the following day (t+1), referred to as a delayed action. Securities that leave an index for any reason are not replaced. Thus, the number of securities in the indices over the year will fluctuate according to corporate activity.

Mergers and acquisitions ("M&A"): M&As result in changes to the membership and to the weighting of members within the Russell Indices. M&A activity is applied to the index after the action is determined to be final. The action will either be applied after the close of the current day (t) or the following day (t+1), depending upon the time it is determined that an action is final. If an action is determined to be final after 2:00 p.m. Eastern time (clients notified by 2:30 p.m.), the action will be delayed and applied the following day (t+1).

Merger or acquisition between members of the Russell 3000E Index or the Russell Global Index. In the event a merger or acquisition occurs between members of the Russell 3000E Index or the Russell Global Index, the acquired company is deleted and its market capitalization moves to the acquiring company's stock, according to the merger terms. If the merger involves an election, the default terms will be used. Cross-ownership and style of the surviving entity is determined by a weighted average (by market value) of the cross-ownership and style probabilities of the two previous companies prior to the merger. Market values at t+1 are used for this determination.

Merger or acquisition between a member and a non-member: A "non-member" is a company that is not a member of the Russell 3000E Index or the Russell Global Index. A merger or acquisition between one member of the Russell 3000E Index and one non-member can take two forms: (1) The acquiring company is a member of the Russell 3000E Index and the acquired company is not; or (2) The acquiring company is not a member, but the acquired company is a member. In the second case, it may be determined that the action falls into the category of a reverse merger, and special processing will be applied.

- If the acquiring company is a member: In this case, the acquiring company's shares are adjusted at month end (see changes to outstanding capital for further details).
- If the acquiring company is not a member: These types of actions can take two forms, either a reverse merger or a standard acquisition.

Reverse mergers: When a Russell 3000E Index member is acquired or merged with a private, non-publicly traded company or OTC company, Russell will review the action to determine whether it is considered a reverse merger. A reverse merger is defined as a transaction that results in a publicly traded company that meets all requirements for inclusion in a Russell index. If it is determined that an action is a reverse merger, the following rules will be applied:

- The newly formed entity will be placed in the appropriate market capitalization index after the close of the day following the completion of the merger (t+1). Index placement will be determined by using the market-adjusted breakpoints from the last reconstitution.
- The acquired company will be simultaneously removed from the current index (t+1), capturing synthetic performance for the day of t+1.
- The style of the surviving entity is determined by the industry average.
- Cross-ownership will be determined on the basis of the most recent SEC filings.

Standard action: The acquired company is deleted after the action is final.

*Reincorporations:* Members of the index that are reincorporated to another country are deleted from the relevant index when the reincorporation is final. The timing of the deletion will mirror the timing requirements for mergers and acquisitions between members.

Reclassifications of Shares (Primary Vehicles): The primary vehicle share class is typically re-examined at reconstitution, at the time of a major corporate action event, or with the issuance of a new share class. During reconstitution, an equal weighted matrix of trading volume, price, and float-adjusted shares is used. This same matrix is used in the event of a major corporate event. However, to determine the primary vehicle when there is an issuance of a new share class, volume is substituted by float adjusted market value due to a lack of volume history. For changes in the primary vehicle outside of reconstitution, the last traded price (when-issued or regular-way traded [t-1]), float-adjusted shares (t-1) and the 100 day average trading

volume is used. When 100 days of trading volume is not available for both issues, float adjusted market value (t-1) is substituted. A determination will be made one day prior to implementation of a change.

Rights Offerings: Rights offered to shareholders are reflected in the index on the date the offer expires for non-transferable rights and on the ex-date for transferable rights. In both cases, the price is adjusted to account for the value of the right, and shares are increased according to the terms of the offering on that day (t). The value of the right is determined by use of the market value of the right, if available. If there is no market value available, the value of the right is calculated. If the value of the right is deemed worthless (value is less than zero), no price adjustment will be made.

Changes to Shares Outstanding: Changes to shares outstanding due to buybacks (including Dutch auctions), secondary offerings, merger activity with a non-index member and other potential changes are updated at the end of the month in which the change is reflected in vendor-supplied updates and are verified by Russell by use of an SEC filing. For a change in shares to occur, the cumulative change to available shares must be greater than 5%. These share changes are communicated to clients two trading days prior to month-end and include shares provided by the vendor and verified by Russell three days prior to month-end. The float factor determined at reconstitution is applied to the new shares issued or bought back. For example, assuming that a new issuance of 1,000 shares is greater than 5% of the available shares and that the current float factor is 50%, 500 shares would be added to the index. (Note: If any new shares issued are unavailable according to the filing, that portion will not be added to the index.)

Spin-offs: The only additions between reconstitution dates result from spin-offs, reincorporations, and initial public offerings. Spin off companies are added to the parent company's index and capitalization tier of membership if the spin-off company is large enough. To be eligible, the spun-off company's total market capitalization must be greater than the market-adjusted total market capitalization of the smallest security in the Russell 3000E Index at the latest reconstitution. The spin-off company's style index is determined by the style index membership of the parent entity. See Appendix D for further description of the calculation of market-adjusted total market capitalization in the Russell 3000E Index.

If a U.S. spin-off from a Russell Global ex-U.S. index member occurs, the spun-off company will also be placed in the parent's index and capitalization tier of the Russell Global Index. For example, if a non-U.S. member of the Russell Global ex-U.S. Large Cap Index spins off a company, incorporates in the U.S., and is larger than the lowest market adjusted market capitalization of the Russell 3000E Index, the new company will be placed in the Russell 1000 Index.

Tender Offers: A company acquired as the result of a tender offer is removed when the offer has fully expired and when it is determined that the company will finalize the process with a short-form merger. Because this information is typically not available until after the close, clients will be given notice one trading day prior to the removal of the acquired company, and the company will be removed at t+1 at the last traded market price. Shares of the acquiring company, if a member of the Russell 3000E Index, will be increased simultaneously at t+1, if applicable.

Delisting: Only companies listed on U.S. exchanges are included in the Russell U.S. indices. Therefore, when a company is delisted from a U.S. exchange and moved to OTC, the company is removed from the Russell Indices. When this occurs, the company is removed either at the close of the current day (t) at the primary exchange price, or the following day (t+1), using the closing OTC price.

Bankruptcy and Voluntary Liquidations: Companies filing for Chapter 7 bankruptcy or have filed a liquidation plan will be removed from the Russell U.S. indices at the time of filing. Companies filing for Chapter 11 reorganization bankruptcy will remain members of the index, unless the companies are delisted from the primary exchange. In that case, normal delisting rules will apply.

Stock Distributions: Stock distributions can take two forms: (1) a stated amount of stock distributed on the ex-date, or (2) an undetermined amount of stock based on earnings and profits to be distributed at a future date. In both cases, a price adjustment is done on the ex-date of the distribution. Shares are increased on the ex-date for category (1) and on the pay-date for category (2).

Dividends: Gross dividends are included in the daily total return calculation of the indices on the basis of their ex-dates. The ex-date is used rather than the pay-date. Monthly, quarterly and annual total returns are calculated by compounding the reinvestment of dividends daily. The reinvestment and compounding is at the total index level, not at the security level. Special cash dividends are treated the same as regular cash dividends unless the special cash dividend exceeds 10% of the share price of the underlying security. In that case, the price of the stock is adjusted to deduct the dividend amount on the ex-date.

Halted Securities: Halted securities are not removed from the Russell Indices until the time they are actually delisted from the exchange (see .Delisting.). If a security is halted, it remains in the index at the last traded price from the primary exchange until the time the security resumes trading or is officially delisted. This pricing method is used for all halted securities, with the exception of those NYSE securities halted due to being priced less than \$1.05. These securities are halted for exchange operational (rather than regulatory) issues (Rule 123D), and they continue to trade on an unlisted trading privileges ("**UTP**") basis. Given the indefinite nature of these halts, NYSE Arca's last traded price will be used in the daily calculation of the index and any action (addition/deletion) will be applied to the index.

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## The S&P Indices

We have derived all information contained in this underlying supplement regarding the S&P 500® Index, the S&P MidCap 400, the S&P 100 Index (each an "**S&P Index**," and together, the "**S&P Indices**"), including, without limitation, their make-up, method of calculation and changes in its components, from publicly available information, and we have not participated in the preparation of, or verified, such publicly available information. Such information reflects the policies of, and is subject to change by, S&P. The S&P 500® Index and the S&P 100 Index are calculated, maintained and published by S&P.

#### The S&P 500 Index

The S&P 500® Index is intended to provide a performance benchmark for the U.S. equity markets. The calculation of the level of the S&P 500® Index (discussed below in further detail) is based on the relative value of the aggregate Market Value (as defined below) of the common stocks of 500 companies (the "S&P 500® Component Stocks") as of a particular time as compared to the aggregate average Market Value of the common stocks of 500 similar companies during the base period of the years 1941 through 1943. Historically, the "Market Value" of any S&P 500® Component Stock was calculated as the product of the market price per share and the number of the then outstanding shares of such S&P 500® Component Stock. As discussed below, on March 21, 2005, S&P began to use a new methodology to calculate the Market Value of the Component Stocks and on September 16, 2005, S&P completed its transition to the new calculation methodology. The 500 companies are not the 500 largest companies listed on the NYSE and not all 500 companies are listed on such exchange. S&P chooses companies for inclusion in the S&P 500® Index with an aim of achieving a distribution

by broad industry groupings that approximates the distribution of these groupings in the common stock population of the U.S. equity market. S&P may from time to time, in its sole discretion, add companies to, or delete companies from, the S&P 500® Index to achieve the objectives stated above. Relevant criteria employed by S&P include the viability of the particular company, the extent to which that company represents the industry group to which it is assigned, the extent to which the company's common stock is widely-held and the Market Value and trading activity of the common stock of that company.

# The S&P MidCap 400 Index

The S&P MidCap 400® Index is intended to provide a benchmark for performance measurement of the medium capitalization segment of the U.S. equity markets. It tracks the stock price movement of 400 companies with mid-sized market capitalizations, primarily ranging from \$1.5 billion to \$5.5 billion. S&P chooses companies for inclusion in the Index with an aim of achieving a distribution by broad industry grouping that approximates the distribution of these groupings in the common stock population of the medium capitalization segment of the U.S. equity market. Relevant criteria employed by S&P include the viability of the particular company, the extent to which that company represents the industry group to which it is assigned, the extent to which the company's common stock is widely held and the market value and trading activity of the common stock of that company.

#### The S&P 100 Index

The S&P 100<sup>®</sup> Index is a subset of the S&P 500<sup>®</sup> Index and is comprised of 100 leading U.S. stocks with exchange-listed options. Constituents of the S&P 100<sup>®</sup> Index are selected for sector balance and represent about 59% of the market capitalization of the S&P 500<sup>®</sup> Index and almost 45% of the market capitalization of the U.S. equity markets. Because the S&P 100<sup>®</sup> Index is derived from the S&P 500<sup>®</sup> Index, the S&P 100<sup>®</sup> Index stocks are also subject to the published S&P 500<sup>®</sup> criteria for additions and deletions. In addition, only companies included in the S&P 500<sup>®</sup> Index are eligible for inclusion in the S&P 100<sup>®</sup> Index. All stocks added to the S&P 100<sup>®</sup> Index must maintain exchange-listed options. Sector balance is considered in the selection of companies for the S&P 100<sup>®</sup> Index. S&P may from time to time, in its sole discretion, add companies to, or delete companies from, the S&P 100<sup>®</sup> Index to achieve the objectives stated above. Relevant criteria employed by S&P include the viability of the particular company, the extent to which that company represents the industry group to which it is assigned, the extent to which the company's common stock is widely-held and the Market Value and trading activity of the common stock of that company. S&P may remove a company that substantially violates one or more of the criteria for Index inclusion from the S&P 100<sup>®</sup> Index.

## The S&P Index Methodology

On March 21, 2005, S&P began to calculate the S&P Indices based on a half float-adjusted formula, and on September 16, 2005 the S&P Indices became fully float adjusted. S&P's criteria for selecting stocks for the S&P Indices have not been changed by the shift to float adjustment. However, the adjustment affects each company's weight in the S&P Indices (*i.e.*, its Market Value).

Under float adjustment, the share counts used in calculating the S&P Indices reflect only those shares that are available to investors, not all of a company's outstanding shares. S&P defines three groups of shareholders whose holdings are subject to float adjustment:

- holdings by other publicly traded corporations, venture capital firms, private equity firms, strategic partners or leveraged buyout groups;
- holdings by government entities, including all levels of government in the United States or foreign countries; and
- holdings by current or former officers and directors of the company, founders of the company, or family trusts of officers, directors or founders, as well as holdings of trusts, foundations, pension funds, employee stock ownership plans or other investment vehicles associated with and controlled by the company.

However, treasury stock, stock options, restricted shares, equity participation units, warrants, preferred stock, convertible stock, and rights are not part of the float. In cases where holdings in a group exceed 10% of the outstanding shares of a company, the holdings of that group will be excluded from the float-adjusted count of shares to be used in the Index calculation. Mutual funds, investment advisory firms, pension funds or foundations not associated with the company and investment funds in insurance companies, shares of a United States company traded in Canada as "exchangeable" shares, that trust beneficiaries may buy or sell without difficulty or significant additional expense beyond typical brokerage fees, and, if a company has multiple classes of stock outstanding, shares in an unlisted or non-traded class if such shares are convertible by shareholders to a listed class without undue delay and cost, are also part of the float.

For each stock, an investable weight factor ("**IWF**") is calculated by dividing the available float shares, defined as the total shares outstanding less shares held in one or more of the three groups listed above where the group holdings exceed 10% of the outstanding shares, by the total shares outstanding. For companies with multiple classes of stock, S&P will calculate the weighted average IWF for each stock using the proportion of the total company market capitalization of each share class as the weights. The result is reviewed to assure that when the weighted average IWF is applied to the class included in the S&P Indices, the shares to be purchased are not significantly larger than the available float for the included class.

The S&P Indices are calculated using a base-weighted aggregate methodology: the level of the relevant S&P Index reflects the total Market Value of all Component Stocks relative to such S&P Index's base period.

An indexed number is used to represent the results of this calculation in order to make the value easier to work with and track over time.

The daily calculation of the S&P Indices is computed by dividing the sum of the IWF multiplied by both the price and the total shares outstanding for each stock (the "Aggregate Market Value") by a number called the Index Divisor. By itself, the Index Divisor is an arbitrary number. However, in the context of the calculation of the S&P Indices, it is the only link to the original base period level of the S&P Indices. The Index Divisor keeps the S&P Indices comparable over time and is the manipulation point for all adjustments to the Index ("Index Maintenance").

Index Maintenance includes monitoring and completing the adjustments for company additions and deletions, rights issues, share buybacks and issuances and spinoffs. Changes to

the S&P Indices are made on an as-needed basis. There is no annual or semi-annual reconstitution. Rather, changes in response to corporate actions and market developments can be made at any time. Constituent changes are typically announced two to five days before they are scheduled to be implemented.

To prevent the level of the S&P Indices from changing due to corporate actions, all corporate actions which affect the total Market Value of the S&P Indices require an Index Divisor adjustment. By adjusting the Index Divisor for the change in total Market Value, the level of the S&P Indices remains constant. This helps maintain the level of the S&P Indices as an accurate barometer of stock market performance and ensures that the movement of the S&P Indices does not reflect the corporate actions of individual companies in the S&P Indices. All Index Divisor adjustments are made after the close of trading and after the calculation of the S&P Indices. Some corporate actions, such as stock splits and stock dividends, require simple changes in the common shares outstanding and the stock prices of the companies in the Index and do not require Index Divisor adjustments.

The table below summarizes the types of the S&P Index maintenance adjustments and indicates whether or not an Index Divisor adjustment is required.

Type of Corporate Action	Adjustment Factor	<b>Divisor Adjustment Required</b>
Stock split (i.e., 2-for-1)	Shares Outstanding multiplied by 2; Stock Price divided by 2	No
Share Issuance ( <i>i.e.</i> , change = 5%)	Shares Outstanding <i>plus</i> newly issued Shares	Yes
Share Repurchase (i.e., change = 5%)	Shares Outstanding <i>minus</i> Repurchased Shares	Yes
Special Cash Dividends	Share Price <i>minus</i> Special Dividend	Yes
Company Change	Add new company Market Value <i>minus</i> old company Market Value	Yes
Rights offering	Divisor adjustment reflects increase in market cap measured as the shares issued multiplied by the price paid	Yes
Spinoffs	If the spun-off company is not added to the relevant S&P Index, then Index market value minus value of the spun-off unit	Yes

Type of Corporate Action	Adjustment Factor	<b>Divisor Adjustment Required</b>
	If the spun-off company is added to the S&P Index, then no company is removed from the Index	No
	If the spun-off company is added to the relevant S&P Index, then another company is removed to keep the number of names fixed, and the Index Divisor adjustment reflects the deletion	Yes

Stock splits and stock dividends do not affect the Index Divisor of the S&P Index, because following a split or dividend both the stock price and number of shares outstanding are adjusted by S&P so that there is no change in the Market Value of the S&P Component Stock. All stock split and dividend adjustments are made after the close of trading on the day before the ex-date.

Each of the corporate events exemplified in the table requiring an adjustment to the Index Divisor has the effect of altering the Market Value of the S&P Component Stock and consequently of altering the aggregate Market Value of the S&P Component Stocks (the "Post-Event Aggregate Market Value"). In order that the level of the S&P Indices (the "Pre-Event Index Value") not be affected by the altered Market Value (whether increase or decrease) of the affected S&P Component Stock, a new Index Divisor ("New Divisor") is derived as follows:

A large part of the Index maintenance process involves tracking the changes in the number of shares outstanding of each of the companies included in each S&P Index. Four times a year, on a Friday close to the end of each calendar quarter, the share totals of companies in the S&P Indices are updated as required by any changes in the number of shares outstanding. After the totals are updated, the Index Divisor is adjusted to compensate for the net change in the total Market Value of the Index. In addition, any changes over 5% in the current common shares outstanding for the Index companies are carefully reviewed on a weekly basis, and when appropriate, an immediate adjustment is made to the Index Divisor.

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# The S&P Select Sector Indices

We have derived all information contained in this underlying supplement regarding the Consumer Discretionary Select Sector Index, the Consumer Staples Select Sector Index, the Energy Select Sector Index, the Financial Select Sector Index, the Health Care Select Sector Index, the Industrial Select Sector Index, the Materials Select Sector Index, the Technology Select Sector Index and the Utilities Select Sector Index (each an "Select Sector Index," and together, the "Select Sector Indices") and the index from which the Select Sector Indices are derived, the S&P 500® Index, including, without limitation, its make-up, method of calculation and changes in their component securities, from publicly available information, and we have not participated in the preparation of, or verified, such publicly available information. The stocks included in each Select Sector Index are selected by Merrill Lynch, acting as index compilation agent in consultation with S&P, from the universe of companies represented by the S&P 500® Index. The AMEX acts as index calculation agent in connection with the calculation and dissemination of each Select Sector Index.

## The Consumer Discretionary Select Sector Index

The Consumer Discretionary Select Index is a modified market capitalization-based index intended to track the movements of companies that are components of the S&P 500 Index from the following industries: retail (specialty, multi-line, internet and catalog), media, hotels, restaurants and leisure, household durables, textiles, apparel and luxury goods, automobiles, auto components and distributors, leisure equipment and products, and diversified consumer services.

# The Consumer Staples Select Sector Index

The Consumer Staples Select Sector Index is a modified market capitalization-based index intended to track the movements of companies that are components of the S&P 500 and are involved in the development or production of consumer products. The Consumer Staples Select Sector Index includes companies from the following industries: food and staples retailing, household products, food products, beverages, tobacco, and personal products.

# The Energy Select Sector Index

The Energy Select Sector Index is a modified market capitalization-based index intended to track the movements of companies that are components of the S&P 500 and are involved in the development or production of crude oil and natural gas, and provide drilling and other energy-related services. The Energy Select Sector Index includes companies from the following industries: oil, gas, and consumable fuels and energy equipment and services.

#### The Financial Select Sector Index

The Financial Select Sector Index is a modified market capitalization-based index intended to provide an indication of the pattern of common stock price movements of companies that are components of the S&P 500<sup>®</sup> Index and are involved in the development or production of financial products. Companies in the Financial Select Sector Index include a wide array of diversified financial services firms whose business lines range from investment management to commercial and business banking.

#### The Health Care Select Sector Index

The Health Care Select Sector Index is a modified market capitalization-based index intended to track the movements of companies that are components of the S&P 500 from the following industries: pharmaceuticals, health care providers and services, health care equipment and supplies, biotechnology, life sciences tools and services, and health care technology.

## The Industrial Select Sector Index

The Industrial Select Sector Index is a modified market capitalization-based index intended to track the movements of companies that are components of the S&P 500 from the following industries: industrial conglomerates, aerospace and defense, machinery, air freight and logistics, road and rail, commercial services and supplies, electrical equipment, construction and engineering, building products, airlines, and trading companies and distributors.

#### The Materials Select Sector Index

The Materials Select Sector Index is a modified market capitalization-based index intended to track the movements of companies that are components of the S&P 500 and are involved in the development or production of materials. Materials companies in the Index develop and produce chemicals, construction materials, containers and packaging, metals and mining, and paper and forest products.

# The Technology Select Sector Index

The Technology Select Sector Index is a modified market capitalization-based index intended to track the movements of companies that are components of the S&P 500 from the following industries: computers and peripherals, software, diversified telecommunication services, communications equipment, semiconductor and semiconductor equipment, internet software and services, IT services, wireless telecommunication services, electronic equipment and instruments, and office electronics.

#### The Utilities Select Sector Index

The Utilities Select Sector Index is a modified market capitalization-based index intended to track the movements of companies that are components of the S&P 500 from the following industries: electric utilities, mutli-utilities, independent power producers and energy traders, and gas utilities.

# Methodology

The Select Sector Indices are modified market capitalization-based indices intended to track the movements of companies that are components of the S&P 500. The Select Sector Indices were all established with a value of 250.00 on June 30, 1998.

Each Select Sector Index was developed and is maintained in accordance with the following criteria:

- Each of the component stocks in an Select Sector Index is a constituent company of the S&P 500<sup>®</sup> Index.
- The nine Select Sector Indices together will include all of the companies represented in the S&P 500<sup>®</sup> Index and each of the stocks in the S&P 500<sup>®</sup> Index will be allocated to one and only one of the Select Sector Indices.
- Merrill Lynch, acting as the index compilation agent, assigns each constituent stock of the S&P 500® Index to a Select Sector Index. The index compilation agent, after consultation with S&P, assigns a company's stock to a particular Select Sector Index on the basis of such company's sales and earnings composition and the sensitivity of the company's stock price and business results to the common factors that affect other companies in each Select Sector Index. S&P has sole control over the removal of stocks from the S&P 500® Index and the selection of replacement stocks to be added to the S&P 500® Index. However, S&P plays only a consulting role in the Select Sector Index assignment of the S&P 500® Index component stocks, which is the sole responsibility of the index compilation agent.
- Each Select Sector Index is calculated by the American Stock Exchange Index Services Group ("**ISG**") using a modified "market capitalization" methodology. This design ensures that each of the component stocks within a Select Sector Index is represented in a proportion consistent with its percentage with respect to the total market capitalization of such Select Sector Index. Under certain conditions, however, the number of shares of a component stock within the Select Sector Index may be adjusted to conform to Internal Revenue Code requirements.

Each Select Sector Index is calculated using the same methodology utilized by S&P in calculating the S&P 500<sup>®</sup> Index, using a base-weighted aggregate methodology. See "The S&P Indices" above. The daily calculation of each Select Sector Index is computed by dividing the total market value of the companies in the Select Sector Index by a number called the index divisor.

The index compilation agent at any time may determine that a S&P 500<sup>®</sup> Index component stock which has been assigned to one Select Sector Index has undergone such a transformation in the composition of its business that it should be removed from that Select Sector Index and assigned to a different Select Sector Index. In the event that the index compilation agent notifies ISG that a S&P 500<sup>®</sup> component stock's Select Sector Index assignment should be changed, the AMEX will disseminate notice of the change following its standard procedure for announcing index changes and will implement the change in the affected Select Sector Indices on a date no less than one week after the initial dissemination of information on the sector change to the maximum extent practicable. It is not anticipated that S&P 500<sup>®</sup> component stocks will change sectors frequently.

Component stocks removed from and added to the S&P 500<sup>®</sup> Index will be deleted from and added to the appropriate Select Sector Index on the same schedule used by S&P for additions and deletions from the S&P 500<sup>®</sup> Index insofar as practicable.

### The Tokyo Stock Price Index

We have derived all information contained in this underlying supplement regarding the Tokyo Stock Price Index, including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information, and we have not participated in the preparation of, or verified, such publicly available information. Such information reflects the policies of, and is subject to change by Tokyo Stock Exchange, Inc. ("**TSE**"). TSE has no obligation to continue to publish, and may discontinue publication of, the Tokyo Stock Price Index.

The Tokyo Stock Price Index, which we refer to as the TOPIX Index, was developed by the TSE. Publication of the TOPIX Index began on July 1, 1969, based on a base index value of 100 as of January 4, 1968. The TOPIX Index is computed and published every 15 seconds via TSE's Market Information System, and is reported to securities companies across Japan and available worldwide through computerized information networks.

The component stocks of the TOPIX Index consist of all common domestic stocks listed on the First Section of the TSE which have an accumulative length of listing of at least six months. The TOPIX Index measures changes in the aggregate market value of these stocks. The TSE domestic stock market is divided into two sections: the First Section and the Second Section. Listings of stocks on the TSE are divided between these two sections, with stocks listed on the First Section typically being limited to larger, longer established and more actively traded issues and the Second Section to smaller and newly listed companies. The component stocks of the TOPIX Index are determined based on market capitalization and liquidity. Review and selection of component stocks is conducted semiannually, based on market data as of the base date for selection.

The TOPIX Index is a free float adjusted market capitalization weighted index, with the market price of each component stock multiplied by the number of shares listed (as adjusted by multiplying the Free-Float Weight ("FFW") to take into account only the listed shares deemed to be available for trading in the market). The TSE is responsible for calculating and maintaining the TOPIX Index, and can add, delete or substitute the stocks underlying the TOPIX Index or make other methodological changes that could change the value of the TOPIX Index. The underlying stocks may be removed, if necessary, in accordance with deletion/addition rules which provide generally for the deletion of a stock from the TOPIX Index if such stock ceases to meet the criteria for inclusion. Stocks listed on the Second Section of the TSE may be transferred to the First Section if they satisfy applicable criteria. Such criteria include numerical

minimum values for number of shares listed, number of shareholders and average monthly trading volume, among others. Similarly, when a First Section stock falls within the coverage of TSE rules prescribing reassignment thereof to the Second Section, such stock will be removed from the First Section.

The TOPIX Index is not expressed in Japanese Yen, but is presented in terms of points (as a decimal figure) rounded off to the nearest one-hundredth. The TOPIX Index is calculated by multiplying 100 by the figure obtained by dividing the current free-float adjusted market value (the current market price per share at the time of the index calculation multiplied by the number of common shares listed on the First Section of the TSE at the same instance (as adjusted by multiplying the FFW)) (the "TOPIX Current Market Value") by the base market value (i.e., the TOPIX Current Market Value on the base date) (the "TOPIX Base Market Value").

The calculation of the TOPIX Index can be represented by the following formula:

TOPIX Index = 
$$\frac{\text{TOPIX Current Market Value}}{\text{TOPIX Base Market Value}} \times 1,000$$

In order to maintain continuity, the TOPIX Base Market Value is adjusted from time to time to ensure that it reflects only price movements resulting from auction market activity, and to eliminate the effects of other factors and prevent any instantaneous change or discontinuity in the level of the TOPIX Index. Such factors include, without limitation: new listings; delistings; new share issues either through public offerings or through rights offerings to shareholders; issuance of shares as a consequence of exercise of convertible bonds or warrants; and transfer of listed securities from the First Section to the Second Section of the TSE.

The formula for the adjustment is as follows:

Where, adjustment amount is equal to the changes in the number of shares included in the calculation of the index multiplied by the price of those shares used for the purposes of the adjustment.

Therefore,

The TOPIX Base Market Value remains at the new value until a further adjustment is necessary as a result of another change. As a result of such change affecting the TOPIX Current Market Value or any stock underlying the TOPIX Index, the TOPIX Base Market Value is adjusted in such a way that the new value of the TOPIX Index will equal the level of the TOPIX Index immediately prior to such change.

No adjustment is made to the TOPIX Base Market Value, however, in the case of events such as stock splits or decreases in capital without compensation, which theoretically do not affect market value.

# **License Agreement with TSE**

We have entered into a non-exclusive license agreement with TSE providing for the license to us and certain of our affiliated or subsidiary companies, in exchange for a fee, of the right to use the TOPIX Indices, which are owned and published by the TSE, in connection with securities, including the securities.

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#### **EXCHANGE TRADED FUNDS**

### The iShares Exchange Traded Funds

We have derived all information contained in this underlying supplement regarding the iShares® DJ U.S. Financial Select Sector Index Fund, the iShares® DJ U.S. Real Estate Index Fund and the iShares® MSCI Emerging Markets Index Fund (each an "iShares ETF," and together, the "iShares ETFs"), including, without limitation, their make-up, method of calculation and changes in their components, from publicly available information, and we have not participated in the preparation of, or verified, such publicly available information. Such information reflects the policies of, and is subject to change by, iShares® Inc. ("iShares®"), iShares Trust, Barclays Global Investors, N.A. ("BGI"), and Barclays Global Fund Advisors ("BGFA"). The iShares ETFs are investment portfolios maintained and managed by iShares®. BGFA is the investment advisor to the iShares ETFs.

iShares® Trust is a registered investment company that consists of numerous separate investment portfolios, including the iShares ETFs. Information provided to or filed with the SEC by iShares® pursuant to the Securities Act of 1933 and the Investment Company Act of 1940 can be located by reference to SEC file numbers 033-92935 and 811-09729, respectively, through the SEC's website at http://www.sec.gov. For additional information regarding iShares®, BGFA and the iShares ETFs, please see the Prospectus, dated August 1, 2007 (as supplemented on December 6, 2007, December 14, 2007, December 27, 2007 and June 23, 2008). In addition, information about iShares and the iShares ETFs may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the iShares® website at www.ishares.com. Information contained in the iShares® website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or any terms supplement, and we have not participated in the preparation of, or verified, such publicly available information.

### iShares® Dow Jones U.S. Financials Sector Index Fund

The Dow Jones U.S. Financial Sector Index Fund seeks to provide investment results that correspond generally to the price and yield performance, before fees and expenses, of publicly traded securities in the financial industry, as measured by the Index. Thus, the Dow Jones U.S. Financial Sector Index Fund is concentrated in the U.S. financial industry. The Dow Jones U.S. Financial Sector Index Fund is an exchange traded fund that trades on the NYSE under the ticker symbol "IYF."

For information about the Dow Jones U.S. Financials Sector Index, see "The Dow Jones Indices" above.

### iShares® Dow Jones U.S. Real Estate Index Fund

The Dow Jones U.S. Real Estate Index Fund seeks to provide investment results that correspond generally to the price and yield performance, before fees and expenses, of the real estate sector of the U.S. equity market. The Dow Jones U.S. Real Estate Index Fund is an exchange traded fund that trades on the NYSE under the ticker symbol "IYR."

For information about the Dow Jones U.S. Real Estate Index, see "The Dow Jones Indices" above.

# iShares® MSCI Emerging Markets Index Fund

The iShares® MSCI Emerging Markets<sup>SM</sup> Index Fund seeks to provide investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI Emerging Markets Index. The Dow Jones U.S. Financial Sector Index Fund is an exchange traded fund that trades on the NYSE under the ticker symbol "EEM."

For information about the MSCI Emerging Markets Index, see "The MSCI Indices" above.

# Methodology

Investment Objective and Strategy

Each iShares ETF seeks to provide investment results that correspond generally to the price and yield performance, before fees and expenses, of publicly traded securities in a certain industry, as represented by an index. Thus, the iShares ETFs are concentrated in the relevant industry.

The iShares ETFs uses a representative sampling strategy (as described below under "— Representative Sampling") to track the index. In addition, in order to improve its portfolio liquidity and its ability to track the Index, the iShares ETFs may invest up to 10% of its assets in futures contracts, options on futures contracts, other types of options, and swaps related to the Index as well as cash and cash equivalents, including shares of money market funds advised by BGFA or its affiliates.

### Representative Sampling

The iShares ETFs pursues a "representative sampling" strategy in attempting to track the performance of the Index, and generally does not hold all of the equity securities included in the iShares ETFs. The iShares ETFs invests in a representative sample of securities in an index. Securities selected have aggregate investment characteristics (based on market capitalization and industry weightings), fundamental characteristics (such as return variability and yield) and liquidity measures similar to those of the relevant index.

# Correlation

The relevant index is a theoretical financial calculation, while the iShares ETFs are an actual investment portfolio. The performance of the iShares ETFs and the relevant index will vary somewhat due to transaction costs, market impact, corporate actions (such as mergers and spin-offs) and timing variances. BGFA expects that, over time, the correlation between the iShares ETFs' performance and that of their underlying indices, before fees and expenses, will be 95% or better. A figure of 100% would indicate perfect correlation. Any correlation of less than 100% is called "tracking error." The iShares ETFs, using a representative sampling strategy, can be expected to have a greater tracking error than a fund using replication strategy. Replication is a strategy in which a fund invests in substantially all of the securities in its underlying index in approximately the same proportions as in the relevant Index.

# **Industry Concentration Policy**

The iShares ETFs concentrate their investments to approximately the same extent that the relevant index concentrates in the stocks of the relevant industry.

## The S&P SPDR Exchange Traded Funds

We have derived all information contained in this underlying supplement regarding the SPDR® S&P® Homebuilders ETF, The Energy Select Sector SPDR® Fund, The Financial Select Sector SPDR® Fund, The Health Care Select Sector SPDR® Fund and The Materials Select Sector SPDR® Fund (each an "S&P SPDR ETF," and together, the "S&P SPDR ETFs"), including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information, and we have not participated in the preparation of, or verified, such publicly available information. Such information reflects the policies of, and is subject to change by Standard & Poor's and SSFM. The S&P SPDR ETFs are investment portfolios maintained and managed by SSFM. SSFM is the investment advisor to the S&P SPDR ETFs.

The Select Sector SPDR Trust (the "**Trust**") is a registered investment company that consists of nine separate investment portfolios, including the S&P SPDR ETFs. Information provided to or filed with the SEC (the "**Commission**") by the Trust pursuant to the Securities Act of 1933 and the Investment Company Act of 1940 can be located by reference to Commission file numbers 333-57791 and 811-08837, respectively, through the Commission's website at http://www.sec.gov. In addition, information may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents, and we have not participated in the preparation of, or verified, such publicly available information.

# The Energy Select Sector SPDR® Fund

The Energy Select Sector SPDR® Fund seeks investment results that correspond generally to the level and yield performance, before fees and expenses, of the Energy Select Sector Index. The Energy Select Sector Index measures the performance of the energy sector of the U.S. equity market. The Energy Select Sector Index includes companies from the following industries: oil, gas, and consumable fuels, and energy equipment and services. The Energy Select Sector SPDR® Fund is an exchange traded fund that trades on the American Stock Exchange LLC under the ticker symbol "XLE".

For information about the Energy Select Sector Index, see "The S&P Select Sector Indices" above.

## The Financial Select Sector SPDR® Fund

The Financial Select Sector SPDR® Fund seeks investment results that correspond generally to the level and yield performance, before fees and expenses, of the Financial Select Sector Index. The Financial Select Sector Index measures the performance of the financial services sector of the U.S. equity market. The Financial Select Sector Index includes companies in the following sub-sectors: banking, mortgage finance, consumer finance, specialized finance, investment banking and brokerage, asset management and custody, corporate lending, insurance and financial investment and real estate, including REITs. The Financial Select Sector SPDR® Fund is an exchange traded fund that trades on the American Stock Exchange LLC under the ticker symbol "XLF".

For information about the Financial Select Sector Index, see "The S&P Select Sector Indices" above.

#### The Health Care Select Sector SPDR® Fund

The Health Care Select Sector SPDR® Fund seeks investment results that correspond generally to the level and yield performance, before fees and expenses, of the Health Care Select Sector Index. The Health Care Select Sector Index measures the performance of the Health Care sector of the U.S. equity market. The Health Care Select Sector Index includes companies from the following industries: pharmaceuticals, health care providers and services, health care equipment and supplies, biotechnology, life sciences tools and services, and health care technology. The Health Care Select Sector SPDR® Fund is an exchange traded fund that trades on the American Stock Exchange LLC under the ticker symbol "XLV".

For information about the Health Care Select Sector Index, see "The S&P Select Sector Indices" above.

#### The Materials Select Sector SPDR® Fund

The Materials Select Sector SPDR® Fund seeks investment results that correspond generally to the level and yield performance, before fees and expenses, of the Materials Select Sector Index. The Materials Select Sector Index measures the performance of the materials sector of the U.S. equity market. The Materials Select Sector Index includes companies from the following industries: chemicals, construction materials, containers and packaging, metals and mining, and paper and forest products. The Materials Select Sector SPDR® Fund is an exchange traded fund that trades on the American Stock Exchange LLC under the ticker symbol "XLB."

For information about the Materials Select Sector Index, see "The S&P Select Sector Indices" above.

## Replication

The S&P SPDR ETFs pursues the indexing strategy of "replication" in attempting to track the performance of the Sector Indices. The S&P SPDR ETFs will invest in all of the securities that comprise the Sector Indices. The S&P SPDR ETFs will normally invest at least 95% of its total assets in common stocks that comprise the Sector Indices.

# Correlation

The Sector Indices are a theoretical financial calculation, while the S&P SPDR ETFs are an actual investment portfolio. The performance of the S&P SPDR ETFs and the Sector Indices will vary somewhat due to transaction costs, asset valuations, market impact, corporate actions (such as mergers and spin-offs) and timing variances. A figure of 100% would indicate perfect correlation. Any correlation of less than 100% is called "tracking error." The S&P SPDR ETFs, using a replication strategy, can be expected to have a smaller tracking error than a fund using the representative sampling strategy. Representative sampling is a strategy in which a fund invests in a representative sample of securities in an underlying index.