# American Century Quality Diversified International Equity Index (ACQINT)

**Rules and Methodology** 

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# The American Century Quality Diversified International Equity Index Rule Book

#### I. Index Overview

American Century Investment Management, Inc. (American Century), the index provider, developed the American Century Quality Diversified International Equity Index (ACQINT or Index) to capture the performance of large- and mid-capitalization companies outside the U.S. that possess attractive quality, growth and valuation fundamentals. The index universe includes the stocks of companies based in developed economies outside the U.S. and companies based in the rising economies of Taiwan, South Korea, Hong Kong and China.

The construction process excludes lower quality stocks based on our methodology. Growth and value scoring provide additional building blocks for constructing the Developed Markets Growth, Developed Markets Value and Rising Economy Growth sub-portfolios. The final portfolio is a blend of the three sub-portfolios.

American Century rebalances the Index monthly and reconstitutes the Index quarterly at the end of February, May, August and November. The updates are effective by the U.S. market open on the 6th business day of the month.

The Index calculation captures price appreciation and total return (dividends reinvested in the Index). The Index calculation utilizes primary market prices, generally in U.S. dollars.

#### II. Initial Universes

American Century creates the Developed Economies Universe and the Rising Economies Universe from the S-Network Global 5500 Index¹ utilizing the screens noted in the table below. The American Century Quality Diversified International Equity Index (ACQINT) contains stocks selected from the initial universes. The selection criteria include requirements for market capitalization, trading volume and country registration, as well as quality, valuation and growth characteristics described in this document.

#### A. Developed Economies Universe

Developed Economies Universe Criteria		
Minimum Market Capitalization	The lower of \$5 billion or value of the 40th percentile of the initial universe.	
Minimum Average Daily Volume	\$5 million	
Countries	Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, United Kingdom.	

#### **B.** Rising Economies Universe

Rising Economies Universe Criteria	
Minimum Market Capitalization	The lower of \$5 billion or value of the 30th percentile of the initial universe.
Minimum Average Daily Volume	\$5 million
Countries	China (H Shares and ADRs only), Hong Kong, South Korea, Taiwan. (Excludes state-owned enterprises.)

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<sup>&</sup>lt;sup>1</sup> The S-Network Global 5500 Index reconstitutes semiannually on the third Friday in June and December and rebalances quarterly on the third Friday of March, June, September and December.

# III. Quality Scoring

American Century ranks the initial universes and excludes securities with lower quality scores. American Century excludes bottom 20 percent companies ranked on quality score and the bottom 20 percent within each industry group for Developed Economies. Further, American Century excludes the bottom 20 percent by country for Rising Economies. The quality attributes and the method for calculating the quality scores are described below.

#### A. Quality Attributes

Quality Attributes		
Category	Financial Measure	
	Free Cash Flow over Assets	
Profitability	Asset Turnover	
-	Margin	
	Gross Profitability	
	ROA	
	Accruals	
Earnings Quality	Cash Earnings to Earnings	
	Variability in Sales, Earnings, Cash Flows	
	Asset Growth	
Investment Quality	Issuance Growth	
-	Capital Expenditure Growth	
	Banks: Tangible Assets/Tangible Common Equity	
Leverage	Utilities: Net Debt/Total Capital	
_	Insurance: Total Debt/Total Capital	
	All others: Net Debt/EBITDA	
	EPS estimate revision	
Momentum	Price momentum	

#### **B.** Quality Score Calculation

Our calculation for the quality score is provided below.

- Securities in the developed and rising economies universes are ranked by each quality attribute relative to their universe.
- Each attribute is scored by the percentile rank.
- Attribute scores are combined in a weighted quality score.

# IV. Value Scoring

American Century ranks securities based on a value score. The value attributes vary by company type. The method for calculating the value score is shown below.

#### A. Value Attributes

Value Attributes		
Company Type	Data	
	Price/Book	
	Price/Sales	
Non Financials Companies	Price/Earnings	
Non-Financials Companies	EV/EBITDA	
	Cash Flow yield	
	Dividend yield	
	Price/Tangible Book	
Financials Companies	Price/Earnings	
·	Dividend Yield	
Deal Fatata Companies	Price/FFO	
Real Estate Companies	Dividend Yield	

#### **B. Value Score Calculation**

American Century performs the calculations below to determine weighted value scores for each stock.

- Securities are ranked by each value attribute relative to their industry group.
- Each attribute is scored by percentile rank.
- Attribute scores are combined to create a weighted value score.

#### V. **Growth Scoring**

American Century ranks securities based on a growth score. The bottom 20 percent of companies based on growth score are excluded. The growth attributes and the method for calculating the growth score are shown below.

#### A. Growth Attributes

Growth Attributes		
Category	Financial Measure	
Historical and Expected Growth	Sales, Earnings and Cash Flow Growth	
Profitability	Defined above in Quality Attributes	
Momentum	Defined above in Quality Attributes	

#### **B.** Growth Score Calculation

American Century performs the calculations below to determine weighted growth scores for each stock.

- Securities in the developed and rising economies are ranked by each growth attribute relative to their universes.
- Each attribute is scored by percentile rank.
- Attribute scores are combined to create a weighted growth score.

#### VI. Portfolio Construction

# A. Developed Economies Value Portfolio

The Developed Economies Value sub-portfolio maximizes the value score, subject to the constraints described below.

Portfolio Constraints		
Active Exposure: Country	No more than 1.5%	
Active Exposure: Region	-5% to 5%	
Active Exposure: Industry	-5% to 1.5%	
Active Exposure: Sector	-5% to 5%	
Weighted Average Market Capitalization	Greater than 60% of the Developed Economies Universe market capitalization	

Note: Active exposure is calculated relative to the Developed Economies Universe.

Security Constraints	
Individual Stock Weights	≥ 25 basis points
Size and Volatility	Companies are grouped with active exposures ranging between 0.25% and 2%

### **B.** Developed Economies Growth Portfolio

The Developed Economies Growth Portfolio maximizes the growth score, subject to the constraints described below. The constraints are relative to the Developed Economies Growth sub-portfolio.

Portfolio Constraints	
Active Exposure: Country	No more than 1.5%
Active Exposure: Region	-5% to 5%
Active Exposure: Industry	-5% to 1.5%
Active Exposure: Sector	-5% to 5%
Weighted Average Market Capitalization	Greater than 60% of the Developed Economies Universe market capitalization

Note: Active exposure is calculated relative to the Developed Economies Universe.

Security Constraints	
Individual Stock Weights	≥ 25 basis points

I SIZE and Volatility	es are grouped with active exposures etween 0.5% and 2%
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#### C. Rising Economies Growth Portfolio

The Rising Economies Growth Portfolio maximizes the growth score, subject to the constraints described below. The constraints are relative to the Rising Markets Growth subportfolio.

Portfolio Constraints		
Active Exposure: Country	-5% to 5%	
Weighted Average Market Capitalization	Greater than 40% of the Rising Economies Universe market capitalization	
Sector Exposure	40%	
Sectors Excluded	Energy Financials Materials Real Estate	

Security Constraints	
Individual Stock Weights	≥ 25 basis points
Size and Volatility	Companies are grouped with exposures ranging between 3% and 9%

#### D. The Final Portfolio

The final portfolio is a blend of the Developed Economies Value, Developed Economies Growth and Rising Economies Growth sub-portfolios. The Rising Economies Growth Portfolio allocation weight is maintained at 5%.

The remaining 95% is allocated between the Developed Economies Value and Developed Economies Growth portfolios. The weights of sub-portfolios are adjusted dynamically monthly based on their trailing returns adjusted by volatility when returns are positive; when trailing returns are negative monthly adjustments are based solely on average trailing returns. The allocation weight for each sub-portfolio ranges from a minimum of 42.75% to a maximum of 52.25%. In any month the weights cannot increase or decrease by more than 5%.

# VII. Calculating the Index

#### A. Index Formula

The Index value is calculated each business day based on the formula below.

$$P_{t} = \sum_{i=1}^{n} \frac{x_{i,t} * p_{i,t} * f_{i,t}}{D_{t}}$$

With:

 $x_{i,t}$  = Number of Index Shares of the Index Component i on Trading Day t

 $p_{i,t}$  = Price of Index Component i on Trading Day t

 $f_{i,t}$  = Foreign exchange rate to convert the Price of Index Component i on Trading Day t into the Index Currency

 $D_t$  = Divisor on Trading Day t

n = Number of Components in the Index on Trading Day t

The initial Divisor on the Start Date is calculated according to the following formula:

$$D_t = \sum_{i=1}^{n} \frac{(P_{i,t} * f_{i,t} * x_{i,t})}{100}$$

After the close of trading on each Adjustment Day t, the new Divisor is calculated as follows:

$$D_{t+1} = D_t * \frac{\sum_{i=1}^{n} (P_{i,t} * f_{i,t} * x_{i,t+1})}{\sum_{i=1}^{n} (P_{i,t} * f_{i,t} * x_{i,t})}$$

This Divisor is valid starting the immediately following business day.

#### **B.** Adjustments

VettaFi LLC (the Calculation Agent) makes adjustments to the Index as necessary whenever there are extraordinary events such as liquidations, conversions, delistings, bankruptcies, mergers or takeovers involving Index components. In these cases, each event will be taken into account on its effective date. Whenever possible, the changes in the Index's components will be announced at least two business days prior to their implementation date.

#### C. Dividends and other distributions

Dividend payments and other distributions are included in the total return and net total return variants of the Index as follows:

$$T_{t} = T_{y} * \frac{\left(P_{t} + \frac{\sum_{i=1}^{n} y_{i,t} * g_{i,t} * x_{i,t}}{D_{t}}\right)}{P_{t-1}}$$

With:

 $T_y$  = Total Return (or as applicable, Net Total Return) Index variant value as of the previous trade date TR

 $P_{t-1}$  = Price Index variant value as of the previous trade date

 $P_t$  = Price Index variant value as of the current trade date (Trading Day t)

 $x_{i,t}$  = Number of Index Shares of the Index Component i on Trading Day t

 $\mathcal{Y}_{i,t}$  = Distribution of Index Component i with ex-date t+1 multiplied by the Dividend Correction Factor (which incorporates the applicable withholding tax rate when used in the Net Total Return variant calculation)

 $g_{i,t}$  = Foreign exchange rate to convert the amount of the distribution of Index Component i on

Trading Day t into the Index Currency

 $D_t$  = Divisor on Trading Day t

n = Number of Components in the Index on Trading Day <math>t

# D. Corporate Actions

#### i. Overview

When a company that is included in the Index announces the terms and conditions of a corporate action, the Calculation Agent assesses the action's impact on the price of the company's stock. If required, the Calculation Agent makes appropriate adjustments to the Index to account for the effect of the corporate action. The adjustments are described below.

#### ii. Capital increases

In the case of capital increases with ex-date t + 1, the Index is adjusted as follows:

$$x_{i,t+1} = x_{i,t} * \frac{1+B}{1}$$

With:

 $p_{i,t}$  = Price of Index Component i on Trading Day t

 $p_{i,t+1}$  = Hypothetical price of Index Component i on Trading Day t+1

s = Subscription Price in the Index Component currency

B = Shares received for every share held

$$D_{t+1} = D_t * \frac{\sum_{i=1}^{n} (P_{i,t} * f_{i,t} * x_{i,t}) + \sum_{i=1}^{n} [(x_{i,t+1} * P_{i,t+1} * f_{i,t}) - (x_{i,t} * P_{i,t} * f_{i,t})]}{\sum_{i=1}^{n} (P_{i,t} * f_{i,t} * x_{i,t})}$$

With:

 $x_{i,t}$  = Number of Index Shares of the Index Component i on Trading Day t

 $x_{i,t+}$  = Number of Index Shares of the Index Component i on Trading Day t + 1

1

 $p_{i,t}$  = Price of Index Component i on Trading Day t

 $p_{i,t+}$  = Hypothetical price of Index Component i on Trading Day t+1

1

 $f_{i,t}$  = Foreign exchange rate to convert the Price of Index Component i on Trading Day t into the

Index Currency

 $D_t$  = Divisor on Trading Day t

 $D_{t+1} = Divisor on Trading Day t + 1$ 

#### iii. Spinoffs

In the case of a spinoff with ex-date t + 1, the Index is adjusted as follows:

$$P_{i,t+1} = P_{i,t} - s$$

With:

 $p_{i,t}$  = Price of Index Component i on Trading Day t

 $p_{i,t+1}$  = Hypothetical price of Index Component i on Trading Day t+1s = Price of the spun-off security in the Index Component currency

 $D_{t+1} = D_t * \frac{\sum_{i=1}^{n} (P_{i,t} * f_{i,t} * x_{i,t}) + \sum_{i=1}^{n} [(x_{i,t+1} * P_{i,t+1} * f_{i,t}) - (x_{i,t} * P_{i,t} * f_{i,t})]}{\sum_{i=1}^{n} (P_{i,t} * f_{i,t} * x_{i,t})}$ 

With:

 $x_{i,t}$  = Number of Index Shares of the Index Component i on Trading Day t

 $x_{i,t+1} =$ Number of Index Shares of the Index Component i on Trading Day t+1

 $p_{i,t}$  = Price of Index Component i on Trading Day t

 $p_{i,t+1}$  = Hypothetical price of Index Component i on Trading Day t+1

 $f_{i,t}$  = Foreign exchange rate to convert the Price of Index Component i on Trading Day t into the

Index Currency

 $D_t$  = Divisor on Trading Day t $D_{t+1}$  = Divisor on Trading Day t + 1

#### iv. Share splits

In the case of share splits with ex-date on Trading Day t+1, it is assumed that the prices change in ratio of the terms of the split. The new number of Index Shares is calculated as follows:

$$x_{i,t+1} = x_{i,t} * B$$

With:

 $x_{i,t}$  = Number of Index Shares of the affected Index Component on Trading Day t Number of Index Shares of the affected Index Component on Trading Day t+1 B = Shares after the share split for every share held before the split

# v. Stock distributions

In the case of stock distributions with ex-date on trading day t + 1, it is assumed that the prices change according to the terms of the distribution. The new number of Index Shares is calculated as follows:

$$x_{i,t+1} = x_{i,t} * (1+B)$$

With:

 $x_{i,t}$ = Number of Index Shares of the Index Component i on Trading Day t  $x_{i,t+1}$  = Number of Index Shares of the Index Component i on Trading Day t+1 B = Shares received for every share held

#### E. Recalculation and Market Disruption

#### Recalculation

In the event of an error, the Calculation Agent adheres to the following correction policy:

To maintain a high standard of data integrity, a series of procedures have been implemented to ensure accuracy, timeliness and consistency. Input prices are monitored using a variety of computerized range-check warning systems for both ticker-plant and real-time index systems. Fault tolerant methods are employed in the collection of market and corporate action data. Various verification and audit tasks are performed to ensure the quality of the real-time data feeds and related market data. While every effort is made to ensure the accuracy of the

information used for the index calculation, an index error may occur due to incorrect or missing data, including trading prices, exchange rates, shares outstanding and corporate actions, due to operational errors or other reasons.

**Index-Related Data and Divisor Corrections.** Incorrect pricing and corporate action data for individual issues in the database will be corrected upon detection. In addition, an incorrect divisor of an index, if discovered within five days of its occurrence, will be fixed on the day it is discovered to prevent an error from being carried forward.

If a divisor error is discovered more than five days after occurrence, the adjustment will depend upon how significant the error is, how far back the error occurred and the feasibility of performing the adjustment.

#### **Market Disruption**

During periods of high volatility and market stress, the Calculation Agent calculates the indices following procedures outlined in its publicly available Disruption Policy.

# VIII. Changes in calculation method

The application by the Calculation Agent of the method described in this document is final and binding. The Calculation Agent shall apply the method described above for the composition and calculation of the Index. However, it cannot be excluded that the market environment, supervisory, legal, financial or tax reasons may require changes to be made to this method. The Calculation Agent may also make changes to the terms and conditions of the Index and the method applied to calculate the Index that it deems to be necessary and desirable to prevent obvious or demonstrable error or to remedy, correct or supplement incorrect terms and conditions. The Calculation Agent is not obliged to provide information on any such modifications or changes. Despite the modifications and changes, the Calculation Agent will take the appropriate steps to ensure a calculation method is applied that is consistent with the method described above.