AN OVERVIEW OF GLOBAL INVESTING

Presentation for the University of Wisconsin-Madison Retirement Association

September 21, 2010

Mike Harmelink, CFA
Nick Stanton, CFA
AGENDA

- An Introduction to Global Equity Markets
- SWIB’s Progression to a Global Investment Platform
- How SWIB Invests in International Markets
- Foreign Currency and International Investing
INTRODUCTION TO GLOBAL EQUITY MARKETS

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TYPES OF GLOBAL EQUITY MANDATES

- Global Markets
- Global Developed Markets
- International Developed Markets
- Emerging Markets
- Frontier Markets
DIFFERENCES IN THE INVESTABLE UNIVERSE

- Domestically focused companies vs. foreign
  - Most regional banks, Kroger, Supervalu, etc.

- Multinational and global companies
  - Coca-Cola, Nestle, GE, Siemens

- While many companies may be domestically focused, it’s becoming more and more a global marketplace
GLOBALIZATION OF THE MARKETPLACE

- Did you know that Nestle operates in over 86 countries worldwide......
- And that Microsoft operates in over 100 countries?
- What about The Coca-Cola Company?
INTERNATIONAL MARKET AS A DIVERSIFIER

- You can get international exposure by investing in large multi-nationals
- Or, better yet, you can invest directly in overseas markets
- International markets can provide diversification and enhanced returns
10 YEAR PERFORMANCE OF INTERNATIONAL VS. US MARKETS – LOCAL CURRENCY
10 Year Performance of International vs. US Markets – USD Currency
BREAKDOWN OF GLOBAL MARKET CAP BY REGION

- USA/Canada: 47%
- Developed Europe: 26%
- Developed Asia: 14%
- Emerging Markets: 13%
BREAKDOWN OF GLOBAL DEVELOPED MARKET CAP BY REGION

- USA: 49%
- Europe: 30%
- Japan: 10%
- APAC ex Japan: 6%
- Canada: 5%
**Difference in Market Composition in International vs. Domestic Market**

### USA Market Composition
- Financials: 15%
- Info Tech: 19%
- Consumer Staples: 11%
- Energy: 11%
- Consumer Discretionary: 11%
- Industrials: 10%
- Health Care: 12%
- Materials: 4%
- Telcos: 3%

### International Market Composition
- Financials: 26%
- Industrials: 11%
- Materials: 11%
- Consumer Staples: 10%
- Consumer Discretionary: 9%
- Energy: 9%
- Health Care: 8%
- Info Tech: 5%
- Utilities: 5%
- Telcos: 6%

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The pie charts illustrate the percentage breakdown of market composition for both the USA and International markets, highlighting differences and similarities in industrial distribution.
# Largest Companies by Market Capitalization

<table>
<thead>
<tr>
<th>Domestic</th>
<th>International</th>
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</thead>
<tbody>
<tr>
<td>1  Exxon Mobil Corp</td>
<td>1  Nestle SA</td>
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<tr>
<td>2  Apple Inc</td>
<td>2  BHP Billiton Ltd</td>
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<td>3  Microsoft Corp</td>
<td>3  HSBC Holdings PLC</td>
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<td>4  Proctor &amp; Gamble</td>
<td>4  Royal Dutch Shell PLC</td>
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<td>5  IBM</td>
<td>5  Vodafone Group PLC</td>
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<td>6  Johnson &amp; Johnson</td>
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<td>7  AT&amp;T Inc</td>
<td>7  BP PLC</td>
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<td>8  General Electric Co</td>
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<td>9  Chevron Corp</td>
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<td>10 JPMorgan Chase &amp; Co</td>
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<td>11 Banco Santander SA</td>
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<td>12 Bank of America Corp</td>
<td>12 Toyota Motor Corp</td>
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<td>13 Cisco Systems Inc</td>
<td>13 Roche Holding AG</td>
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<tr>
<td>14 Wal-Mart Stores Inc</td>
<td>14 Telefonica SA</td>
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<tr>
<td>15 Coca-Cola Co/The</td>
<td>15 Siemens AG</td>
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<td>Switzerland</td>
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<td>Australia/UK</td>
</tr>
<tr>
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<td>USA</td>
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<tr>
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<td>UK</td>
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<td>Royal Dutch Shell PLC</td>
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<td>Coca-Cola Co/The</td>
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RISE OF THE EMERGING MARKETS

- Definition: Nations with business activity in the process of rapid growth and industrialization

- Approximately 20-30 countries included in the emerging market universe
  - The BRIC’s, Chile, Egypt, Hungary, Mexico, South Korea, etc.
SIGNIFICANT OUTPERFORMER OVER THE PAST DECADE
**Frontier Markets**

- “Subset” of emerging markets
- Investable, but have lower market capitalization and liquidity than emerging markets
- Constituents include:
  - Argentina, Bangladesh, Kenya, Pakistan, etc.
BEYOND THE BRIC’S

- What countries will inherit the growth mantel from the BRIC’s

- The Next 11 (N-11)
  - Designation created by Goldman Sachs in 2005 - Bangladesh, Egypt, Indonesia, Iran, Mexico, Nigeria, Pakistan, the Philippines, South Korea, Turkey, Vietnam

- VISTA
  - Vietnam, Indonesia, South Africa, Turkey, Argentina
CHALLENGES OF INTERNATIONAL INVESTING

- Around the clock trading hours
- Language differences
- Differences in accounting
  - Most international developed markets to be on IFRS by 2011
- Geo-political concerns
- Differing macro-economic outlooks
- Differing tax and regulatory requirements
Risks in International Investing

- Lack of transparency in some markets
- Foreign exchange
  - Devaluation of currencies and exchange rate fluctuations
- Unstable geo-political environment
- Expropriation of assets
WHY SWIB INVESTS IN GLOBAL EQUITIES

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Deal or No Deal?
DEAL OR NO DEAL?

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</table>
Deal or No Deal?
Deal or No Deal?
Deal or No Deal?
Deal or No Deal?
Deal or No Deal?

$400,000
**RISK / RETURN**

Scenario #1
- Loan $10,000 to a trustworthy friend at a 7% rate.

Scenario #2
- Loan $5,000 each to two different trustworthy friends at a 7% rate.
CORRELATION

- Spouses – high correlation
- Same company
- Same type of job/Same area
- Different jobs/Same area
- Different jobs/Different area – Low correlation
<table>
<thead>
<tr>
<th>Scenario #1</th>
<th>Scenario #2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invest $10,000 in a market with an expected return of 7%</td>
<td>Invest $5,000 each in two different markets with expected returns of 7% each</td>
</tr>
</tbody>
</table>
HISTORICAL CORRELATION OF MSCI WORLD EX-US INDEX (USD) TO S+P 500

- 1970-1980: 0.55
- 1980-1990: 0.52
- 1990-2000: 0.56
HISTORICAL CORRELATION OF MSCI WORLD EX-US INDEX (USD) TO S+P 500

<table>
<thead>
<tr>
<th>Period</th>
<th>Correlation</th>
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<tr>
<td>1970-1980</td>
<td>0.55</td>
</tr>
<tr>
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<td>0.52</td>
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<tr>
<td>1990-2000</td>
<td>0.56</td>
</tr>
<tr>
<td>2000-2010</td>
<td>0.88</td>
</tr>
</tbody>
</table>
HISTORICAL CORRELATION OF MSCI WORLD EX-US INDEX (USD) TO S&P 500
We feel that there are inefficiencies in the market. It makes sense to expand our reach as far as possible to find those inefficiencies and exploit them.
HISTORICAL STRUCTURE

International Equities Portfolio

Portfolio Manager

Analyst 1
Analyst 2
Analyst 3

Domestic Equities Portfolio

Portfolio Manager

Analyst 1
Analyst 2
Analyst 3
Analyst 4
Analyst 5
Current Structure

Global Equities Portfolio

Portfolio Manager

Sector Portfolio 1
Sector Portfolio 2
Sector Portfolio 3
Sector Portfolio 4
Sector Portfolio 5
Sector Portfolio 6
Sector Portfolio 7
Sector Portfolio 8

Analyst 1
Analyst 2
Analyst 3
Analyst 4
Analyst 5
Analyst 6
Analyst 7
Analyst 8
SWIB’S GLOBAL INVESTMENT PROCESS AND STRATEGY

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SWIB’S GLOBAL EQUITIES INVESTMENT PROCESS

- Evaluate “intrinsic value” of a company using discounted free cash flow analysis

- Valuation models companies established on approximately 1,000

- Try to maximize upside consistent with risk control parameters

- Secondary risk control is country / currency zone weightings
TENANTS OF SWIB GLOBAL INVESTING

- Fundamental bottom up investors
- Rigorous screening process
  - Both fundamental and quantitative
- Stock selection over country of origin
- Macro-economic overlay
A FOCUS ON FUNDAMENTALS

- Attempt to identify the intrinsic net worth of a business via DCF models and other metrics
- Less emphasis on EPS and PE ratios
  - Accounting vs. economic earnings
- Use of quantitative screens
- Management quality and competitive positioning
COMPANY ANALYSIS

- Focus on cash generation as opposed to EPS

- Questions to be asked of a company:
  - What’s the upside relative to its peer group?
  - Competitive positioning vs. its peer group?
  - Quality of the management team?
  - Geographic exposure and the relevant macro outlook of that region relative to its peer group
EXAMPLE: GLOBAL PAINTS

- Global market in excess of $85 billion
  - Market is global, yet very regional in the decorative market

- Mature market in developed world, although strong growth present in emerging markets
  - Volume growth of 1-2x GDP in emerging markets
  - APAC currently 35% of industry demand

- Products sold into multiple markets:
  - Decorative (44% share)
  - Automotive OEM
  - Automotive aftermarket
  - Industrial and aerospace
  - Marine & protective
EXAMPLE: GLOBAL PAINTS

Global Coatings Market Share:

- Akzo Nobel; 12%
- PPG; 9%
- Sherwin Williams; 7%
- DuPont; 4%
- BASF; 3%
- Valspar; 3%
- Kansai Paint; 2%
- Others; 60%
### Summary of screening process

<table>
<thead>
<tr>
<th>Company</th>
<th>Country</th>
<th>Upside to DCF</th>
<th>2010 P/E</th>
<th>2011 P/E</th>
<th>Quant Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akzo Nobel</td>
<td>Netherlands</td>
<td>53.0%</td>
<td>12.3</td>
<td>10.7</td>
<td>30</td>
</tr>
<tr>
<td>Kansai Paint</td>
<td>Japan</td>
<td>37.0%</td>
<td>13.9</td>
<td>12.9</td>
<td>15</td>
</tr>
<tr>
<td>PPG</td>
<td>US</td>
<td>12.0%</td>
<td>13.8</td>
<td>12.6</td>
<td>62</td>
</tr>
<tr>
<td>Sherwin Williams</td>
<td>US</td>
<td>8.0%</td>
<td>15.3</td>
<td>13.5</td>
<td>58</td>
</tr>
</tbody>
</table>
Analysis of more subjective items for relevant companies
- Akzo & Kansai Paint have a higher exposure to emerging markets – less exposure to the US
- Akzo management team well regarded
- All players improving performance via a cost cutting program

Macro outlook
- More positive on emerging market growth outlook vs. developed market
Conclusion and weighting of names within global portfolios

- Akzo Nobel core position within our portfolio's
- Kansai Paint also held within internal portfolio
- No position held in Sherwin Williams or PPG
THE ROLE OF CURRENCY IN GLOBAL EQUITY INVESTING

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100 EUR/night
$1.00/EUR
=$100/night
Exchange rate goes from $1.00/EUR to $1.20/EUR

100 EUR/night

$1.20/EUR

$120/night

sad emoji
Exchange rate goes from $1.00/EUR to $0.80/EUR

100 EUR/night

$0.80/EUR

$80/night
CURRENCY BASICS

Exchange rate = $1/ EUR

$1 = 1 EUR
Currency Basics

$1 = 1 EUR

Exchange rate = $0.80/EUR
Effects of a Strong Dollar

Good For:
- US consumers
- International companies

Bad For:
- US companies
- International consumers
How Currency Affects Investment Returns

- Work on global auto companies indicates Volkswagen is fundamentally undervalued
- Want $10 mil. Position
- At $1/EUR, $10 mil. = 10 mil. EUR
- VW = 50 EUR/share
- We want to buy 200,000 shares.
How Currency Affects Investment Returns

- VW’s share price goes from 50 EUR to 60 EUR
- Position worth 200,000 x 60 EUR = 12 mil. EUR
- At $1/EUR, 12 mil. EUR = $12 mil.
- At $0.80/EUR, 12 mil. EUR = $9.6 mil.
- At $1.20/EUR, 12 mil. EUR = $14.4 mil.
HOW CURRENCY AFFECTS INVESTMENT RETURNS

- When we invest in a company, we also implicitly invest in the currency of the exchange on which the stock trades.
HOW CURRENCY AFFECTS INVESTMENT RETURNS

**SWIB portfolio**
- US dollar – 40%
- Euro – 35%
- Japanese Yen – 10%
- Swiss Franc – 5%
- Australian dollar – 5%
- Canadian dollar – 5%
- 8% local return
- EUR 20% weaker = -7% curr. return
- Total Return = 0.44%

**Benchmark portfolio**
- US dollar – 50%
- Euro – 25%
- Japanese Yen – 10%
- Swiss Franc – 5%
- Australian dollar – 5%
- Canadian dollar – 5%
- 7% local return
- EUR 20% weaker = -5% curr. return
- Total Return = 1.65%
**How Can We Deal with the Effects of Exchange-Rate Movements?**

- Don’t worry about it
- Hedge it all back into US Dollars
- Manage the currency as a separate strategy
MANAGING CURRENCY RISK

**SWIB portfolio**
- US dollar – 40%
- Euro – 35%
- Japanese Yen – 10%
- Swiss Franc – 5%
- Australian dollar – 5%
- Canadian dollar – 5%
- Short EURUSD forward – 10%

**Benchmark portfolio**
- US dollar – 50%
- Euro – 25%
- Japanese Yen – 10%
- Swiss Franc – 5%
- Australian dollar – 5%
- Canadian dollar – 5%
MANAGING CURRENCY RISK

- Equity portfolios get rid of excess currency risk vs. their benchmarks.

- Currency committee monitors SWIB’s overall currency exposure in an attempt to maximize diversification.

- Opportunistic investments in currencies are undertaken when the situation warrants.
Trading in ADRs

- ADRs = American Depository Receipts
- US-traded version of foreign stock
- These carry currency risks, just like a foreign-purchased stock.
**ADR Example**

- Sony Corp. value/share in Japan = 2,425 JPY
- JPY/USD = 84.17
- Expected value of Sony ADR = $28.81
- Actual price of Sony ADR = $28.86
- If JPY/USD goes to 100, then expected value of Sony ADR would be $24.25
QUESTIONS