

# **Quantitative finance**

## **Lecture 5**

# Global Investment Opportunities

- More investment instruments available in the financial markets as a results of technological advances and new regulations
- Ability to invest from a global perspective thanks to the globalization or integration of domestic and foreign financial markets

# Global Investment Opportunities

- Investment vehicles with a variety of maturities, risk-return characteristics, and cash flow patterns being spawned due to competition and deregulations in the financial sector

# The Case for Global Investment

- Three reasons Canadian investors should think of constructing global investment portfolios
  1. Ignoring foreign markets can substantially reduce the investment choices for all investors
  2. Rates of return on foreign securities often substantially exceed those on Canadian investments
  3. Low correlation between Canadian securities markets and many foreign markets can help to substantially reduce portfolio risk

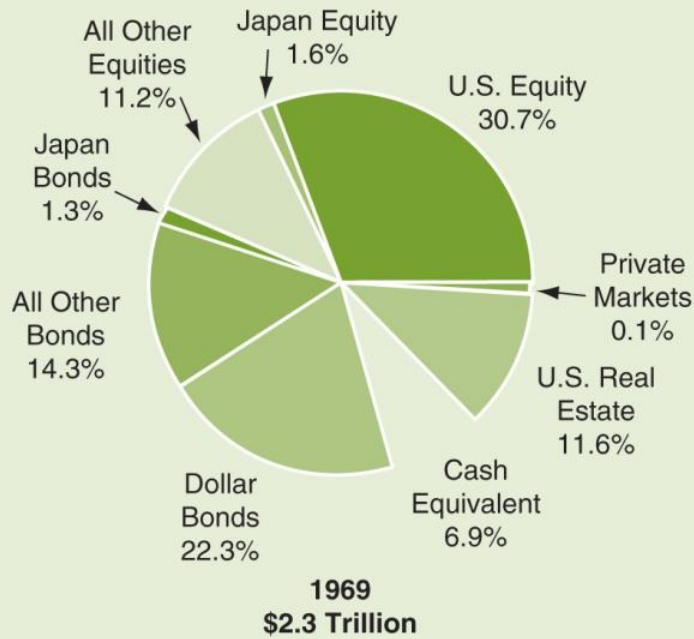
# The Case for Global Investment

- Relative Size of Financial Markets
  - Share of U.S. in world stock and bond markets has dropped from about 65% of the total in 1969 to about 46% in 2006
  - Growing importance of foreign securities in world capital markets is likely to continue
  - Overall value of securities available in world capital market has increased from \$2.3 trillion in 1969 to \$103 trillion in 2006
  - U.S. portion has declined to less than half

# The Case for Global Investments

**EXHIBIT 3.1**

Total Investable Assets in the Global Capital Market

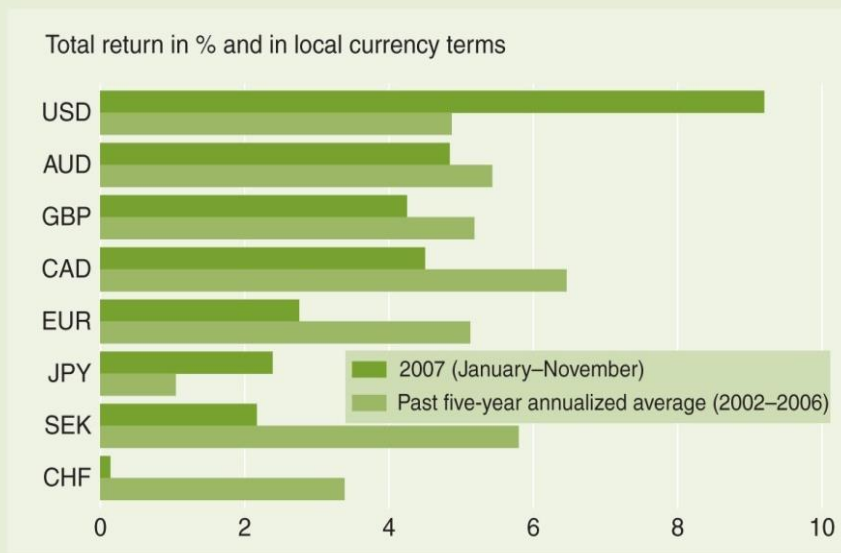


Source: UBS Global Asset Management.

# The Case for Global Investments: Bond Markets

EXHIBIT 3.3

Performance of Bond Markets



Sources: Bloomberg, JP Morgan, Merrill Lynch, UBAWMR.

The performance of the Canadian bond market ranked higher than the U.S. bond market due to the weaker Canadian dollar during the period.

# The Case for Global Investments: Equity Markets

EXHIBIT 3.4

Annual Returns, in Canadian Dollars

## Performance of Various Indices

	Year 2008 Returns	Year 2007 Returns	Year 2006 Returns	Year 2005 Returns	Year 2004 Returns	Year 2003 Returns	Year 2002 Returns
Canada—S&P/TSX composite	-33.38	9.83%	17.26%	24.13%	14.48%	26.72%	-12.44%
United Kingdom—FTSE 100	-34.41	-7.27%	30.77%	4.81%	10.80%	7.25%	-14.02%
Japan—Nikkei 225	-8.05	-20.16%	7.12%	19.14%	4.76%	14.06%	-9.94%
Mexico—Bolsa	-25.02	-3.82%	47.82%	42.52%	39.14%	9.80%	-15.31%
Swiss	-10.69	-10.12%	27.27%	12.68%	7.56%	10.17%	-11.65%
United States—DJIA	-15.82	-7.44%	19.08%	-1.66%	-2.50%	5.16%	-15.75%
United States—S&P 500	-22.07	-10.28%	15.90%	1.41%	2.64%	5.59%	-22.78%

Source: Bloomberg.

Investors that limit themselves to domestic markets may experience below average ROI.  
 Notice that Canadian and Mexican equity markets produced comparatively high returns in the 2003-06 period.

# The Case for Global Investments: Diversification

- Diversification with foreign securities can help reduce portfolio risk because foreign markets have low correlation with Canadian capital markets.
- The correlation of returns between a single pair of countries changes over time because the factors influencing the correlation change over time.

# The Case for Global Investments: Diversification

- Diversified portfolios reduce variability of returns over time.
- Correlation coefficients measure diversification contribution.
- Correlations range from -1.00 to +1.00
- Combining investments with perfect positive correlation will NOT help diversification.
- Combining two assets with negative correlation is ideal for diversification