



Research Affiliates Fundamental Index[®] and the 3-D Hurricane

**Surviving the Coming Storm of
Deficits, Debt, and Demographics**

CFA UK Society

May 27, 2011



Overview

- **Capital Market Assumptions**
- **Research Affiliates Fundamental Index**
- **Asset Allocation - Putting It All Together**

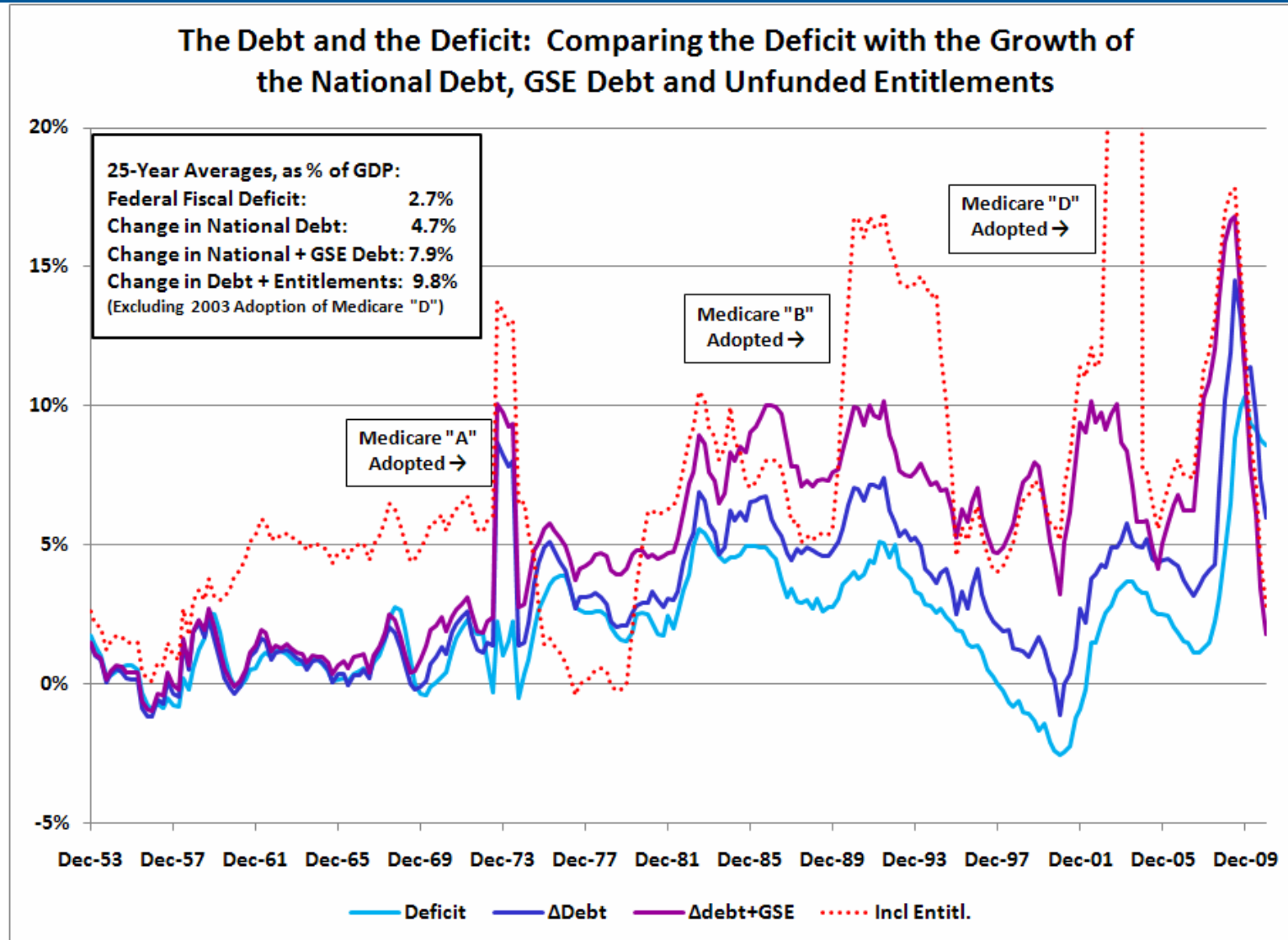


Looking to the Future

A 3-D Hurricane: Our Deficit, Debt, and Demographics



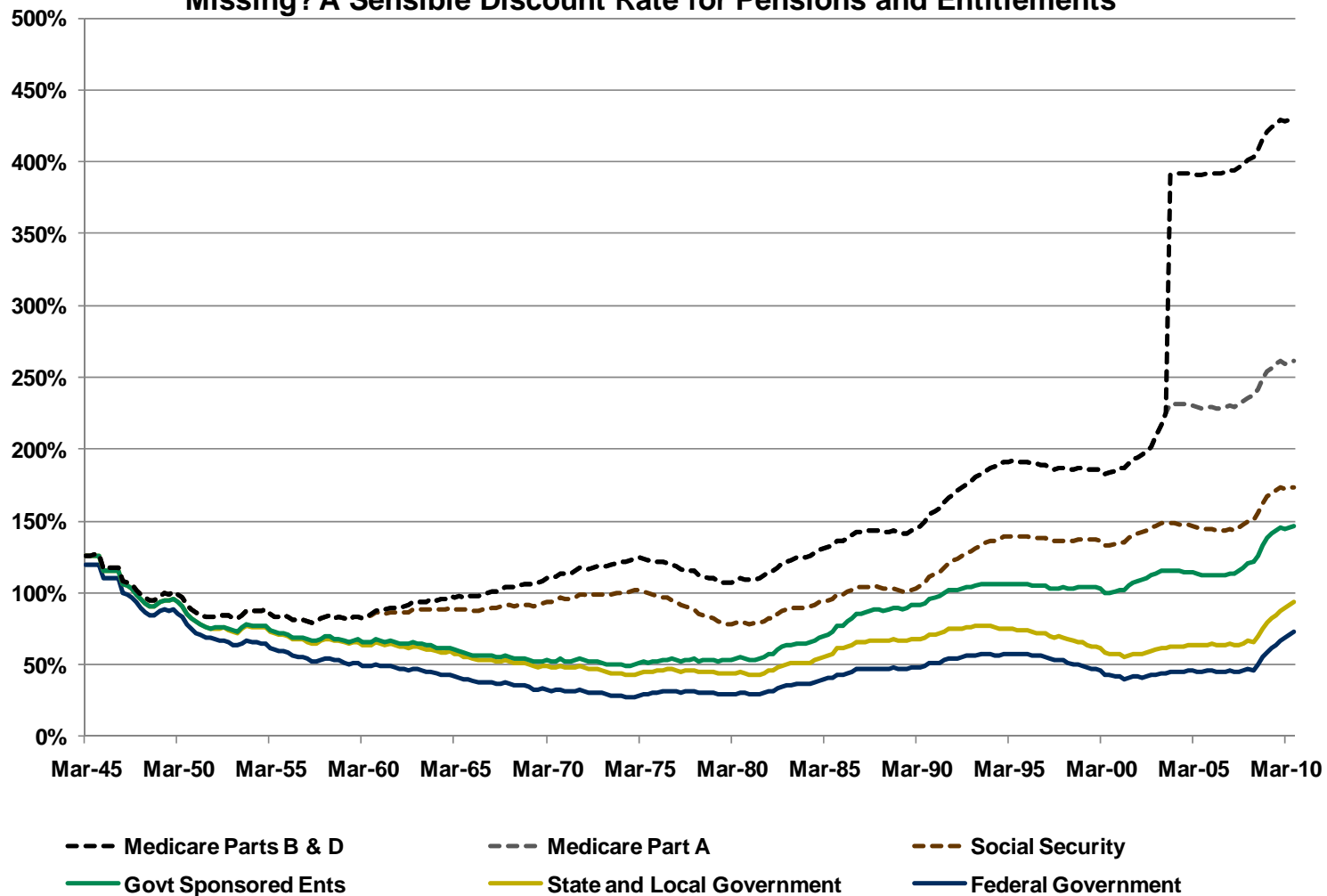
What's the True Deficit? Under GAAP Accounting, Far Higher Than Official Statistics



Source: Research Affiliates, LLC, based on data and projections from the U.S. Treasury Department.

Public Debt and Entitlement Obligations are Growing at a Frightful Pace

A Closer Look at the Public Sector, through Q3 2010
Missing? A Sensible Discount Rate for Pensions and Entitlements



Source: Research Affiliates, based on data from Federal Reserve Flow of Funds, 2010 Q3 Release.

Comparing Debt Levels: Developed versus Emerging Countries

Comparing Debt Levels with Factors of Production

Developed Country	Bond Cap Wt	Public Net Debt	GDP Weight	Pop Weight	Sqr Area Wt	Energy Wt	RAFI Wt
Australia	0.5%	0.4%	1.5%	0.4%	5.2%	1.2%	2.1%
Austria	1.0%	0.8%	0.6%	0.2%	0.5%	0.3%	0.4%
Belgium	1.5%	1.3%	0.7%	0.2%	0.3%	0.7%	0.5%
Canada	1.6%	2.9%	2.2%	0.6%	6.0%	3.3%	3.0%
Denmark	0.5%	0.0%	0.4%	0.1%	0.4%	0.2%	0.3%
Finland	0.3%	0.3%	0.3%	0.1%	1.1%	0.3%	0.5%
France	5.2%	6.0%	3.9%	1.2%	1.4%	2.7%	2.3%
Germany	5.3%	7.3%	5.0%	1.6%	1.1%	3.3%	2.7%
Greece	1.4%	1.1%	0.5%	0.2%	0.7%	0.4%	0.4%
Ireland	0.6%	0.4%	0.3%	0.1%	0.5%	0.2%	0.3%
Italy	6.2%	7.0%	3.2%	1.1%	1.0%	1.9%	1.8%
Japan	28.8%	26.3%	7.6%	2.5%	1.2%	5.4%	4.1%
Netherlands	1.4%	1.4%	1.2%	0.3%	0.4%	1.0%	0.7%
New Zealand	0.1%	0.1%	0.2%	0.1%	1.0%	0.2%	0.4%
Norway	0.1%	0.5%	0.5%	0.1%	1.1%	0.4%	0.5%
Poland	0.5%	0.5%	0.9%	0.8%	1.1%	1.0%	0.9%
Portugal	0.6%	0.5%	0.4%	0.2%	0.6%	0.2%	0.3%
South Korea	1.6%	0.7%	1.8%	0.8%	0.5%	2.4%	1.4%
Slovakia	0.1%	0.1%	0.2%	0.1%	0.4%	0.2%	0.2%
Slovenia	0.1%	0.0%	0.1%	0.0%	0.3%	N/A	0.1%
Spain	2.4%	2.6%	2.3%	0.8%	1.3%	1.5%	1.5%
Sweden	0.3%	0.4%	0.6%	0.2%	1.3%	0.5%	0.6%
Switzerland	0.4%	0.0%	0.7%	0.1%	0.4%	0.3%	0.4%
United Kingdom	5.8%	4.4%	3.5%	1.2%	0.9%	2.3%	2.0%
United States	23.2%	26.5%	23.6%	5.9%	5.9%	24.1%	14.7%
Prudent Nine	3.6%	5.2%	6.4%	2.4%	17.7%	7.2%	8.3%
"PIIGS"	11.2%	11.7%	6.7%	2.5%	4.1%	4.2%	4.3%
G-5	68.3%	70.5%	43.7%	12.5%	10.6%	37.8%	25.8%
ALL DEVELOPED	89.5%	91.7%	62.4%	19.1%	35.3%	54.1%	42.2%

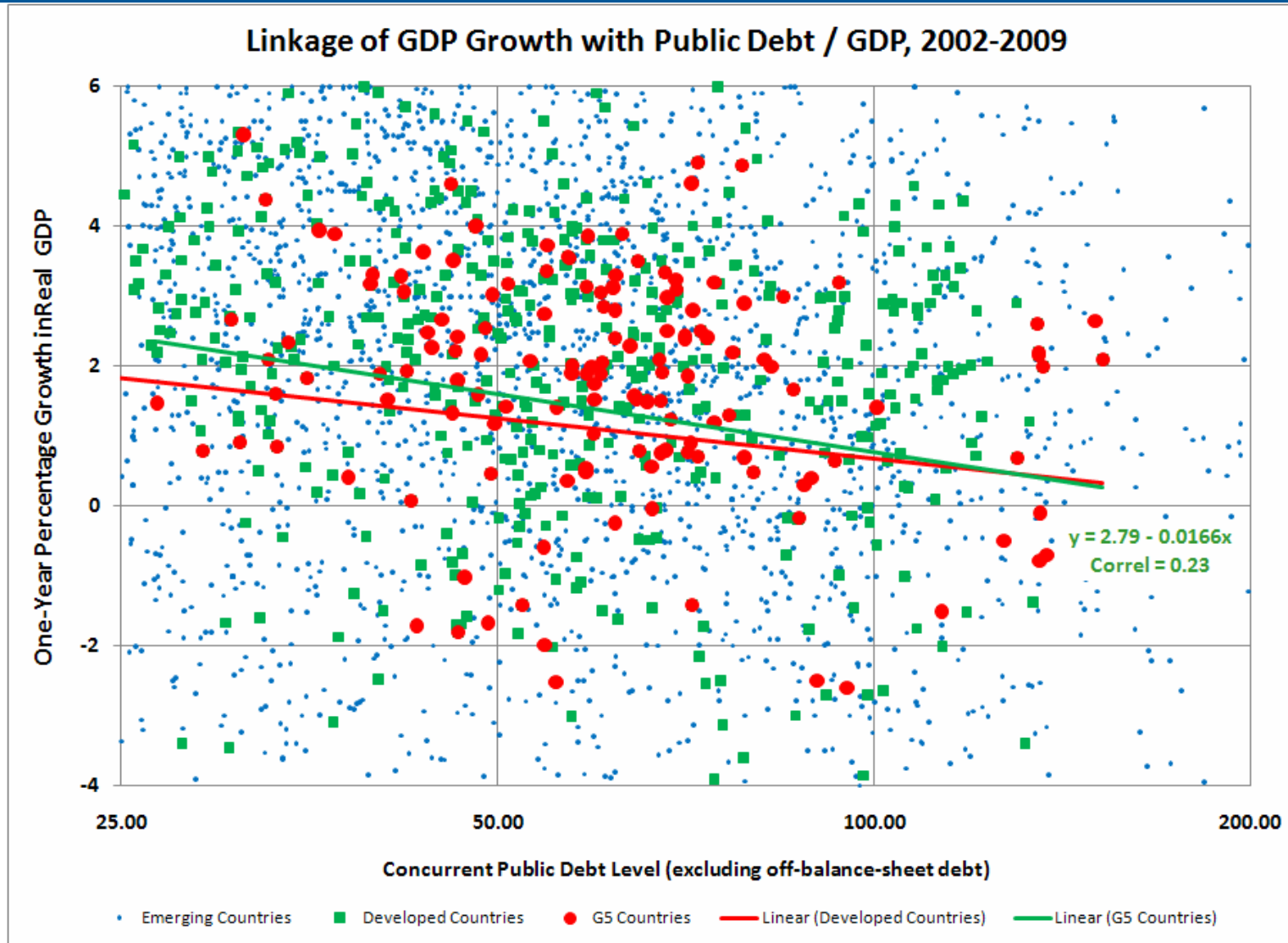
Emerging Country	Bond Cap Wt	Public Net Debt	GDP Weight	Pop Weight	Sqr Area Wt	Energy Wt	RAFI Wt
Argentina	0.2%	0.4%	0.7%	0.8%	3.1%	0.7%	1.3%
Brazil	0.8%	2.3%	3.0%	3.7%	5.5%	2.2%	3.5%
Bulgaria	0.0%	0.0%	0.1%	0.2%	0.6%	0.2%	0.3%
Chile	0.0%	0.0%	0.3%	0.3%	1.6%	0.3%	0.6%
China	2.3%	-1.4%	11.9%	25.9%	5.9%	17.8%	15.1%
Colombia	0.2%	0.3%	0.5%	0.9%	2.0%	0.3%	0.9%
Croatia	0.0%	0.1%	0.1%	0.1%	0.4%	N/A	0.2%
Czech Republic	0.2%	0.1%	0.4%	0.2%	0.5%	0.5%	0.4%
Dominican Republic	0.0%	0.1%	0.1%	0.2%	0.4%	N/A	0.2%
Ecuador	0.0%	0.1%	0.3%	1.0%	1.0%	0.1%	0.4%
Egypt	0.1%	0.4%	0.6%	1.4%	1.9%	0.6%	1.1%
El Salvador	0.0%	0.0%	0.1%	0.1%	0.3%	N/A	0.2%
Gabon	0.0%	0.0%	0.0%	0.0%	1.0%	N/A	0.3%
Ghana	0.0%	0.0%	0.0%	0.4%	0.9%	N/A	0.5%
Hong Kong	0.0%	-0.3%	0.4%	0.1%	0.0%	0.3%	0.2%
Hungary	0.2%	0.2%	0.3%	0.2%	0.6%	0.3%	0.3%
India	1.8%	2.1%	4.2%	21.6%	3.4%	4.0%	8.2%
Indonesia	0.3%	0.4%	1.3%	4.4%	2.6%	1.2%	2.3%
Israel	0.2%	0.3%	0.3%	0.1%	0.3%	N/A	0.2%
Lebanon	0.0%	0.1%	0.1%	0.1%	0.2%	N/A	0.1%
Lithuania	0.0%	0.0%	0.1%	0.1%	0.5%	0.1%	0.2%
Malaysia	0.4%	0.2%	0.5%	0.5%	1.1%	0.6%	0.7%
Mexico	0.6%	1.0%	2.0%	2.1%	2.7%	1.6%	2.0%
Morocco	0.0%	0.1%	0.2%	0.6%	1.3%	N/A	0.7%
Pakistan	0.0%	0.2%	0.5%	3.0%	1.7%	0.6%	1.4%
Panama	0.0%	0.0%	0.1%	0.1%	0.5%	N/A	0.2%
Peru	0.1%	0.1%	0.3%	0.5%	2.1%	0.1%	0.8%
Philippines	0.2%	0.2%	0.4%	1.7%	1.0%	0.3%	0.8%
Romania	0.0%	0.0%	0.3%	0.4%	0.9%	0.4%	0.5%
Russia	0.4%	-0.5%	2.8%	2.8%	7.8%	7.0%	5.0%
South Africa	0.4%	0.2%	0.7%	0.9%	2.1%	1.3%	1.2%
Serbia	0.0%	0.0%	0.1%	0.1%	0.6%	N/A	0.3%
Singapore	0.2%	0.2%	0.4%	0.1%	0.0%	0.5%	0.3%
Si Lanka	0.0%	0.1%	0.1%	0.4%	0.5%	N/A	0.3%
Taiwan	0.6%	-0.3%	1.3%	0.5%	0.2%	1.2%	0.8%
Thailand	0.3%	0.2%	0.7%	1.3%	1.4%	0.9%	1.0%
Tunisia	0.0%	0.0%	0.1%	0.2%	0.8%	N/A	0.4%
Turkey	0.5%	0.8%	1.3%	1.4%	1.7%	1.0%	1.3%
Ukraine	0.0%	0.1%	0.3%	0.9%	1.5%	1.4%	1.0%
Uruguay	0.0%	0.0%	0.1%	0.1%	0.8%	N/A	0.3%
Venezuela	0.1%	0.1%	0.5%	0.5%	1.8%	0.7%	0.9%
Vietnam	0.0%	0.1%	0.3%	1.6%	1.1%	N/A	1.0%
BRICs	5.2%	2.5%	21.9%	54.0%	22.6%	30.9%	31.9%
ALL EMERGING	10.5%	8.3%	37.6%	80.9%	64.7%	45.9%	57.8%

Debt is More than Double RAFI Scale
Debt is More than 25% above RAFI Scale

Debt is Less than Half RAFI Scale
Debt is More than 25% below RAFI Scale

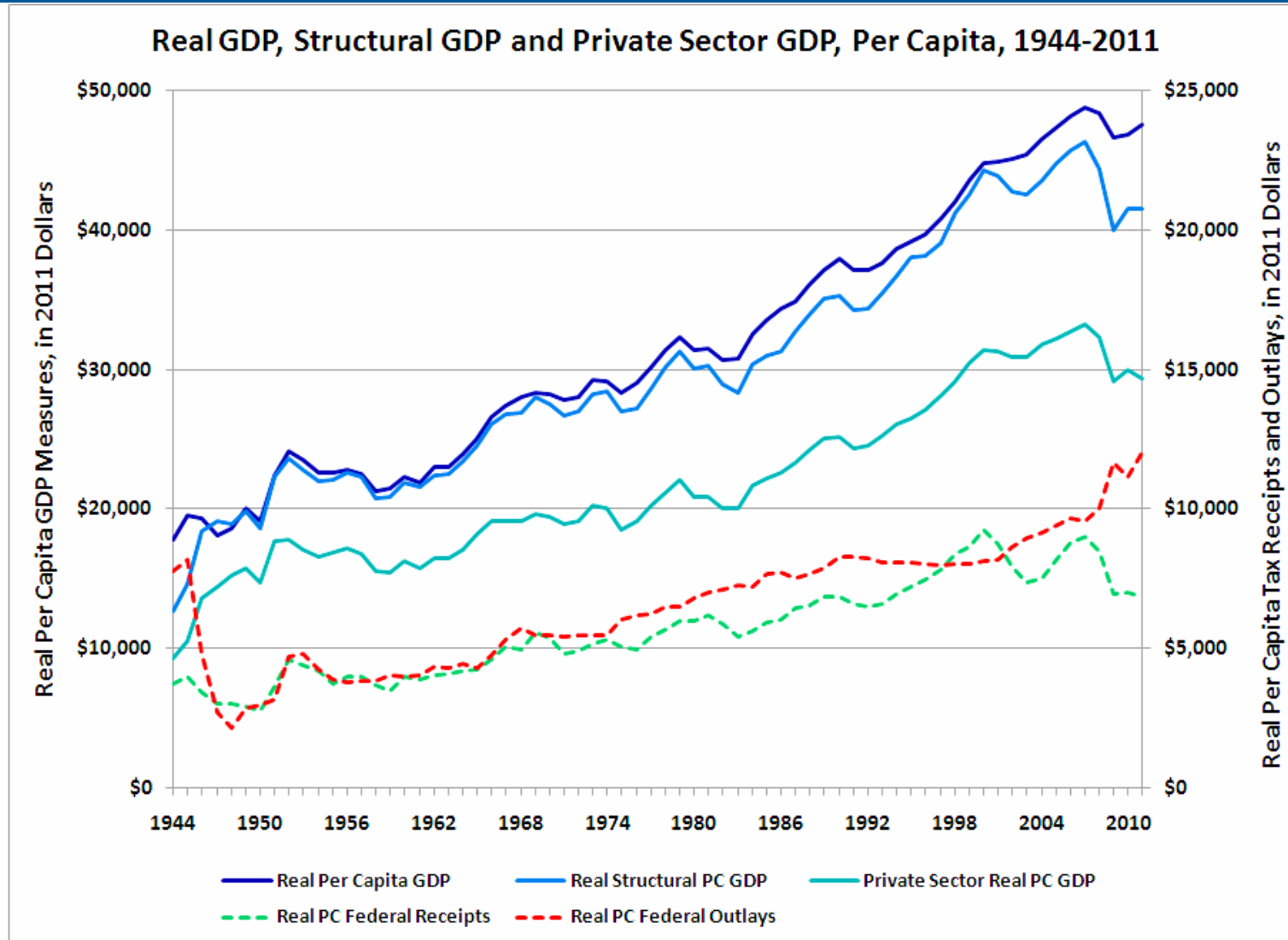
Source: Research Affiliates, LLC, based on data from CIA World Fact Book 2010, International Monetary Fund.

Comparing Debt Levels: Recent Effects on Growth



Source: Research Affiliates, LLC, based on data from CIA World Fact Book 2010, International Monetary Fund.

GDP is the Wrong Measure for Prosperity, Anyway! Structural GDP (Net of New Borrowing), is Much More Important

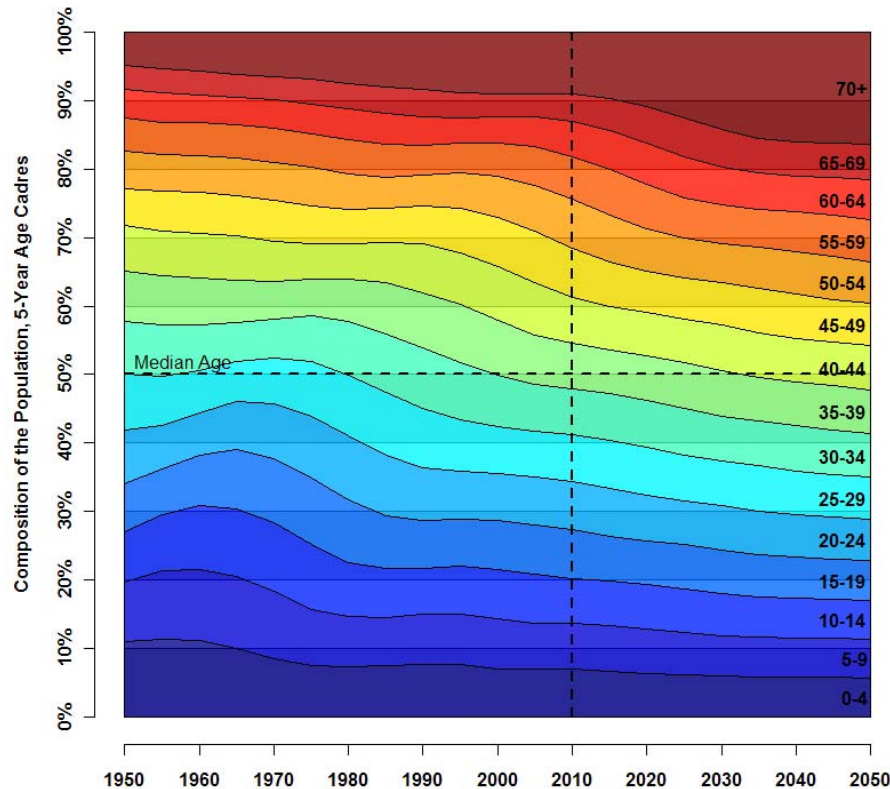


Source: Research Affiliates, LLC, based on data from OMB, Department of Commerce and NIPA.

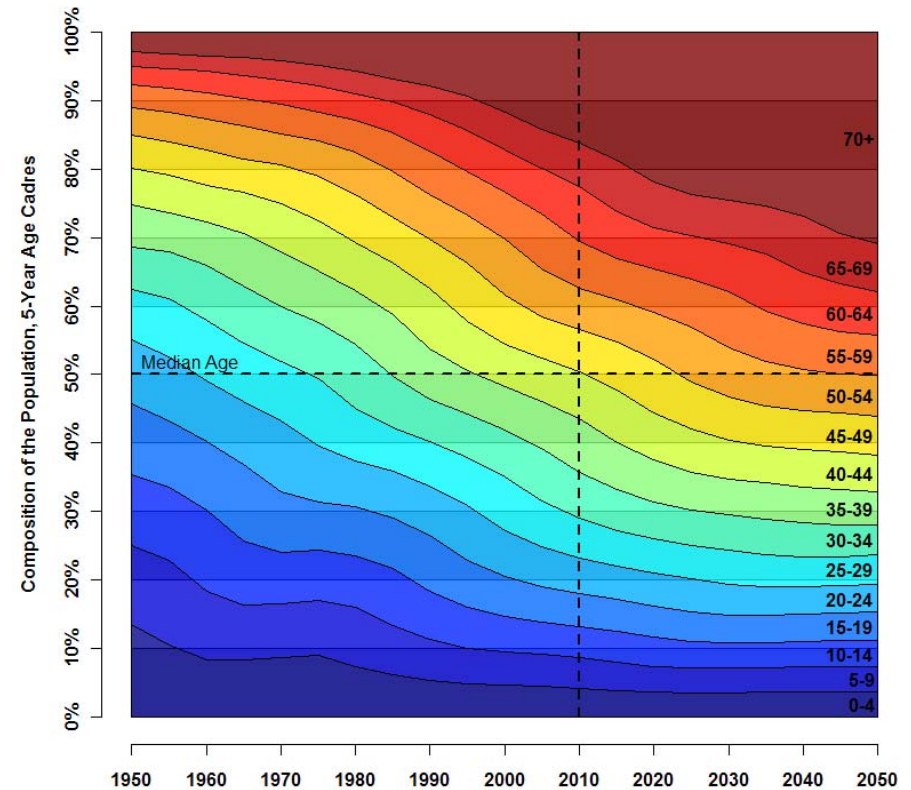
And Demographics Won't Make This Any Easier in the Years Ahead

Whither US? Whither Japan?

USA - Distribution of the Population, 1950-2050



Japan - Distribution of the Population, 1950-2050

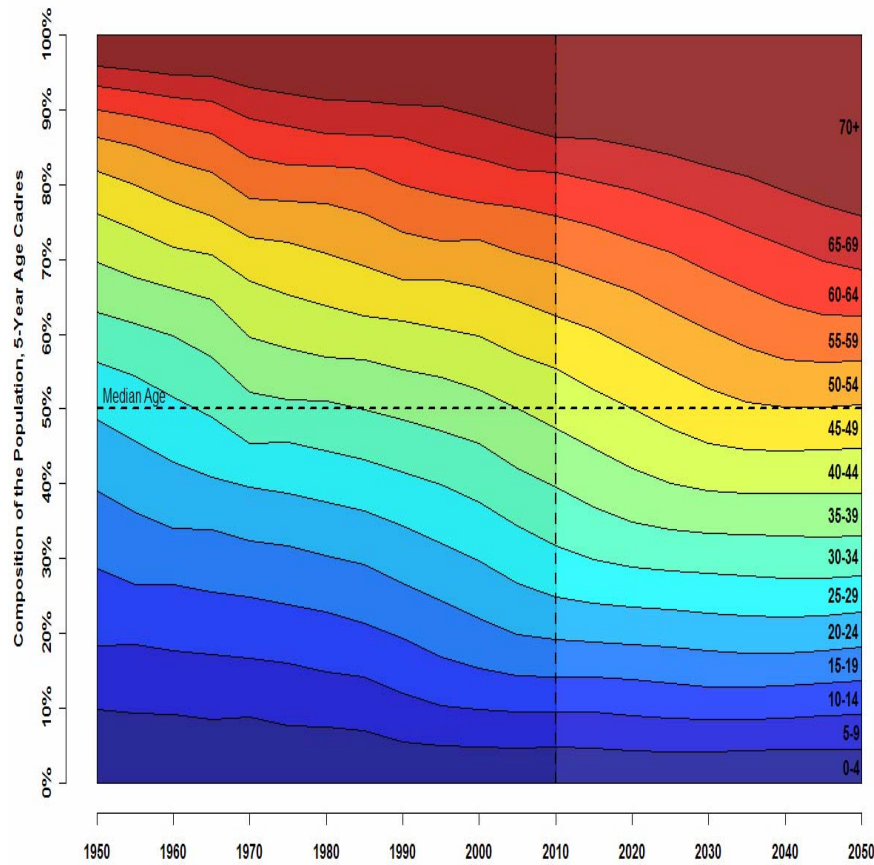


Source: Research Affiliates, LLC, based on data from U.S. Census, United Nations.

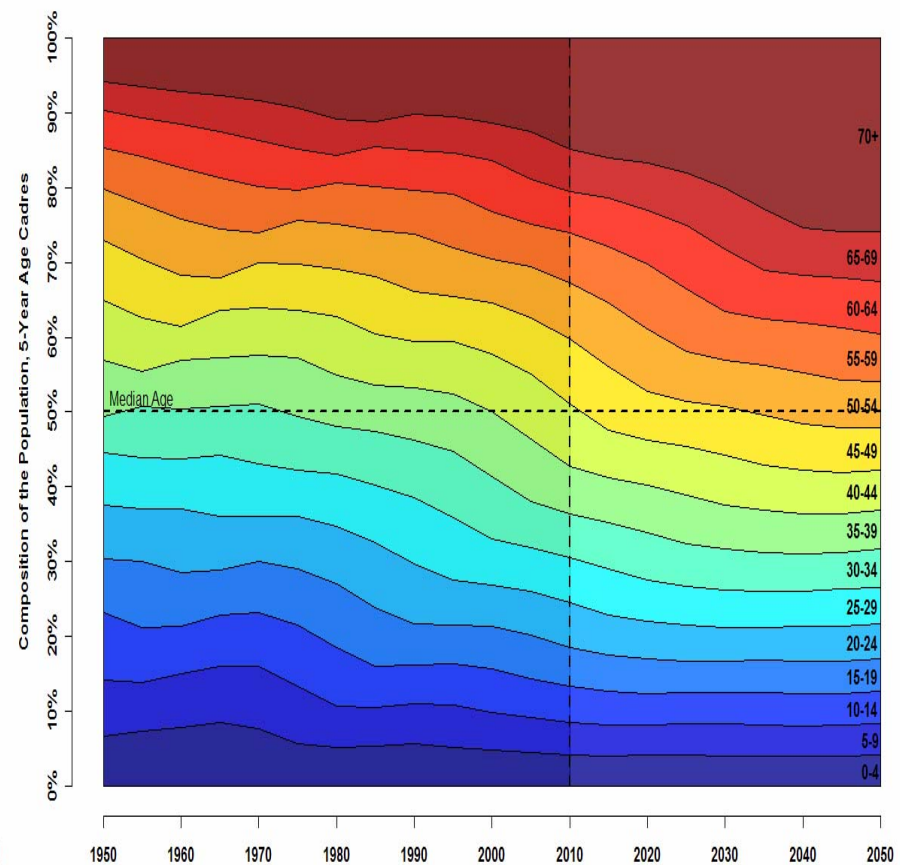
Europe, Graying Fast

Can Germany Save Greece?

Greece-Distribution of the Population, 1950-2050



Germany-Distribution of the Population, 1950-2050

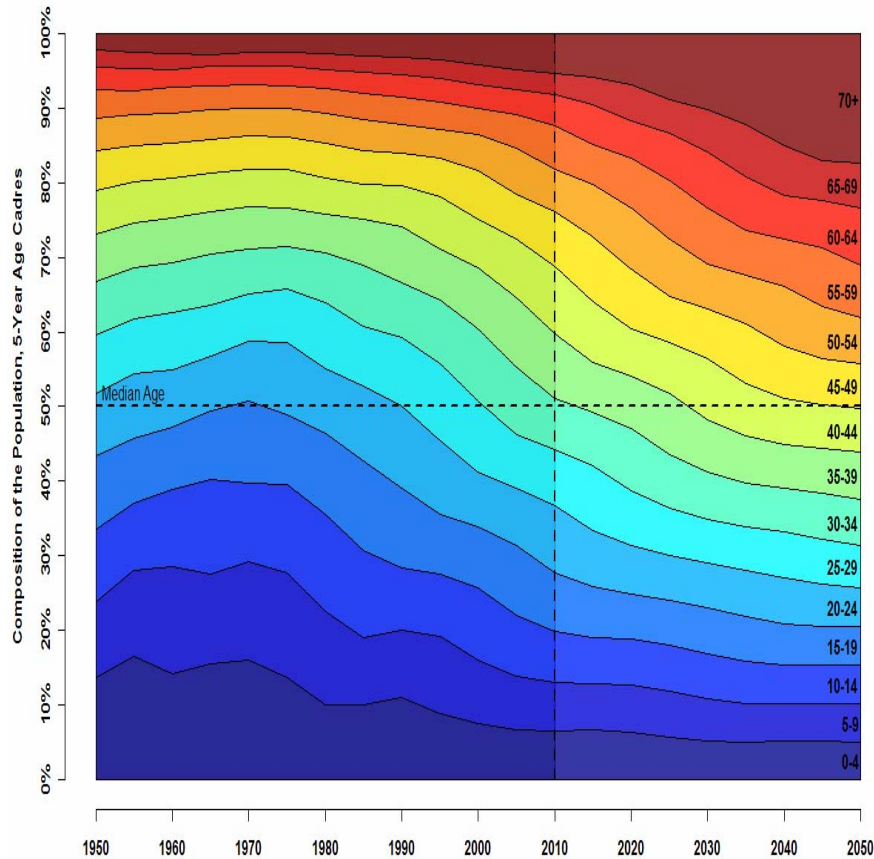


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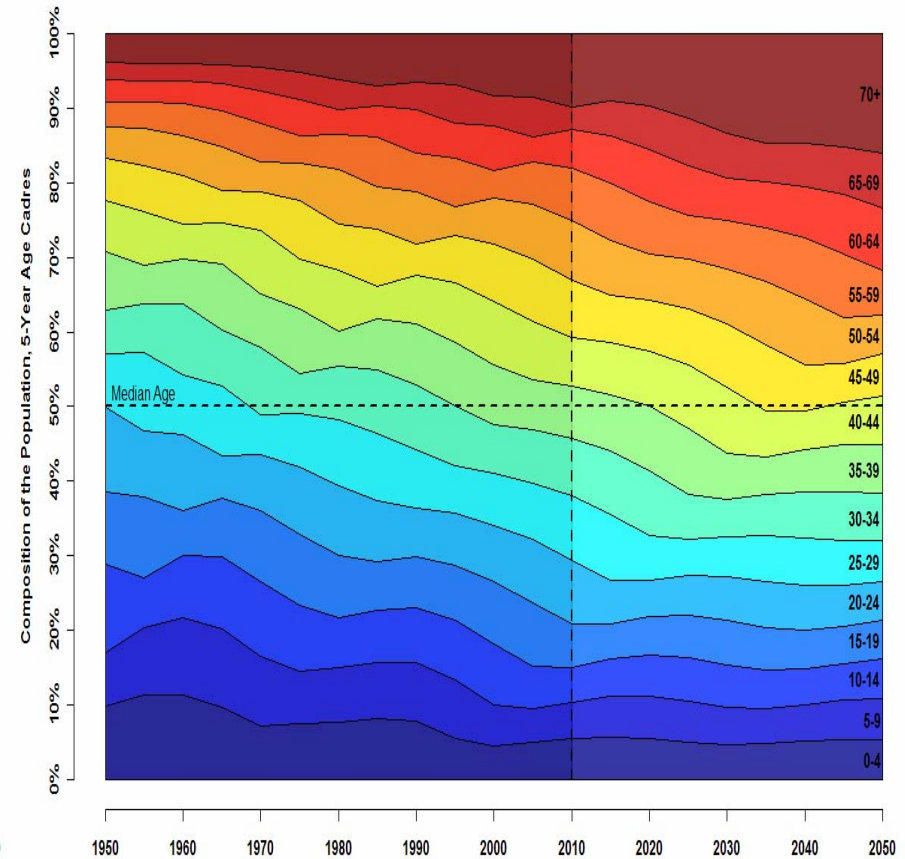
Demographic Picture Brightens in EM Our Headwinds are their Tailwinds

China and Russia are Aging but Well Behind the Developed World

China-Distribution of the Population, 1950-2050



Russia-Distribution of the Population, 1950-2050

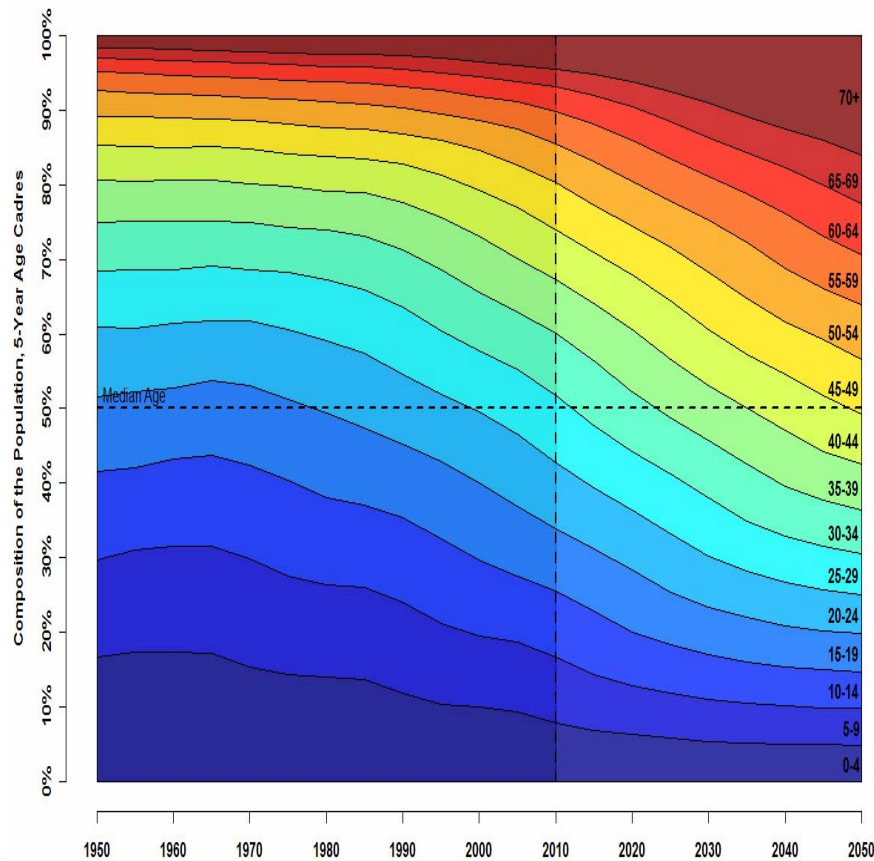


Source: Research Affiliates, LLC, based on data from U.S. Census, United Nations.

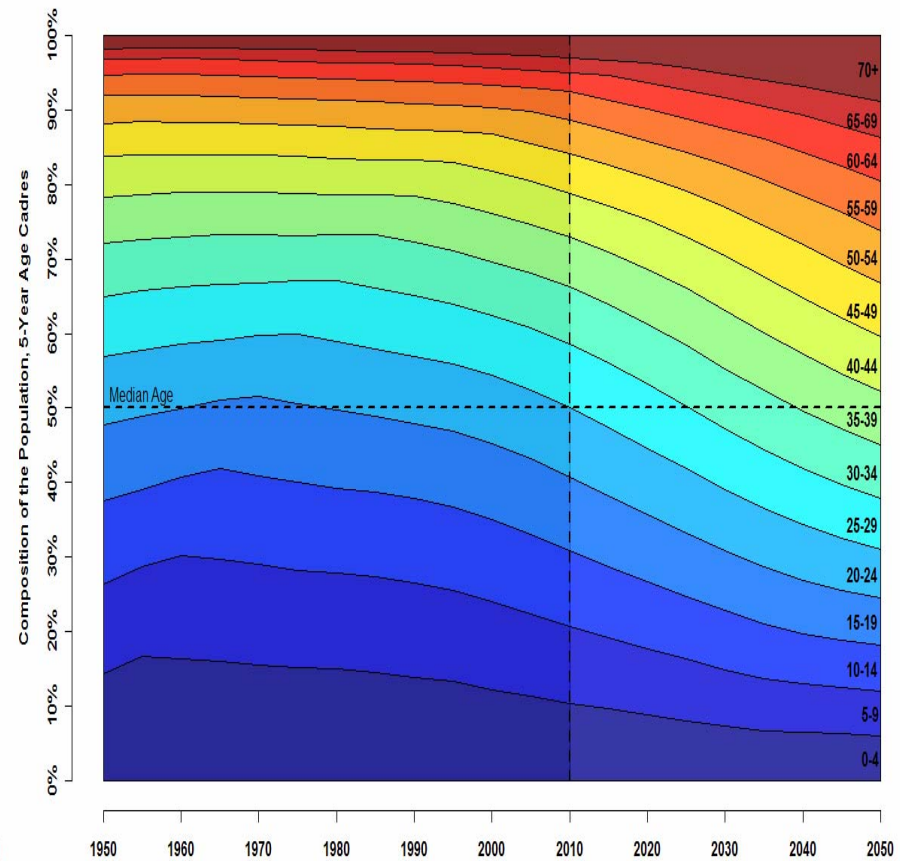
Demographic Picture Brightens in EM Our Headwinds are their Tailwinds

Brazil and India are in an Entirely Different League

Brazil-Distribution of the Population, 1950-2050

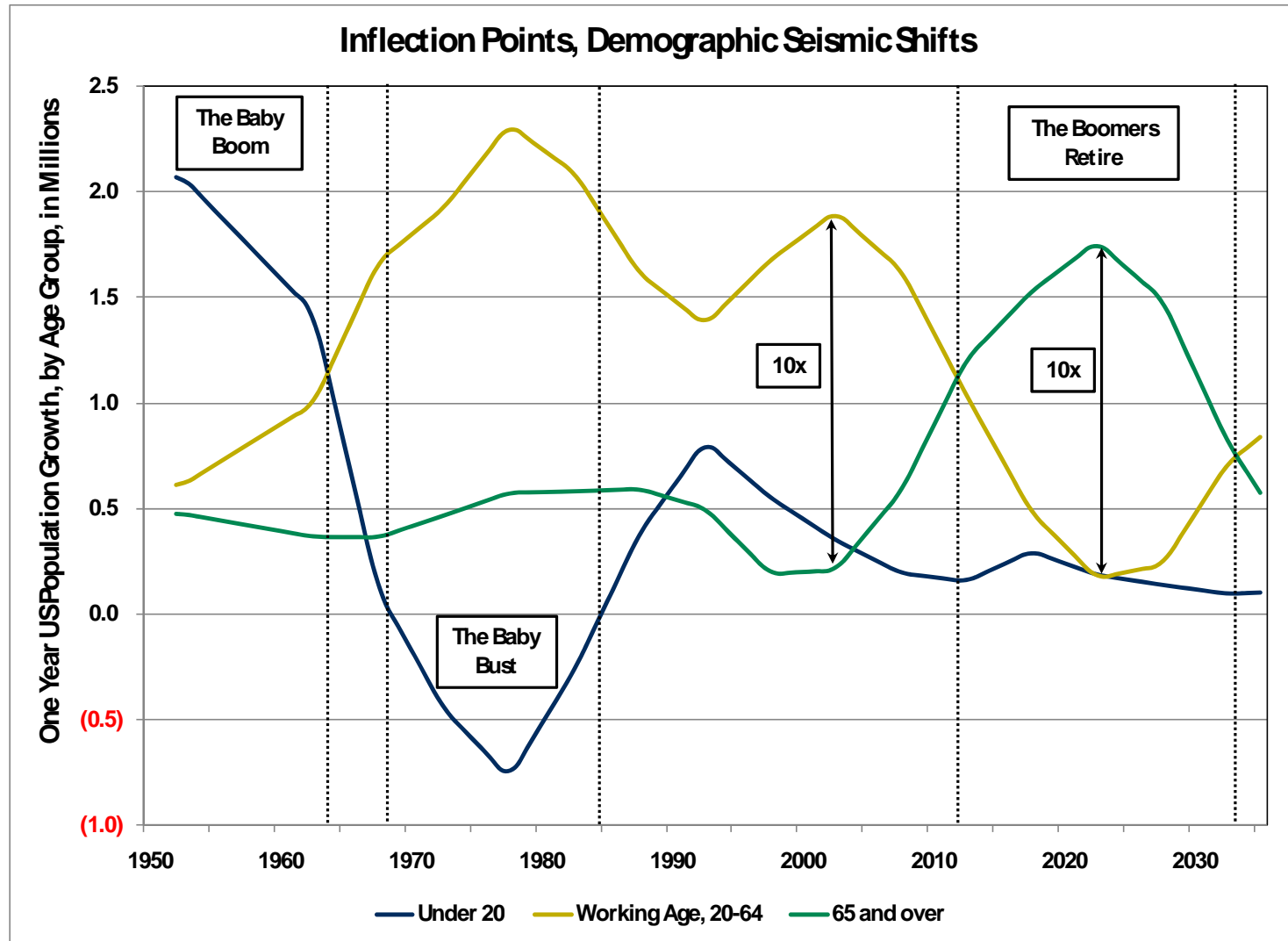


India-Distribution of the Population, 1950-2050



Source: Research Affiliates, LLC, based on data from U.S. Census, United Nations.

And Demographics Won't Make This Any Easier in the Years Ahead



Source: Research Affiliates, LLC, based on population data and projections from the U.S. Social Security Administration.

Investment Implications

If our debt burden is too large, choices are: Pay the debt, abrogate, or reflate

Which will our politicians choose?

- Inflation protection will be priced at a premium
- Retirees selling assets to a proportionally smaller pool of buyers
- Equities under pressure
- Opportunities in emerging markets

The “Third Pillar” of our portfolio: diversifying into EM, alternative markets, and inflation hedges



Equity Philosophy

**Indexing is a Great Strategy
(if properly designed)**



Frame of Reference: Two Views on the Markets

Cap-Weight Market Centric View

- Markets are efficient—prices reflect true valuations
- Departures from cap weight are active bets, inherently a zero-sum game
- Invest in companies proportional to market valuation
- Seek equity risk premium not alpha

Impossible to beat cap-weighted index, except by luck; value premium and size premium are anomalies, contradicting EMH and CAPM theories, unless there are hidden risks or different discount rates.

Graham & Dodd Economy-Centric View

- Markets are constantly seeking fair value, but prices are rarely right
- Some companies can get overpriced, some underpriced
- The market itself makes active bets
- Create valuation model of the company and invest in ones which offer the best rate of return

Cap-weighted index overweights the overpriced and underweights the underpriced; result is a return drag, relative to its opportunity set. Cap-weighted index favors popularity and comfort; not sensible.

The Advantages of Passive Investing

Index funds are a compelling choice for investors

- Broad market exposures
- Diversification
- Large investment capacity
- Low fees and expenses
- Low due diligence and monitoring costs
- Superior performance over time relative to most active managers

The RAFI Approach

Select and weight stocks by non-price measures of firm size

- Sales, cash flow, dividends, and book value

Achieve excess returns over cap weighting¹

- 2–4% in developed markets
- Greater in less efficient markets

Preserve the advantages of passive investing

- Diversification
- Liquidity
- Transparency
- Broad economic representation
- Low cost access to equity markets

¹Based on Research Affiliates historical simulated data using CRSP, Compustat, Worldscope and Datastream, on universe of U.S. equities 1962-2009 and International equities 1984-2009.

RAFI Factors: Why These Metrics?

Metrics are not correlated with price

- Pricing errors are uncorrelated (and cancel)
- Both overvalued and undervalued stocks will be either overweighted or underweighted, but the errors largely offset each other

Metrics reflect objective measures of relative size

- Widely acceptable measures of company size
- Less susceptible to gaming
- Easily accessible data
- Not intended to be predictive of future size or value
- Broadly available across countries

Simulated RAFI Developed 1000 1984–2010

Index	Ending Value of \$1	Annual Return	Volatility	Sharpe Ratio	Tracking Error
MSCI World	\$13	9.9%	15.6%	0.32	---
Equal Weight Developed 1000	\$16	10.8%	15.8%	0.37	2.9%
Book	\$21	12.0%	15.8%	0.44	4.4%
Cash Flow	\$28	13.1%	15.0%	0.54	4.4%
Sales	\$26	12.8%	16.4%	0.48	5.2%
Gross Dividend	\$28	13.2%	14.7%	0.56	6.2%
RAFI Composite	\$26	12.8%	15.3%	0.51	4.6%

Source: Research Affiliates, LLC. based on data from Bloomberg, Datastream and Worldscope. THE INDEX DATA PUBLISHED HEREIN IS SIMULATED, UNMANAGED AND CANNOT BE INVESTED IN DIRECTLY. PAST SIMULATED PERFORMANCE IS NO GUARANTEE OF FUTURE PERFORMANCE AND IS NOT INDICATIVE OF ANY SPECIFIC INVESTMENT. ACTUAL INVESTMENT RESULTS MAY DIFFER.

Benefits of a Composite Approach

Any single-metric index works, but has a structural bias

- Sales—overexposed to large companies with thin margins
- Cash flow—overexposed to cyclical stocks at cyclical peaks
- Dividends—overexposed to mature, high-yield companies and exclusion of growth companies
- Book value—overexposed to companies with aggressive accounting

Composite approach improves methodology

- Diversifies exposure to data source, sectors, and other risks
- Improves robustness of methodology
- Improves stability of factors
- Superior risk–return performance*

*Research Affiliates historical simulated data based on universe of U.S. equities 1962-2009.

Original Research: Simulated Results

A Look Back

1983 - 2004			
Country	RAFI Return	MSCI Return	Value Added
Ireland	19.6%	10.9%	8.6%
Austria	16.6%	11.7%	4.9%
France	16.3%	12.4%	3.9%
Singapore	11.1%	7.2%	3.9%
Norway	15.0%	11.2%	3.8%
Spain	15.9%	12.3%	3.6%
Canada	13.2%	9.7%	3.5%
Portugal	10.7%	7.4%	3.3%
Greece	21.3%	18.1%	3.2%
United Kingdom	14.9%	11.8%	3.1%
Japan	6.4%	3.3%	3.1%
Hong Kong	20.5%	17.6%	2.9%
Germany	12.0%	9.1%	2.9%
Australia	15.5%	13.0%	2.6%
Italy	15.6%	13.3%	2.2%
United States	15.1%	12.9%	2.2%
Denmark	11.3%	9.1%	2.1%
Sweden	16.7%	14.8%	1.9%
Finland	13.9%	12.3%	1.6%
Netherlands	13.4%	11.9%	1.5%
Belgium	15.8%	14.4%	1.4%
New Zealand	6.5%	6.6%	-0.1%
Switzerland	10.8%	11.3%	-0.6%
23-Country Average	15.9%	13.3%	2.7%

- Average outperformance of 2.7%
- Excess return in 21 of 23 markets
- Value tailwind

Note: 23- Country Average values are determined from the return series of the average country, not the average of each respective statistic in the above table.

Source: Research Affiliates, LLC. Based on data from Worldscope, Datastream, CRSP and Compustat. THE INDEX DATA PUBLISHED HEREIN IS SIMULATED, UNMANAGED AND CANNOT BE INVESTED IN DIRECTLY. PAST SIMULATED PERFORMANCE IS NO GUARANTEE OF FUTURE PERFORMANCE AND IS NOT INDICATIVE OF ANY SPECIFIC INVESTMENT. ACTUAL INVESTMENT RESULTS MAY DIFFER.

RAFI Five-Year Scorecard

Live Results

11/28/2005 - 12/31/2010

Country	RAFI Return	MSCI Return	Value Added
Austria	1.8%	-8.0%	9.8%
Hong Kong	17.3%	11.9%	5.4%
Germany	9.1%	5.1%	4.0%
Greece	-13.6%	-17.1%	3.4%
Belgium	-4.3%	-7.7%	3.4%
Sweden	10.8%	7.8%	2.9%
Finland	3.5%	0.6%	2.9%
Singapore	12.8%	10.5%	2.3%
United States	4.6%	2.3%	2.3%
Italy	-3.6%	-5.9%	2.3%
Japan	-6.2%	-8.2%	2.0%
France	2.3%	0.7%	1.6%
Portugal	2.7%	1.1%	1.6%
Canada	8.1%	7.1%	1.0%
Spain	3.6%	2.6%	0.9%
Switzerland	0.5%	-0.3%	0.8%
Norway	6.2%	5.6%	0.6%
Australia	5.4%	5.0%	0.4%
New Zealand	-1.9%	-2.2%	0.3%
United Kingdom	4.8%	5.1%	-0.2%
Netherlands	-0.7%	2.5%	-3.1%
Ireland	-24.7%	-21.6%	-3.2%
Denmark	4.9%	9.3%	-4.4%
23-Country Average	1.9%	0.3%	1.6%

- Full market cycle
- Average outperformance of 1.6%
- Excess return in 19 of 23 markets
- Value headwind

Note: 23- Country Average values are determined from the return series of the average country, not the average of each respective statistic in the above table.

Source: Research Affiliates, LLC. Based on data from Bloomberg.

RAFI Performance Across Markets

Through December 2010	Annualized Return	Annualized Volatility	Annualized Value Add	% 3-Year Wins	Start Date
Simulated RAFI US Large S&P 500	11.6% 9.4%	15.4% 15.2%	2.2%	74.5%	1962
Simulated RAFI - 23 Country Average MSCI - 23 Country Average	14.0% 11.1%	15.6% 15.9%	2.8%	94.8%	1984
Simulated RAFI U.S. Small Russell 2000	15.9% 11.8%	20.0% 20.0%	4.2%	99.7%	1979
Simulated RAFI All World 3000 MSCI All Country World	13.7% 9.1%	15.5% 15.7%	4.7%	89.6%	1984
Simulated RAFI Int'l. Small 1500 MSCI EAFE Small Cap	14.2% 9.1%	17.5% 19.7%	5.0%	96.3%	1999
Simulated RAFI EM MSCI EM	16.6% 7.1%	25.1% 24.5%	9.5%	96.4%	1994

- **Add 2–4% in most markets, more in less efficient markets**
- **Average over 90% win ratio in rolling three-year periods**

Source: Research Affiliates, LLC. based on data from Worldscope, Datastream, CRSP, and Compustat. The 23-Developed Countries correspond to a study conducted by Research Affiliates. THE INDEX DATA PUBLISHED HEREIN IS SIMULATED, UNMANAGED AND CANNOT BE INVESTED IN DIRECTLY. PAST SIMULATED PERFORMANCE IS NO GUARANTEE OF FUTURE PERFORMANCE AND IS NOT INDICATIVE OF ANY SPECIFIC INVESTMENT. ACTUAL INVESTMENT RESULTS MAY DIFFER.

Fundamental Index Performance

	4/30/2011	3 Month	1 Year	3 Year	Since Launch	Launch Date
FTSE RAFI All World 3000		6.9%	19.3%	3.2%	11.4%	9/22/2008
MSCI All World		7.2%	19.1%	0.4%	7.7%	
	Value Added	-0.3%	0.2%	2.8%	3.6%	
FTSE RAFI US 1000		6.7%	17.2%	5.6%	6.0%	11/28/2005
Russell 1000		6.9%	18.0%	2.3%	4.0%	
	Value Added	-0.2%	-0.9%	3.3%	2.0%	
FTSE RAFI US MS 1500		9.8%	19.4%	13.0%	7.3%	5/4/2006
Russell 2000		11.1%	22.2%	8.0%	3.7%	
	Value Added	-1.3%	-2.8%	5.0%	3.6%	
FTSE RAFI Developed ex-US 1000		7.1%	20.6%	0.3%	7.6%	11/28/2005
MSCI EAFE		7.2%	19.7%	-2.4%	5.3%	
	Value Added	-0.1%	0.9%	2.7%	2.3%	
FTSE RAFI Dev. ex-US MS 1500		5.5%	18.6%	4.8%	1.6%	8/6/2007
MSCI EAFE Small		7.6%	24.5%	2.7%	-0.6%	
	Value Added	-2.1%	-5.9%	2.1%	2.1%	
FTSE RAFI Emerging Markets		6.2%	20.7%	5.7%	7.5%	7/9/2007
MSCI Emerging Markets		8.2%	21.0%	3.0%	4.5%	
	Value Added	-2.0%	-0.3%	2.7%	2.9%	

Note: The index version of the RAFI methodology, or the FTSE RAFI Indexes, is licensed globally by our partner the FTSE Group. All returns are Total Returns in USD with the exception of the FTSE RAFI Developed ex-US MS 1500 and MSCI EAFE Small Cap Index which are price returns.

This material relates only to a hypothetical model of past performance of the Fundamental Index® strategy itself, and not to any asset management products based on this index. No allowance has been made for trading costs or management fees which would reduce investment performance. Actual results may differ. Indexes are not managed investment products, and, as such cannot be invested in directly. Returns represent performance based on rules used in the creation of the index, are not a guarantee of future performance and are not indicative of any specific investment. Returns listed prior to the individual indexes launch dates are simulated.

Source: Research Affiliates, LLC., based on data from Bloomberg.

Extension of Fundamental Index Strategies

Traditional Asset Classes

Fixed Income

- Credit
 - Investment Grade
 - High Yield
- Sovereign
 - Developed
 - Emerging Markets

Size and Style

- Nine categories
- Large, mid, and small
- Growth, value, and core

Alternative Asset Classes

Real Estate

- Global REITs
- U.S. REITs

Long/Short

- Global
- U.S.
- Various implementation methodologies

RAFI Bonds Through December 2010

**RAFI fixed income adds more value in less efficient markets,
similar to RAFI equity**

Through 12/31/2010	Annual Return	Annual Volatility	Sharpe Ratio	Value Add	Risk-Adjusted Alpha	Tracking Error	IR of Alpha	Start Date
RAFI High Yield ¹	8.9%	9.4%	0.69	2.8%	3.0%	2.7%	1.14	2000
Merrill Lynch High Yield	6.1%	9.6%	0.38					
RAFI Developed Sovereign Debt	5.6%	3.3%	0.79	0.7%	0.5%	0.6%	0.94	1997
Merrill Lynch Developed Sovereign Debt Index	4.9%	3.0%	0.63					
RAFI Emerging Markets	12.0%	11.2%	0.81	1.6%	3.4%	5.4%	0.78	1997
Merrill Lynch EM (IGOV) Index	10.4%	13.5%	0.55					

¹11-10 Year, BB-B Rated

High-Yield Bonds Metrics: sales, cash flow, gross dividends, book value of assets

Developed Sovereign & Emerging Markets Metrics: area, population, GDP, energy consumption

Sources: For RAFI High-Yield indices: Research Affiliates LLC based on indices calculated by Ron Ryan ALM (www.ryanalm.com). RAFI HY 1–10 is the Research Affiliates Fixed-Income High-Yield Index of 1 to 10 years maturity. ML HY 1–10 is the U.S. High-Yield, BB-B rated, 1-10 years (H5A4 Index), published by Merrill Lynch. THE INDEX DATA PUBLISHED HEREIN IS SIMULATED, UNMANAGED, AND CANNOT BE INVESTED IN DIRECTLY. PAST SIMULATED PERFORMANCE IS NO GUARANTEE OF FUTURE PERFORMANCE AND IS NOT INDICATIVE OF ANY SPECIFIC INVESTMENT. ACTUAL INVESTMENT RESULTS MAY DIFFER.

RAFI REITs Through December 2010

RAFI REITs add significant value in the United States and globally

Through 12/31/2010	Annual Return	Annual Volatility	Sharpe Ratio	Value Add	Risk-Adjusted Alpha	Tracking Error	IR of Alpha	Start Date
RAFI US REIT	13.6%	20.9%	0.44	4.6%	4.2%	9.5%	0.45	1984
FTSE NAREIT Composite	9.0%	17.2%	0.26					
RAFI REIT International	10.3%	21.3%	0.32	3.6%	3.8%	8.9%	0.43	1994
FTSE EPRA/NAREIT Global ex US	6.7%	20.4%	0.16					

Source: Research Affiliates, LLC. Based on data from Worldscope, Datastream, CRSP, Compustat and Bloomberg. THE INDEX DATA PUBLISHED HEREIN IS SIMULATED, UNMANAGED AND CANNOT BE INVESTED IN DIRECTLY. PAST SIMULATED PERFORMANCE IS NO GUARANTEE OF FUTURE PERFORMANCE AND IS NOT INDICATIVE OF ANY SPECIFIC INVESTMENT. ACTUAL INVESTMENT RESULTS MAY DIFFER.

RAFI Long/Short Through December 2010

RAFI Long/Short provides a good alternative in a low beta environment

Index		1 year	3 year	5 year	10 year	Since 1979
RAFI US Equity Long/Short Index*	Return	10.4%	8.4%	5.8%	9.3%	9.7%
	Volatility	9.1%	18.7%	15.0%	12.5%	10.0%
S&P 500	Return	15.1%	-2.9%	2.3%	1.4%	11.5%
	Volatility	19.3%	22.2%	17.8%	16.4%	15.6%
BarCap Aggregate	Return	6.5%	5.9%	5.8%	5.8%	8.5%
	Volatility	2.9%	4.2%	3.6%	3.8%	5.9%
30 day T-Bill	Return	0.1%	0.5%	2.1%	2.1%	5.5%
	Volatility	0.0%	0.2%	0.6%	0.5%	1.0%
RAFI US Equity Long/Short Index Correlation		1 year	3 year	5 year	10 year	Since 1979
S&P 500		0.52	0.58	0.55	0.38	0.04
BarCap Agg		-0.31	0.15	0.08	0.10	-0.01
30-Day T-Bill		-0.38	-0.20	-0.08	0.01	0.07

*RAFI US Equity Long/Short Returns are collateralized and represent the return of the strategy plus the return of a cash collateral yield.

Source: Research Affiliates based on data from Bloomberg. The RAFI US Long/Short Equity Index was launched on 11/2/2010. Prior returns are simulated. Indexes are unmanaged and cannot be invested in directly. Past simulated performance is no guarantee of future performance and is not indicative of any specific investment. Actual investment results may differ.

Efficient Indexing for an Inefficient Market

Cap-weighting has a rich history... and a flaw

The RAFI strategy improves on cap weighting

- Addresses the shortcomings of cap weighting while maintaining the benefits of a broad market index
- Generally outperforms its cap-weighted counterparts
- Adds more value as pricing errors increase (i.e., in markets like emerging markets, international, and small cap)



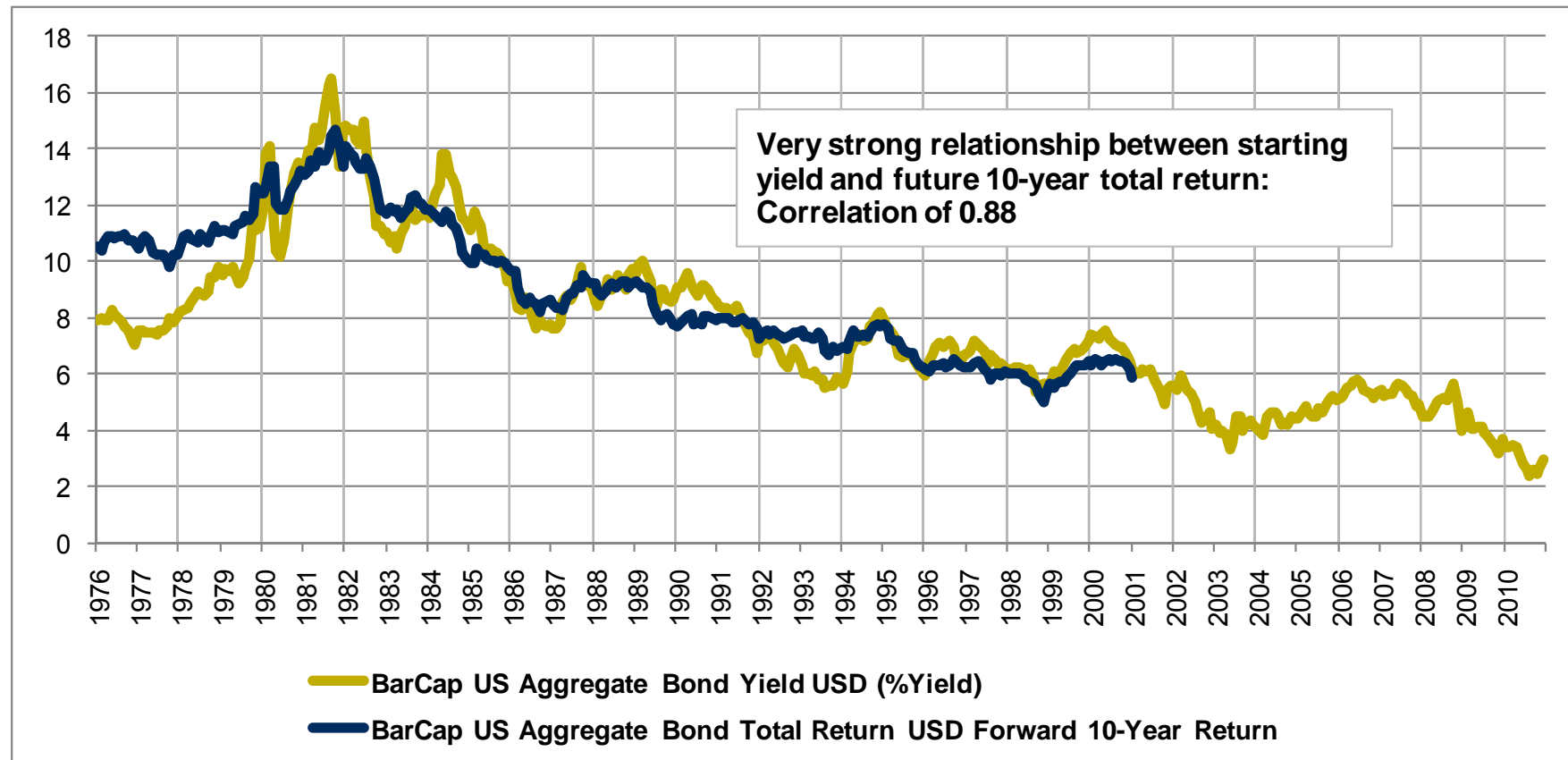
Where are the Opportunities Today?

How Do We Set Bond and Stock Market
Expectations?



Bond Market Returns Follow Yields

Future *long-term* bond returns closely follow entry yield



Source: Research Affiliates, LLC based on data from Ibbotson and Barclays Capital.

Building Blocks for Bonds

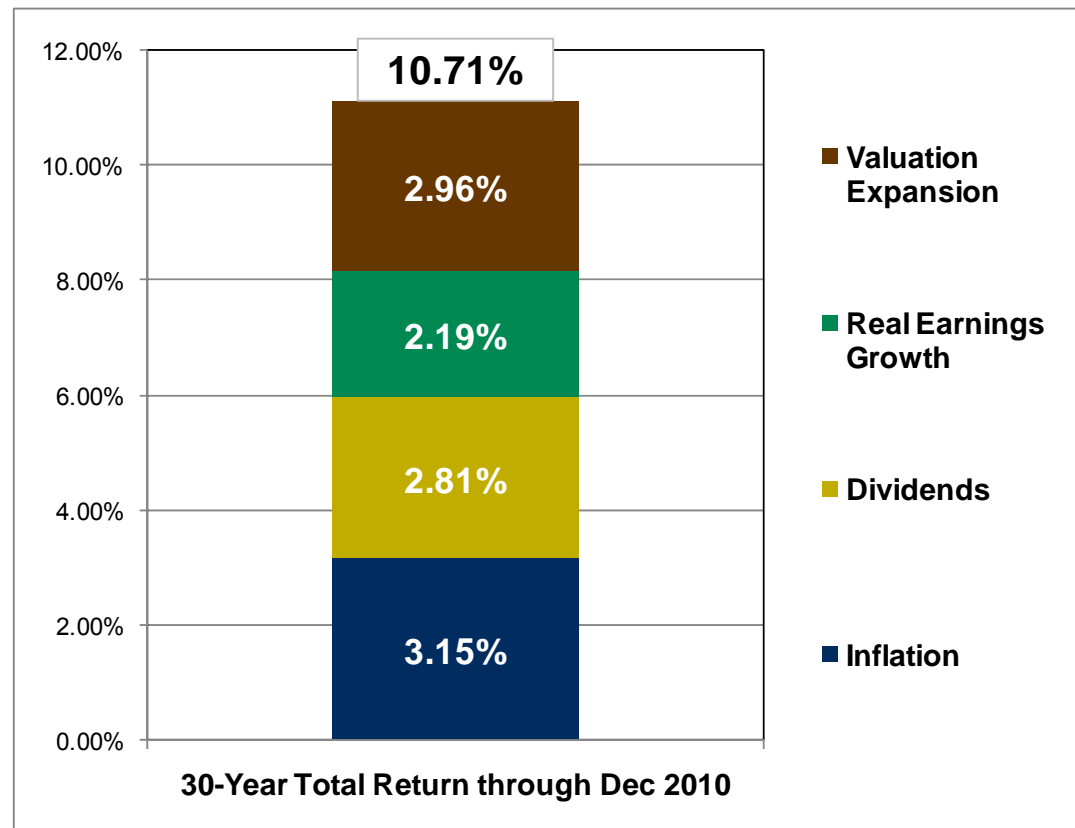
Bond returns are decomposed into two parts:

	Expected Return	Methodology
Income (Yield to Maturity)	3.0%	Current YTM (1/2011) of BarCap Aggregate Bond Index
Real Growth (Expected Default Rate)	-0.1%	Expected Default Rate for BarCap Aggregate Index
NOMINAL EXPECTED RETURN	2.9%	

- **30-year returns of U.S. bonds: 8.9%!**
- **Should we expect that for the next decade?? No!**
- **Today's yields are under 4% = the only sensible expected future return.**

Stock Market Returns Follow Valuation

- **30-year returns of S&P 500 stocks: 10.7%!**
- **Should we expect that for the next decade?? No!**
- **This past period was driven by strong valuation multiple expansion:**



Source: Research Affiliates, LLC based on data from Ibbotson and Robert Shiller of Yale. Sub-components do not equal total return due to compounding effects.

Building Blocks for Stocks

Stock returns are decomposed into 4 parts:

	Expected Return	Methodology
Dividend Yield	1.9%	Current Dividend Yield of S&P 500 Index (1/2011)
Real Earnings Growth	1.0%	100-year Average of Real Earnings Growth
Expected Inflation	2.1%	10-year Breakeven Inflation (10-yr Treasury – 10-yr TIPS)
Valuation Multiple	??	Shiller 10-Year Cyclically-Adjusted P/E (CAPE) Ratio
NOMINAL EXPECTED RETURN	5.0%	

Source: Research Affiliates, LLC based on data from Bloomberg, JP Morgan, U.S. Treasury.

Three Paths to Improved Return Potential

Consider Other Asset Classes

- Stocks and bonds are not the only choices
- Unconventional assets can be priced to offer better returns

Seek Alpha

- Conservatively, focusing on avoiding negative alpha, or
- Aggressively, if you have confidence in the opportunities

Actively Manage the Asset Mix

- *Include* alternative markets in these decisions
- Seek assets which are out of favor, priced for better returns

We Believe All Three Paths Can Be Pursued in Parallel!

Our fourth alternative—leverage—boosts risk far more than it improves prospective returns

Achieving Sensible Returns

A carefully crafted, well-executed departure from the classic balanced portfolio can move portfolios materially towards our aspired returns.

Rebalancing can add up to 1% to long-term risk-adjusted investment returns, if it's done with discipline.

How far you can move down this path, without exceeding the risk tolerance - the maverick aversion - of clients, is something that you'll need to judge very carefully.

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