Institutional Investor Asset Management in a Low Return/High Risk World

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Executive Summary

I. Global Economic and Financial Environment

- Lower economic growth, larger risks and low returns on "safe" assets
- Deepening opportunities in emerging and frontier markets

II. Institutional Investors' Broad Move to Diversify Asset Allocation

- Institutional investor AUM growing quickly
- Secular diversification to alternative assets and emerging/frontier markets

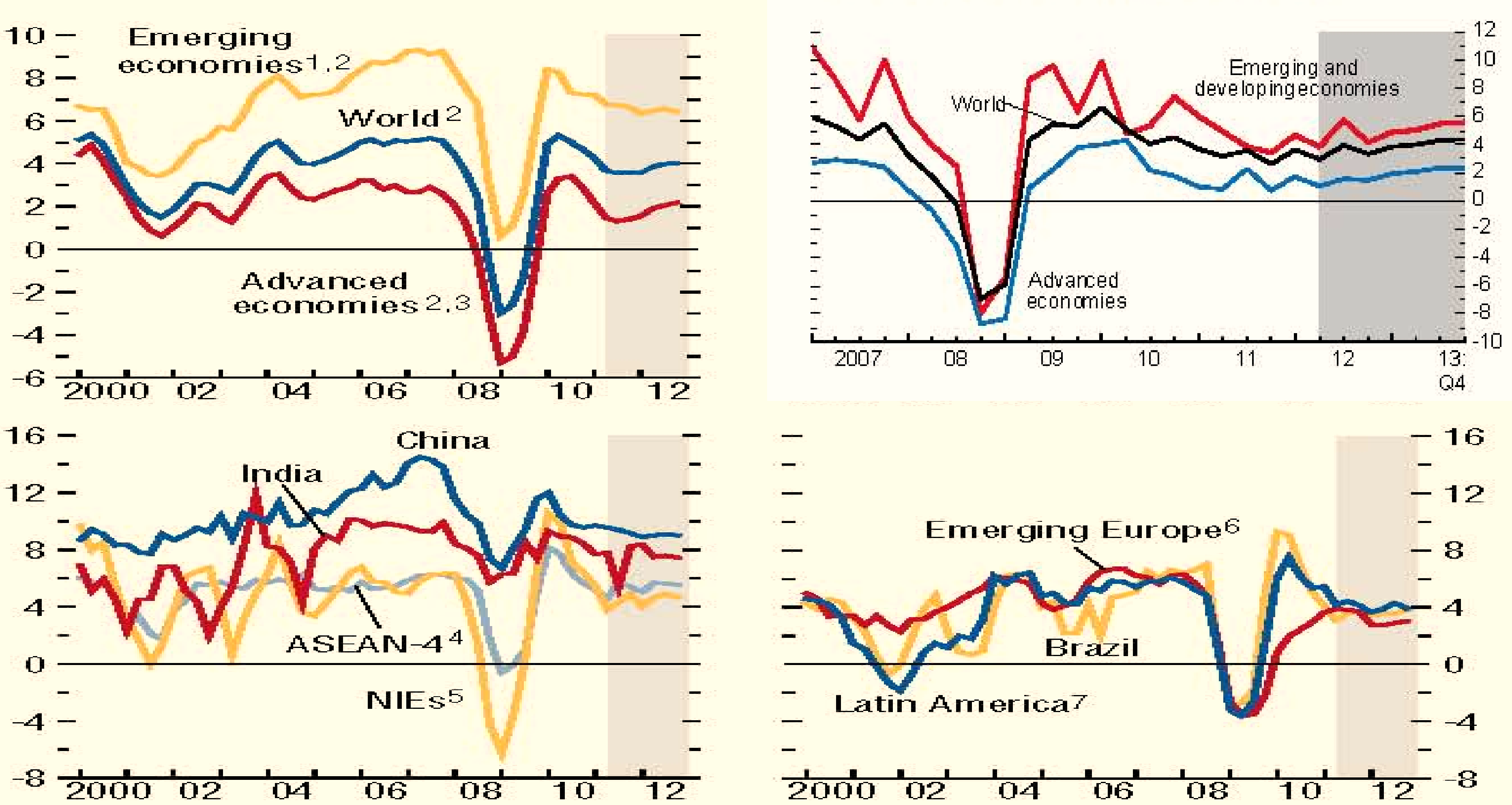
III. Drivers for Diversification in the Face of Increased Correlation

- Continuing divergent growth paths for developed and EM countries
- The Search for yield and reduced risks
- Higher absolute returns and lower risk from diversification to broad array of alternative assets, emerging/frontier markets and cash

IV. Conclusions

I. Global Economic and Financial Environment

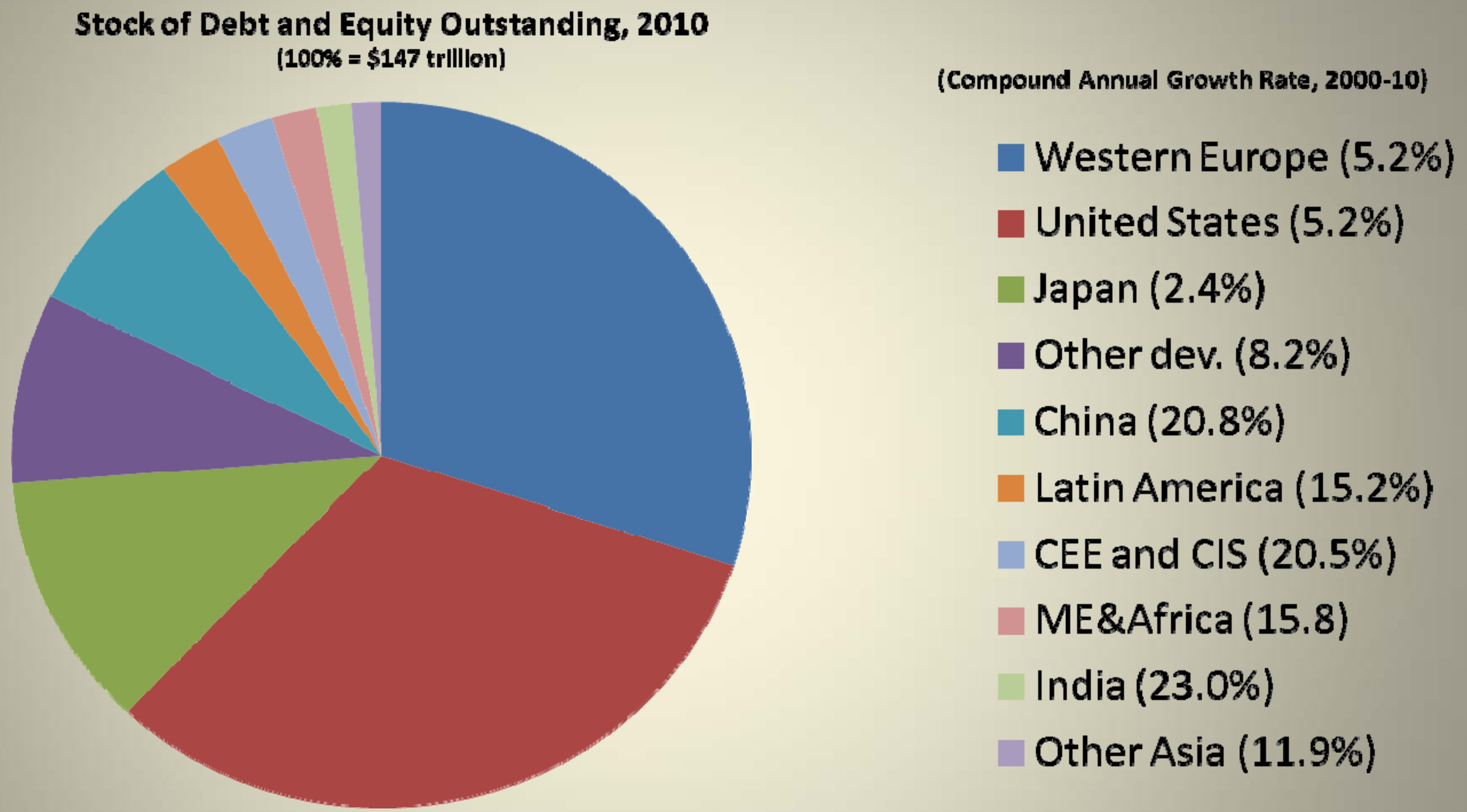
Economic growth remains weak; EM countries weathered the financial crisis better than advanced economies



Source: IMF WEO

Global Share and Growth of Capital Markets

Emerging markets account for small (18%) but rapidly growing share of global financial markets



Source: BIS, Dealogic, S&P, McKinsey Global Banking

Source: IMF WEO

MENAP economic growth reached the level of global emerging economies in 2012 but is projected to decline in 2013

Overview of the *World Economic Outlook* Projections

(Percent change)

	Year-over-Year		
		Projections	
	2011	2012	2013
World output	**3.8**	**3.3**	**3.6**
Advanced economies	1.6	1.3	1.5
Of which: United States	1.8	2.2	2.1
European Union	1.6	–0.2	0.5
Emerging and developing economies	6.2	5.3	5.6
Of which: MENAP	3.3	5.1	3.6
CCA	6.7	5.7	5.5
Commonwealth of Independent States	4.9	4.0	4.1
Of which: Russia	4.3	3.7	3.8
World trade volume (goods and services)	**5.8**	**3.2**	**4.5**
Commodity prices			
Oil[1]	31.6	2.1	–1.0
Nonfuel[2]	17.8	–9.5	–2.9

Sources: IMF, *World Economic Outlook* (October 2012) and *Middle East and Central Asia Regional Economic Outlook* (November 2012).

[1]Simple average of prices of U.K. Brent, Dubai, and West Texas Intermediate crude oil. The average price of oil in U.S. dollars a barrel was \$104.01 in 2011; the assumed price based on future markets is \$106.18 in 2012 and \$105.10 in 2013.

[2]Average (measured in U.S. dollars) based on world commodity export weights.

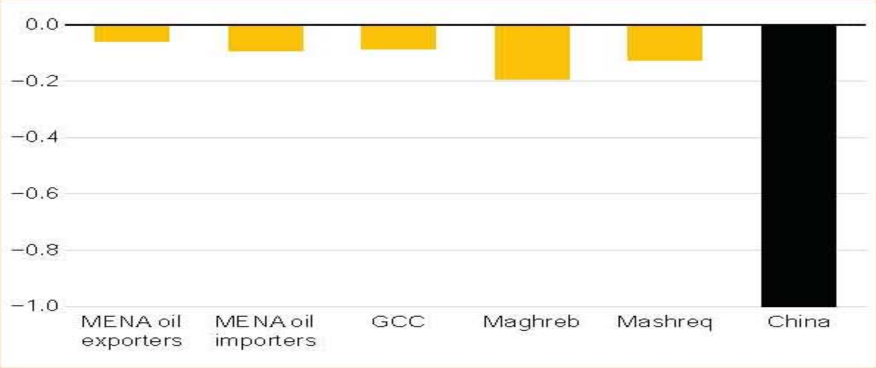
Source: IMF Regional Outlook

MENA Economic Growth is Vulnerable to Shocks from the EURO Area, United States and China

Figure 1

Responses of Output to a Negative GDP Shock in China

(Percent change)

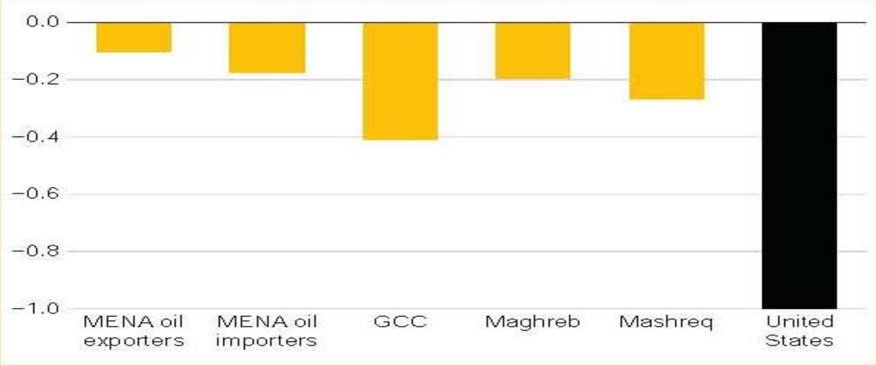


Source: Cashin, Mohaddes, and Raissi (2012).

Figure 2

Responses of Output to a Negative GDP Shock in the United States

(Percent change)

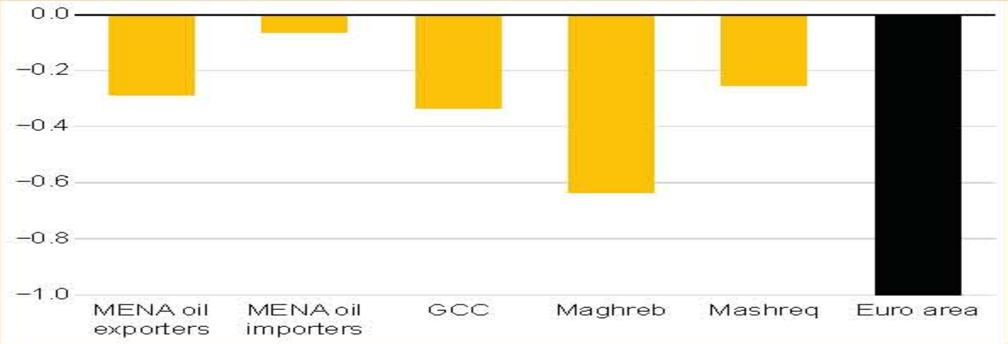


Source: Cashin, Mohaddes, and Raissi (2012).

Figure 3

Responses of Output to a Negative GDP Shock in the Euro Area

(Percent change)



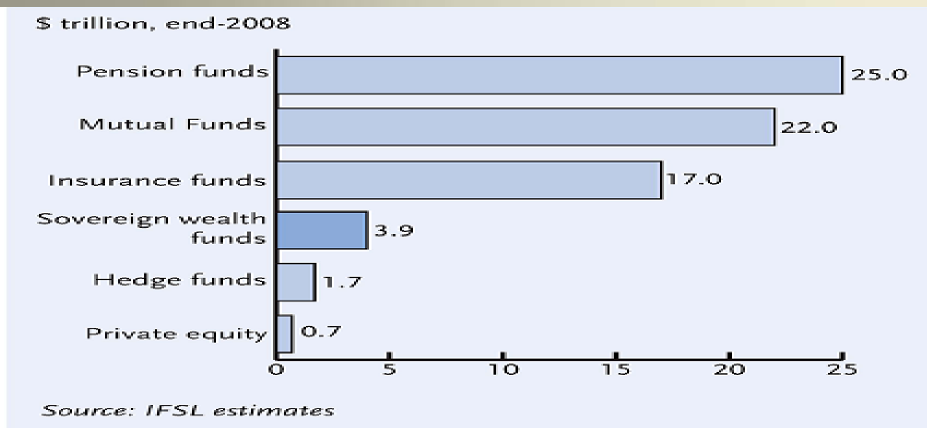
Source: Cashin, Mohaddes, and Raissi (2012).

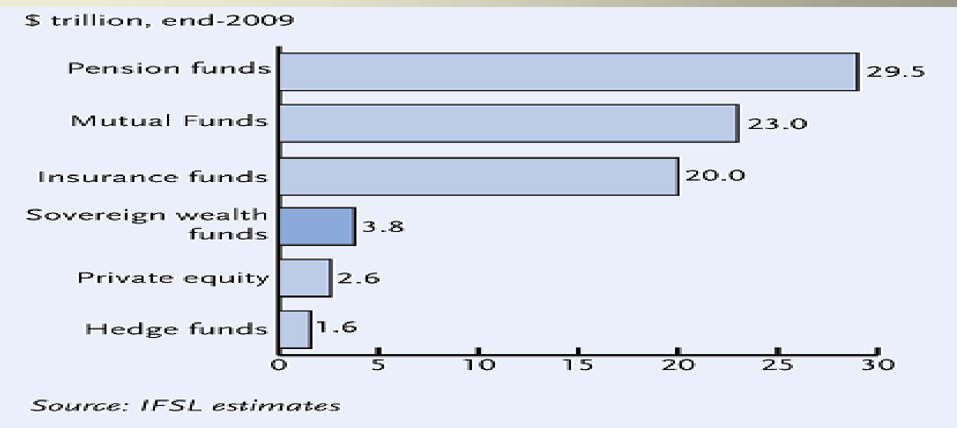
Source: IMF Regional Outlook

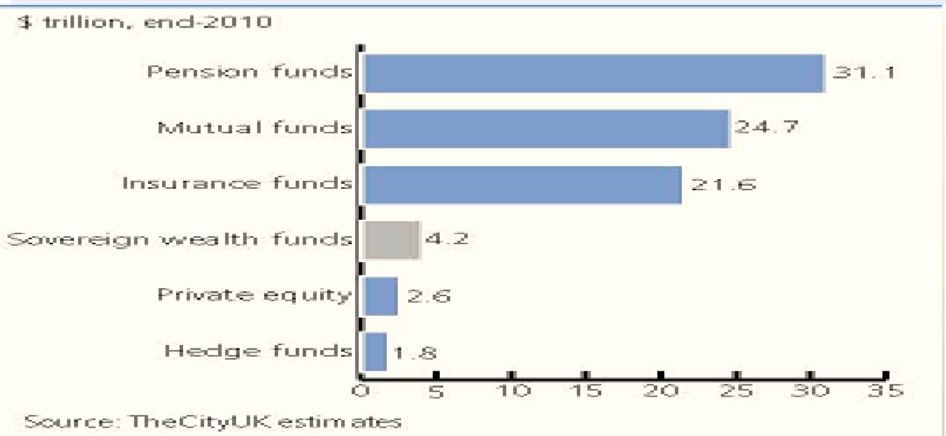
II. Institutional Investors' Broad Move to Diversify Asset Allocation

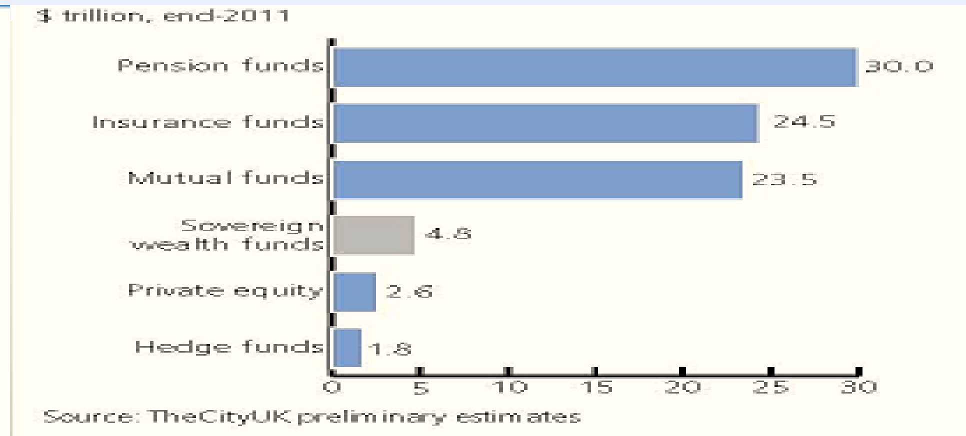
Total global AUM rose from $71 trillion in end-2008 to $89 trillion in end-2011

- Increase of $5 trillion for pension funds-by 20%; Increase of $7 ½ trillion for insurance companies-by 44%
- Increase of $1 trillion for private equity funds-270% ; $1 trillion for sovereign wealth funds -23%; and $1 ½ trillion for mutual funds -7%





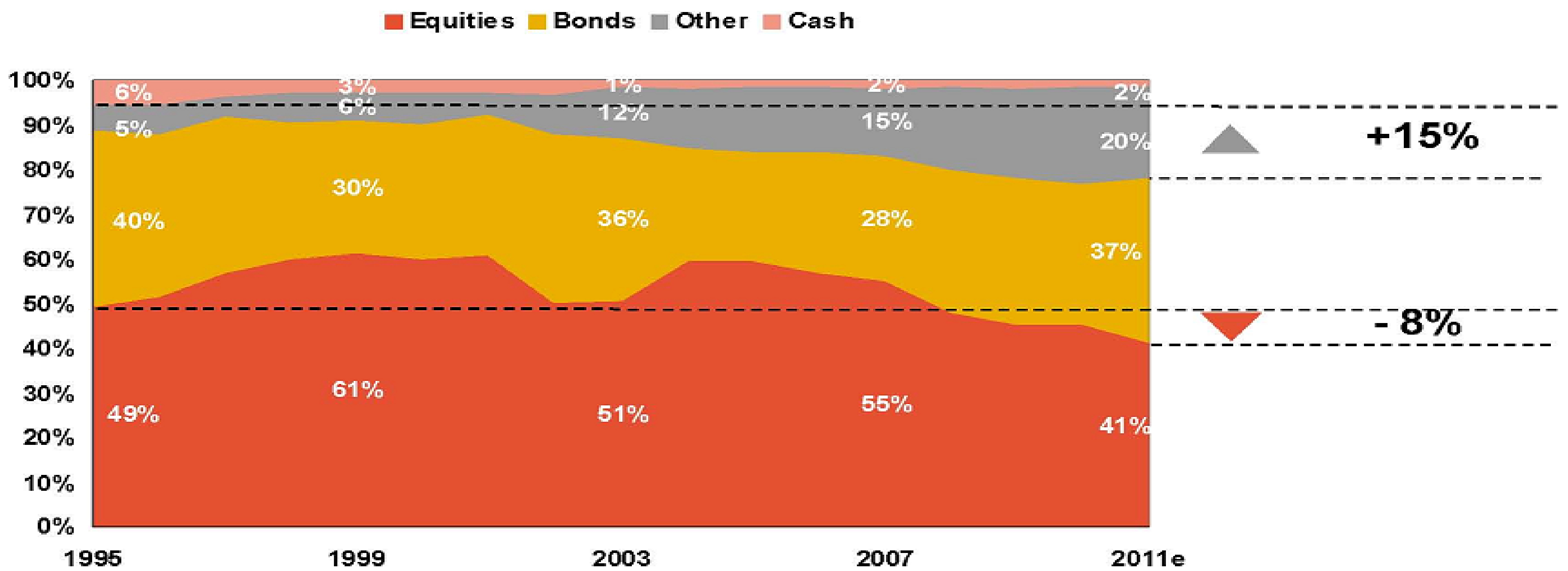




Pension Funds have diversified with increasing allocation to alternatives 1995-2011

Pension fund asset allocation:

- ❖ Decade long decline in allocation to equities
- ❖ Sizable increase in allocation to bonds since 2007/8 financial crisis
- ❖ Secular increase in exposure to alternative assets mainly coming out of equity investments
- ❖Small increase in cash position



- For the last 16 years, equities, bonds and cash allocations have all been reduced to a varying degree while assets in alternative areas have increased from 5% to 20% in the same time period.

Includes pension funds in OECD countries

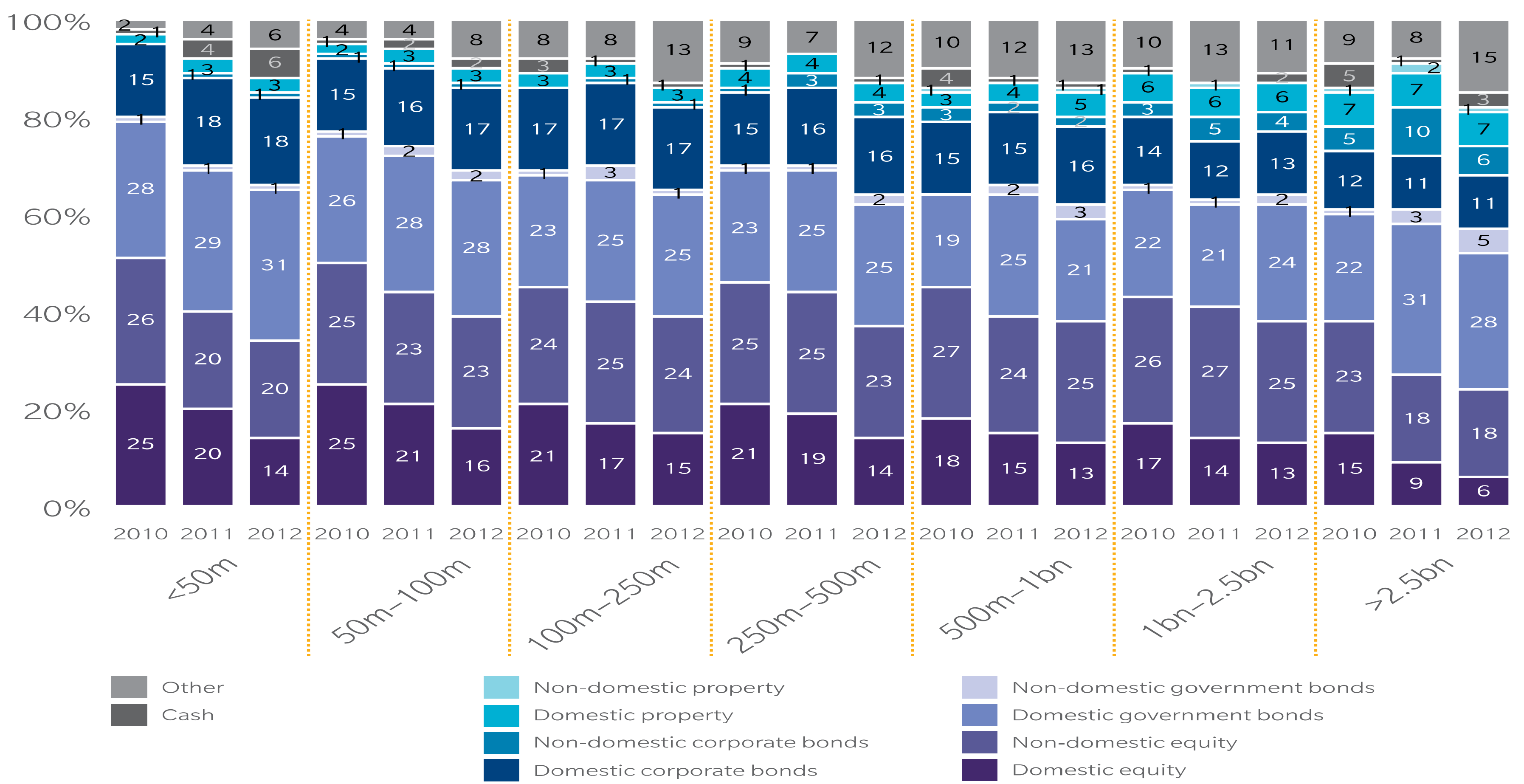
Source: Towers Watson and secondary sources

EU Pension Fund Asset Allocation by Size of Plan, 2010-2012

Significant decline in allocation to equities (domestic and foreign) and increase to alternatives

- Increase in allocation to fixed income and alternatives (reached 23% of total AUM in 2012 for larger plans)
- Larger pension plans allocated more to alternative assets and less to equities than smaller plans, though the observed trends hold for both; some increase in the allocation to cash

CHANGES IN STRATEGIC ASSET ALLOCATION BY PLAN SIZE (2010–2012)

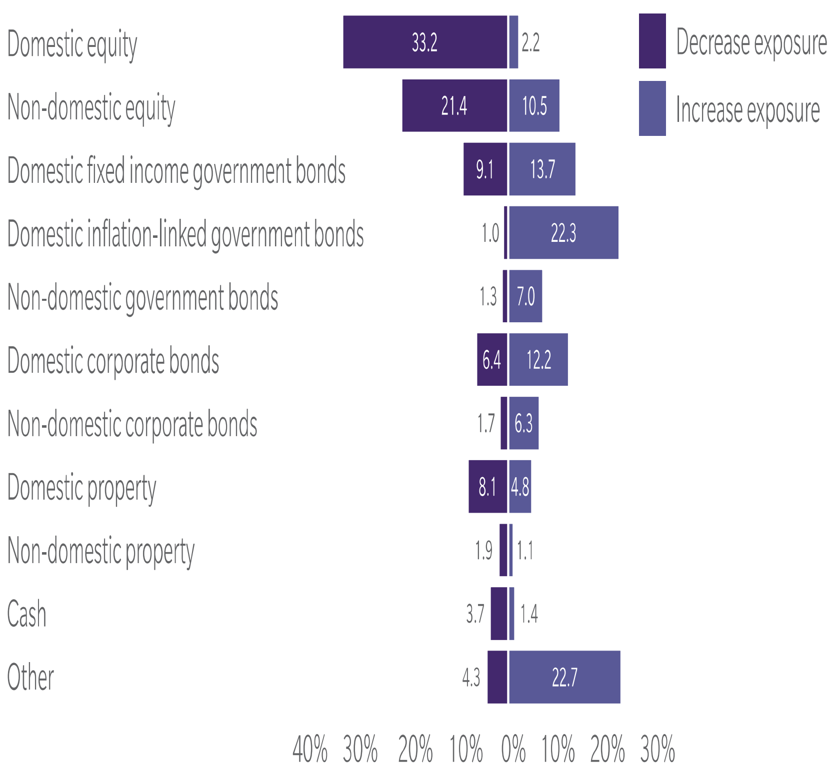


Shifting EU Pension Fund Asset Allocation by Location and Asset Class

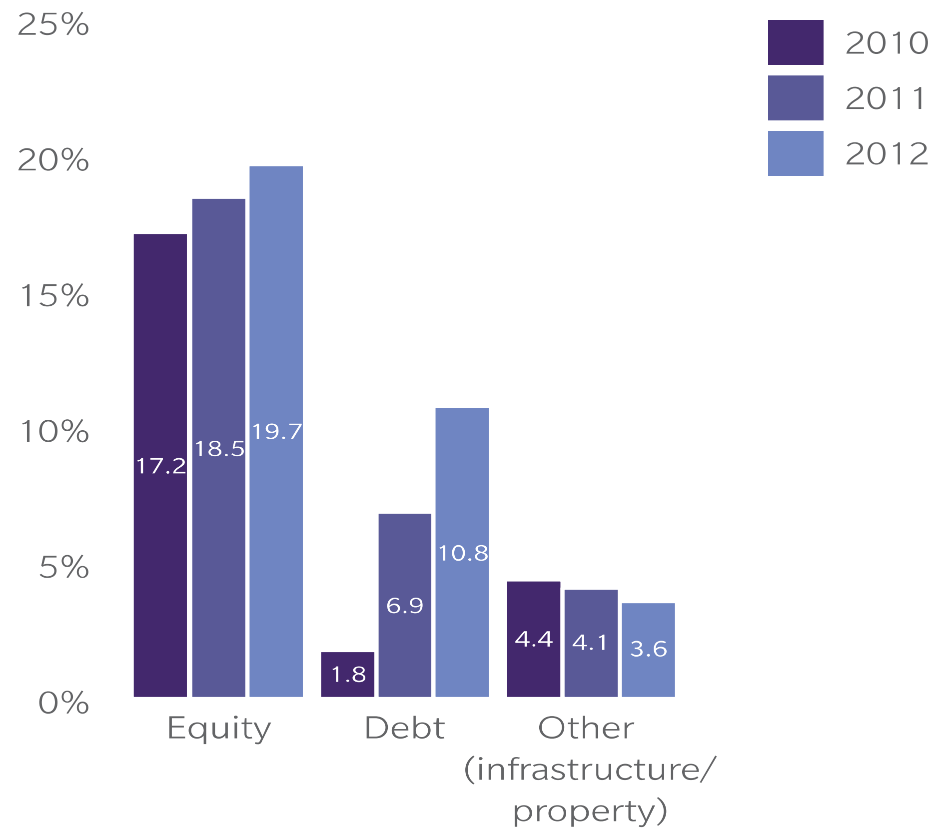
Pension funds plan to further increase exposure to non-domestic equity, domestic inflation-linked bonds and alternatives

➢ Specific allocations to emerging market debt and equities increasing rapidly

PERCENTAGE OF PLANS EXPECTING TO CHANGE INVESTMENT STRATEGY

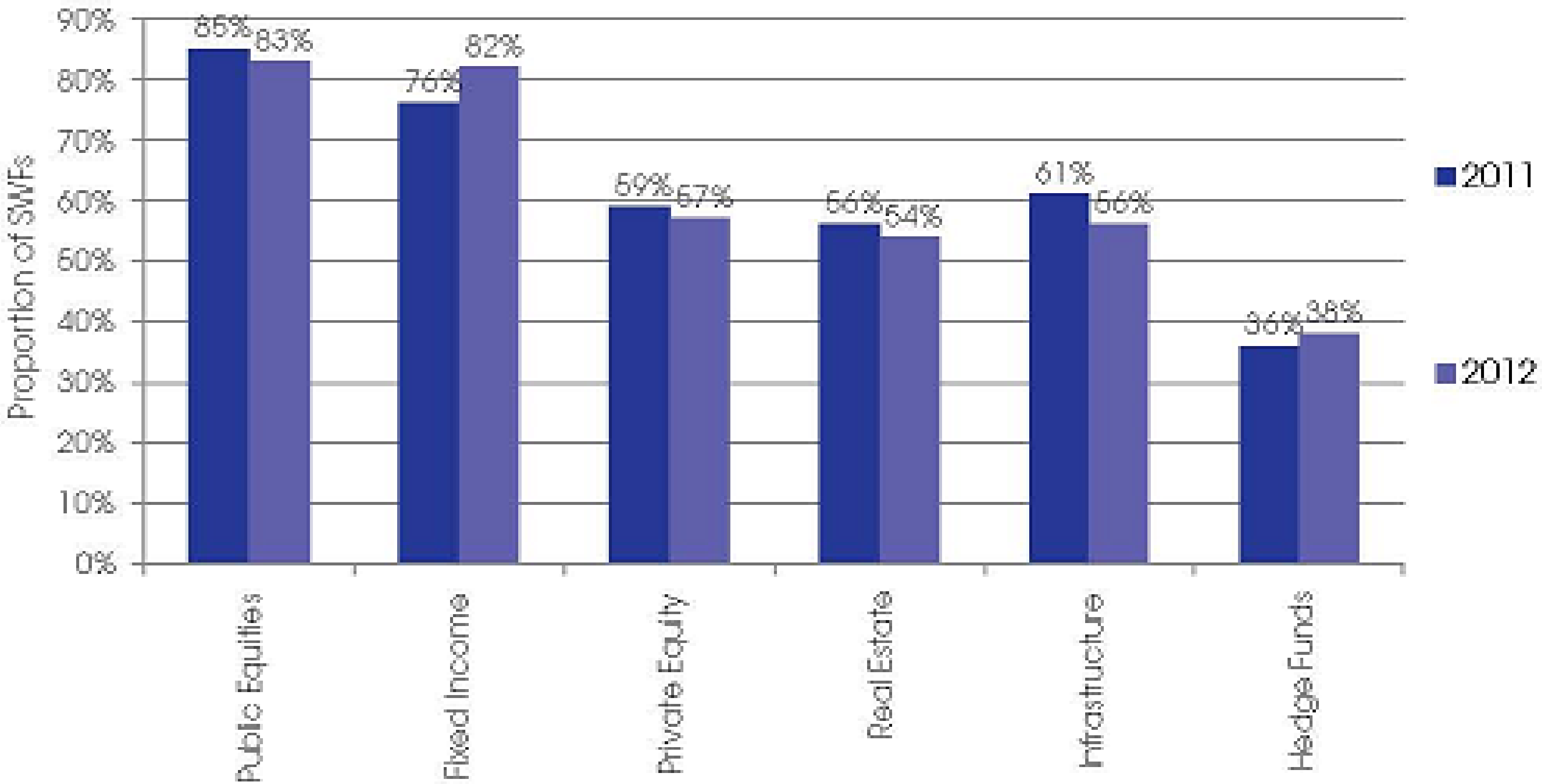


PERCENTAGE OF PLANS WITH SPECIFIC ALLOCATIONS TO EMERGING MARKETS (2010–2012)



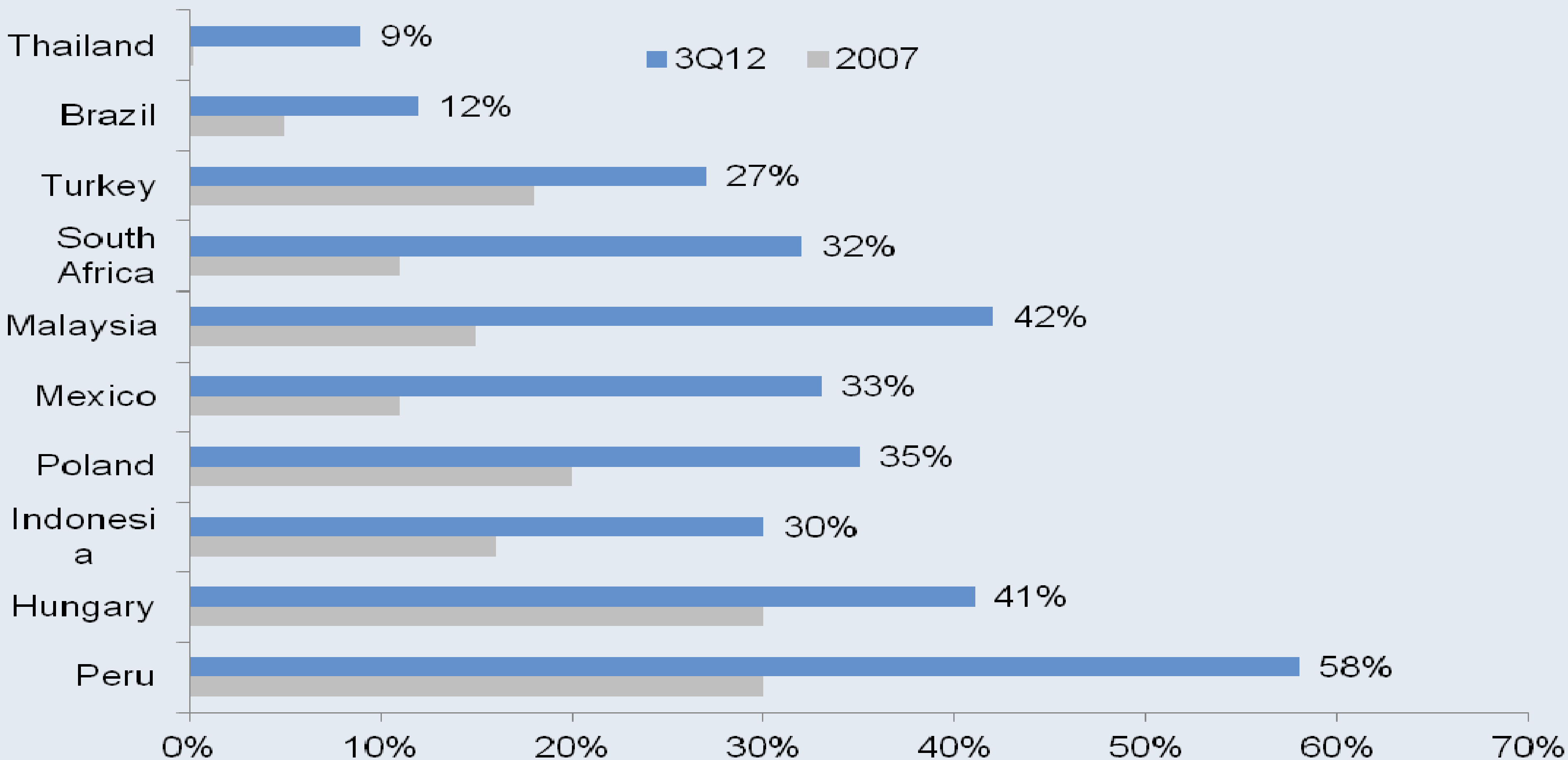
Proportion of Sovereign Wealth Funds Investing in Each Asset Class

Within context of their mandate, SWFs have diversified across all asset classes



Foreign ownership of local debt stock is much higher than five years ago

Increased institutional investor search for yield has facilitated deeper local EM capital markets and improved EM debt profile (with external debt replaced by local debt)



Source: JP Morgan

III. Drivers for Diversification in the Face of Increased Correlation

Observations underlying asset allocation diversification; why diversification still works:

- Diversification to alternative assets and emerging/frontier markets still lowers cross-asset and intra-asset correlation, with attention to diversification within alternative and EM asset classes
- Absolute returns on alternatives and emerging/frontier market assets have been higher than traditional assets and likely to remain
- Returns on portfolios with diverse use of alternative and EM/frontier market assets gain both from higher absolute returns and better risk-adjusted characteristics
- The higher yields from alternatives and EM/frontier markets allow increased inclusion of liquid assets in portfolios without hurting overall returns

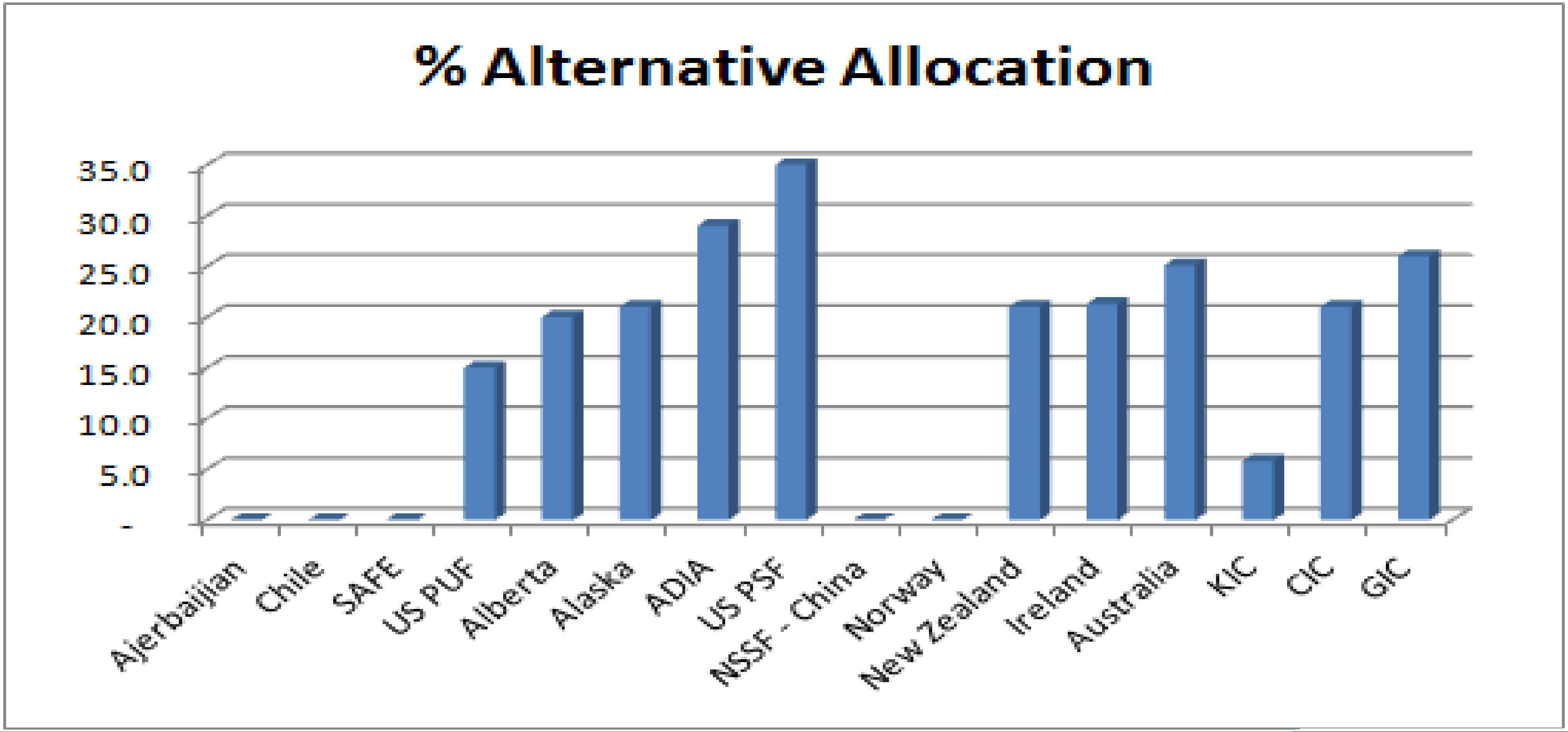
SWFs' Mandate Drives Asset Allocation

Stabilization Funds	**Insulate Budget/Economy (e.g. Chile, Kazakhstan, Azerbaijan, Algeria, Iran, Venezuela)**
Savings Funds	**Inter-generational transfer (e.g. Kuwait, Qatar, Singapore , ADIA Alaska, Alberta)**
Reserve Investment Corporations	**Part of Reserves; Increasing Returns (e.g. China SAFE, Korea KIC, SAMA)**
Development Funds	**Socio-Economic Objectives (e.g. Bahrain Mumtalakat, UAE Mubadala)**
Contingent Pension Reserve Funds	**Contingent pension liabilities of governments (Australia, New Zealand, China NSSF)**

Source: IMF and Fletcher's SWFI

Allocation patterns are driven by mandate, investment horizon, and liability structure

Other factors include size, maturity, sophistication, investment philosophy and source of funding (to reduce covariance of returns including assets in the ground)



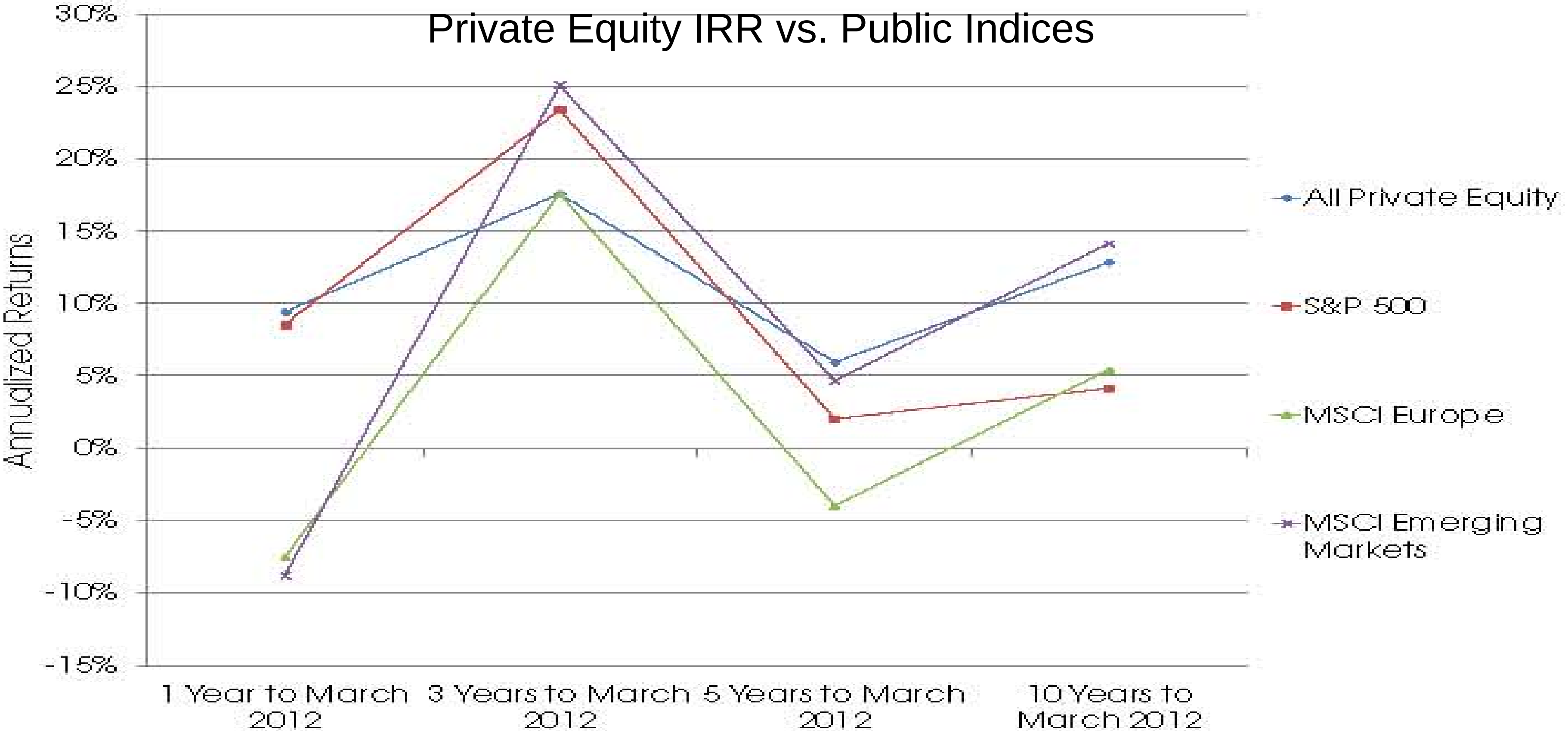
Source: Fletcher's SWFI

Private Equity and Emerging Market Returns vs. Public Indices

Ten years through December 2011

Absolute Returns are Drivers to Alternatives and Emerging Markets

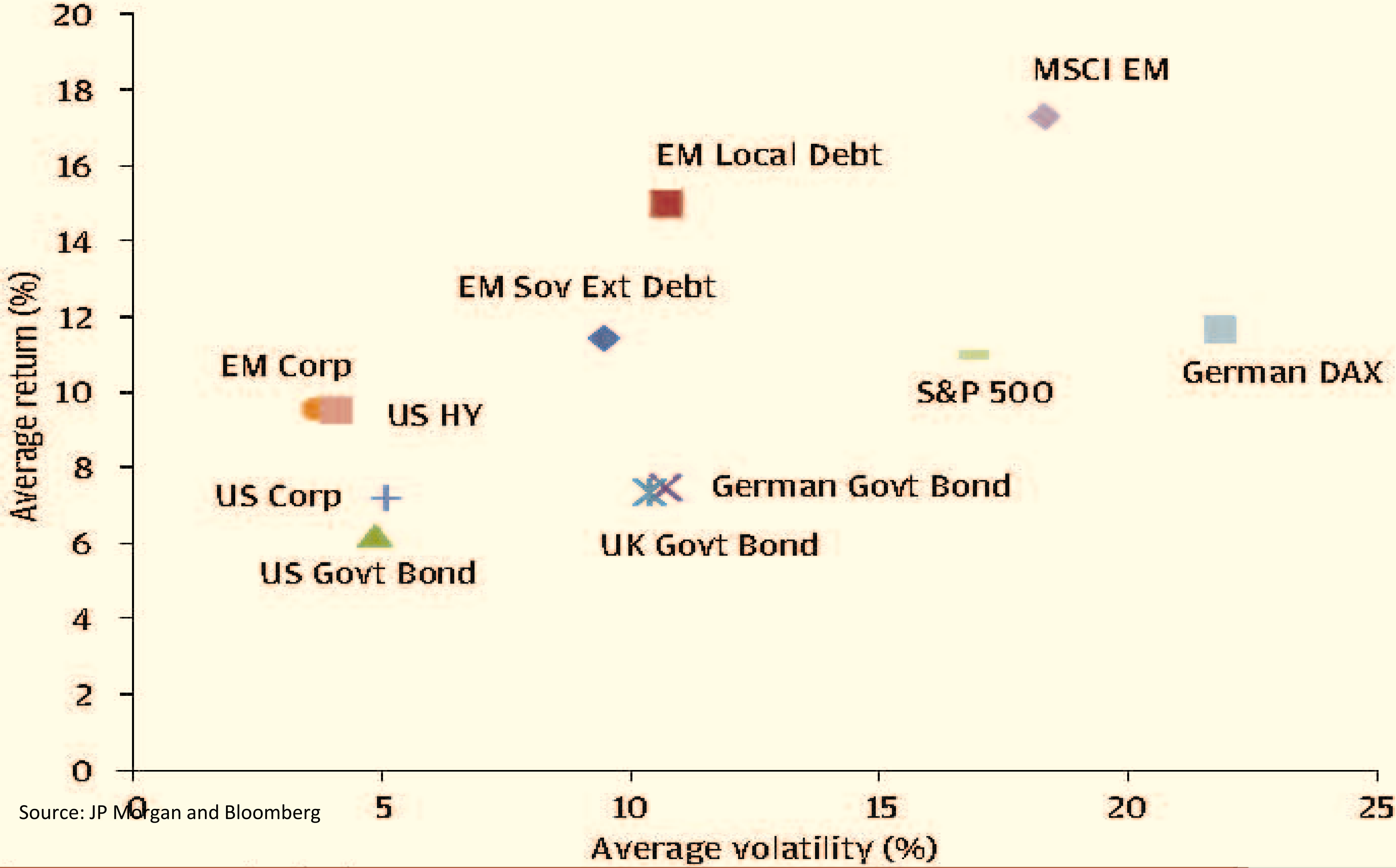
Private equity and emerging markets have outperformed public securities



Source: Preqin Performance Analyst

Emerging Market Returns Over Past 15 Years

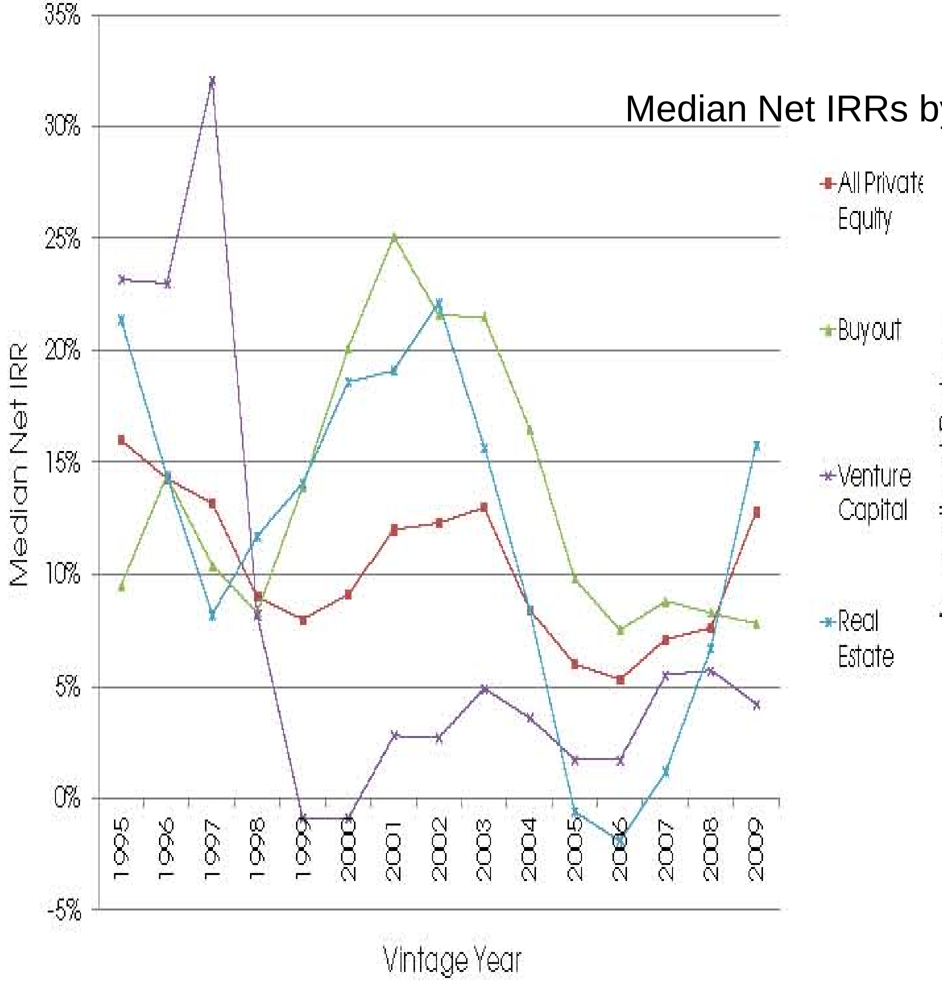
Emerging market assets have a record of higher returns and lower volatility



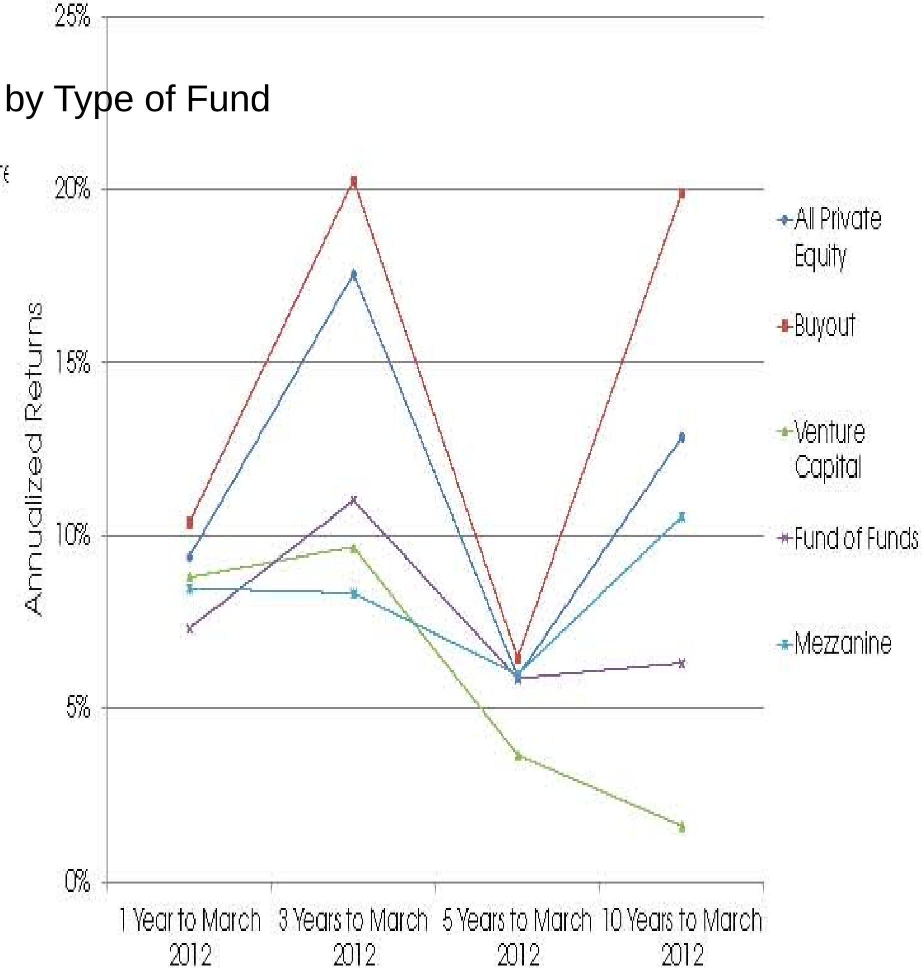
Source: JP Morgan and Bloomberg

Non-Correlated Returns within Alternatives Asset Class

Median Net IRRs by Type of Fund



Source: Preqin Performance Analyst



Source: Preqin Performance Analyst

Post-Crisis Cross Correlations

Post-crisis cross-correlations are high but alternatives and EM/Frontier assets still consistently less correlated with other asset class than S&P or World Index

Correlation Coefficients Matrix

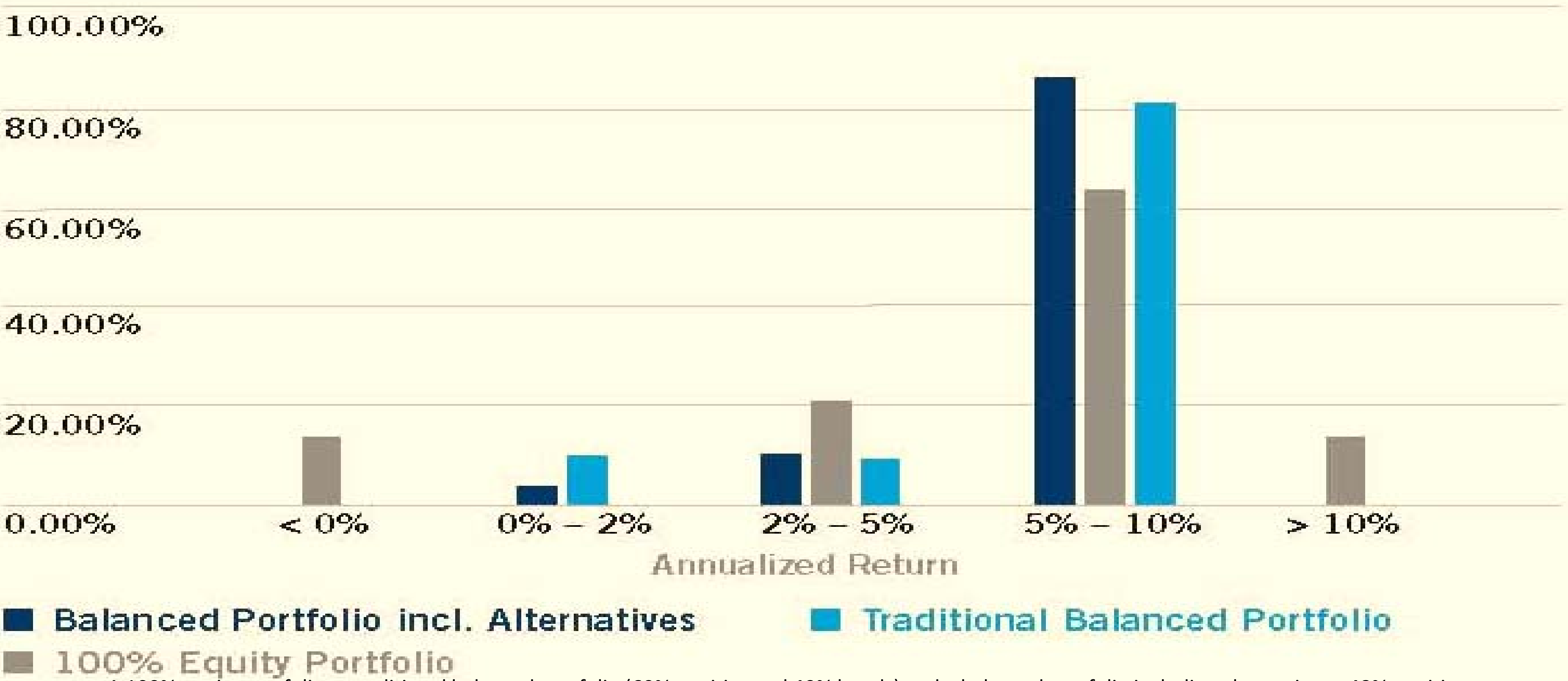
2008-2011	SPX	MSWI	MXEF	MXFM	20 T	US Corp	RE	COM	HF	PE
SPX	1.00									
MSWI	0.98	1.00								
MXEF	0.88	0.94	1.00							
MXFM	0.83	0.87	0.86	1.00						
20 T	-0.61	-0.59	-0.66	-0.51	1.00					
US Corp	0.05	0.17	0.17	0.11	0.50	1.00				
RE	0.90	0.87	0.73	0.82	-0.44	0.04	1.00			
COM	0.68	0.73	0.76	0.76	-0.61	-0.06	0.56	1.00		
HF	0.85	0.89	0.94	0.84	-0.65	0.07	0.68	0.86	1.00	
PE	0.87	0.84	0.79	0.78	-0.62	-0.11	0.79	0.79	0.87	1.00

Source: Fletcher's SWFI

Distribution of 10-Year Returns for Three Asset Mixes

(Jan. 1991 – Dec. 2010-rolling (monthly) 10-year returns for each of the three asset mixes)

**The value of diversification with a mix of alternative assets:
Higher absolute returns with lower risk**



A 100% equity portfolio, a traditional balanced portfolio (60% equities and 40% bonds) and a balanced portfolio including alternatives-- 48% equities, 32% bonds and 20% alternatives, equally split between hedge funds, real estate, equities and commodities

Source: Ibbotson. The MSCI World Index was used as a proxy for equities; the Citigroup World Government Bond Index was used as a proxy for global bonds. The DJ-UBS Commodity Total Return Index proxies commodities, the HFRI FoF Composite Index proxies hedge funds and the FTSE NAREIT All Reits proxies real estate. All calculations were based on monthly returns

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IV. Conclusions: Asset Allocation Decisions by Institutional Investors

- **Global Economic and Financial Environment**
  - Investors are facing lower economic growth, larger downside risks and low returns on "safe" assets
  - Emerging and frontier markets have taken policy measures to reduce their risks to external market turmoil and are set for continued economic and financial growth

- **Global State of Institutional Investors**
  - Pension fund and SWF assets under management are growing quickly despite a global decline in equity capitalization
  - Pressures to perform to meet budgetary objectives and investment mandates in the face of low returns/high risk environment

- **Asset Management in Low Return/High Risk World**
  - In this environment, asset managers are searching for risk-adjusted yield through ***a diverse mix*** of alternative assets, emerging/frontier markets and cash

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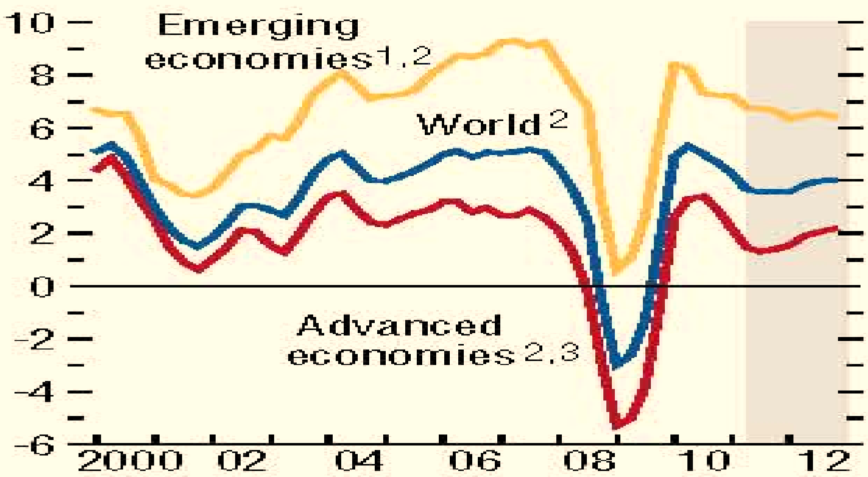
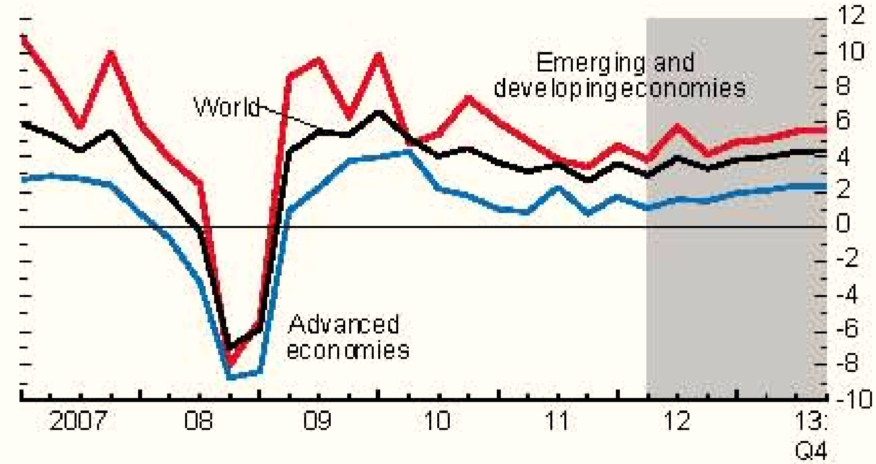
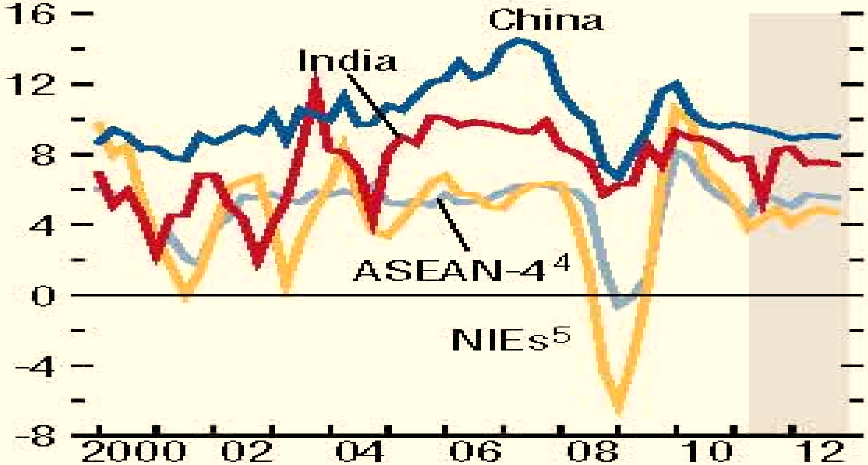
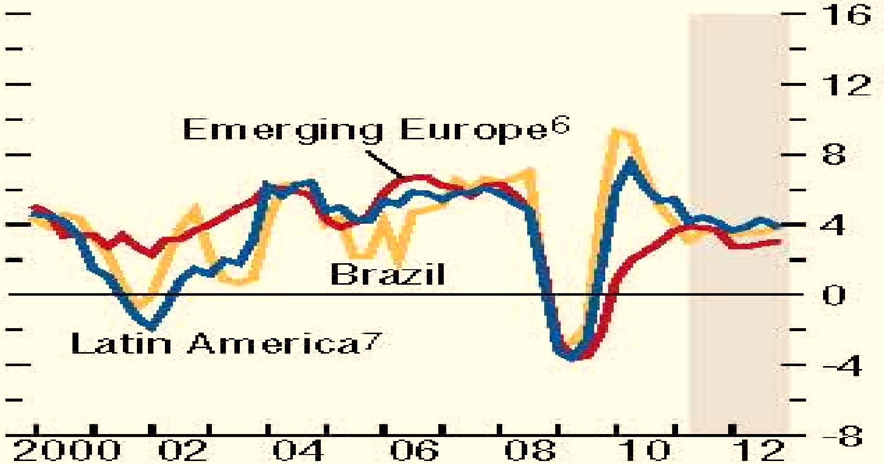
Economic growth remains weak; EM countries weathered the financial crisis better than advanced economies





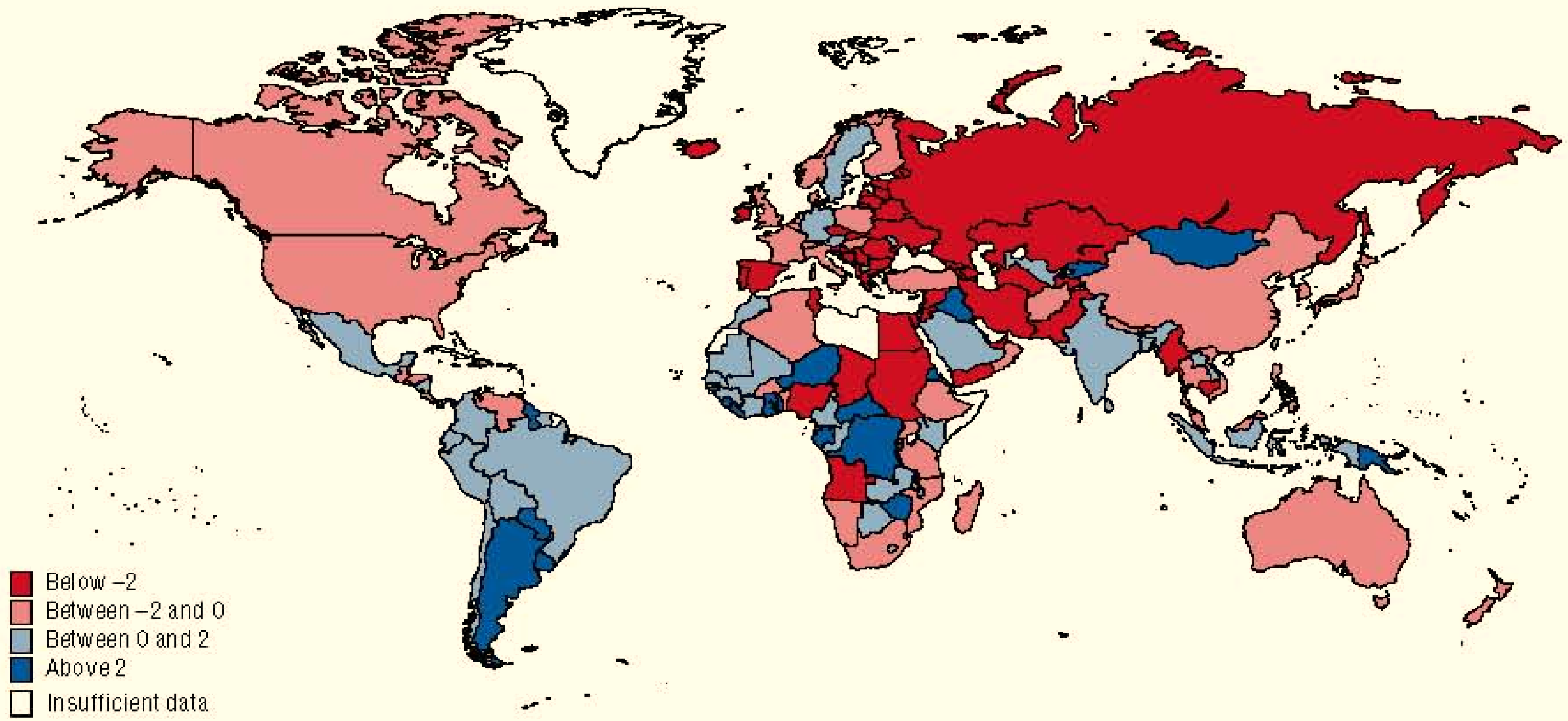




Global Growth versus Pre-Crisis Average

Global growth exceeds pre-crisis levels in EM Countries in contrast with lower growth in advanced economies

(Percentage point difference in compound annual rates of change between 2011–12 and 2000–07)



Source: IMF staff estimates.
Note: There are no data for Libya in the projection years due to the uncertain political situation. Projections for 2011 and later exclude South Sudan. Due to data limitations, data for Iraq are the growth differential between the average in 2011–12 and 2005–07; for Afghanistan between the average in 2011–12 and 2003–07; and for Kosovo, Liberia, Malta, Montenegro, Tuvalu, and Zimbabwe between the average in 2011–12 and 2001–07.

Source: IMF WEO

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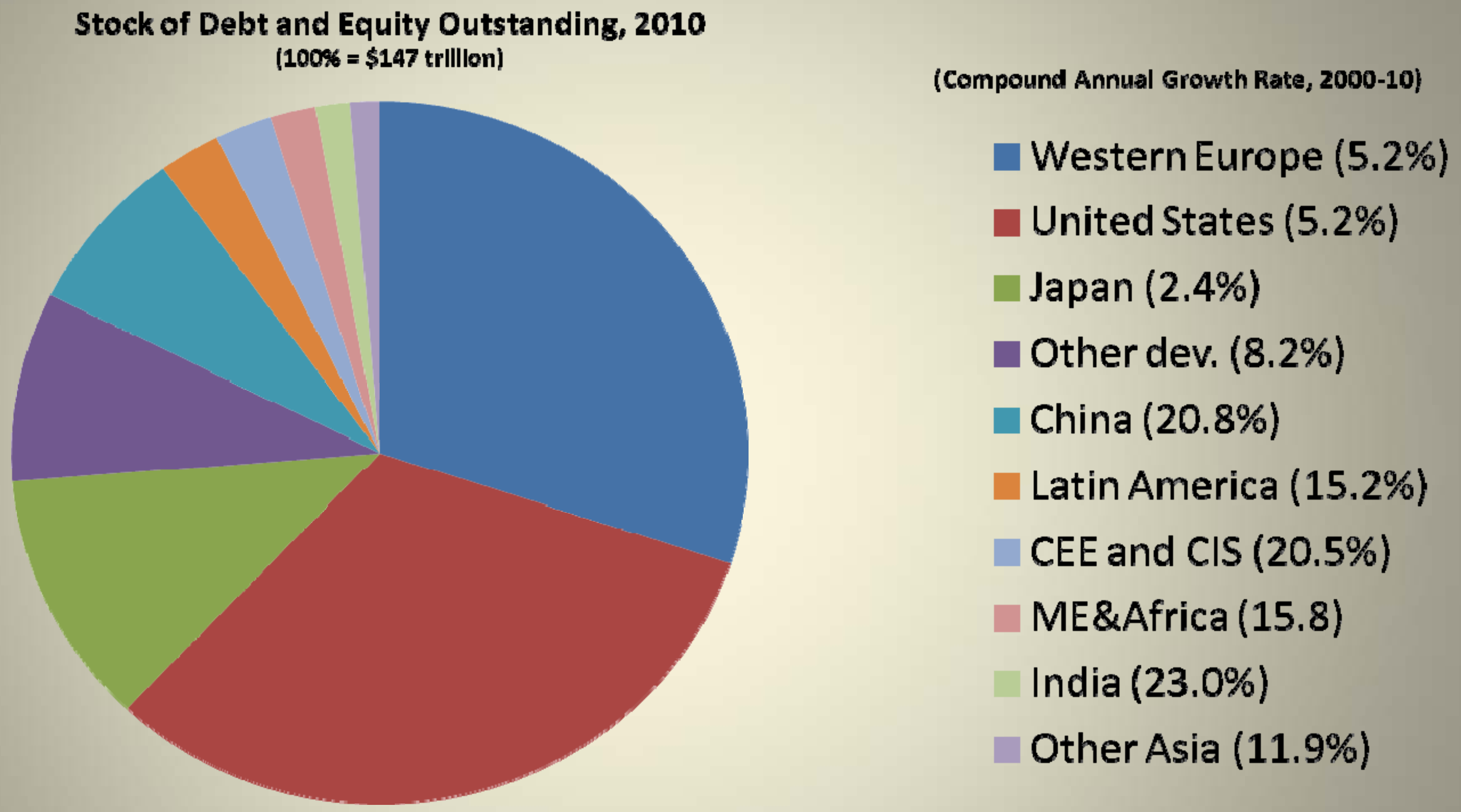
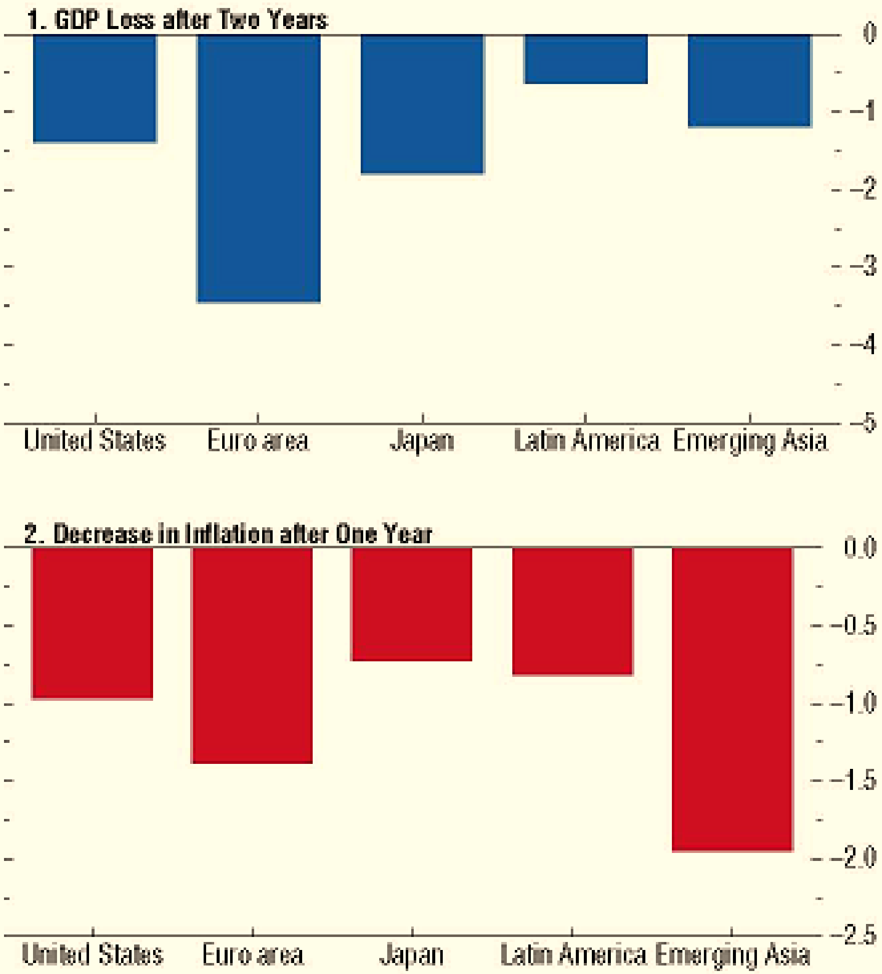


Source: BIS, Dealogic, S&P, McKinsey Global Banking

Source: IMF WEO

Global Risks: WEO Downward Scenario

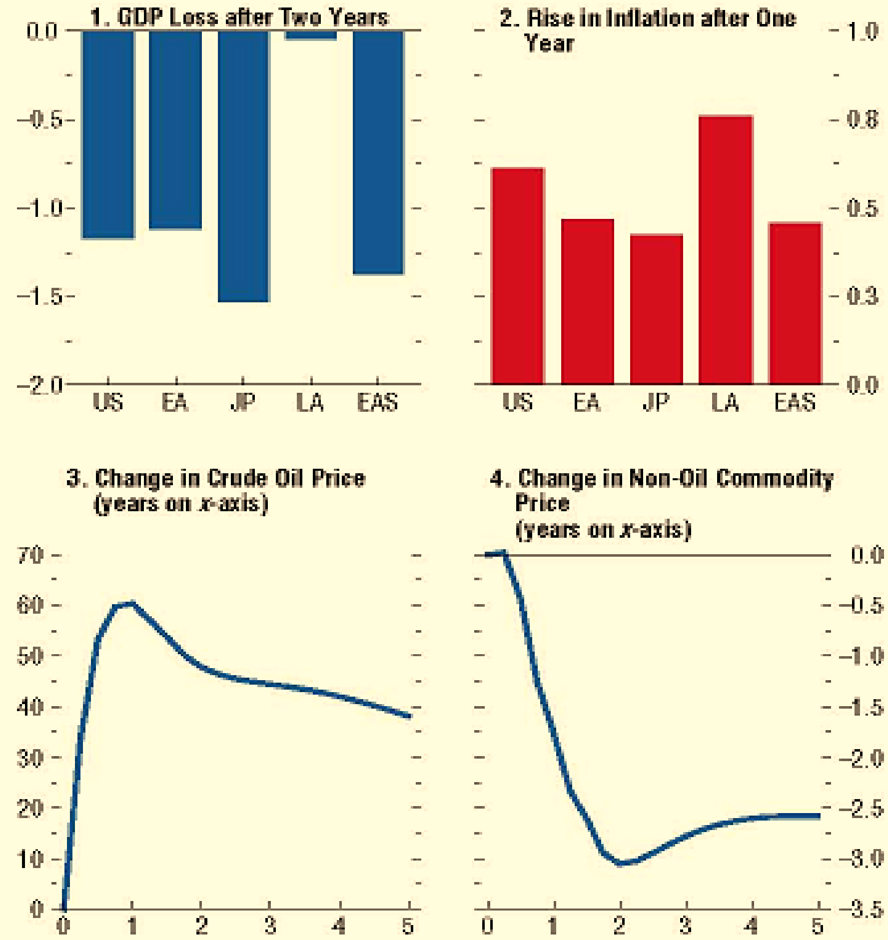
Increased Bank and Sovereign Stress in Euro Area



Source: GEM simulations.

Percent or percentage point deviation from WEO baseline

Oil Supply Disruption



Source: GEM simulations.

[1]US: United States; EA: euro area; JP: Japan; LA: Latin America; EAS: emerging Asia.

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Emerging and developing economies	6.2	5.3	5.6
Of which: MENAP	3.3	5.1	3.6
CCA	6.7	5.7	5.5
Commonwealth of Independent States	4.9	4.0	4.1
Of which: Russia	4.3	3.7	3.8
World trade volume (goods and services)	**5.8**	**3.2**	**4.5**
Commodity prices			
Oil[1]	31.6	2.1	–1.0
Nonfuel[2]	17.8	–9.5	–2.9

Sources: IMF, *World Economic Outlook* (October 2012) and *Middle East and Central Asia Regional Economic Outlook* (November 2012).

[1]Simple average of prices of U.K. Brent, Dubai, and West Texas Intermediate crude oil. The average price of oil in U.S. dollars a barrel was $104.01 in 2011; the assumed price based on future markets is $106.18 in 2012 and $105.10 in 2013.

[2]Average (measured in U.S. dollars) based on world commodity export weights.

Source: IMF Regional Outlook

MENA oil exporter growth is projected to converge with the rest of the region as Government expenditures rise to meet social pressures while oil exports level off

MENAP Region: Selected Economic Indicators, 2000–13

(Percent of GDP, unless otherwise indicated)

	Average						Projections	
	2000–06	2007	2008	2009	2010	2011	2012	2013
MENAP[1]								
Real GDP (annual growth)	5.4	5.8	4.4	2.6	4.8	3.3	5.1	3.6
Current Account Balance	9.2	13.1	13.7	2.0	7.0	13.2	11.2	9.7
Overall Fiscal Balance	3.1	6.2	6.6	–3.0	–0.4	1.5	1.5	0.4
Inflation, p.a. (annual growth)	5.9	9.9	14.3	7.3	7.3	10.3	10.9	9.5
MENAP oil exporters								
Real GDP (annual growth)	5.8	5.3	4.0	1.7	5.3	3.9	6.6	3.8
Current Account Balance	13.4	18.6	19.7	4.8	11.0	18.7	16.4	14.2
Overall Fiscal Balance	7.4	12.4	13.3	–1.8	2.5	5.9	6.1	4.4
Inflation, p.a. (annual growth)	6.7	11.5	15.0	5.7	6.6	10.4	11.5	9.7
***Of which:* Gulf Cooperation Council**								
Real GDP (annual growth)	5.7	5.3	6.3	–0.2	5.5	7.5	5.5	3.7
Current Account Balance	15.4	19.9	22.7	7.5	14.4	24.1	23.6	21.1
Overall Fiscal Balance	11.5	17.9	24.8	–0.7	4.5	12.7	14.6	11.2
Inflation, p.a. (annual growth)	1.6	6.6	11.0	3.0	3.2	3.6	3.5	3.6

Source: IMF Regional Outlook

MENAP Region: Selected Economic Indicators, 2000–13

(Percent of GDP, unless otherwise indicated)

	Average 2000–06	2007	2008	2009	2010	2011	Projections 2012	Projections 2013
MENAP oil importers								
Real GDP (annual growth)	4.9	6.8	5.3	4.2	4.0	2.0	2.1	3.3
Current Account Balance	–0.8	–2.5	–4.1	–4.8	–3.1	–3.5	–5.2	–4.4
Overall Fiscal Balance	–4.5	–5.2	–5.6	–5.0	–5.6	–7.0	–7.8	–7.4
Inflation, p.a. (annual growth)	4.5	7.1	13.0	10.2	8.5	9.9	9.7	9.2
MENA[1]								
Real GDP (annual growth)	5.5	5.7	4.5	2.6	5.0	3.3	5.3	3.6
Current Account Balance	10.0	14.5	15.3	2.6	7.7	14.2	12.2	10.6
Overall Fiscal Balance	3.9	7.7	8.4	–2.8	0.2	2.5	2.5	1.4
Inflation, p.a. (annual growth)	5.9	10.2	14.6	6.2	7.0	9.8	10.9	9.5
MENA oil importers								
Real GDP (annual growth)	4.7	6.7	6.1	4.9	4.3	1.4	1.2	3.3
Current Account Balance	–1.3	–1.8	–2.8	–4.6	–3.6	–5.2	–6.9	–5.8
Overall Fiscal Balance	–5.3	–5.1	–4.8	–5.2	–5.6	–7.5	–8.7	–7.7
Inflation, p.a. (annual growth)	4.2	6.7	13.6	7.3	8.0	7.9	9.0	8.8
Memorandum								
Arab countries in transition (excl. Libya)								
Real GDP (annual growth)	4.6	6.0	6.3	4.5	4.7	1.2	2.0	3.6
Current Account Balance	1.1	–1.1	–2.5	–3.9	–3.3	–4.9	–5.4	–4.6
Overall Fiscal Balance	–5.2	–5.5	–5.2	–5.7	–6.0	–8.0	–9.1	–8.0
Inflation, p.a. (percent)	4.7	7.1	14.0	7.7	8.4	7.9	7.8	8.6

Sources: National authorities; and IMF staff calculations and projections.

[1] 2011–13 data exclude Syrian Arab Republic.

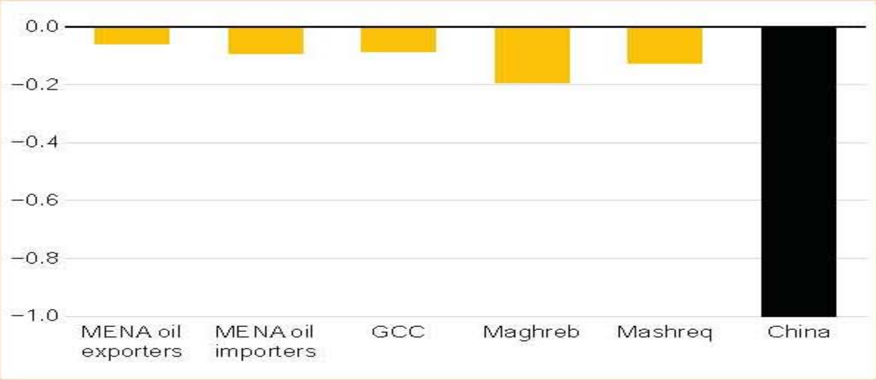
MENAP: (1) Oil exporters: Algeria, Bahrain, Iran, Iraq, Kuwait, Libya, Oman, Qatar, Saudi Arabia, the United Arab Emirates, and Yemen; (2) Oil importers: Afghanistan, Djibouti, Egypt, Jordan, Lebanon, Mauritania, Morocco, Pakistan, Sudan, Syria, and Tunisia; (3) Arab countries in transition: Egypt, Jordan, Libya, Morocco, Tunisia, and Yemen.

MENA: MENAP excluding Afghanistan and Pakistan.

Note: Data refer to the fiscal year for the following countries: Afghanistan and Iran (March 21/March 20), Qatar (April/March), and Egypt and Pakistan (July/June).

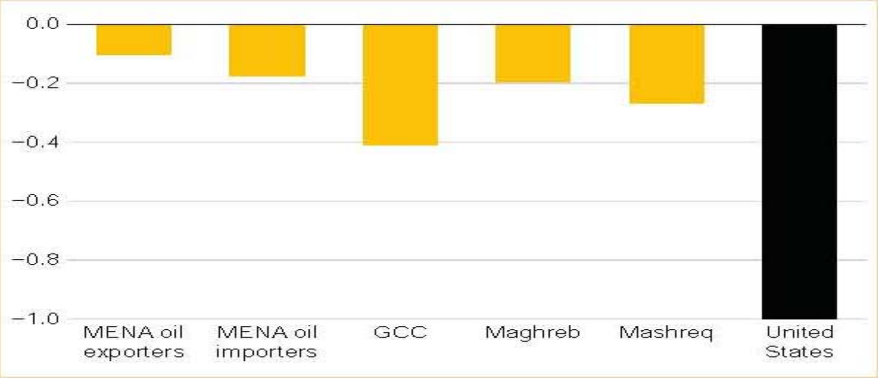
MENA economic growth is vulnerable to shocks from the EURO Area, United States and China

Figure 1
Responses of Output to a Negative GDP Shock in China
(Percent change)



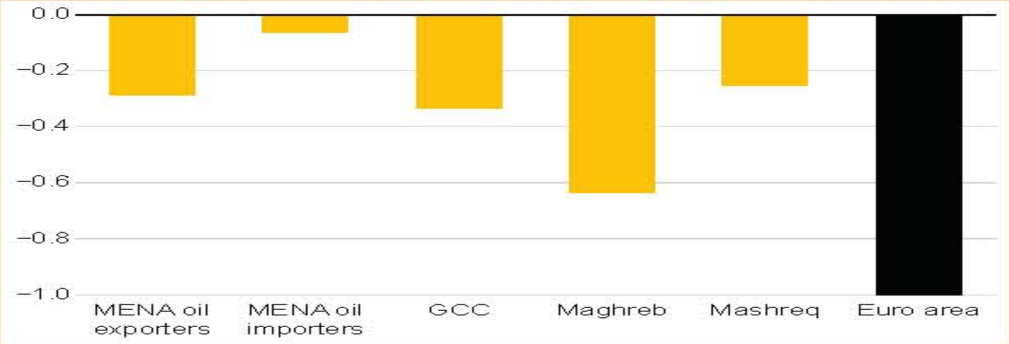
Source: Cashin, Mohaddes, and Raissi (2012).

Figure 2
Responses of Output to a Negative GDP Shock in the United States
(Percent change)



Source: Cashin, Mohaddes, and Raissi (2012).

Figure 3
Responses of Output to a Negative GDP Shock in the Euro Area
(Percent change)



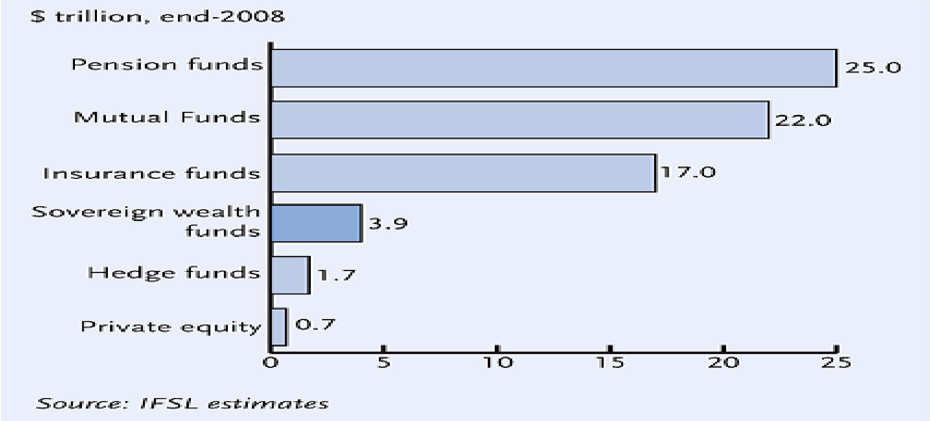
Source: Cashin, Mohaddes, and Raissi (2012).

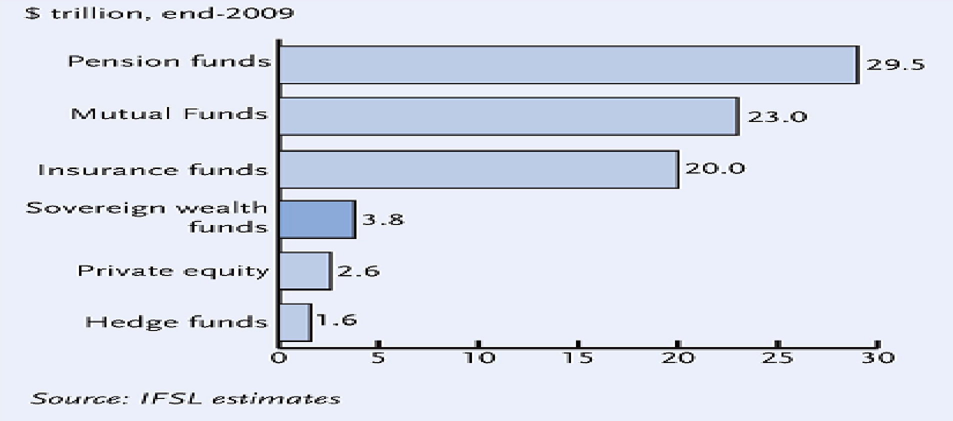
Source: IMF Regional Outlook

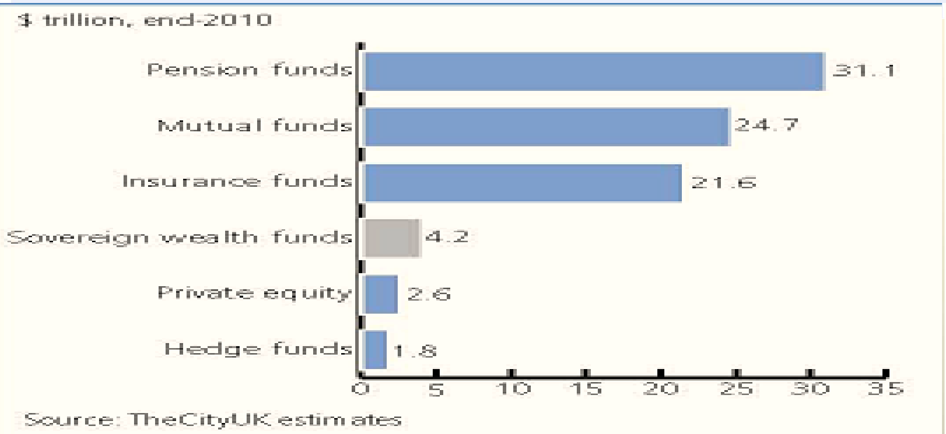
II. Institutional Investors' Broad Move to Diversify Asset Allocation

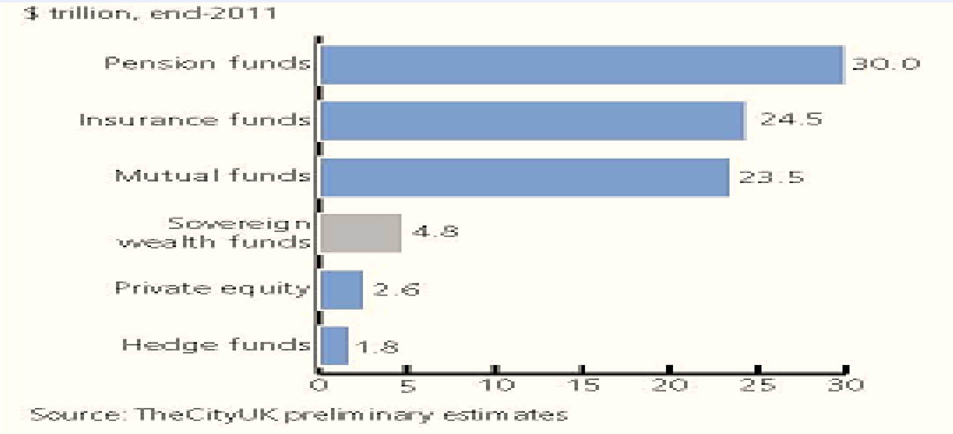
Total global AUM rose from $71 trillion in end-2008 to $89 trillion in end-2011

- Increase of $5 trillion for pension funds-20%; Increase of $7 ½ trillion for insurance companies-44%
- Increase of $1 trillion for private equity funds-270% ; $1 trillion for sovereign wealth funds -23%; and $1 ½ trillion for mutual funds -7%





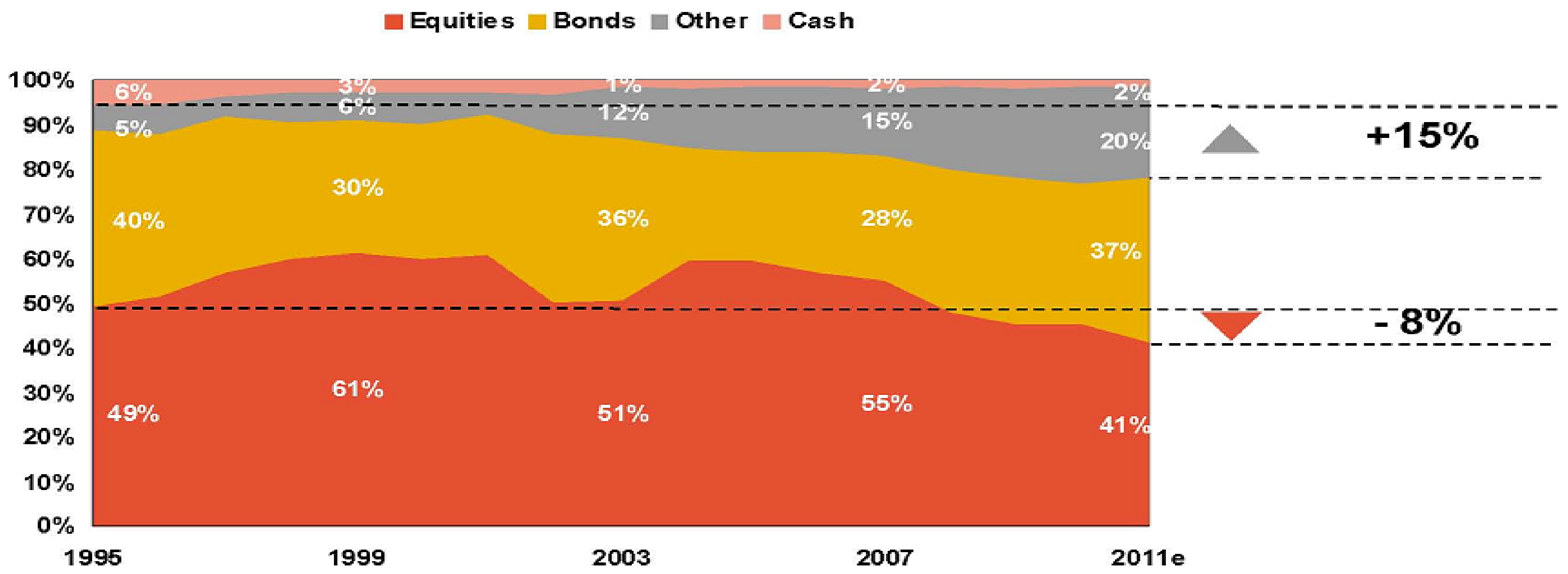




Pension Funds have diversified with increasing allocation to alternatives 1995-2011

Pension fund asset allocation:

- ❖ Decade long decline in allocation to equities
- ❖ Sizable increase in allocation to bonds since 2007/8 financial crisis
- ❖ Secular increase in exposure to alternative assets mainly coming out of equity investments
- ❖Small increase in cash position



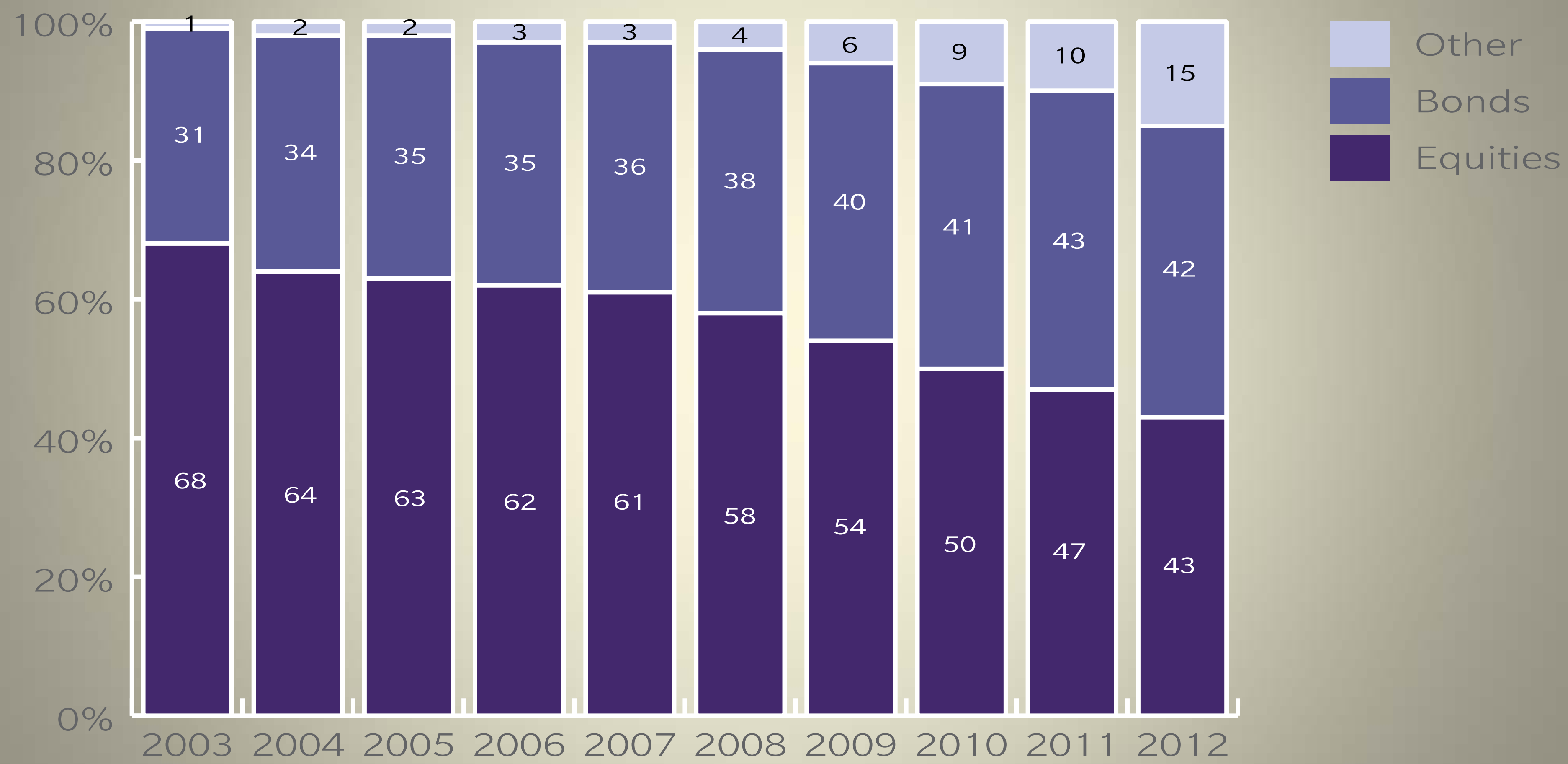
- For the last 16 years, equities, bonds and cash allocations have all been reduced to a varying degree while assets in alternative areas have increased from 5% to 20% in the same time period.

Includes pension funds in OECD countries

Source: Towers Watson and secondary sources

Broad Shift in Asset Allocation from Equities to Bonds and Alternatives

CHANGES IN BROAD STRATEGIC ASSET ALLOCATION FOR UK PLANS (2003–2012)



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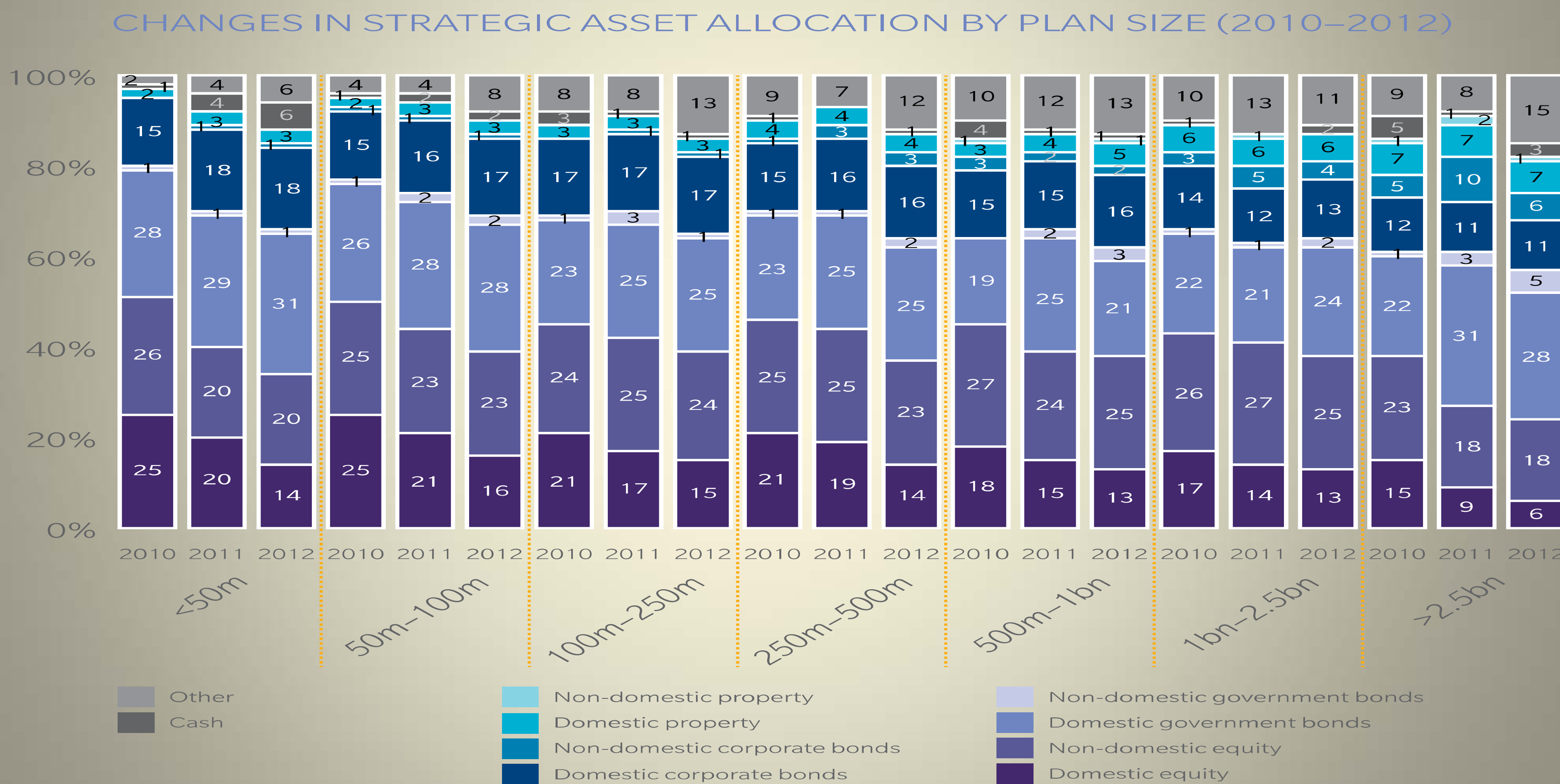
ASSET ALLOCATION SURVEY
EUROPEAN INSTITUTIONAL
MARKETPLACE OVERVIEW 2012

EU Pension Fund Asset Allocation by Size of Plan, 2010-2012

Significant decline in allocation to equities (domestic and foreign) and increase to alternatives

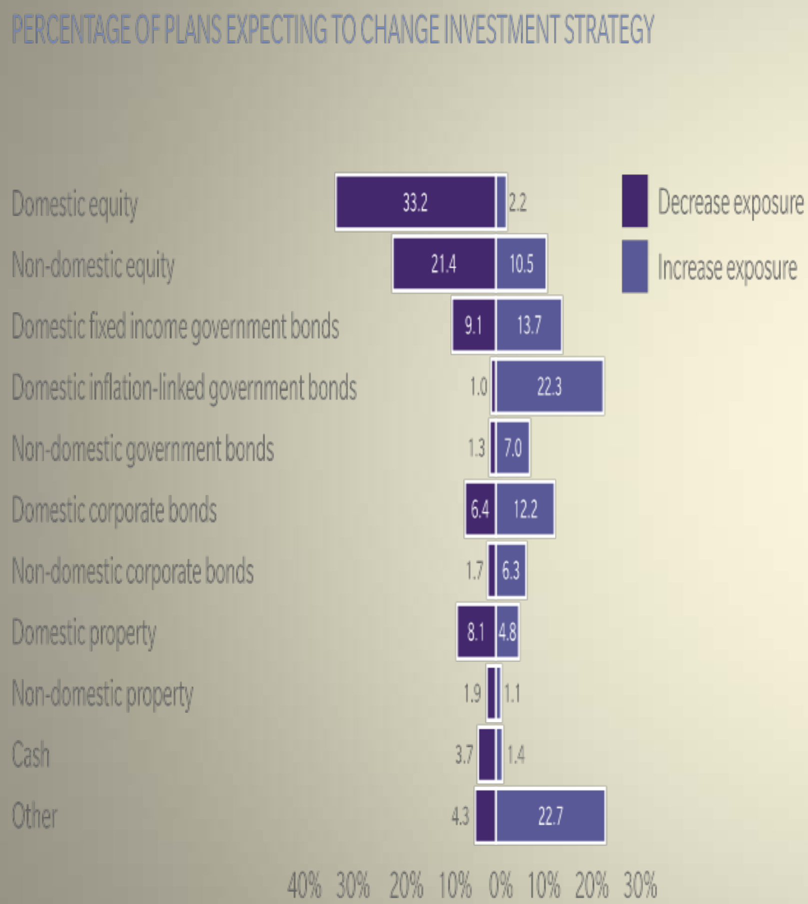
- Increase in allocation to fixed income and alternatives (including real estate, reached 23% of total AUM in 2012 for larger plans)
- Larger pension plans allocated more to alternative assets and less to equities than smaller plans, though the observed trends hold for both
- There was some increase in the allocation to cash

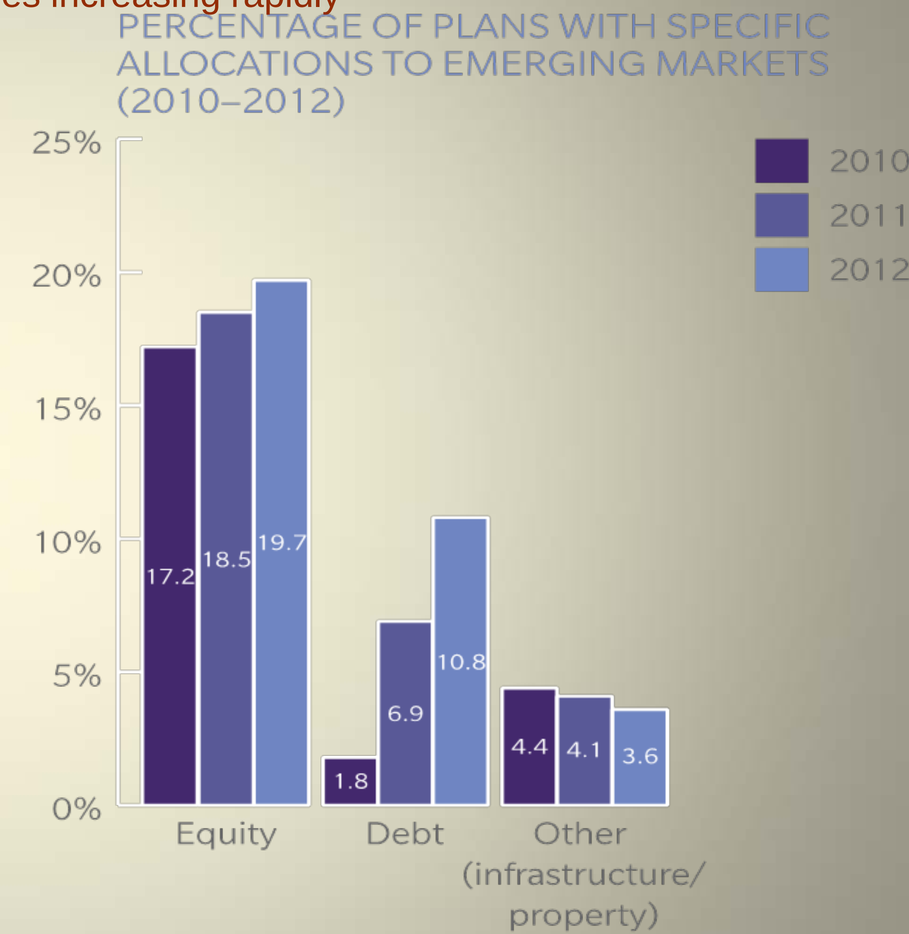


Shifting EU Pension Fund Asset Allocation by Location and Asset Class

Pension funds plan to further increase exposure to non-domestic equity, domestic inflation-linked bonds and alternatives

➢ Specific allocations to emerging market debt and equities increasing rapidly





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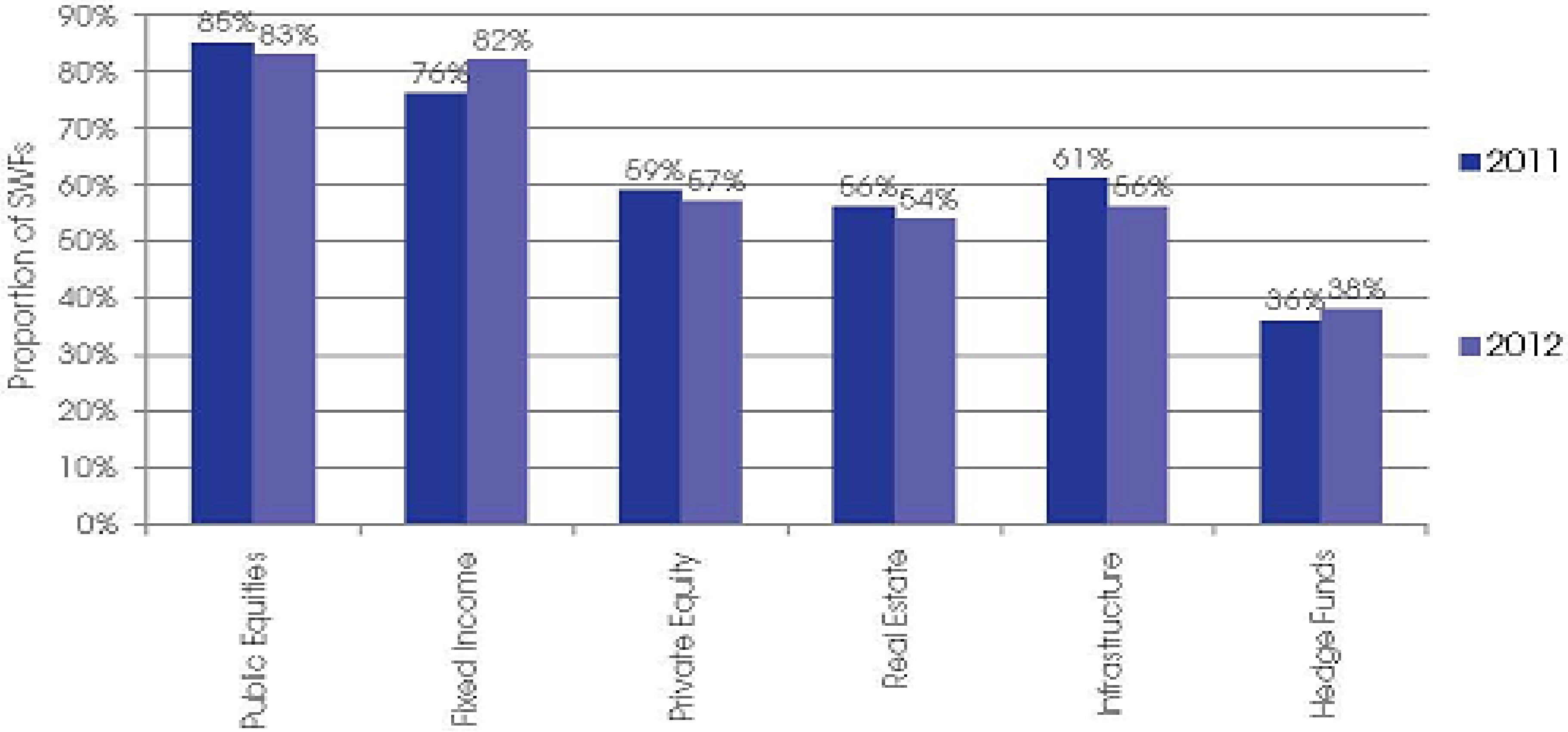
EUROPEAN INSTITUTIONAL MARKETPLACE OVERVIEW 2012

Within context of their mandate, SWFs have diversified across all asset classes

Proportion of Sovereign Wealth Funds Investing in Each Asset Class



Diversification of SWF Direct Investment Across EM and Frontier Markets

Not captured by this data: A move from OECD to EM and frontier countries through increased investment in OECD companies that focus on exports to non-OECD countries

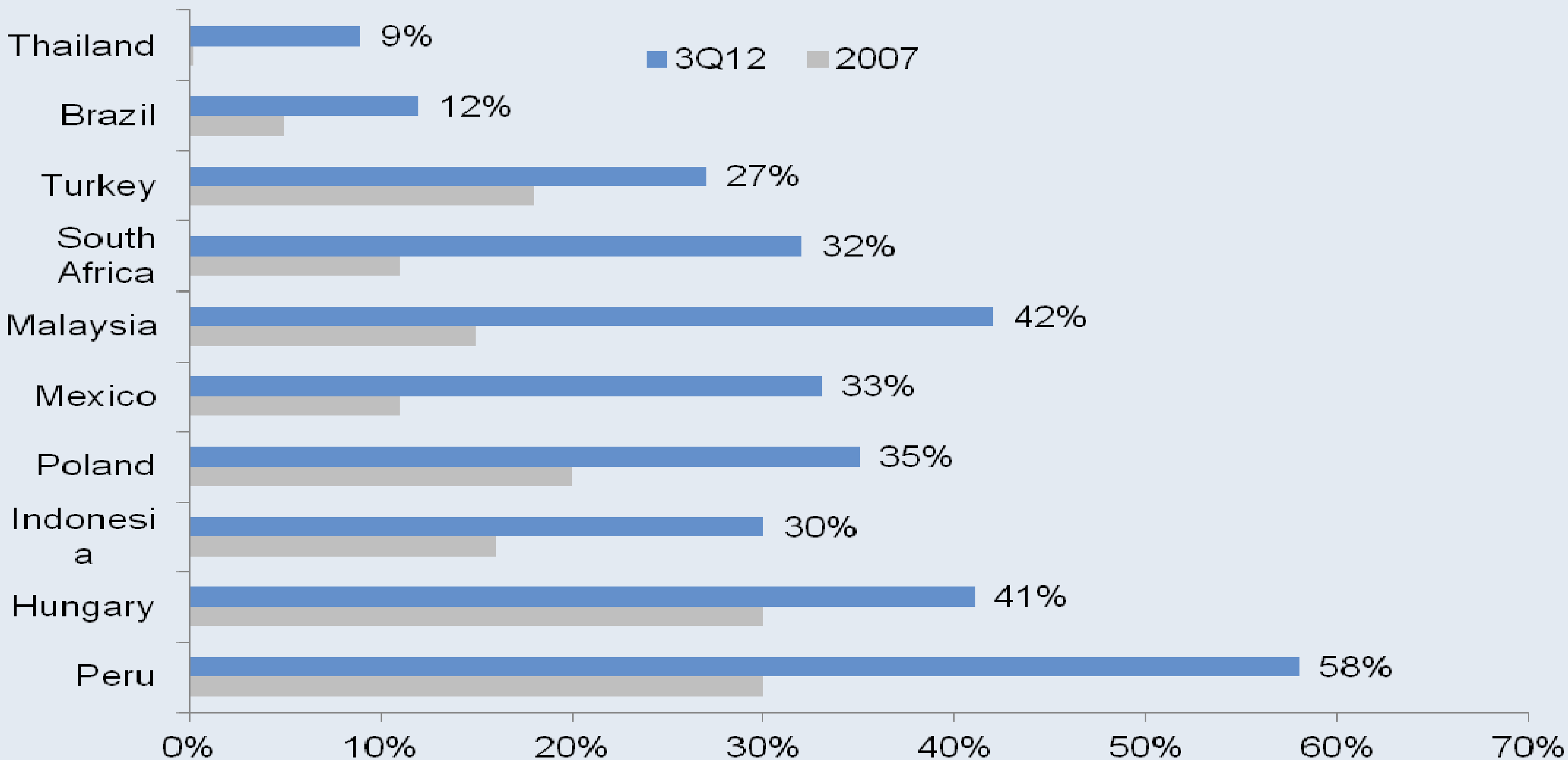
	BRIC	EMERGING MARKETS	FRONTIER MARKETS	OTHERS	OECD
Number 2007	28.57%	6.43%	12.14%	8.57%	44.29%
2011	30.17%	9.05%	11.64%	2.16%	46.98%
Value ($) 2007	39.82%	0.22%	3.94%	1.21%	54.81%
2011	29.25%	8.54%	6.21%	0.83%	55.18%

Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections.

Source: Sovereign Investment Lab, Università Bocconi

Foreign ownership of local debt stock is much higher than five years ago

Increased institutional investor search for yield has facilitated deeper local EM capital markets and improved EM debt profile (with external debt replaced by local debt)



Source: JP Morgan

III. Drivers for Diversification in the Face of Increased Correlation

Observations underlying asset allocation diversification; why diversification still works:

- Diversification to alternative assets and emerging/frontier markets still lowers cross-asset and intra-asset correlation, with attention to diversification within alternative and EM asset classes

- Absolute returns on alternatives and emerging/frontier market assets have been higher than traditional assets and likely to remain

- Returns on portfolios with diverse use of alternative and EM/frontier market assets gain both from higher absolute returns and better risk-adjusted characteristics

- The higher yields from alternatives and EM/frontier markets allow increased inclusion of liquid assets in portfolios without hurting overall returns

SWFs' Mandate Drives Asset Allocation

Stabilization Funds	Insulate Budget/Economy (e.g. Chile, Kazakhstan, Azerbaijan, Algeria, Iran, Venezuela)
Savings Funds	Inter-generational transfer (e.g. Kuwait, Qatar, Singapore , ADIA Alaska, Alberta, Oman GRF)
Reserve Investment Corporations	Part of Reserves; Increasing Returns (e.g. China SAFE, Korea KIC, SAMA)
Development Funds	Socio-Economic Objectives (e.g. Bahrain Mumtalakat, UAE Mubadala)
Contingent Pension Reserve Funds	Contingent pension liabilities of governments (Australia, New Zealand, China NSSF)

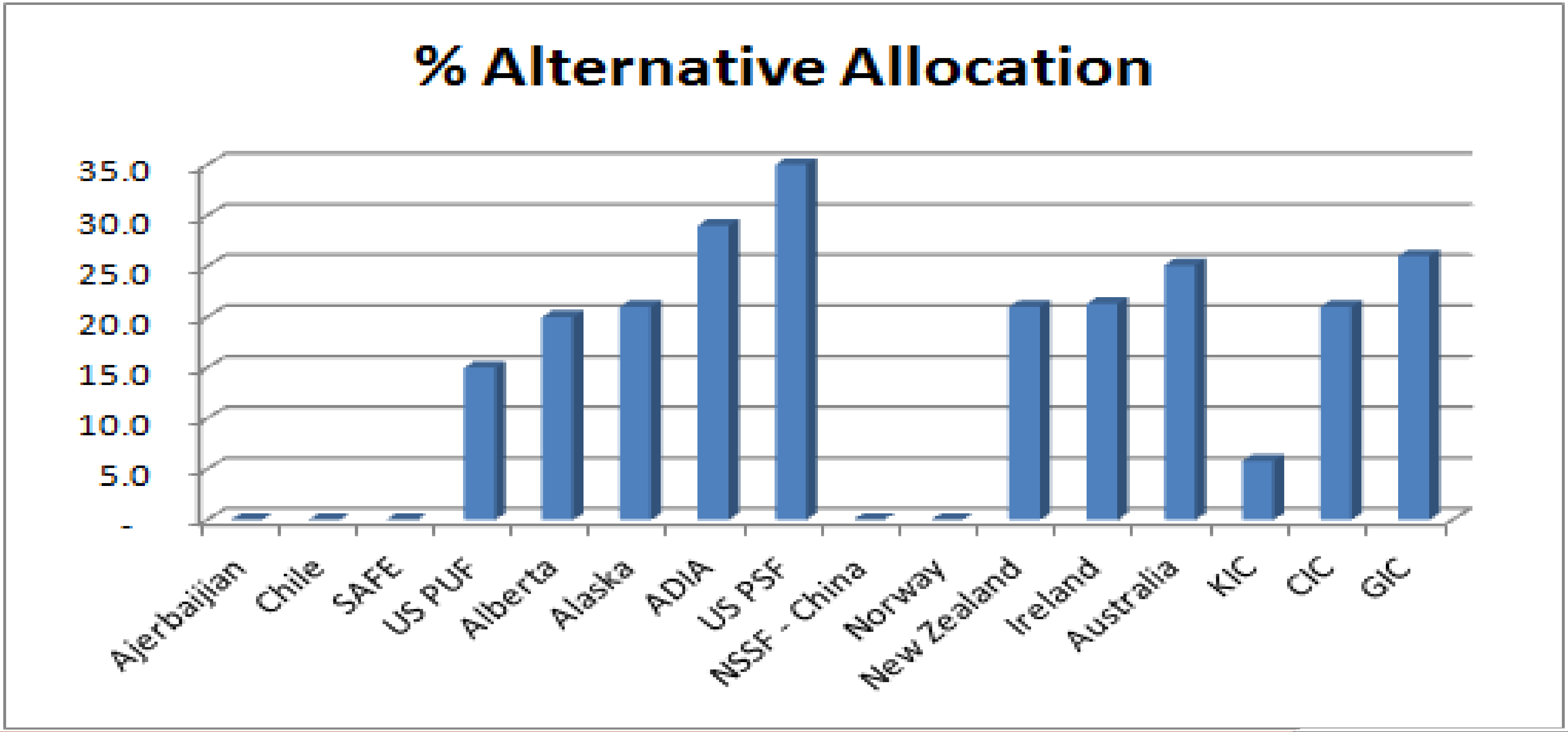
Source: IMF and Fetcher's SWFI

SWF's segmented by policy purpose using the IMF convention

Country	Fund	Purpose	Source
Kazakhstan	Kaz Natl Fund	Stabilization	Oil
Algeria	Rev Reg Fund	Stabilization	Oil
Iran	Oil Stab Fund	Stabilization	Oil
Singapore	Temasek	Savings	Non-commodity
US-NM	NM St Inv Council	Savings	Non-commodity
Brazil	Sov Fund	Savings	Non-commodity
UAE	ADIA	Savings	Oil
Kuwait	KIA	Savings	Oil
Qatar	QIA	Savings	Oil
UAE	ICD	Savings	Oil
Libya	LIA	Savings	Oil
UAE	IPIC	Savings	Oil
US	AK Per Fund	Savings	Oil
Brunei	Brunei Inv Agency	Savings	Oil
US	Texas Per School	Savings	Oil
Canada	AB Heritage Fund	Savings	Oil
Oman	Gen Res Fund	Savings	Oil & Gas
China	SAFE	Reserve Investment	Non-commodity
China	CIC	Reserve Investment	Non-commodity
China	HKMA	Reserve Investment	Non-commodity
Singapore	GIC	Reserve Investment	Non-commodity
Korea	KIC	Reserve Investment	Non-commodity
Saudi Arabia	SAMA	Reserve Investment	Oil
China	NSSF	Pension Reserve	Non-commodity
Australia	AFF	Pension Reserve	Non-commodity
Ireland	NPRF	Pension Reserve	Non-commodity
New Zealand	NZ Super Fund	Pension Reserve	Non-commodity
Russia	NWF	Pension Reserve	Oil
Norway	GPG-G	Stab/Savings/Pension	Oil
Azerbaijan	State Oil Fund	Stab/Savings	Oil
East Timor	Tiimor-Leste	Stab/Savings	Oil & Gas
Chile	Soc & Eco Stab Fund	Stab/Pension	Copper
Malaysia	Khazanah	Sov Dev	Non-commodity
Bahrain	Mumtalakat	Sov Dev	Non-commodity
UAE	Mubadala	Sov Dev	Oil
France	Strg Inv Fund	National Strategic	Non-commodity

Allocation patterns are driven by mandate, investment horizon, and liability structure

Other factors include size, maturity, sophistication, investment philosophy and source of funding (to reduce covariance of returns including assets in the ground)



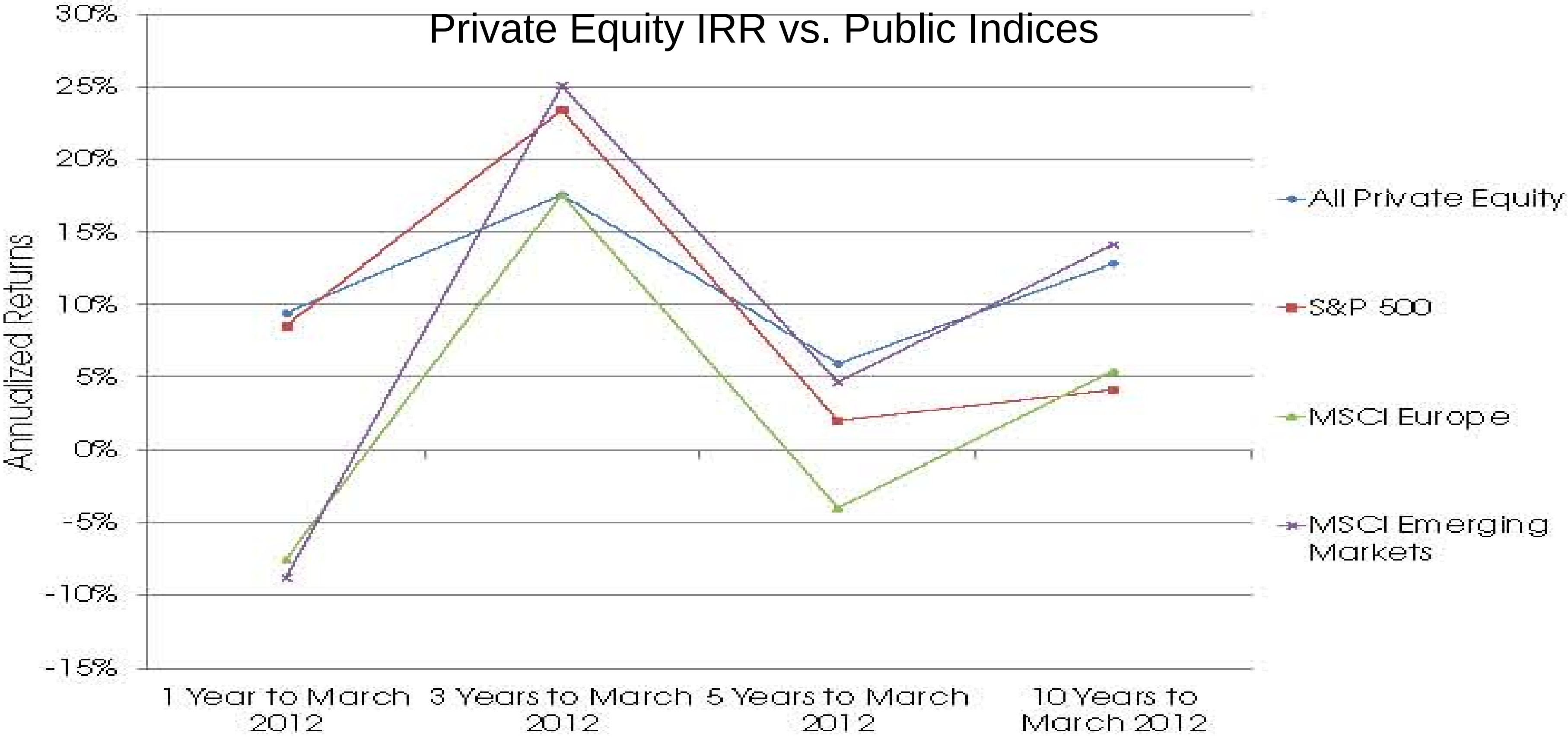
Source: IMF and Fletcher's SWFI

Private Equity and Emerging Market Returns vs. Public Indices

Ten years through December 2011

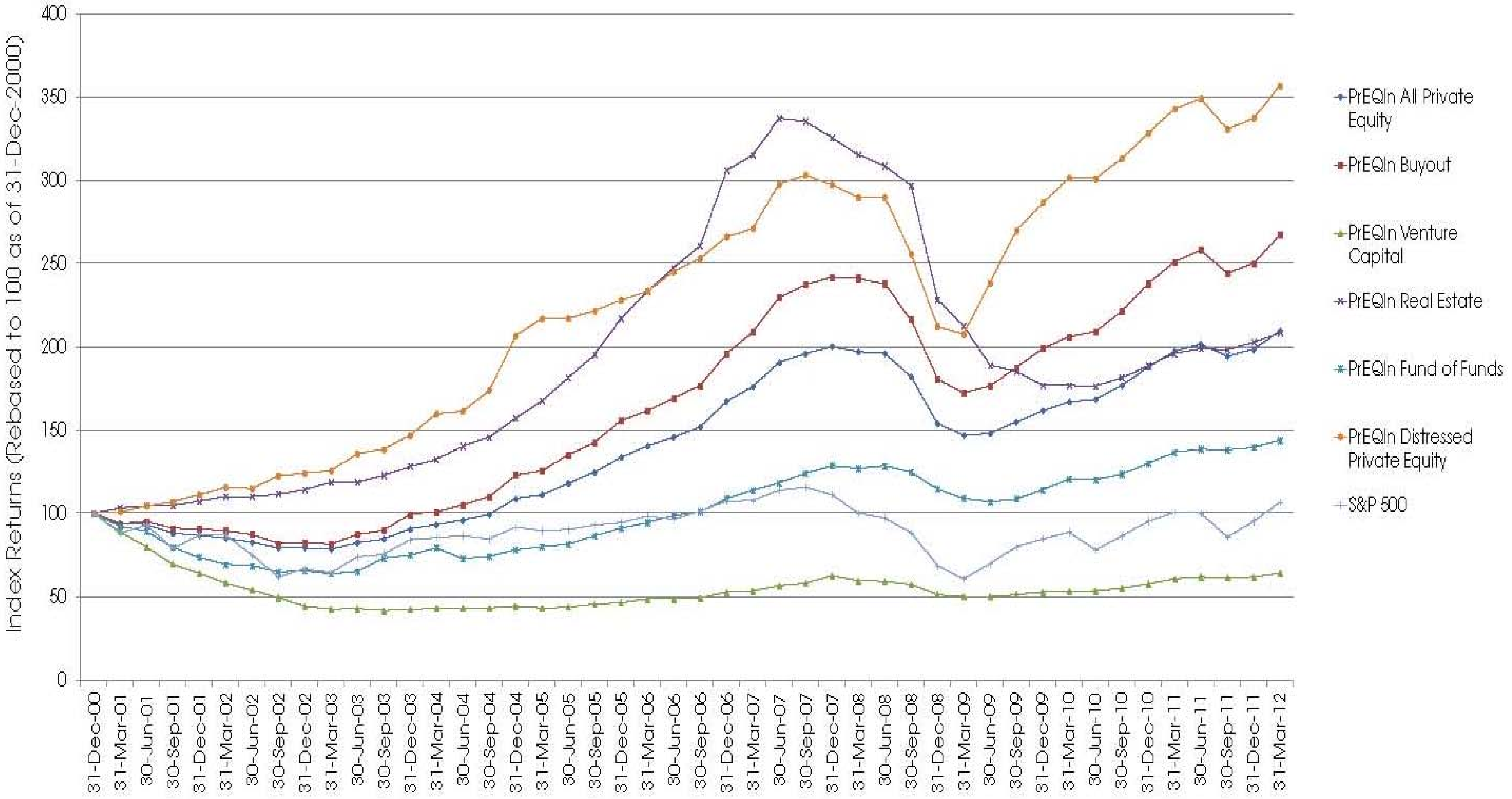
Absolute Returns are Drivers to Alternatives and Emerging Markets

Private equity and emerging markets have outperformed public securities



Source: Preqin Performance Analyst

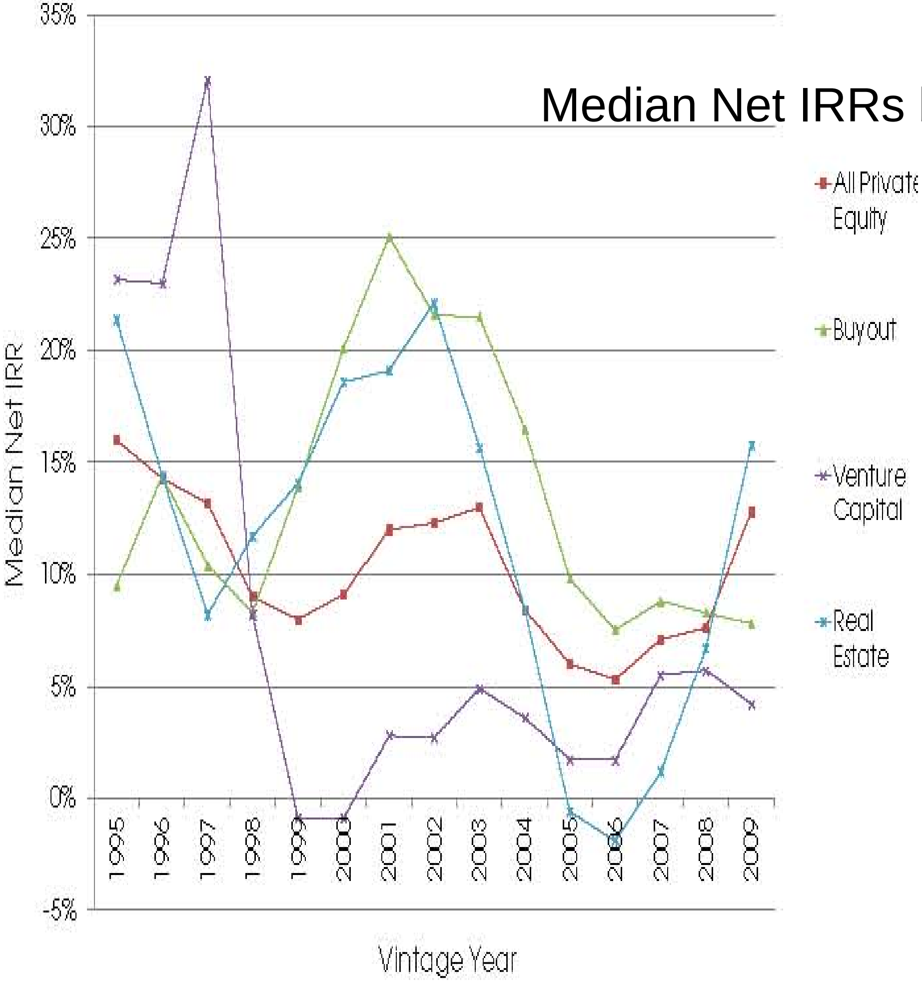
Absolute Returns are Drivers to Alternatives



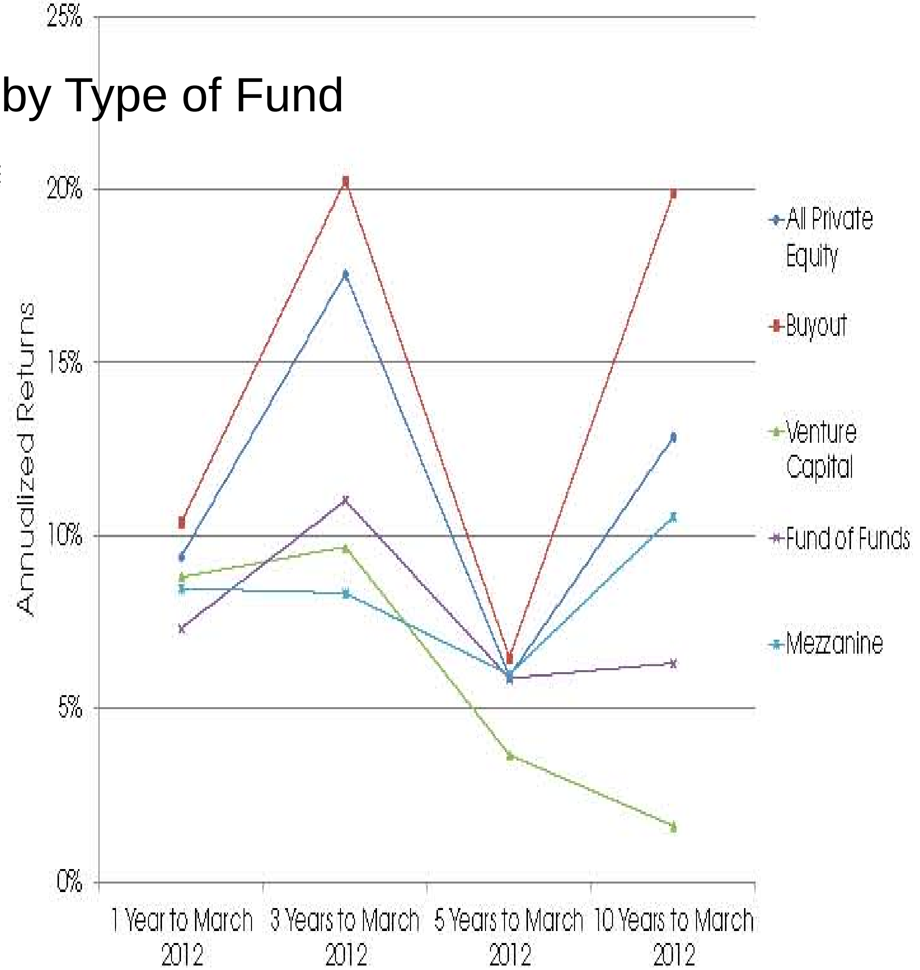
Source: 2012 Preqin Performance Analyst

Non-correlated returns with Alternatives Asset Class

Median Net IRRs by Type of Fund



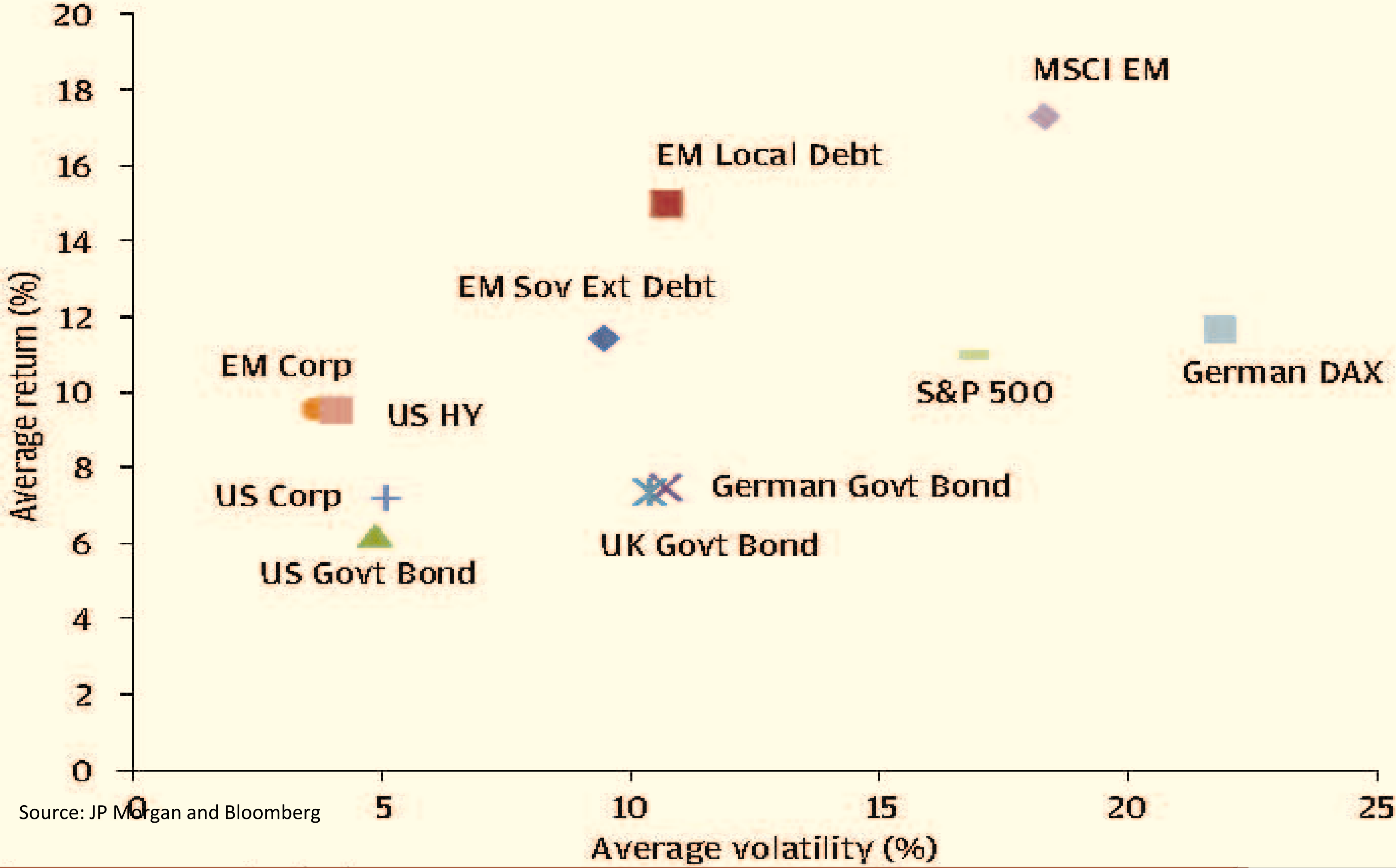
Source: Preqin Performance Analyst



Source: Preqin Performance Analyst

Emerging Market Returns Over Past 15 Years

Emerging market assets have a record of higher returns and lower volatility



Source: JP Morgan and Bloomberg

Correlations of Emerging Market Asset Classes

- **Frontier market equities have lower correlation with other asset classes than publicly traded world or EM equities**
- **U.S. equities have lower correlation with EM equities than with other advanced economy equities**

June 2002–September 2011

	Emerging Markets	Local Currency Debt	Commodities	Dollar Index	Hard Currency Debt	China A Shares	Frontier Markets	MSCI World
Emerging Markets	1.00	0.78	0.58	-0.51	0.65	0.43	0.60	0.90
Local Currency Debt	0.78	1.00	0.57	-0.81	0.65	0.33	0.61	0.77
Commodities	0.58	0.57	1.00	-0.54	0.33	0.30	0.52	0.48
Dollar Index	-0.51	-0.81	-0.54	1.00	-0.46	-0.34	-0.42	-0.53
Hard Currency Debt	0.65	0.65	0.33	-0.46	1.00	0.26	0.41	0.63
China A Shares	0.43	0.33	0.30	-0.34	0.26	1.00	0.22	0.35
Frontier Markets	0.60	0.61	0.52	-0.42	0.41	0.22	1.00	0.61
MSCI World	0.90	0.77	0.48	-0.53	0.63	0.35	0.61	1.00

[1] U.S. equities not shown in this table
Source: State Street Global Advisors

Source: FactSet

Past performance is not a guarantee of future results. Diversification does not ensure a profit or guarantee against loss.

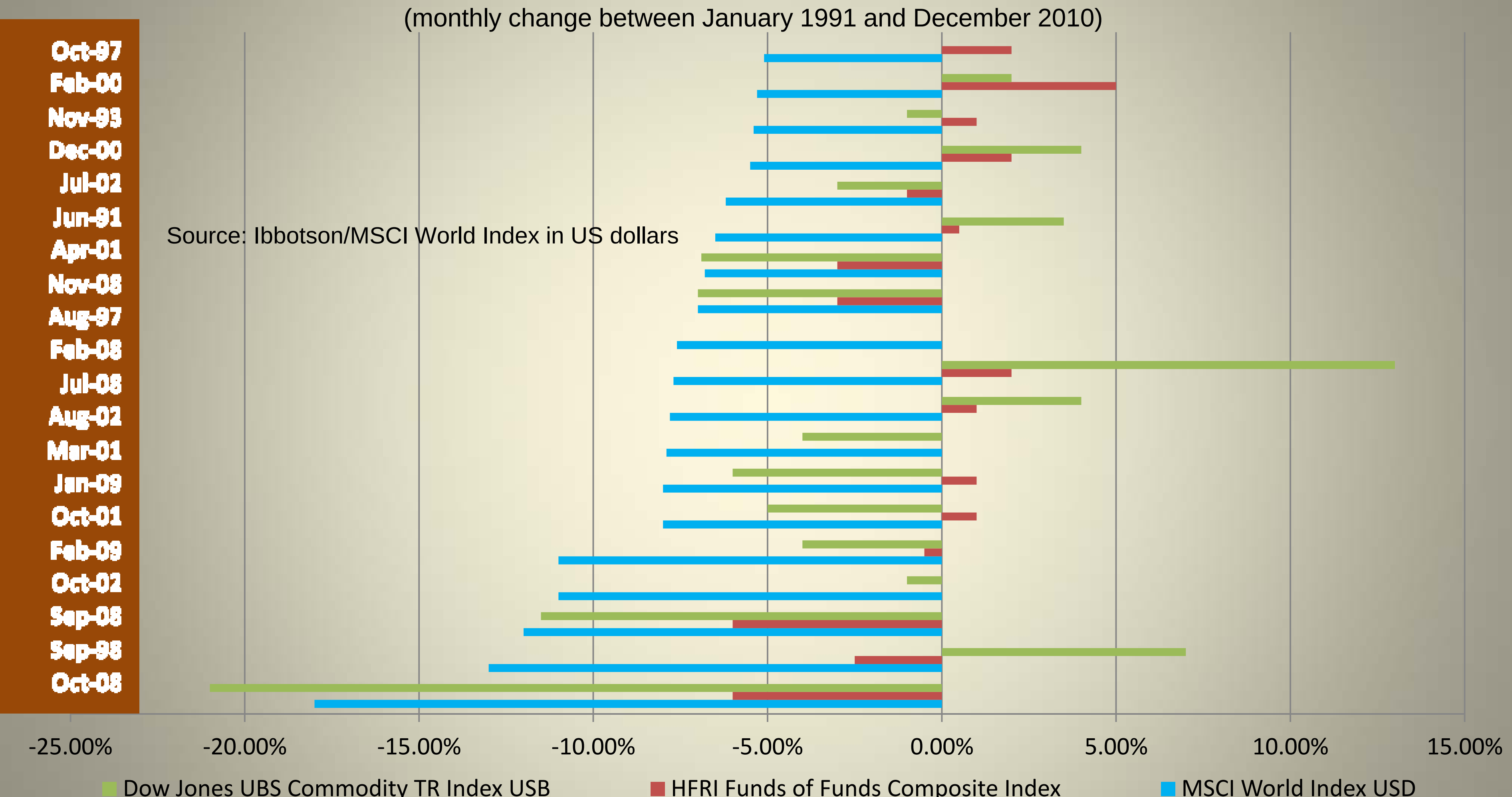
The correlation coefficient measures the degree to which the movements of two variables are related. For example, a correlation of 1.00 (or 100%) would indicate that the two asset classes monthly returns move in the same direction (positive or negative) for the stated time period. In contrast, a correlation coefficient of -1.00 would mean that the to indices move in opposite direction. A correlation of zero indicates that the two exhibit no discernible relationship.

Post-crisis correlations rise but alternatives still consistently less correlated with other asset class than S&P or World Index

	Correlation Coefficients Matrix									
2008-2011	SPX	MSWI	MXEF	MXFM	20 T	US Corp	RE	COM	HF	PE
SPX	1.00									
MSWI	0.98	1.00								
MXEF	0.88	0.94	1.00							
MXFM	0.83	0.87	0.86	1.00						
20 T	-0.61	-0.59	-0.66	-0.51	1.00					
US Corp	0.05	0.17	0.17	0.11	0.50	1.00				
RE	0.90	0.87	0.73	0.82	-0.44	0.04	1.00			
COM	0.68	0.73	0.76	0.76	-0.61	-0.06	0.56	1.00		
HF	0.85	0.89	0.94	0.84	-0.65	0.07	0.68	0.86	1.00	
PE	0.87	0.84	0.79	0.78	-0.62	-0.11	0.79	0.79	0.87	1.00

The Value of Diversification
The 20 Worst-Performing Months for Equities

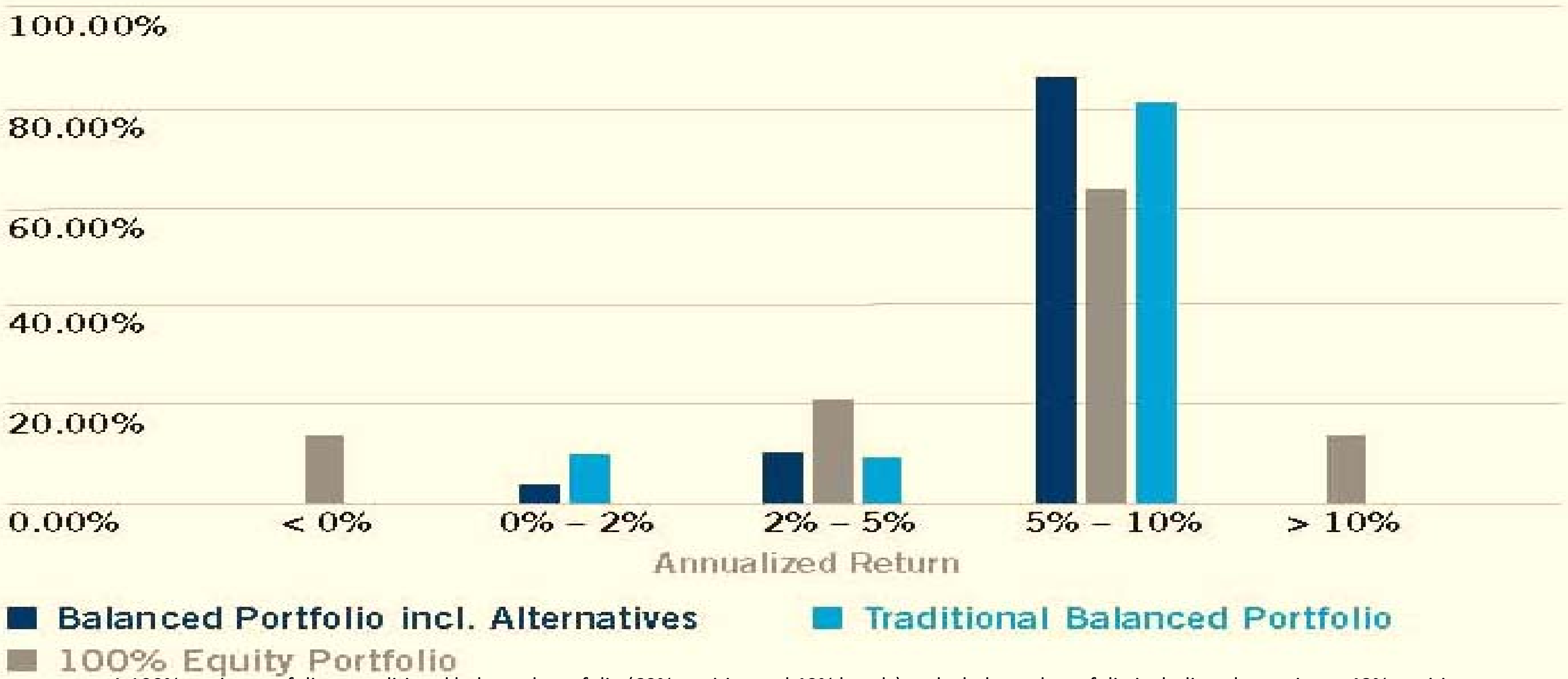
Alternatives offset worst-performing months for global equities



Distribution of 10-Year Returns for Three Asset Mixes

(Jan. 1991 – Dec. 2010-rolling (monthly) 10-year returns for each of the three asset mixes)

The value of diversification with alternatives: Higher absolute returns with lower risk



A 100% equity portfolio, a traditional balanced portfolio (60% equities and 40% bonds) and a balanced portfolio including alternatives-- 48% equities, 32% bonds and 20% alternatives, equally split between hedge funds, real estate, equities and commodities

Source: Ibbotson. The MSCI World Index was used as a proxy for equities; the Citigroup World Government Bond Index was used as a proxy for global bonds. The DJ-UBS Commodity Total Return Index proxies commodities, the HFRI FoF Composite Index proxies hedge funds and the FTSE NAREIT All Reits proxies real estate. All calculations were based on monthly returns

IV. Conclusion: Asset allocation Decisions by Institutional Investors

- **Global Economic and Financial Environment**
  - Investors are facing lower economic growth, larger downside risks and low returns on "safe" assets
  - Emerging and frontier markets have taken policy measures to reduce their risks to external market turmoil and are set for continued economic and financial growth
- **Global State of Institutional Investors**
  - Pension fund and SWF assets under management are growing quickly despite a global decline in equity capitalization
  - Pressures to perform to meet budgetary objectives and investment mandates in the face of low returns/high risk environment
- **Asset Management in Low Return/High Risk World**
  - In this environment, asset managers should search for risk-adjusted yield through diversification to alternative assets, emerging/frontier markets and cash

- **Clear Shift in Asset Allocation Strategy Across Institutional Investors**

- Institutional investors are adjusting well to the current macro/financial/political environment
- Pension plans reduced allocation to equities and increased allocation to fixed income and alternatives across plan size and expect to continue this asset allocation shift; they also have increased allocation to emerging market fixed income and equity
- However, the allocation to cash may not be sufficiently large yet
- SWFs have diversified across all asset classes with increasing allocation to alternatives as well as to emerging and frontier markets.
- Shift in asset allocation should be nimble to macro-regime change to take advantage of macro-sensitive asset behavior

Institutional Investor Asset Management in a Low Return/High Risk World

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