



Real Estate Asset Class Review ***December 18, 2009***

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ASRS Real Estate Program – Discussion Items

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ASRS Real Estate Program - Overview

- Real estate represents 6% +/- 2% of ASRS strategic asset allocation policy. Inception Date is 10/1/2005.

- ASRS real estate investments include:
 - Public and Private vehicles
 - Core and Non-Core strategies
 - U.S. and international institutional real estate markets

- Program Objectives:
 - Achieve attractive risk-adjusted returns.
 - Enhance the overall diversification of ASRS' investment program.

- Return Expectation:
 - NPI + 1%
 - 9% net (1% over the ASRS Actuarial 8% rate of return)

- Funding Status as of June 30, 2009

Total Plan Assets	\$20,734 million	
Target Allocation to Real Estate	\$ 1,244 million	6.0%
Ending Market Value	\$ 637 million	3.1%
Unfunded Commitments	\$ 766 million	3.7%
Total Funded + Committed	\$ 1,402 million	6.8%

ASRS Real Estate Program – Constraints

Constraint ¹	Strategic Allowance	% of Portfolio F&C as of 6/30/2009 ²
Total Core Portfolio	Minimum 20%	23%
Public Securities	Maximum 30%	6%
Total Non-Core Portfolio	Maximum 80%	77%
International Exposure³	Maximum 30%	31%*
Total Portfolio Leverage³	Maximum 65%	58%
Total Core Private Portfolio Leverage³	Maximum 30%	42%**
ASRS % Interest in Commingled Fund	Maximum 20%	N/A

- * ASRS' 31% exposure to Non-U.S. investments represents the Plan's current Funded Portfolio. Significant capital has been committed, but not yet called for domestic strategies which will decrease ASRS' exposure to Non-U.S. investments over time (AEW, CBRE, CIM, Dune and Westbrook).
- The ASRS Strategic Plan allows for temporary variances in diversification during initial allocations and Portfolio formation.
- ** The Core Private Portfolio has exceeded its loan-to-value constraint due to unrealized equity losses, not deliberate use of excess debt. However, all debt was in compliance of Strategic Plan guidelines at the time of origination.

¹Percentages representative of private assets only.

²F&C is defined as Funded & Committed which equals the 6/30/2009 market value + unfunded commitments.

³Percentages represent ASRS' Funded status as of 6/30/2009.

ASRS Real Estate Program - Activity

- Two real estate mandates were awarded in FY2009 (7/1/2008 – 6/30/2009) with commitments totaling \$200 million.

Manager	Strategy	Commitment
AEW Core Property Trust (U.S.) Inc.	Core-Private	\$ 150,000,000
Dune Real Estate Fund II LP	Non-Core High Return	\$ 50,000,000

- Subsequent to FY2009, ASRS evaluated tactical investment opportunities in Public Securities and the Non-Core space.
 - One additional \$50 million Non-Core commitment was approved by the Real Estate Committee in November 2009.
 - ASRS is also evaluating both of its Public Securities positions at this time.
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ASRS Real Estate Program - Performance

Time Weighted Return Performance through 6/30/2009

Portfolio Performance	2Q09 Market Value	1 Year		3 Year		Since Inception ¹	
		Gross	Net	Gross	Net	Gross	Net
Total ASRS Real Estate Portfolio	\$636,661,886	-33.27%	-34.55%	-6.34%	-8.93%	-1.42%	-3.91%
<i>NPI + 100 bps</i>		-18.60%		2.01%		5.30%	
<i>Constant 9%</i>		9.00%		9.00%		9.00%	

1. Inception date of performance is 10/1/2005.

- The ASRS return objective is net of fees to meet/exceed the NCREIF Property Index plus 100 basis points (“NPI + 100 bps”) and provide a constant 9% return to ASRS over longer time periods.
- The NCREIF Property Index is a de-levered index comprised of Core institutional properties in the U.S.
- Performance Drivers:
 - “J-curve Effect “ in Non-Core investments:
 - Anticipated during initial funding periods and early value creation phase. See page 10 and 11 for vintage year exposure by strategy (enhanced and high return).
 - Leverage:
 - The portfolio’s loan to value ratio of 57% leverage (as of 6/30/09) has had a negative effect on portfolio returns, relative to an unleveraged benchmark in the NPI. The following slide shows the effect of leverage on ASRS’ Total Portfolio.

ASRS Real Estate Program - Performance without Leverage

Time Weighted Levered/Unlevered Returns through 6/30/2009

	1 Year	3 Year	Inception
ASRS Total Portfolio Net Levered Return	-34.55%	-8.93%	-3.91%
ASRS Total Portfolio Net Unlevered Return	-10.45%	0.31%	2.42%
<i>NPI + 100 bps</i>	-18.60%	2.01%	5.30%
<i>Constant 9%</i>	9.00%	9.00%	9.00%

- On an unlevered, net of fee basis, ASRS has outperformed the NPI + 100 bps over the recent one year time period by 815 bps.
- As investments mature and the economy shows signs of improvement, longer time period return streams will begin to reflect returns in line with the Plan's established benchmark of the NPI + 100 bps and a constant 9% return.

¹Assumed the total portfolio's loan-to-value ratio is 58.00% over all time periods.

²Assumed weighted average cost of capital is 7.00% over all time periods.

ASRS Real Estate Program – Portfolio Composition

ASRS Valuation Rollforward Report as of October 31, 2009

Fund Investment	Vintage Year	Commitment	Adjusted Value ¹	Adjusted Remaining Commitment	Adjusted Exposure ²	% Real Estate Portfolio	Policy Allocation
AEW Core Property Trust (U.S.), Inc.	2007	150,000,000	7,500,000	142,500,000	150,000,000		
CIM Urban REIT, LLC	2005	75,000,000	50,176,435	22,002,403	72,178,838		
Hines US Core Office Fund LP	2003	16,000,000	9,940,924	0	9,940,924		
Total Core Private:		241,000,000	67,617,359	164,502,403	232,119,762	17%	
European Investors Global REIT	2007	72,341,377	39,890,141	0	39,890,141		
LaSalle Investment Management Global REIT	2007	89,071,494	43,678,510	0	43,678,510		
Total Core Public:		161,412,871	83,568,651	0	83,568,651	6%	Max 30%
Total Core		402,412,871	151,186,010	164,502,403	315,688,413	23%	Min 20%
AEW Value Investors Fund II, L.P.	2006	50,000,000	8,747,402	30,721,965	39,469,367		
Capmark Commercial Realty Partners III	2007	50,000,000	16,742,625	15,001,852	31,744,477		
CB Richard Ellis Strategic Partners U.S. Value 5	2008	50,000,000	3,012,579	46,011,825	49,024,404		
Heitman Value Partners II, L.P.	2006	50,000,000	9,735,880	31,004,266	40,740,146		
PRISA II	2007	61,200,000	30,812,229	7,295,000	38,107,229		
Total Enhanced Return		261,200,000	69,050,715	130,034,908	199,085,623	15%	

1. Represents Reported Value as of 6/30/2009 plus Capital Calls minus Capital Distributions through 10/31/2009.

2. Calculated as Adjusted Value plus Adjusted Remaining Commitment.

* Adjusted Value + Adjusted Remaining Commitment = Adjusted Exposure

ASRS Real Estate Program – Portfolio Composition

ASRS Valuation Rollforward Report as of October 31, 2009 (cont'd)

Fund Investment	Vintage Year	Commitment	Adjusted Value ¹	Adjusted Remaining Commitment	Adjusted Exposure ²	% Real Estate Portfolio	Policy Allocation
AIG Asian Real Estate Partners II (USD), L.P.	2007	50,000,000	4,284,415	44,327,777	48,612,192		
Blackstone Real Estate Partners VI, L.P.	2006	45,000,000	9,317,824	26,387,594	35,705,418		
Carlyle Realty Partners V, L.P.	2006	50,000,000	33,048,336	11,536,298	44,584,634		
CB Richard Ellis Strategic Partners US Opportunity 5	2007	50,000,000	10,207,548	36,384,615	46,592,163		
CIM Fund III, L.P.	2007	50,000,000	1,162,161	46,669,909	47,832,070		
Colony Investors VIII, L.P.	2006	50,000,000	9,455,100	8,404,784	17,859,884		
Dune Real Estate Fund II LP	2009	50,000,000	2,635,171	45,500,000	48,135,171		
Dune Real Estate Fund LP	2005	50,000,000	24,537,206	10,133,129	34,670,335		
Five Arrows Realty Securities IV, L.P.	2004	75,000,000	55,046,829	14,197,453	69,244,282		
Five Arrows Realty Securities V, L.P.	2008	50,000,000	6,134,462	42,669,560	48,804,022		
Five Mile Capital Partners II, L.P.	2007	50,000,000	16,043,657	20,000,000	36,043,657		
Lone Star Fund VI (U.S.), L.P.	2008	75,000,000	60,223,958	16,993,215	77,217,173		
Lone Star Real Estate Fund (U.S.), L.P.	2008	25,000,000	13,157,329	12,232,642	25,389,971		
PLA Residential Fund III, L.P.	2008	50,000,000	35,217,848	16,321,243	51,539,091		
PLA Retail Fund I, LP	2006	60,000,000	52,276,343	0	52,276,343		
RREEF Global Opportunities Fund II, LLC	2005	50,000,000	29,893,314	0	29,893,314		
Tishman Speyer Real Estate Venture VI, L.P.	2004	24,685,050	7,625,941	4,427,570	12,053,511		
Tishman Speyer Real Estate Venture VII, L.P.	2007	50,000,000	2,676,468	24,144,722	26,821,190		
Westbrook Real Estate Fund VII, L.P.	2006	44,000,000	20,709,430	11,333,335	32,042,765		
Westbrook Real Estate Fund VIII, L.P.	2008	50,000,000	0	50,000,000	50,000,000		
Total High Return		998,685,050	393,653,340	441,663,846	835,317,186	62%	
Total Non-Core (Enhanced Return + High Return)		1,259,885,050	462,704,055	571,698,754	1,034,402,809	77%	Max 80%
Total ASRS Portfolio		1,662,297,921	613,890,065	736,201,157	1,350,091,222	100%	

1. Represents Reported Value as of 6/30/2009 plus Capital Calls minus Capital Distributions through 10/31/2009.

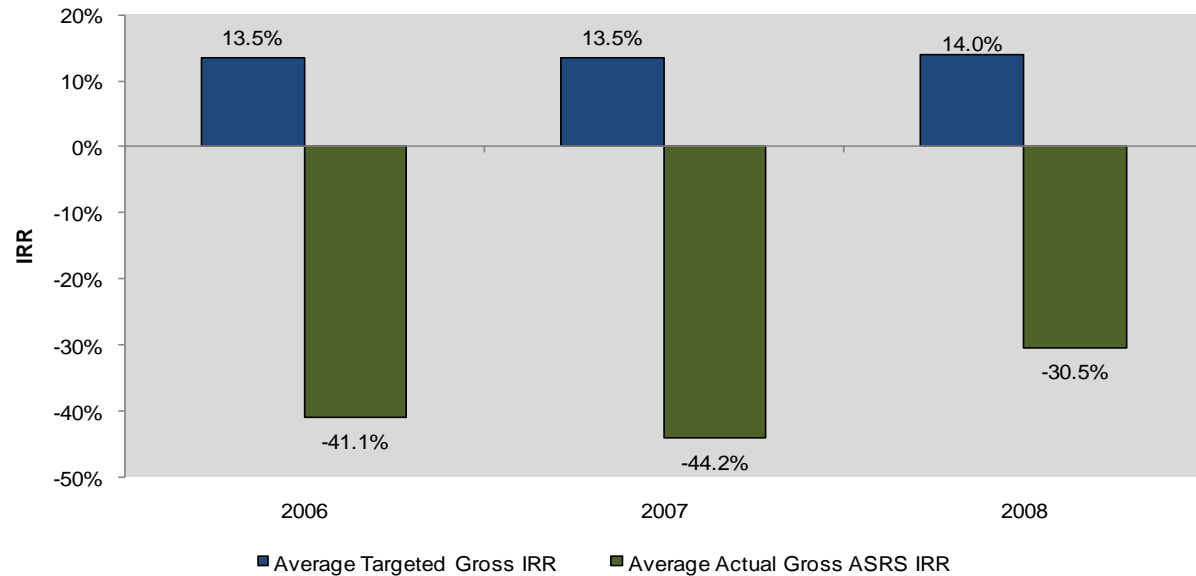
2. Calculated as Adjusted Value plus Adjusted Remaining Commitment.

* Adjusted Value + Adjusted Remaining Commitment = Adjusted Exposure.

* Total ASRS Portfolio line is exclusive of ASRS owned assets in the Rollforward report.

ASRS Real Estate Program – Vintage Exposure (IRR¹)

Enhanced Investment Performance by Vintage Year



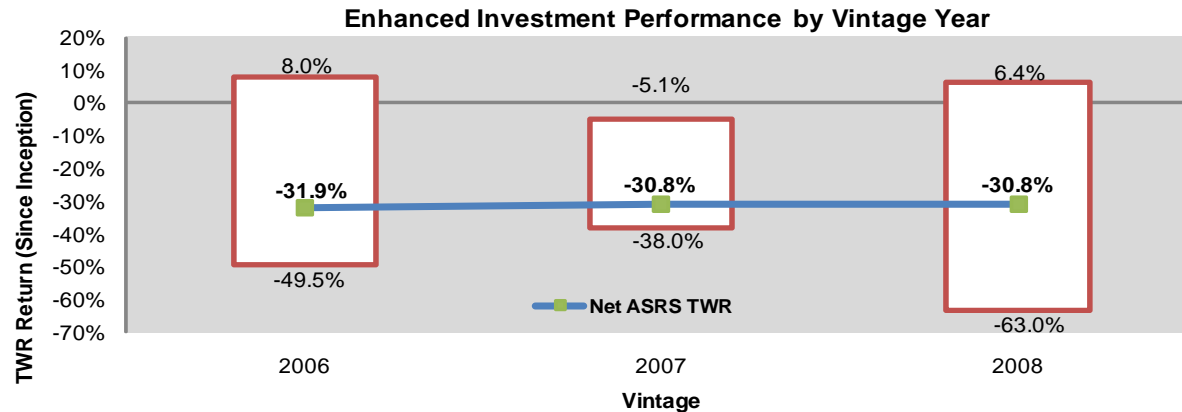
Vintage	ASRS Exposure (# of Funds)
2006	2
2007	2
2008	1

- The Average Projected IRR represents the average targeted return promised by investment managers in their respective vintage year. The Average Actual Gross ASRS IRR represents the average gross IRR of investments to date relative to the displayed vintage year based on actual cash flows. Total commitments to the enhanced space represent \$261 million since inception.
- As of June 30th, 2009 the market value of all enhanced investments represents 26.4% of total commitments made to enhanced strategies and 49.7% of total capital committed remains for future investments.

¹Internal Rate of Return.

*Measures the promised average IRR relative to current average IRR with in place cash flow. Current performance is not indicative of fund level performance at maturity.

ASRS Real Estate Program – Vintage Exposure (TWR¹)

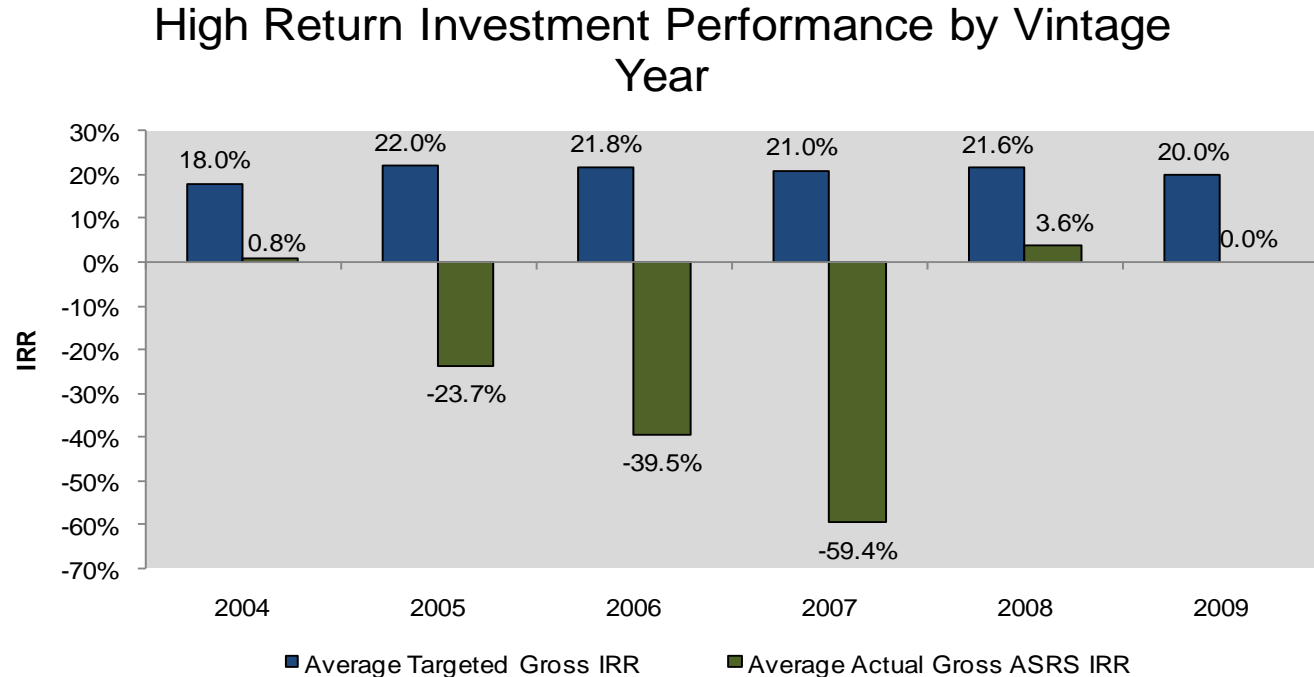


# of NCREIF/TTG Enhanced Funds	10		10		6	
# of Funds ASRS Invested In	2		2		1	
ASRS' Net TWR Since Inception by Vintage Year	-31.9%		-30.8%		-30.8%	
ASRS Quartile Percentage	10.0%		10.0%		33.3%	
Quartile Statistics	Since Inception TWR	Percentile	Since Inception TWR	Percentile	Since Inception TWR	Percentile
	-49.5%	0.0%	-38.0%	0.0%	-63.0%	0.0%
	-13.1%	25.0%	-29.4%	25.0%	-35.0%	25.0%
	-9.6%	50.0%	-23.2%	50.0%	-30.7%	50.0%
	-3.0%	75.0%	-11.3%	75.0%	-29.2%	75.0%
	8.0%	100.0%	-5.1%	100.0%	6.4%	100.0%

¹Time-Weighted Return.

ASRS Real Estate Program – Vintage Exposure (IRR¹)

Vintage	ASRS Exposure (# of Funds)
2004	2
2005	2
2006	5
2007	5
2008	5
2009	1

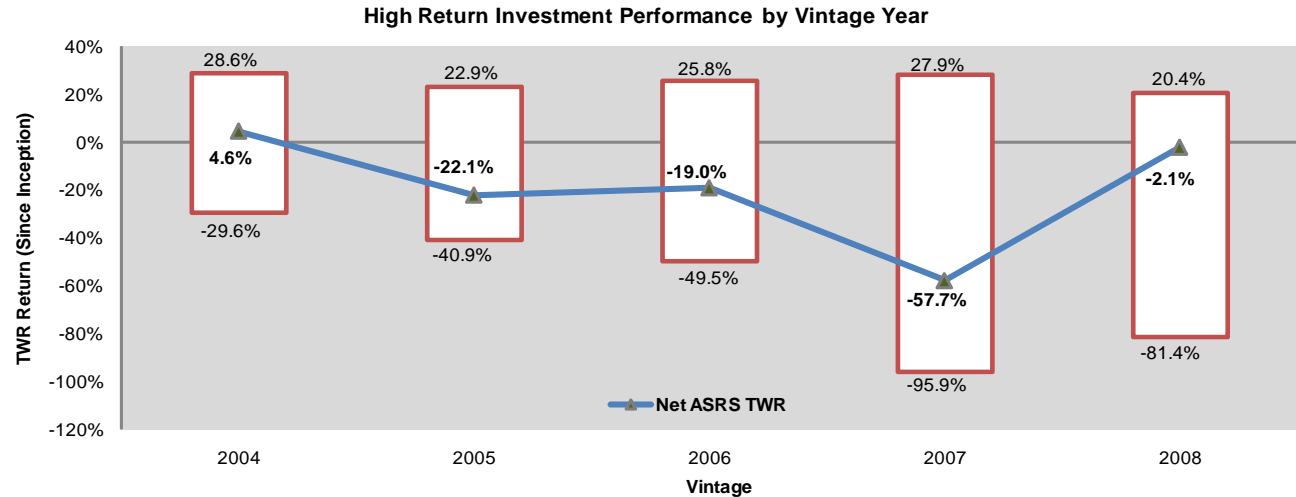


- A total of \$999 million has been allocated to the high return space since inception.
- Of the total capital allocated, 39.4% represents current assets and 44.2% represents capital yet to be called from ASRS (unfunded commitments).
- The 2009 Vintage Fund (Dune RE Fund II) has yet to call capital as of 6/30/2009 and as such reflects a 0% IRR.

¹Internal Rate of Return.

*Measures the promised average IRR relative to current average IRR with in place cash flow. Current performance is not indicative of fund level performance at maturity.

ASRS Real Estate Program – Vintage Exposure (TWR¹)



# of NCREIF/TTG Enhanced Funds	13		32		29		33		17	
# of Funds ASRS Invested In	2		2		5		5		5	
ASRS' Net TWR Since Inception by Vintage Year	4.6%		-22.1%		-19.0%		-57.7%		-2.1%	
ASRS Quartile Percentage	46.1%		6.2%		17.2%		21.2%		70.5%	
Quartile Statistics	Since Inception TWR	Percentile	Since Inception TWR	Percentile	Since Inception TWR	Percentile	Since Inception TWR	Percentile	Since Inception TWR	Percentile
	-29.6%	0.0%	-40.9%	0.0%	-49.5%	0.0%	-95.9%	0.0%	-81.4%	0.0%
	-5.2%	25.0%	-12.3%	25.0%	-17.8%	25.0%	-53.4%	25.0%	-54.7%	25.0%
	4.8%	50.0%	-3.6%	50.0%	-7.6%	50.0%	-16.1%	50.0%	-30.7%	50.0%
	12.2%	75.0%	7.0%	75.0%	1.4%	75.0%	-6.4%	75.0%	-1.7%	75.0%
28.6%	100.0%	22.9%	100.0%	25.8%	100.0%	27.9%	100.0%	20.4%	100.0%	

¹Time-Weighted Return.

ASRS Portfolio Risk Assessment

- Evaluate Current Market Environment
 - Broad based diversification (sectors, styles, location, life cycle) did not protect against the market collapse.
 - All portfolio's with existing exposure to real estate were impacted.
 - Expect "workout" to consume efforts in 2009, 2010 and into 2011.

 - Assess Risk and Exposure
 - Identify debt maturities, mark-to-market progress and covenants.
 - Expose and monitor assets at risk or those with permanent impairment.
 - Identify available equity; whether through unfunded commitments, reserves, future cash flow or other sources.
 - Minimize capital loss and stop 'good money-after-bad' capital requests.
 - Consider organizational stability and retention within the General Partnership.

 - Manage Future Portfolio
 - Position portfolio to take advantage of inevitable recovery.
 - Diversify away from "bad vintages."

 - Five quarters of 'reset' has exceeded 30% expected core equity declines
 - Not all of NPI index has been revalued
 - Write-downs in 2010 will reflect fundamental declines

 - ASRS - One Year Performance Ending June 30, 2009
 - Levered Time Weighted Return of -33.3%
 - Unlevered Time Weighted Return of -9.9%, assuming current Portfolio leverage of 58% and a 7% WACC.
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ASRS Private Portfolio Risk Assessment

Risk Assessment:

- In an effort to manage risk through the current market cycle, Townsend has established a category ranking system. Below is an explanation of the rankings:
 - **Category 1:** These funds are likely to return at least all invested capital for one or more of the following reasons: (i) invested well before peak market pricing, (ii) have substantial asset realizations and capital has been returned to investors and, (iii) some near term debt maturities may exist but plans are in place to address these maturities. Existing investments may not perform well due to current market conditions, however, these investments will not grossly affect total returns due to substantial realizations.
 - **Category 2:** These funds are likely to return at least all invested capital for one or more of the following reasons: (i) invested slowly but into peak market pricing, (ii) due to patient investing, these funds still have capital available to support existing investments, capitalize on new investment opportunities and pay down debt and (iii) some near term debt maturities exist but existing capital is available to pay down debt or plans are in place to address debt maturities.
 - **Category 3:** These funds may experience some loss of capital for one or more of the following reasons: (i) invested very quickly at peak market pricing, (ii) have no available equity (capital) to support existing investments or reduce debt, (iii) have asset concentration within their portfolio and (iv) have near term liquidity concerns, including debt maturities. Category 3 investments may also contain significant levels of organizational risk.
 - **Category 4:** These funds exhibit all the same characteristics of Category 3 funds, however, through additional due diligence a loss of equity is expected. Category 4 investments may also contain significant levels of organizational risk.
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ASRS Private Portfolio Risk Assessment

- Based on information provided by managers and additional due diligence analysis conducted as of 2Q09 by Townsend, ASRS's private real estate investments have been categorized as follows:

Private Real Estate Portfolio Risk Assessment

ASRS Risk Classifications	Original Commitment (Millions)	6/30/2009 Market Value (Millions)	Unfunded Commitments (Millions)	Total Capital Returned (Millions)
Category 1 (3 Investments)	\$250	\$3	\$214	\$0
Category 2 (18 Investments)	\$926	\$404	\$435	\$48
Category 3 (6 Investments)	\$275	\$94	\$114	\$28
Category 4 (1 Investment)	\$50	\$10	\$8	\$0

- While all investments are being monitored, Category 3 and 4 are of greatest concern and clearly warrant additional oversight and active management in order to minimize loss of capital.
- Together, investments most likely to return all committed capital (classified as Category 1 and Category 2) represents 78% of the Total Funded and Committed Portfolio.

Percentages of Total Funded & Committed Portfolio

Public REITs	6%
Category 1	16%
Category 2	62%
Category 3	15%
Category 4	1%
Total	100%

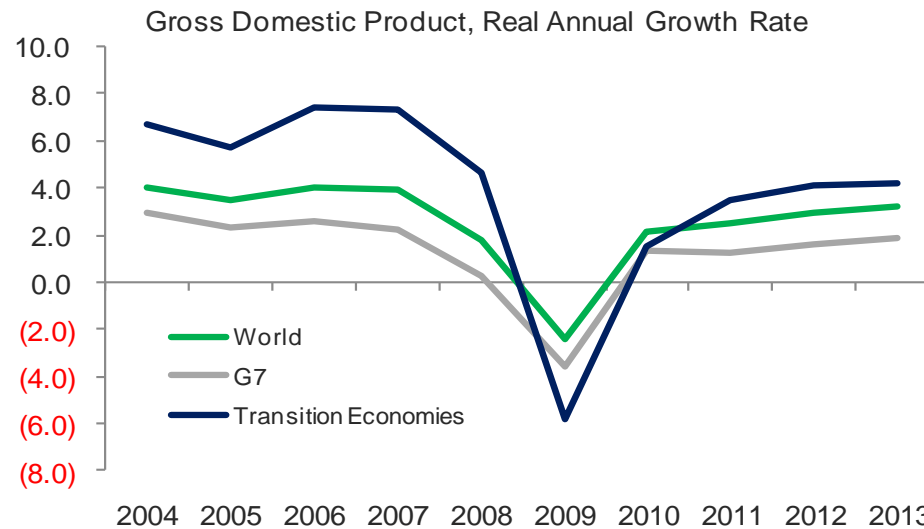
* Risk assessment excludes publicly traded securities and ASRS owned assets.

View of the World

Global Real Estate Investment Opportunities

Overview of Global Real Estate Markets

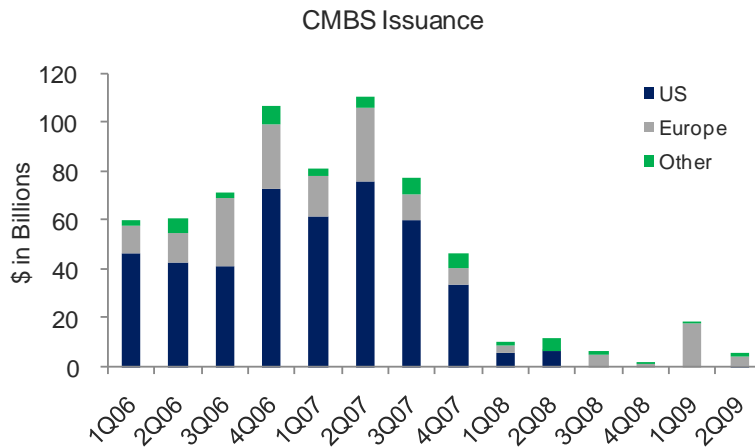
- Two primary forces shape the world's real estate markets:
 - The credit crisis
 - Questionable economic growth
- Other forces, such as undersupply in emerging markets, continue to influence long-term strategic planning but are not central to constructing a global real estate portfolio today.



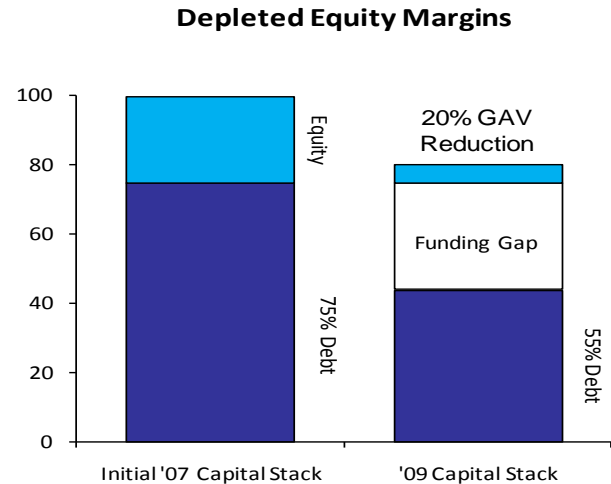
Source: Thomson Reuters, Economist Intelligence Unit

Availability and Nature of Debt Financing

- The Credit Crisis
 - Since the summer of 2007, debt has become progressively more difficult and expensive to obtain. An acute deleveraging process is underway across the globe, with looming debt maturities.
 - Reductions in gross asset values have left borrowers in threatened or actual violation of loan to value covenants.
 - Borrowers need to provide significant supplemental equity to close the funding gap given the lower LTVs available from lenders today

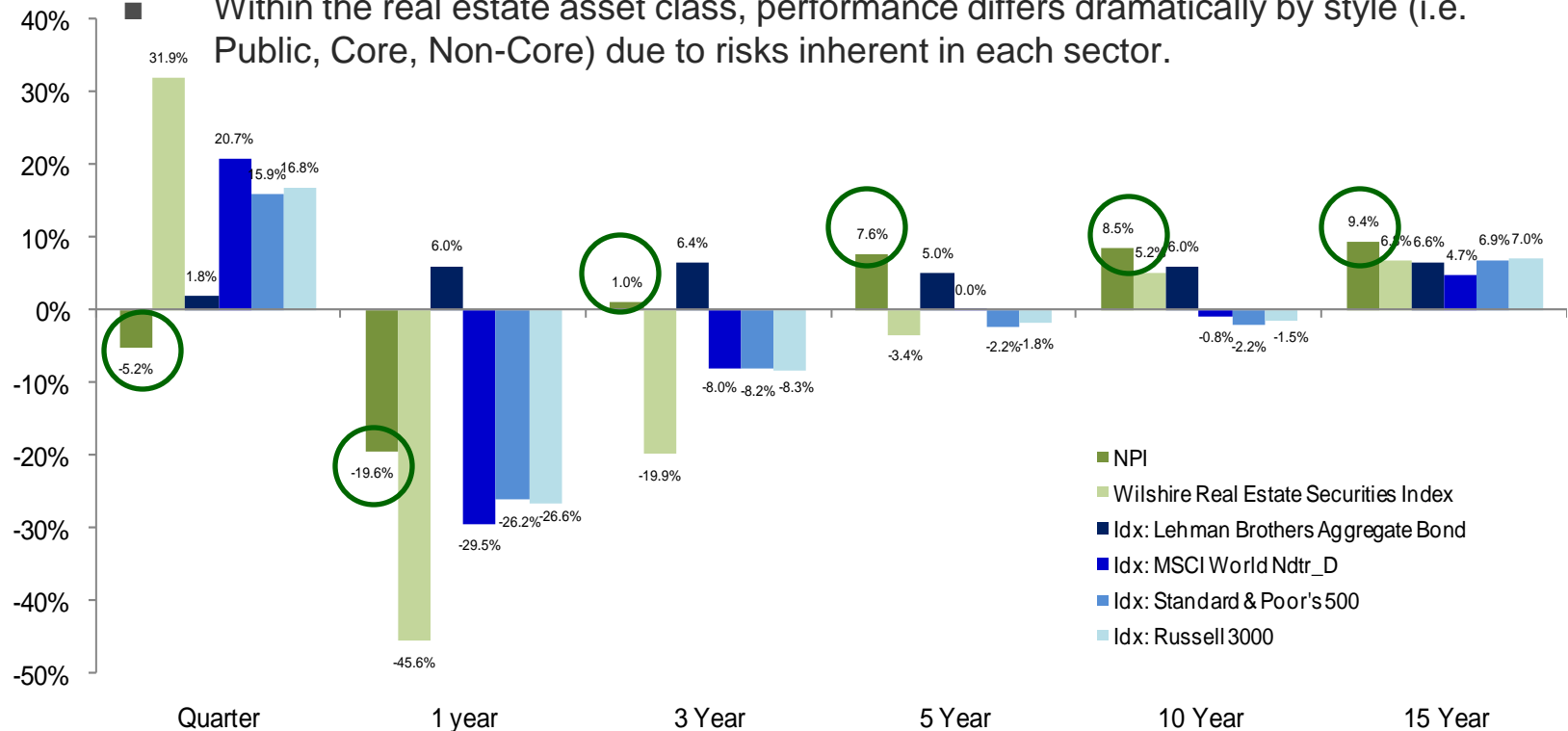


Source: Commercial Mortgage Securities Association



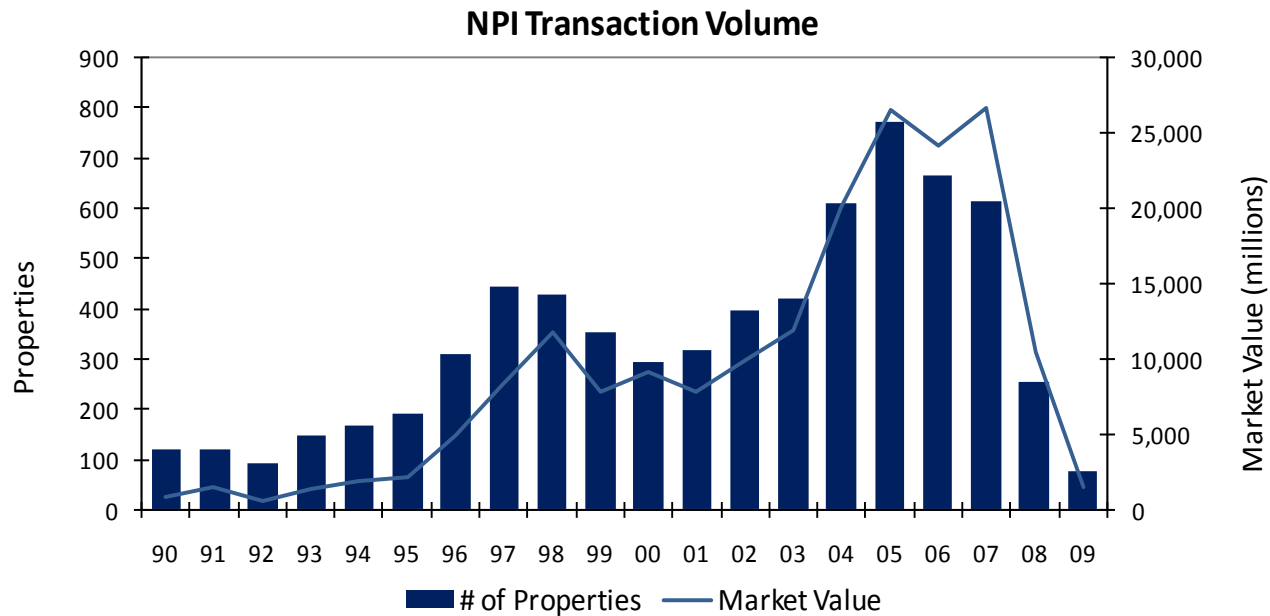
Real Estate Asset Class Performance

- Although real estate has been hit hard in recent years, it has historically been a top performer among asset classes.
- Within the real estate asset class, performance differs dramatically by style (i.e. Public, Core, Non-Core) due to risks inherent in each sector.



Steep Declines in Transaction Volume

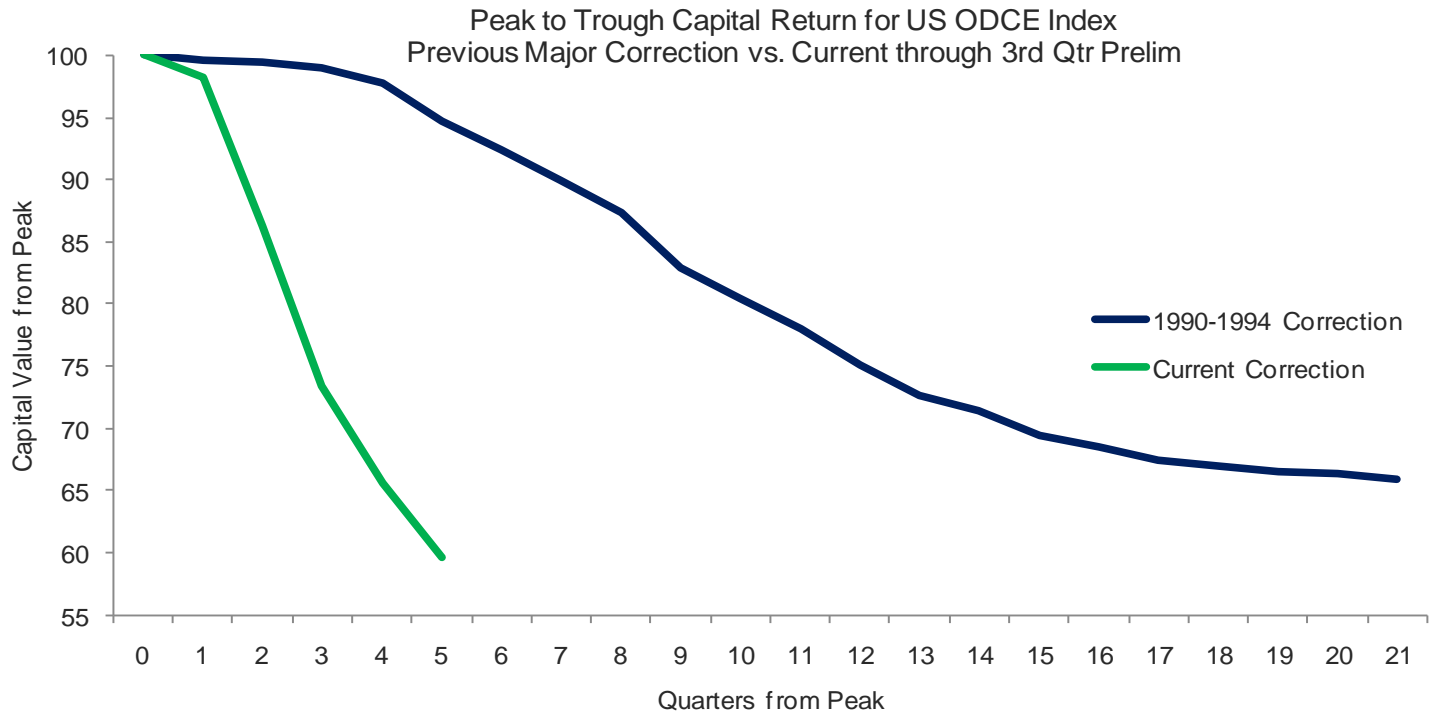
- Transaction volume has slowed substantially.
- Limited transaction volume has impeded price adjustments due to the dearth of comparable transactions available to appraisers.
- Causes of the slowdown include limited debt financing and price uncertainty.



Real Estate Performance

Current Downturn vs. Previous Downturn

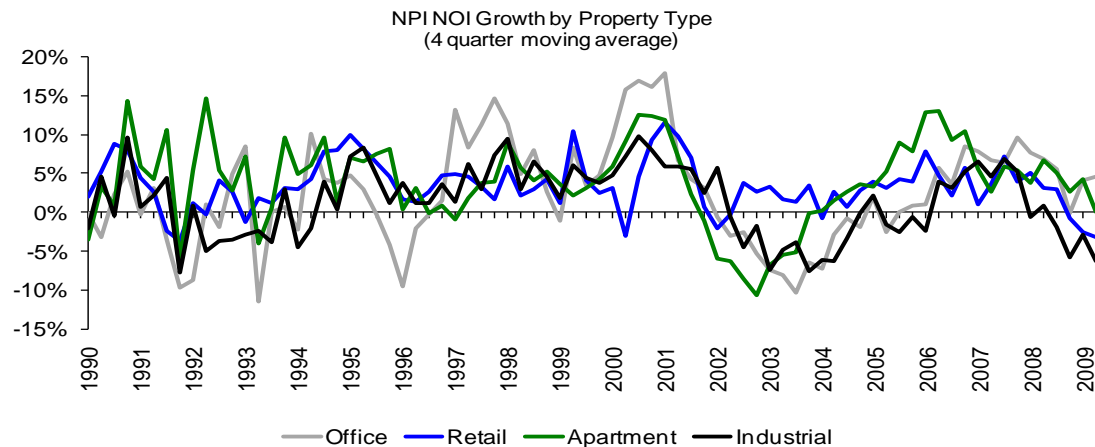
- Although relatively few transactions have occurred, values have adjusted at a historic rate.
- Use of high levels of leverage greatly accelerated the pace of write downs.



Looking Forward

Weakened Fundamentals and Continued Declines

- Weakened economies have and will continue to affect real estate fundamentals (real estate lags).
- As of June 30, 2009 the four quarter moving average NOI growth was -1.09%.
 - Landlords continue to offer further concessions to keep and attract tenants.
- Public markets may imply private losses spanning another 2 to 4 quarters.
- Global REITs share are up 31.4% YTD (9/10/09).
 - Private markets are typically four to five quarters behind public markets.



Looking Forward

Overall Global Themes and Future Opportunities

- US and Japan offer sharply discounted pricing, with looming debt maturities, as rents continue to roll down. Need to watch for deflation in Japan; a jobless recovery in the US. Little transaction volume to date.
- Be prepared to capitalize on distress in the market. ASRS' capital projections indicate that future capital is available for new commitments to real estate in 2010.
- Expect U.K to be first economy in Eurozone to return to growth; rents will continue to fall; sharp correction in property values coupled with weak currency is attracting foreign investors.
- Fewer opportunities in France and Germany until 2011-2014 when assets need restructuring, debt maturities require recapitalization.
- China and Singapore offer comparatively outsized growth; need to avoid inflation and bubble pricing; Residential leads recovery; Logistics lags.
- Latin American offers growth, stability and relatively low unemployment. Development is key, with consequent risk of oversupply.

Looking Forward ASRS Capital Plan

- Capital projections show ASRS will remain below its 6% funding target through 2011, leaving room for new commitments to real estate.

	2009		2010		2011	
	Ending Value	Unfunded Commitments	Ending Value	Unfunded Commitments	Ending Value	Unfunded Commitments
Core Private Portfolio	\$114,136,896	\$115,000,000	\$185,441,525	\$88,333,333	\$208,691,989	\$56,666,667
Core Public Portfolio	\$83,568,638	\$0	\$83,568,638	\$0	\$83,568,638	\$0
Enhanced Return Portfolio	\$144,251,328	\$54,688,799	\$196,530,781	-\$496,001	\$190,185,798	-\$1,897,334
High Return Investments	\$549,996,870	\$315,503,568	\$611,313,655	\$204,100,760	\$655,373,765	\$199,103,678
Total ASRS Portfolio *	\$891,953,732	\$485,192,367	\$1,076,854,599	\$291,938,092	\$1,137,820,190	\$253,873,011
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ASRS Total Plan Assets**	\$22,000,000,000		\$23,760,000,000		\$25,660,800,000	
6% Target for RE	\$1,320,000,000		\$1,425,600,000		\$1,539,648,000	
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Portfolio Breakout	% of Funded RE Portfolio	% of Funded & Committed RE Portfolio	% of Funded RE Portfolio	% of Funded & Committed RE Portfolio	% of Funded RE Portfolio	% of Funded & Committed RE Portfolio
Core Private Portfolio	12.8%	16.6%	17.2%	20.0%	18.3%	19.1%
Core Public Portfolio	9.4%	6.1%	7.8%	6.1%	7.3%	6.0%
Enhanced Return Portfolio	16.2%	14.4%	18.3%	14.3%	16.7%	13.5%
High Return Portfolio	61.7%	62.8%	56.8%	59.6%	57.6%	61.4%
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Total Portfolio (as of % of the Total Plan)	4.1%	6.3%	4.5%	5.8%	4.4%	5.4%
Dollars (Over)/Under 6% RE Target	\$428,046,268	-\$57,146,099	\$348,745,401	\$56,807,308	\$401,827,810	\$147,954,799

* Where managers did not supply information, investment projections are based on Townsend's knowledge of the investment and current market conditions.

** Total Plan Assets assume 6% growth between 2Q09 and YE 2009 and 8% growth annually through 2011 and a total of \$300 million in both new commitments and re-up commitments.