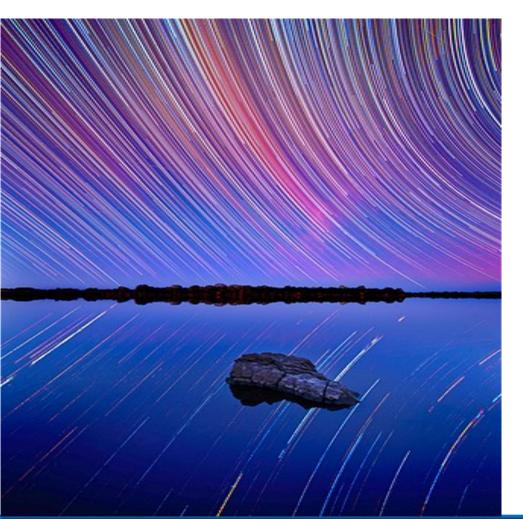
THE ELUSIVE CAP RATE Finding & Supporting Cap Rates in Uncertain Times



Presented May 14, 2013 at the New Hampshire Association of Assessing Officers in Concord, NH by Peter F. Korpacz, MAI, CRE, FRICS

Contents

The Economic Environment

Real Estate Market Trends

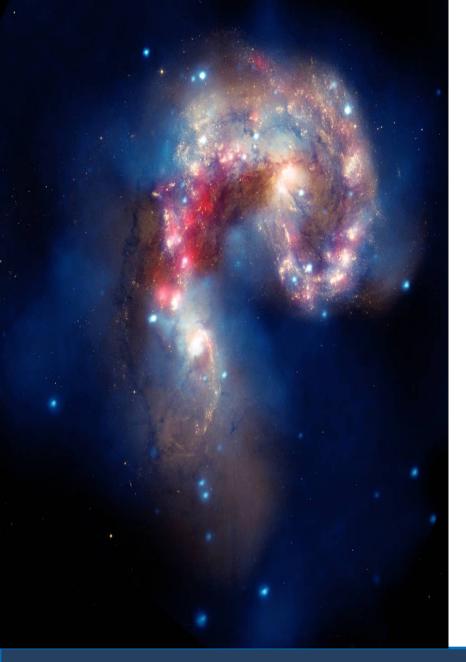
Defensible Cap Rate Sources and Techniques



Take-aways from this session

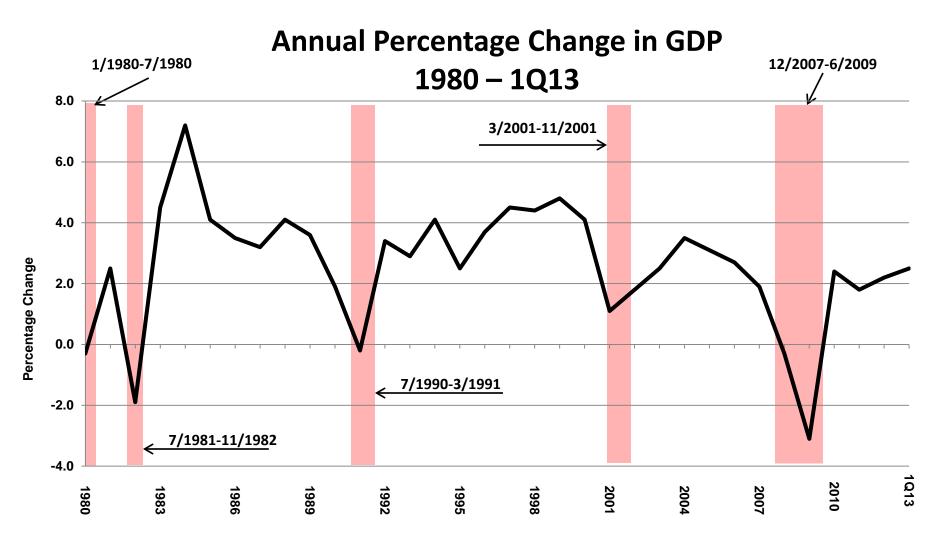
How to use economic trends, leasing trends, and transaction market trends to support or criticize an appraisal

Dialogue on persuasive market-supported methodologies to help bullet-proof appraisals you use



The Economic Environment

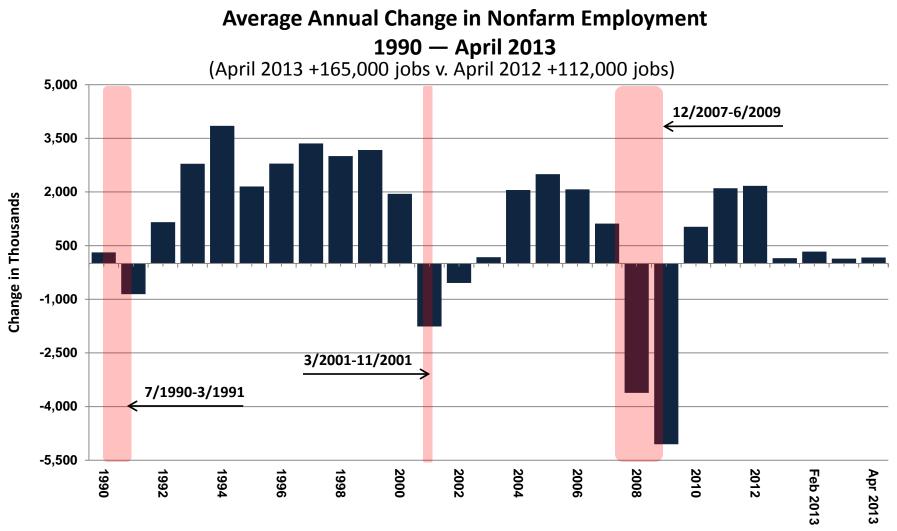
GDP growth positive but underwhelming



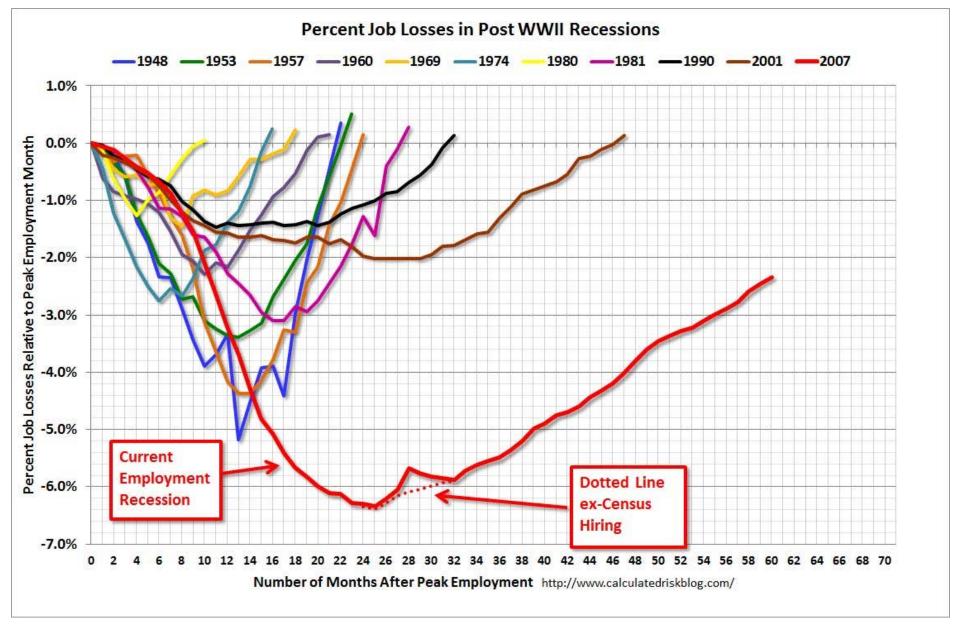
Source: Bureau of Economic Analysis

Shaded areas reflect U.S. recession dates.

Strong job growth in 2013 through April



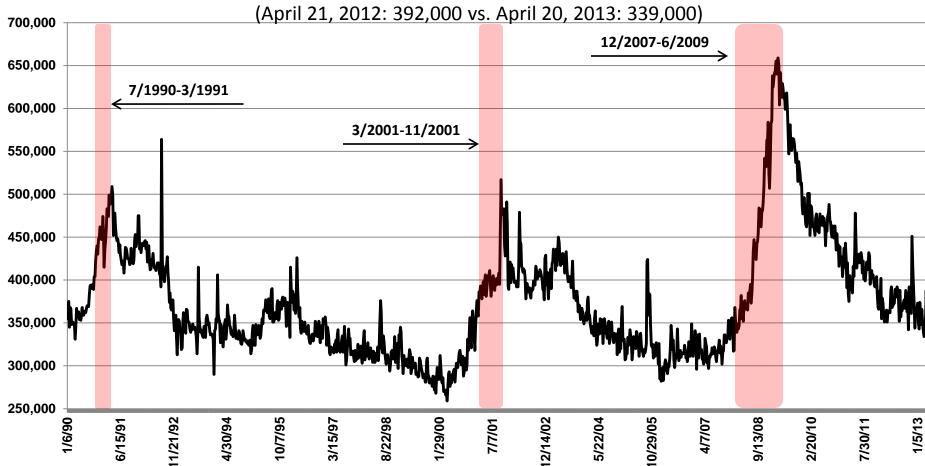
Annual figures are based on December to December figures, while monthly figures are based on the difference in the previous month. Shaded areas reflect U.S. recession dates. Source: Bureau of Labor Statistics



Initial unemployment claims trending downward



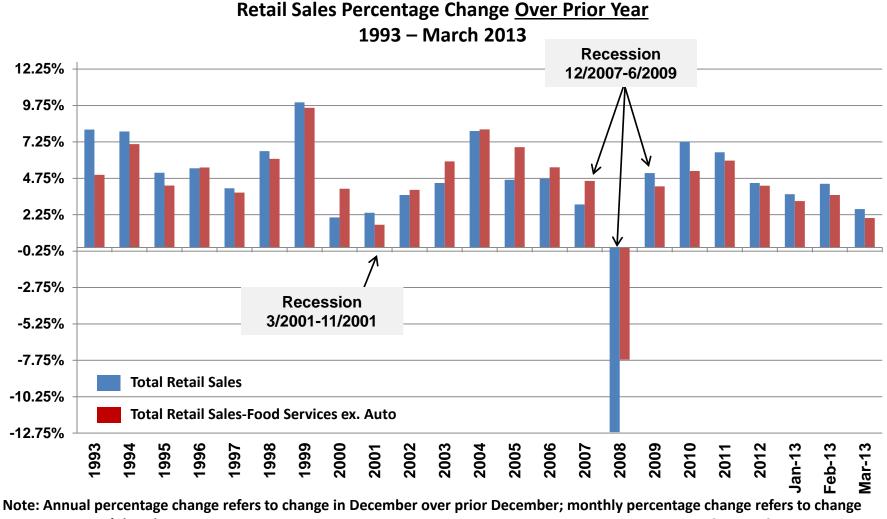




Note: Figure for 4/20/2013 seasonally adjusted, advanced data. Shaded areas reflect U.S. recession dates.

Source: U.S. Department of Labor

Retail sales growth moderates



over same month in prior year

Source: Census Bureau

Real Estate Market Trends



Distress update

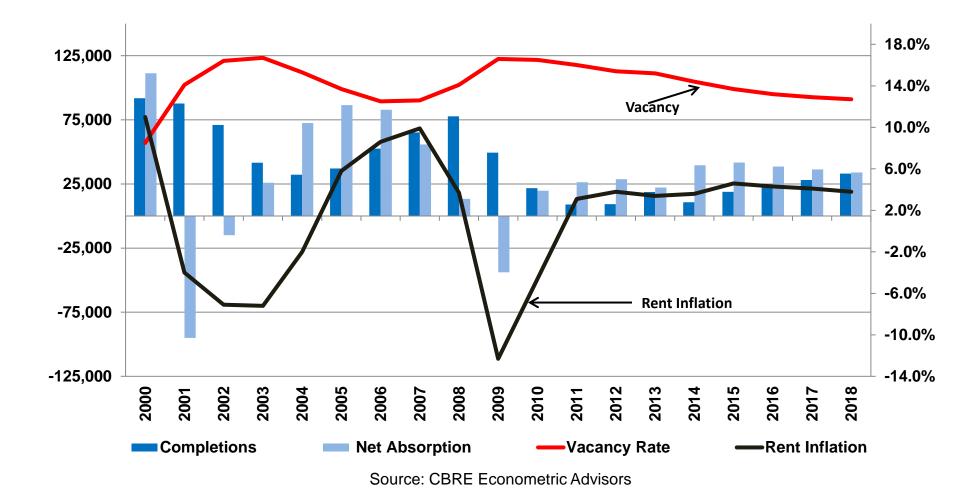
By Property Type

	Outstanding	% Chg	Worked	RR*
	Distress (\$M)	vs Q1'12	Out (%)	(%)
Office	\$40,440	-9%	<mark>61%</mark>	66%
Apartment	\$28,549	-18%	<mark>67%</mark>	71%
Retail	\$26,580	-12%	62%	62%
Industrial	\$12,462	-14%	56%	69%
Hotel	\$ 19,497	-23%	<mark>65%</mark>	66%
Land	\$ 24,881	-7%	42%	55%
Other	\$5,133	-3%	41%	70%
All	\$157,542	-13%	<mark>60%</mark>	66%

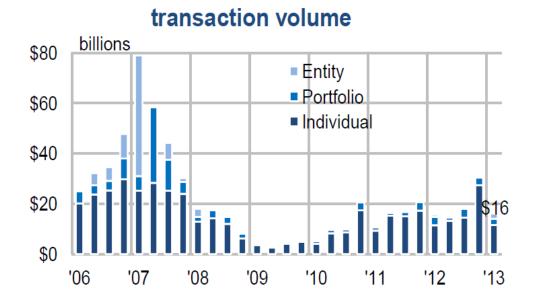
* recovery rate before costs and fees

Source: Real Capital Analytics, Inc. First Quarter 2013, published April 2013

Office leasing markets continue to improve



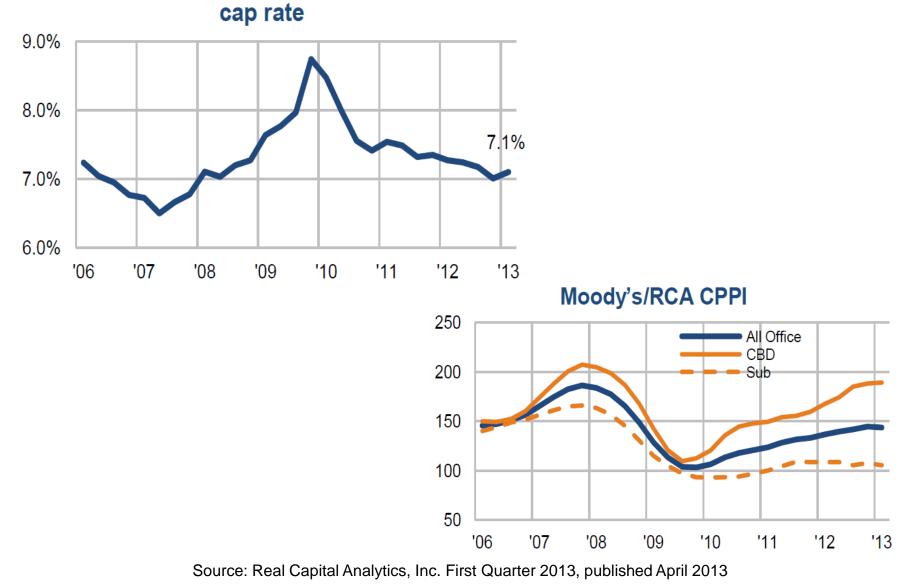
Office transaction volume up slightly from prior year



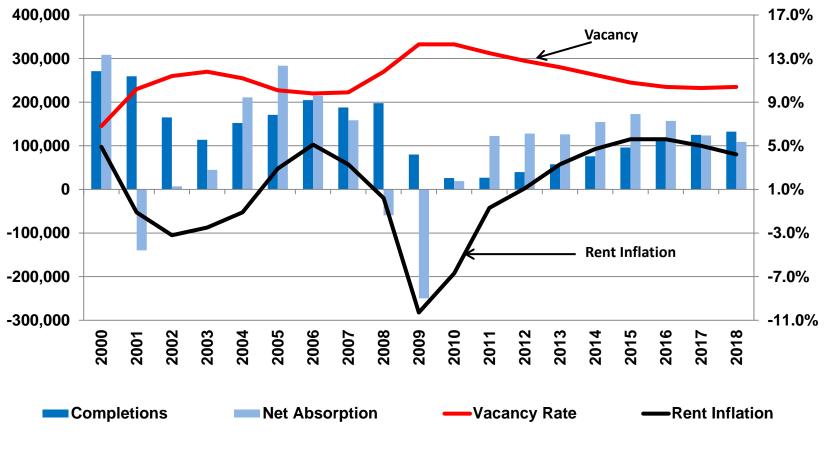


Source: Real Capital Analytics, Inc. First Quarter 2013, published April 2013

Office pricing continues to stabilize

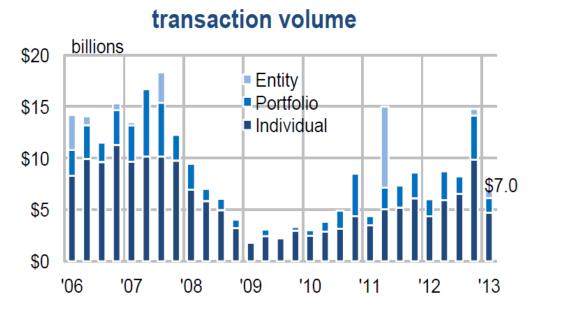


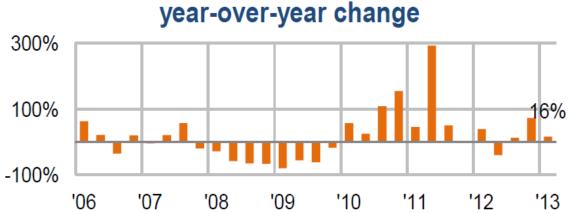
Industrial leasing markets continue to improve



Source: CBRE Econometric Advisors

Industrial transaction volume jumps over prior year

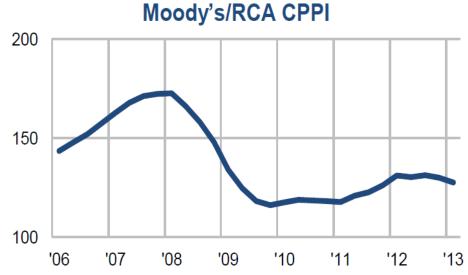




Source: Real Capital Analytics, Inc. First Quarter 2013, published April 2013

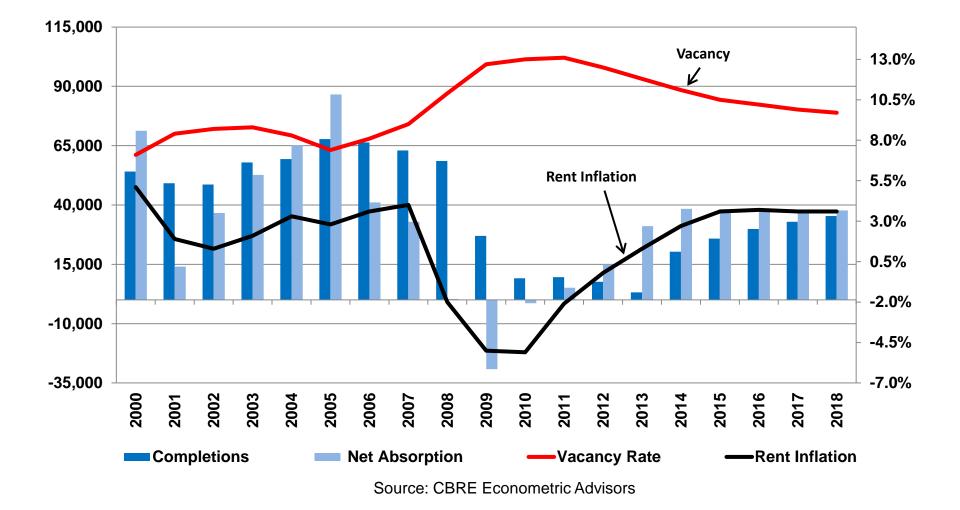
Industrial pricing continues to stabilize



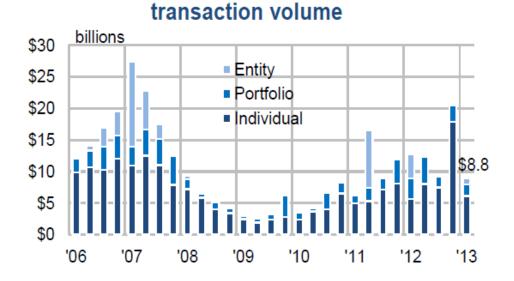


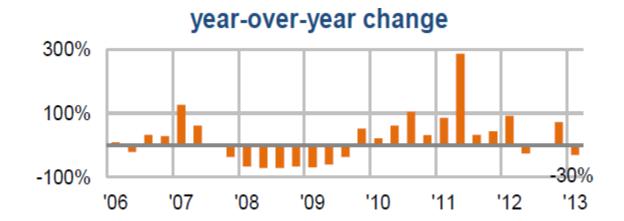
Source: Real Capital Analytics, Inc. First Quarter 2013, published April 2013

Retail leasing markets continue to improve



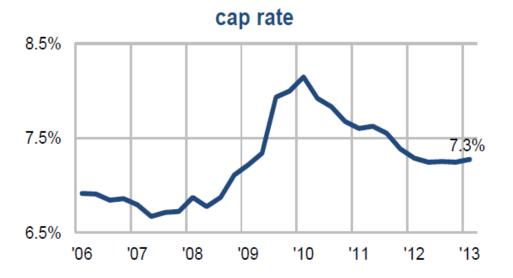
Retail transaction volume drops significantly

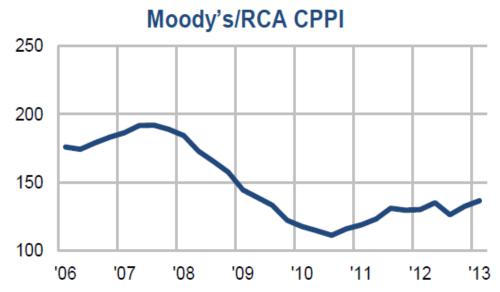




Source: Real Capital Analytics, Inc. First Quarter 2013, published April 2013

Retail pricing continues to stabilize

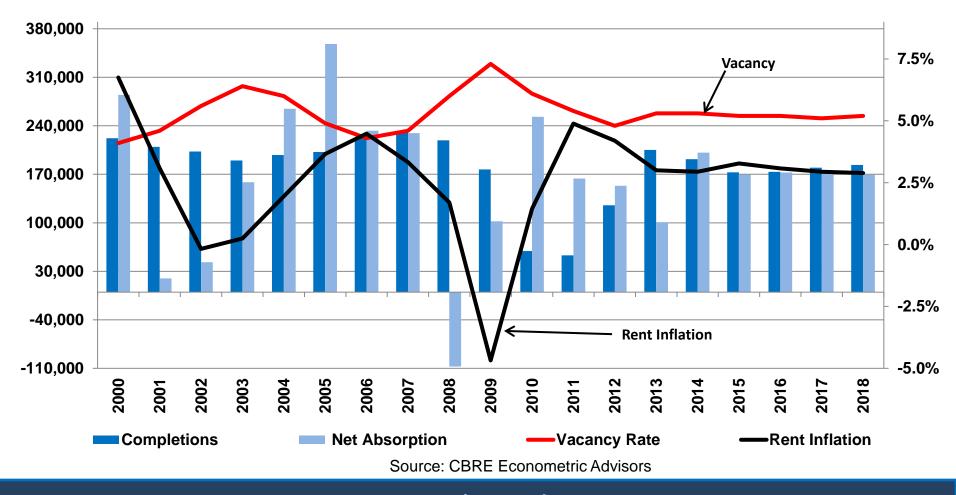




Source: Real Capital Analytics, Inc. First Quarter 2013, published April 2013

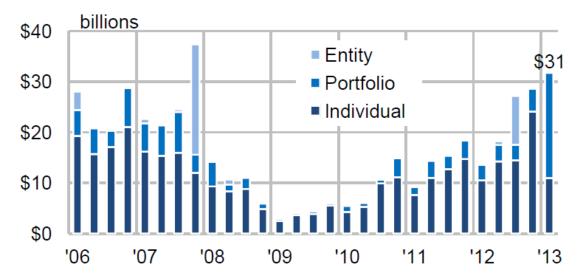
Korpacz Realty Advisors, Inc.

Apartment leasing markets continue to stabilize

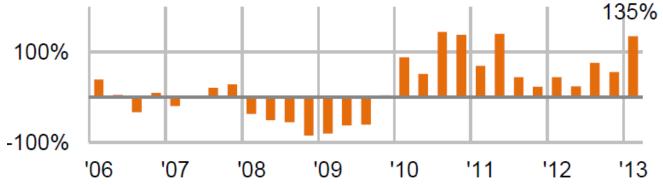


Korpacz Realty Advisors, Inc.

Apartment transaction volume – record high in 1Q13



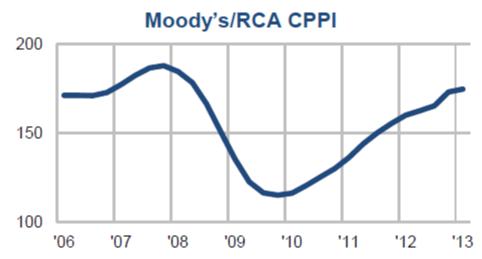
year-over-year change



Source: Real Capital Analytics, Inc. First Quarter 2013, published April 2013

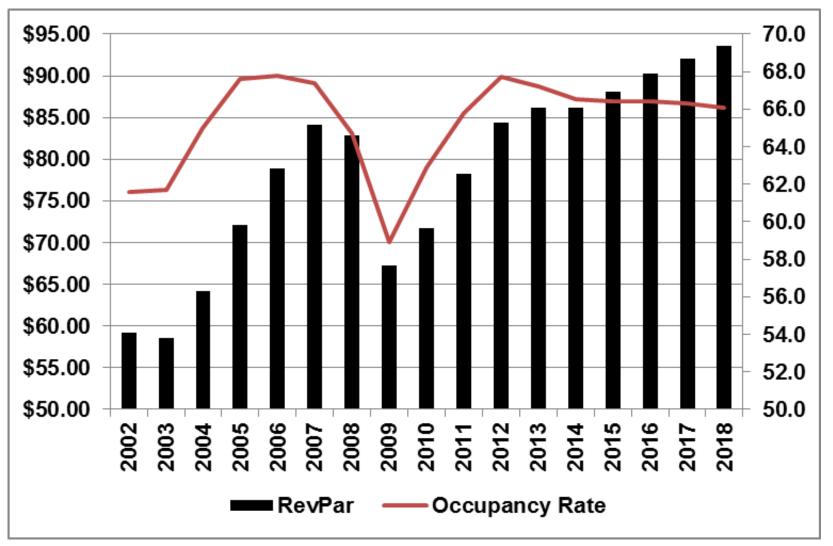
Apartment prices still increasing





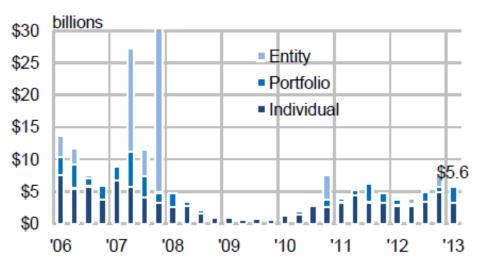
Source: Real Capital Analytics, Inc. First Quarter 2013, published April 2013

Hotel RevPar & occupancy continue to improve

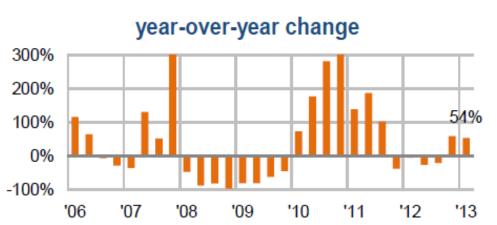


Source: CBRE Econometric Advisors

Hotel volume trends- huge increase over prior year



transaction volume



Source: Real Capital Analytics, Inc. First Quarter 2013, published April 2013

Hotel cap rates and prices stabilizing



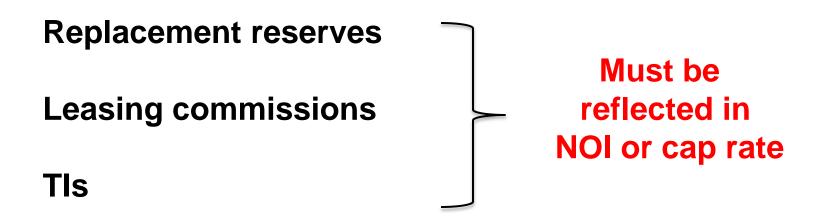


Source: Real Capital Analytics, Inc. First Quarter 2013, published April 2013

Defensible Cap Rate Sources and Techniques



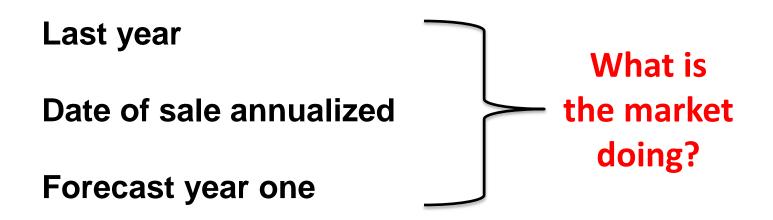
NOI calculation – before/after



Contract rent/NOI at, above, or below market rent

<u>If at market</u>, is it a proxy for a fee simple sale?

NOI year to capitalize



Best sources of defendable cap rates

Comparable sales – preferred technique

Personal investor survey – up close and personal

Published surveys – good foundation but may be over used and relied upon

Mortgage and equity – Band of Investment (if sale of subject would be leveraged)

Least useful sources of defendable cap rates

Debt coverage ratio – used mostly by lenders to better insure loan safety

Built-up rate – safe rate, illiquidity, management, real estate risk

ACLI – partially appraisal based

When comparable sales are scare

UPDATE CAP RATES ON OLDER SALES

Sale No.	Date of Sale	Deal Cap Rate	Subject Valuation Date	Updated Cap Rate	
1	1/10/10	8.8	1/1/12	7.9	Must
2	4/25/10	7.8	1/1/12	7.2 一	understand why rate
3	10/25/10	7.5	1/1/12	7.0	changed

Or use sales from competing/national markets

Shopping centers

Corporate headquarters

Large distribution warehouse

Large CBD office and apartments

Personal investor surveys

Targeted to specific markets, property type, and date

Opportunity to survey

- Local economic, demographic, and leasing trends that drive cap rates
- NOI calculation
- Contract-to-market rent relationship
- Handling of TIs and major capital needs

Published surveys

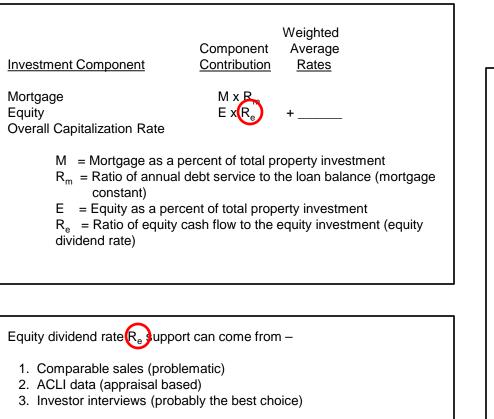
Recognized source for investors, lenders, and courts

Timely – published quarterly

Provides support for DCF forecasts

Can support pricing methodology

Band of Investment technique



- Reflects a leveraged sale
- Would the subject property sell on a leveraged basis?
- Equity dividend rate difficult to support
- Does it reflect a fee simple or leased fee estate?
- Requires adequate research and market support

Equity dividend rate extraction examples

Sale <u>Number</u>	% <u>Mortgage</u>	Interest <u>Rate %</u>	Overall Cap <u>Rate %</u>	Equity Dividend <u>Rate %</u>	
1	40.87	5.49	9.27	11.88	
2	39.81	4.67	5.50	6.05	Can range
3	68.96	7.95	7.95	9.89	d be
4	58.20	6.15	6.15	7.42	
5	60.57	5.85	5.85	7.08	explained?

Equity Dividend Cap Rates from Comparable Sales

Equity Dividend Rates Inferred from ACLI Data (Retail Properties)

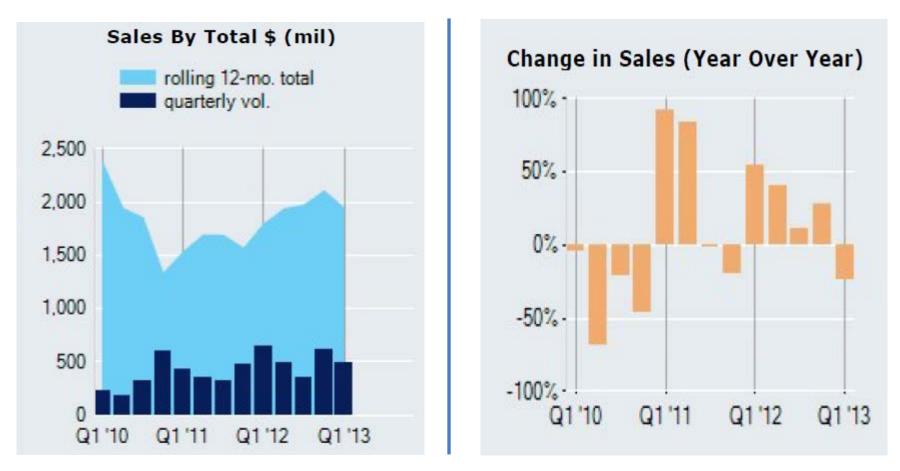
	DCR	Interest	Mortgage Constant	L-T-V	Indicated	Inferred Equity Dividend Rate	
<u>Date</u>	Ratio	Rate %	<u>%</u>	Ratio	OAR %	<u>%</u>	
1Q05 1Q06	1.62 1.58	5.42 5.78	7.40 7.47	66.90 63.60	8.02 7.51	9.27 7.58	Can range
1Q07	1.53	5.77	6.63	66.71	6.77	7.05	be
1Q08 1Q09	1.89 1.58	5.62 7.62	6.63 8.72	57.96 58.50	7.26 8.06	8.13 7.13	xplained?

DCR = debt coverage ratio; L-T-V = loan to value ratio

Consider all relevant sources and techniques

Rely on those with identifiable and persuasive market support

Drug store retail – historical pricing trends



Source: Real Capital Analytics, Inc. Trends & Trades May 8, 2013

Drug store retail – historical pricing trends

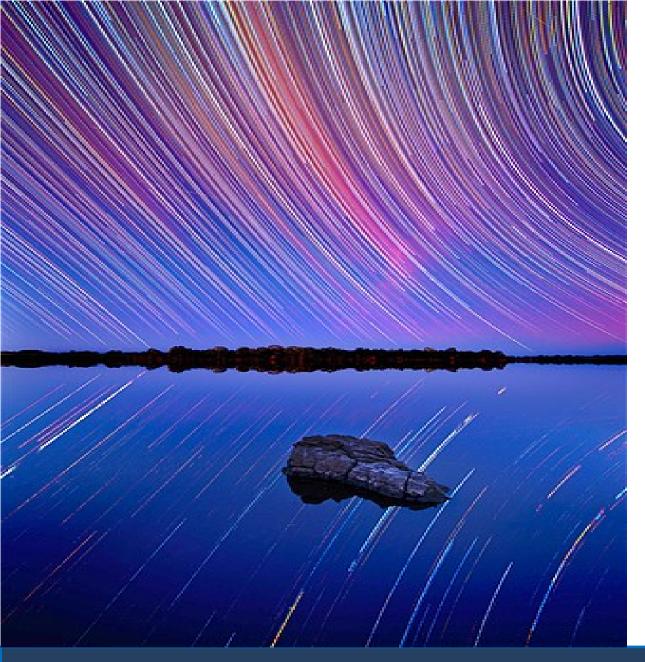


Source: Real Capital Analytics, Inc. Trends & Trades May 8, 2013

Drug store retail – historical market performance

		US Drug	US Drug Store RET		RET
		Actual	Chg vs Prior	Actual	Chg vs Prior
Volume (mil)	Prior 12 mos (thru Q1 '13)	\$1,945.5	8%	\$45,248.5	-2%
	Q1 '13	\$490.3	-20%	\$7,831.2	-58%
No. of props	Prior 12 mos (thru Q1 '13)	317	4%	3,302	23%
	Q1 '13	122	61%	799	-21%
Total sf	Prior 12 mos (thru Q1 '13)	4,516,666	4%	256,431,135	-27%
	Q1 '13	1,635,345	48%	49,917,890	-41%
Avg Price/sf	Prior 12 mos (thru Q1 '13)	\$530	26%	\$201	10%
	Q1 '13	\$481	-19%	\$171	-33%
Avg Cap Rate (Yield)	Prior 12 mos (thru Q1 '13)	6.5%	-48 bps	7.0%	-39 bps
	Q1 '13	6.5%	15 bps	7.1%	26 bps

Source: Real Capital Analytics, Inc. Trends & Trades May 8, 2013



Addenda

Sources of published cap rate information

Real Capital Analytics, Inc. (www.rcanalytics.com)

REIS (<u>www.reis.com</u>)

PricewaterhouseCoopers' Investor Survey (formerly the Korpacz Real Estate Investor Survey) (<u>www.pwc.com/us/realestatesurvey</u>)

Real Estate Research Corporation (<u>www.rerc.com</u>)

ACLI (<u>www.acli.com</u>)

RealtyRates.com (www.realtyrates.com)

CoStar (www.costar.com)

Other useful research sources

GDP – Bureau of Economic Analysis (www.bea.gov)

Employment Information – Bureau of Labor Statistics (<u>www.bls.gov</u>) and U.S. Department of Labor (<u>www.dol.gov</u>)

Retail Sales – U.S. Census (www.census.gov)

Housing Information - National Association of Realtors (www.realtor.org)

Capital Markets Information - Real Capital Analytics, Inc. (www.rcanalytics.com)

In addition to collecting transactional information, RCA interprets the data, including capitalization rates, market trends, pricing, and sales volume. The firm publishes a series of Capital Trends reports and offers an online service that provides real-time, global transactional market information. For more information, contact 1-212-387-7103.

Leasing and Capital Market Information – CBRE/Torto Wheaton Research (<u>www.tortowheatonresearch.com</u>) Outlook product provides detailed data and quarterly forecasts on real estate fundamentals and capital markets across five property types; custom reports are available. For more information, contact Ken O'Brien, Director, Client Services – <u>kobrien@tortowheatonresearch.com</u> or 1-671-912-5200

"Tracking the Credit Crisis: A Timeline" – Mu\$eum of American Finance (moaf.org), 48 Wall Street, New York, NY, traces the development of the economy since the beginning of the financial crisis.

Outside the Box is a free weekly economic e-letter by best-selling author and renowned financial expert, John Mauldin. You can learn more and get your free subscription by visiting <u>www.mauldineconmics.com</u> (highly recommended by Pete Korpacz)

The following is an excerpt from "Tracking the Credit Crisis: A Timeline" an exhibit at the Mu\$eum of American Finance

THE BUBBLE BURSTS: The Origins of the Credit Crisis

Between 2003 and 2007, \$7 trillion worth of home mortgages were sold in the United States – or more than the worth of the entire U.S. Treasury bond market. Home prices increased to record levels by an average 124% from 1977 to 2006, and the housing market became a veritable casio that operated on the assumption that prices would appreciate indefinitely. When the bubble finally burst and demand for the overpriced homes finally began declining, the approximately \$1.3 trillion in inappropriately-issued subprime loans triggered a rash of foreclosures – making subprime mortgage loans the match that lit the financial crisis fuse.

Many subprime borrowers, who often had no income, assets, or jobs (but could pay high upfront fees that increased bonuses), were unable to service or refinance their mortgages when the bubble burst. Huge portfolios of defaulted mortgages lost 50% to 80% of their value, leading to catastophic losses at financial institutions. This led to a credit crisis, as banks initally stopped lending because of insufficient capital availability due to housing loan/bond losses, which in turn led to a crisis in the stock market when worried investors liquidated their equity portfolios.

Consumers also experienced considerable losses. Many watched their 401k plans and other stock holdings drop to unimaginable levels, and this helped create a consumption crisis as consumer purchases fell off dramatically. Serious unemployment became a function of this negative cycle.

	2007							
<u>January</u>	February 5 - Mortgage Lenders Network USA, the 15th largest subprime lender in the United States, files for bankruptcy	<u>March</u>	April 3 - New Century Financial, the largest subprime lender in the United States, files for bankruptcy and defaults on \$8.4 billion in loan repayments	<u>May</u>	<u>June</u>			
	13 - ResMae Mortgage Corporation files for bankruptcy		4 - CNN Money reveals that subprime loans have five times the delinquency rate of prime loans a total of approximately \$1.3 trillion has been loaned to subprime borrowers, in a \$6 trillion housing market.					

			2007	2007								
July 17 - Two Bear Sterns hedge funds specializing in subprime debt disclose to investors that each fund has lost at least 90% of its value. The funds only invested in securities that rating agencies graded as AAA, high-quality investments	<u>August</u>	September 21 - Bear Stearns announces a 61% drop in earnings from the same quarter in 2006. Goldman Sachs reports a 79% rise in 3rd quarter profits, beating analyst expectations	October 1 - Swiss Bank UBS announces a \$3.7 billion writedown followed by the resignation of the head of its investment banking division. UBS was heavily involved with CDOs and credit default swaps, derivative products that lost value with the subprime crisis hit.	November 13 - Bank of America says it will have to write off \$3 billion of subprime losses.	December 3 - Moody's announces it will lower its AAA ratings on mortgage-related securities. These high ratings allowed for successful securitization of pools of lower- quality bonds that were packaged and exported all over the world. Because of the high ratings, hundreds of billions of dollars in bonds were not subject to appropriate due diligence by the buyers							
31 - The two troubled Bear Sterns hedge funds file for bankruptcy. Shortly thereafter, the SEC launches an investigation into Bear Stearn's risk management process.			 11 - RealtyTrac, which tracks foreclosures in the housing market, reports that foreclosures have doubled compared to the same time last year. 16 - Because of the subprime writedowns totaling over \$3 billion, Citigroup's profits drop 57% compared to the same quarter the prior year. 25 - Merrill Lynch announces a \$2.24 billion loss in the 3rd quarter, largely due to subprime mortgage-related losses. 26 - Countrywide Bank reports its first quarterly loss in 25 years of \$1.2 billion on about \$1 billion in writedowns. 31 - Merrill Lynch CEO Stan O'Neal resigns after an announcement that the company would write down around \$7.9 billion in subprime debt – the largest writedown in the credit crisis so far. O'Neal gets a \$160 million payout upon leaving. 	Fannie Mae shares drop 25% immediately following the announcement.	20 - Bear Stearns reports the first quarterly loss in its 84-year history: \$854 million.							
		I/ F										

		2008			
January 17 - Lehman Brothers announces plans to eliminate 1,300 jobs in its domestic mortgage division, on top of 2,500 that have already been cut in the wake of the subprime crisis.	<u>February</u>	March 10 - Rumors spread on Wall Street that Bear Stearns is experiencing severe liquidity problems. Investor anxieties become a self-fulfilling prophecy as Bear's stock price plunges over the next few days.	April 17 - Merrill Lynch reveals 1st quarter losses of \$1.96 billion largely due to subprime lending, compared to a profit of \$2.1 billion the year before.	<u>May</u>	June 16 - Lehman Brothers reports a \$2.8 billion 2nd quarter loss, the first loss in the company's 14-year history under public ownership.
22 - The Federal Reserve cuts the discount interest rate by 0.75% – the largest cut in two decades.		16 - JP Morgan Chase announces that it will acquire Bear Stearns at \$2 a share in an arrangement brokered by the Federal Reserve. The Fed finances the transaction and guarantees Bear's outstanding obligations up to \$30 billion.			25 - Bank of America takes over Countrywide Bank.
26 - Bank of America and Countrywide are in merger talks, which would create the largest mortgage lending					

ground in the United States.

TOXIC ASSETS: Pooling and Exporting Subprime Debt

Financial institutions securitized many of their subprime mortgages, selling the loans for a fee while moving the mortgages off their books, thereby reducing their risk exposure and increasing their lending capability. Individual mortgages were packaged together into pools called "mortgage-backed securities" in a variety of ways, and then these securities were exported all over the world.

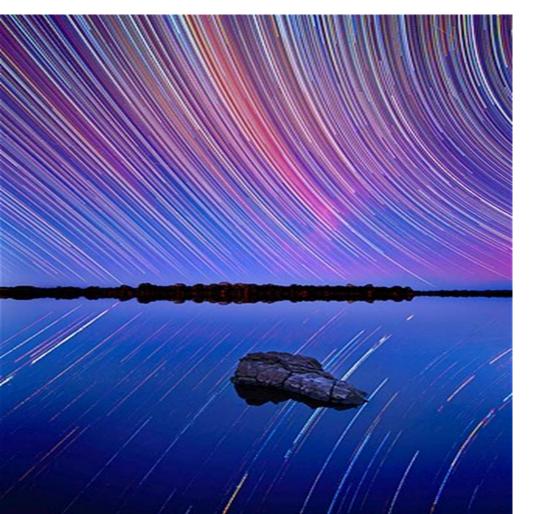
Aside from lax regulatory oversight, the problem was exacerbated when investors relied solely on ratings from big American rating agencies rather than undertaking their own (often costly) due diligence. For several years these subprime mortgage bonds were given the highest rating: triple-A. But in the summer of 2007, the agencies astonished the world when they abruptly began to downgrade bonds they had previously blessed as the inevitable defaults occurred on subprime loans. It was in this way that American institutions exported toxic assets (subprime backed bonds) globally, which affected investors at all levels, from pension funds and governments to international banks and corporations. Defaulting mortgages created losses and widespread economic slowdowns, which then deepened and spread to most major debt categories like falling dominoes.

		2008		
July August 17 - Merrill Lynch announces writedowns of \$9.4 billion primarily on its' mortgage-related assets and its hedges with troubled bond issuers, for a total of \$19 billion in he last 4 quarters. By late summer, writedowns neared \$40 billion.	September 7 - The U.S. government effectively takes control of Fannie Mae and Freddie Mac, placing the companies under the conservatorship of the Federal Housing Finance Agency.	October 3 - A revised bailout plan is signed into law as the Emergency Economic Stabilization Act by President Bush, establishing the Troubled Asset Relief Program (TARP). The bill gives the Treasury \$700 billion to purchase subprime loans from banks to improve their capital-to-debt ratios. The aim is to recapitalize the banks so that they are able to make loans again.	November 14 - Freddie Mac asks the U.S. government for access to a \$13.8 billion lifeline after reporting a quarterly loss of \$25.3 billion.	December 4Q2008 - The U.S. economy has contracted at the fastest pace in a quarter century, at an annualized rate of 6.2%.
22 - IndyMac Bank close down due to large mortgage- leated losses. With \$32 billion in assets, this is the 2nd largest bank failure in U.S. history. The FDIC estimates that the takeover could approximate \$8 billion.	13 - The Federal Reserve and U.S. Treasury refuse to rescue Lehman Brothers, citing a lack of "political will" for a bailout and the "moral hazard" of protecting failing companies from the consequences of their actions. As a result of this decision, the markets to into a tailspin.	10 - The DIJA caps it worst week ever with the highest one-day volatility on record in its 112-year history. Over the previous 8 trading days, the DJIA has dropped 22%, or 2,400 points, amid worries of a worsening credit crisis and global recession.		
	15 - Lehman Brothers announces that it will file for bankruptcy – the largest in American history.			
	16 - The Federal Reserve announces it will lend insurer AIG \$85 billion in emergency funds. The government will take an 80% stake in the company's preferred stock, which will pay a 10% interest rate. In effect, this is a collateralized loan, a demand not made of the banks receiving government assistance. An AIG collapse would be catastrophic because its extensive derivative obligations, including credit default swaps, would have caused a global market collapse.			
	26 - U.S. regulators seize the assets of Washington Mutual, the 6th largest U.S. bank. Washington Mutual had \$310 billion in assets, making this the largest bank failure in U.S. history.	LEHMAN: A Turning Point in	n the Markets and in Investor and Consumer C	onfidence
		Although Lehman was about to fail in September 20 mortgage-backed securities, no financial institution any bank. The Bush administration nevertheless refused and Freddie Mac. The Treasury felt it important to u healthy capitalist system, and that a moral hazard ris save them if they made serious and even reckless mis	ywhere could be induced to take over the 150-yea to offer the same financial guarantees that help phold a free market belief that the freedom to fa sk would exist if companies were included to bel	ar old, 26,000-employee investmen ed save Bear Stearns, Fannie Mae iil was an important ingredient for a
		The reaction of Lehman's bankruptcy, the biggest in I DJIA dropping 508 points. AIG began rescue talks wit Morgan Stanley came under attach as rumors circula bank lines, while fearful hedge funds withdrew huge do	h the Fed and Merrill agreed to be bought by Bar ated that they were having liquidity problems, be	k of America. Goldman Sachs and
		By the first week in October, Wall Street had suffered i overseas markets. The French finance minister call widely shared in the U.S. markets.		

			2009		
January 26 - Companies in the United States and Europe announce 76,000 job cuts, resulting in one of the worst days on record for workers.	<u>February</u>	March 2 - AIG declares a 4th quarter loss of \$60 billion – the largest quarterly loss in U.S. history. Total support to date from the U.S. government is \$130 billion.	April 6 - The Congressional Budget Office raises the projected taxpayer costs of the U.S. government's financial rescue program from its original projection of \$189 billion to \$356 billion.	May 4 - A U.S. Federal Reserve survey reports that mortgage demand rose in the first quarter for the first time since early 2007, despite tightened standards for homeloans by banks.	June 1 - General Motors becomes the largest manufacturing company in U.S. history to file for Chapter 11 bankruptcy protection.
		17 - A report is released showing credit card defaults in February rose to the highest level in 20 years. Citigroup and American Express report default rates of approximatley 9%.	24 - G7 finance ministers meet in Washingotn, DC and comment that the world's economy is starting to show signs of stabilization, but reiterate the need to maintain stimulus efforts.	7 - Stress test results for the 19 largest banks are released. The restuls are better than expected. Nine of the banks tested, ilcuding JP Morgan Chase, Goldman Sachs, and Capital One, are found to be adequately capitalized. The most troubled institutions include GMAC, Wells Fargo, Bank of America, and Citigroup, who lack the capital to withstand worst-case-scenario simulations. These banks must prepare capital-raising plans by June 8, to be implemented by November 9. Some anaysts remain wary.	since World War II. However, the news is part of a set of mixed data which indicate the global economic slowdown may be
		26 - Updated commerce department data show that the U.S. economy contracted at its fastest rate since 1982 in the fourth quarter. GDP shrank by 6.3%, slightly less than the 6.6% projected.	30 - U.S. automaker Chrysler Group LLC files for Chapter 11 bankruptcy protection.	20 - Bank of America takes a step towards meeting its capital requirements, reporting that \$13.47 billion was raised through a sale of shares.	9 - Ten of the nation's biggest financial companies get a green light to return \$68 billion in federal bailout money - freeing the banks from constraints on executive pay and leaving the government with a small gain on the rescue cash. These banks inlcude American Express, Morgan Stanley, JP Morgan Chase, and Goldman Sachs.

		2	2009		
	the worst of the economic crisis might be over, following a report that the unemployment rate in the U.S. fell for the first time in 15	AIG has finally stabilized, following		November 17 - AIG posts its second consecutive quarterly profit as operations continue to stabilize following the government bailout.	December 9 - Bank of America announces that it has fully repaid the \$45 billion in TARP aid that it took at the height of the financial crisis.
15 - Goldman Sachs announces profits of \$3.44 billion in the second quarter of 2009 - the highest quarterly profit in its 140-year history. Goldman had paid back its TARP money in June.	20%.		15 - Goldman Sachs posts a third quarter profit of over \$3 billion. The gains are attributed largely to the company's trading activites in the fixed income, currency, and commodities markets.		18 - The FDIC closes seven banks, bringing the total number of bank failures in 2009 to 140.
above 9,000 as reports emerge that the housing market has bottomed out.	12 - The Federal Reserve holds interest rates at 0.25%, stating that although the worst of the crisis seems to have passed, "econoimc activity is likely to remain weak for some time."		 22 - Morgan Stanley posts a third quarter profit of \$757 million, putting the firm back in the black after three consecutive quarters of losses. 29 - U.S. GDP shows reported expansion of 3.5% in the third quarter, evidence that the stimulus money is having an effect. The figure is later revised down to 2.8%, but still shows the first signs of expansion in the economy after four straight quarters of contraction. 		

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