Dallas-Fort Worth Metroplex: Economic Headwinds Build Rapidly

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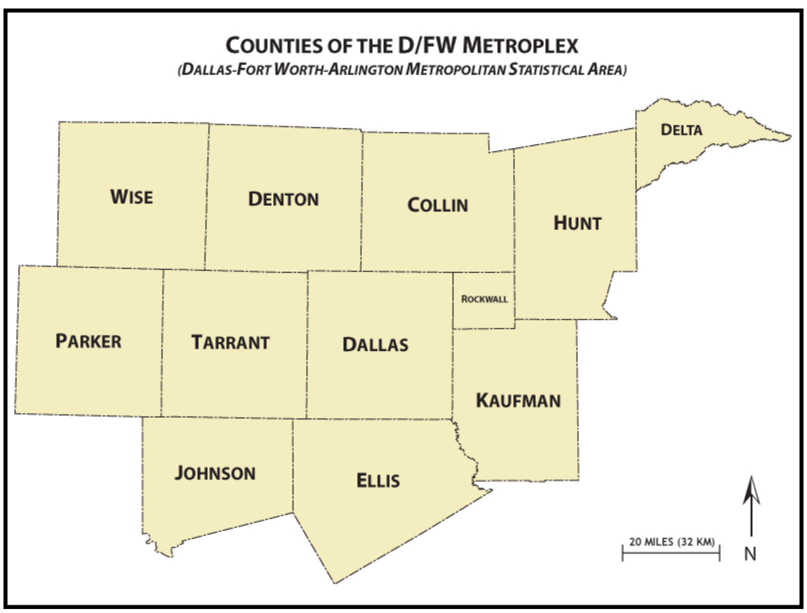
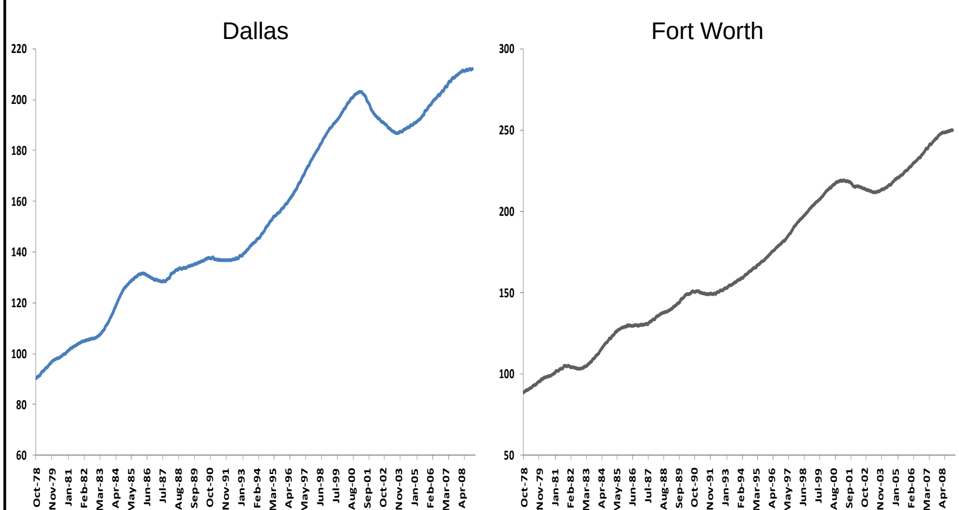
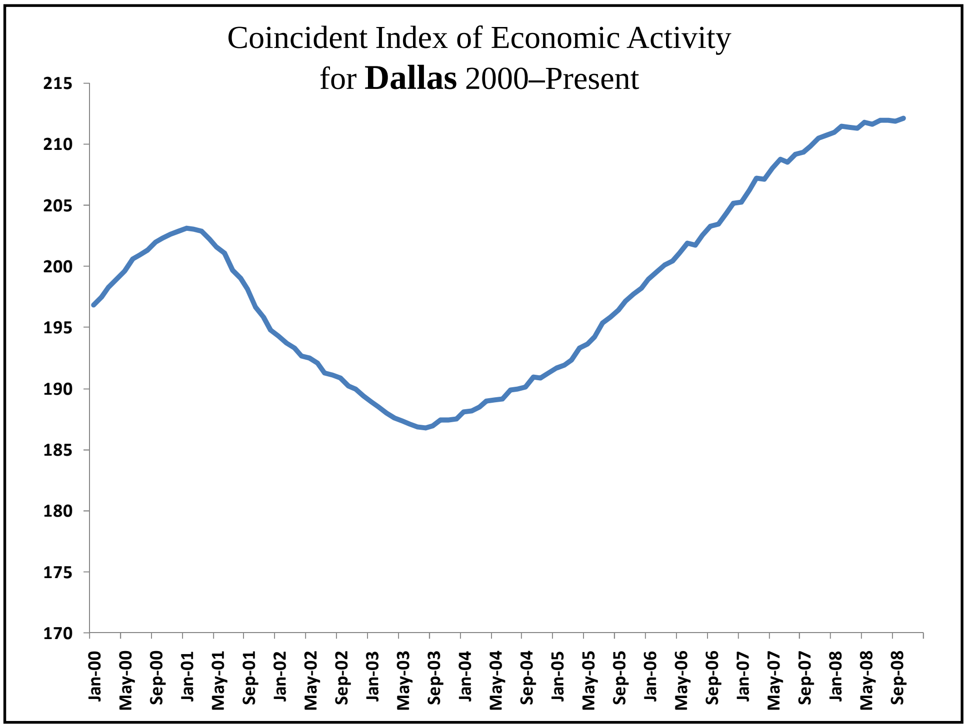


Geography Of the Dallas-Fort Worth Metroplex

	Population	Percent
Dallas-Fort Worth- Arlington	5,983,237	100.0%
Dallas-Plano-Irving	4,006,613	67.0%
Collin	696,383	11.6%
Dallas	2,337,956	39.1%
Delta	5,503	0.1%
Denton	586,582	9.8%
Ellis	137,892	2.3%
Hunt	82,413	1.4%
Kaufman	91,689	1.5%
Rockwall	68,195	1.1%
Fort Worth- Arlington	1,976,624	33.0%
Johnson	146,612	2.5%
Parker	104,708	1.8%
Tarrant	1,668,541	27.9%
Wise	56,763	0.9%

Metroplex Business Cycle, 1978 - present




Coincident Index of Economic Activity
for **Dallas** 2000–Present
215
210
205
200
195
190
185
180
175
170
Jan-00
May-00
Sep-00
Jan-01
May-01
Sep-01
Jan-02
May-02
Sep-02
Jan-03
May-03
Sep-03
Jan-04
May-04
Sep-04
Jan-05
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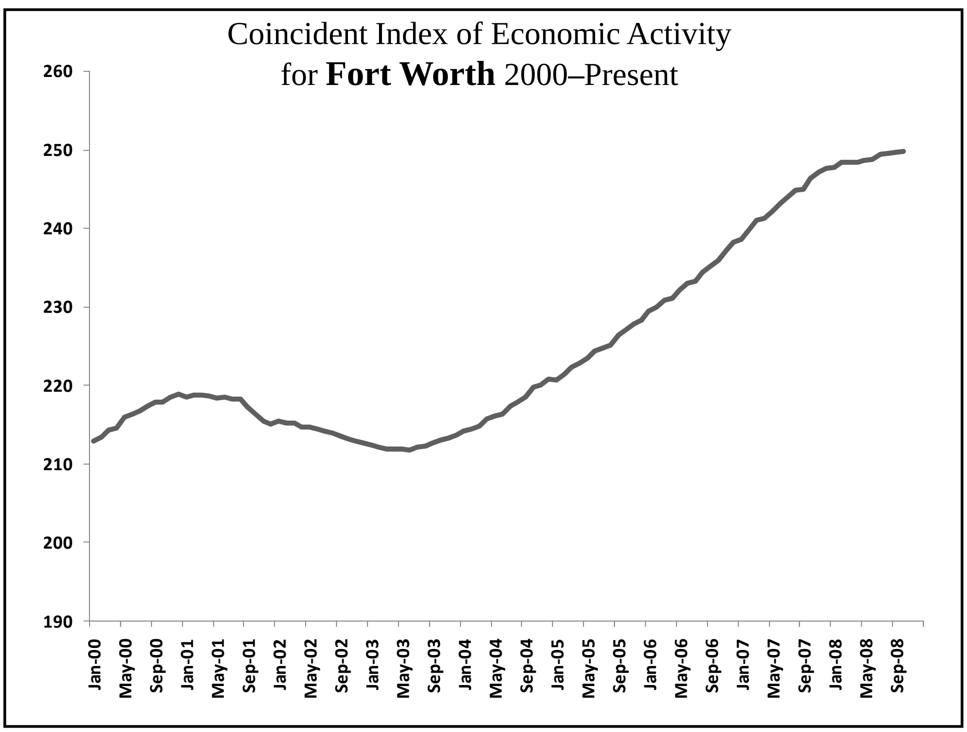
Sep-07
Jan-08
May-08
Sep-08


Coincident Index of Economic Activity
for **Fort Worth** 2000–Present
260
250
240
230
220
210
200
190
Jan-00
May-00
Sep-00
Jan-01
May-01
Sep-01
Jan-02
May-02
Sep-02
Jan-03
May-03
Sep-03
Jan-04
May-04
Sep-04
Jan-05
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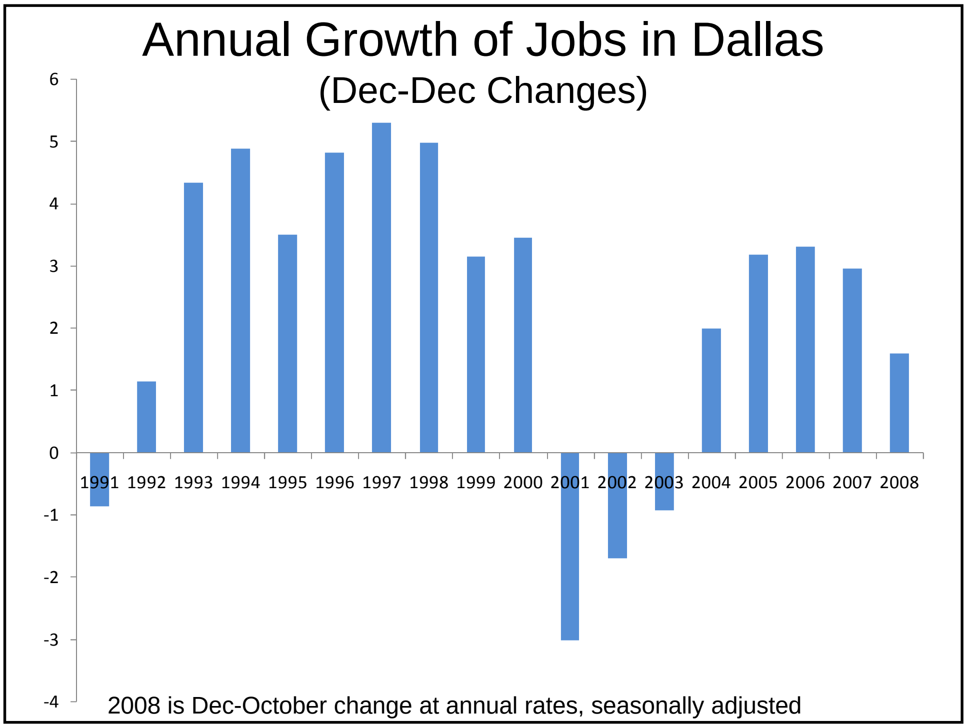
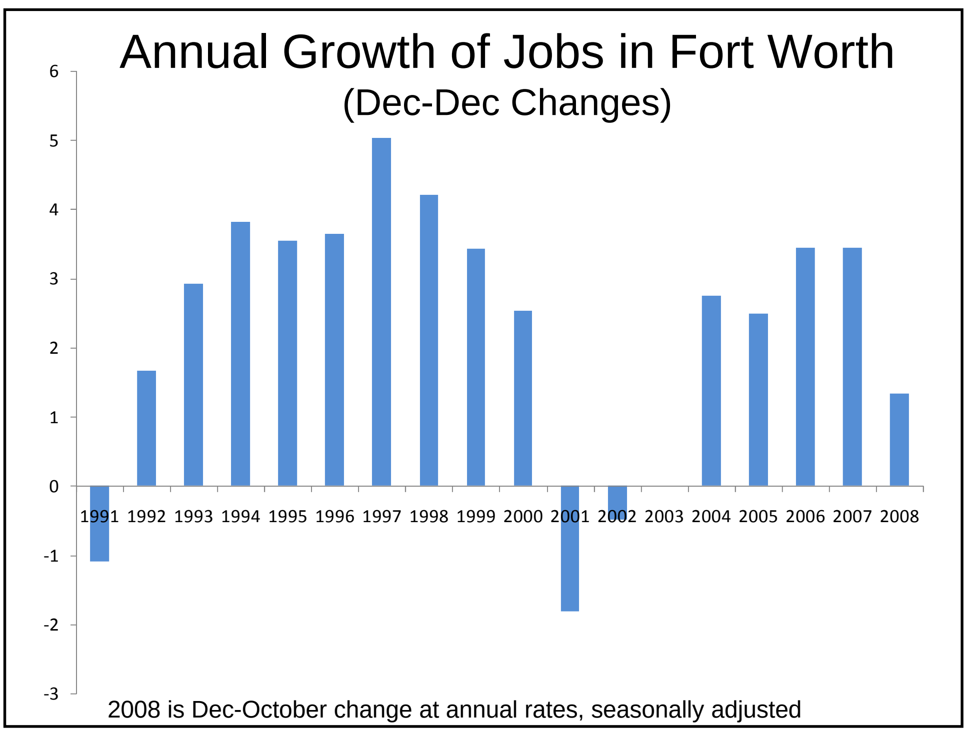
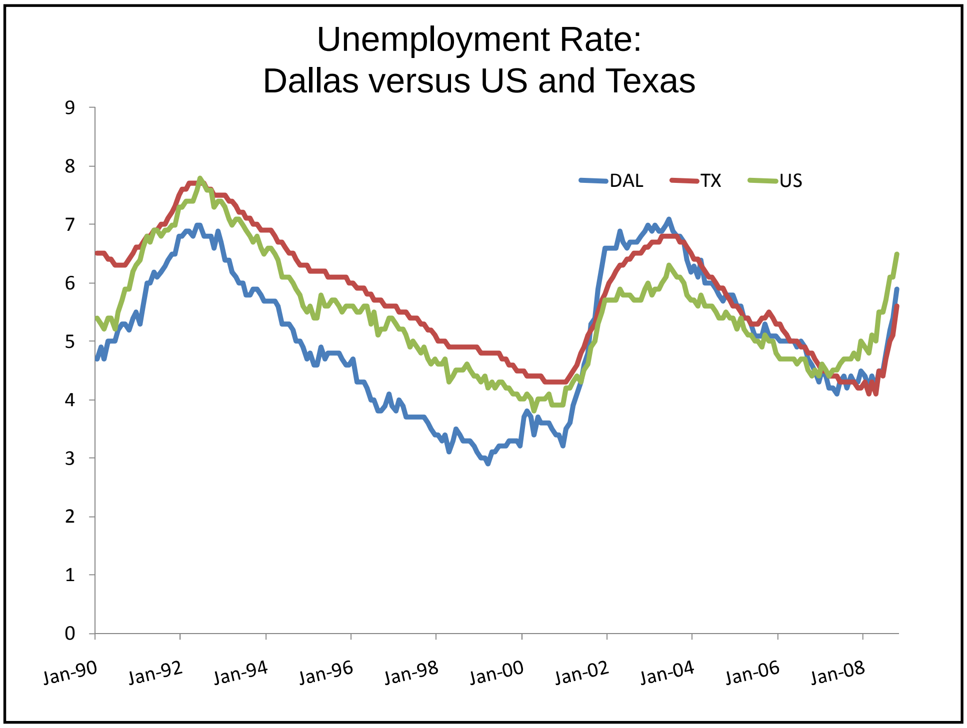
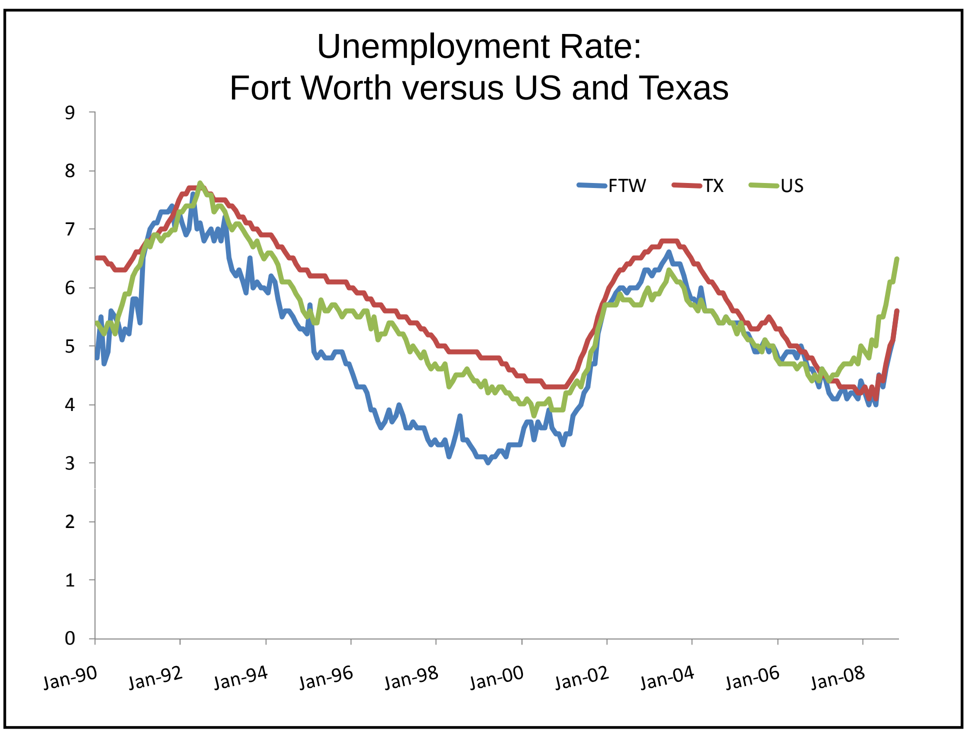
Jan-08
May-08
Sep-08


Annual Growth of Jobs in Dallas
(Dec-Dec Changes)
6
5
4
3
2
1
0
-1
-2
-3
-4
1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008
2008 is Dec-October change at annual rates, seasonally adjusted


Annual Growth of Jobs in Fort Worth
(Dec-Dec Changes)
6
5
4
3
2
1
0
-1
-2
-3
1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008
2008 is Dec-October change at annual rates, seasonally adjusted



Unemployment Rate:
Dallas versus US and Texas
DAL
TX
US
0
1
2
3
4
5
6
7
8
9
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08



Unemployment Rate:
Fort Worth versus US and Texas
FTW
TX
US
0
1
2
3
4
5
6
7
8
9
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08

D/FW as part of the Texas economy

Metroplex Ranks #4, Houston #6 as a U.S. Metropolitan Area Based On 2006 Population

New York-Northern New Jersey-Long Island, NY-NJ-PA (MSA)	18782715
Los Angeles-Long Beach-Santa Ana, CA (MSA)	12866834
Chicago-Naperville-Joliet, IL-IN-WI (MSA)	9458442
Dallas-Fort Worth-Arlington, TX (MSA)	***5982787***
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD (MSA)	5810834
Houston-Sugar Land-Baytown, TX (MSA)	***5507557***
Miami-Fort Lauderdale-Pompano Beach, FL (MSA)	5415440
Washington-Arlington-Alexandria, DC-VA-MD-WV (MSA)	5260705
Atlanta-Sandy Springs-Marietta, GA (MSA)	5127841
Detroit-Warren-Livonia, MI (MSA)	4494906
Boston-Cambridge-Quincy, MA-NH (MSA)	4465674
San Francisco-Oakland-Fremont, CA (MSA)	4164463
Phoenix-Mesa-Scottsdale, AZ (MSA)	4046914
Dallas Metro Division	***4006613***
Riverside-San Bernardino-Ontario, CA (MSA)	3994711

Economic Characteristics of Texas Triangle Cities, 2006

	Population	**Employment**	**Personal Income**	**Per Capita Income**
	(millions)	**(millions)**	**($ billion)**	**(dollars)**
Texas	23.41	14.61	821.6	35,101
Triangle Cities	*15.06*	*9.02*	*598.1*	*39,712*
Austin	1.53	.97	55.7	36,323
Dallas/Fort Worth	5.98	3.75	238.9	39,924
Dallas Div	4.00	2.63	168.5	40,068
Ft Worth Div	1.98	1.12	70.3	35,578
Houston	5.61	3.19	240.0	42,793
San Antonio	1.94	1.11	63.5	32810

Hypothesis

- The Texas Triangle cities can best be understood as a single economic entity that is spread out across the heart of Texas.
- The cities are close enough geographically that as each city found a specialized economic role, the other cities had to seek out different and complementary roles.

Geography and Texas History

- None of the rivers in Texas that run from north to south are navigable for any significant distance.
- The location for Houston was selected in 1836 as the most interior point with year-around navigation to the Gulf of Mexico.
- Dallas was founded in 1841 as the only natural ford on the Trinity River for many miles.
- San Antonio was over 100 years old before the Texas revolution, a part of the Mexican mission and presidio system.
- Austin was a planned capitol like Washington, but the remote, interior location left it as an isolated village for many years.

The Cities Today

- Houston is the state’s major deepwater port, a center for upstream oil and gas, home to the Texas Medical Center and the Johnson Space Center.
- Dallas/Fort Worth is a major inland transportation hub, a banking and financial center, and home to a new telecommunications industry that has grown up with semiconductors, aircraft, and defense electronics.
- Austin is the state capital, home to the University of Texas, and to high-tech computers and semiconductors.
- San Antonio is a distribution hub for South Texas and northern Mexico, a tourist Mecca, and home to several military bases.
- If geography had been different, with a major river through the heart of the state or a large salt water inlet, all of these roles could have been located at one place.

Testing the Hypothesis

- If we look at the four cities individually, we should see cities with industrial structures different from each other, and industrial structures that mutually complement each other.
- If we add the four cities together, we should see a reduced list of potential exports from the region. Those exports where one city serves only other Triangle cities will disappear.
- If we add the four cities together, do the remaining exports compare favorably in number and composition to the largest metro areas in the U.S.. Especially New York, Chicago and Los Angeles?

Industrial Structure

- To see if our hypothesis is true we will look closely at the industrial structure of the four cities.
- Industrial structure is the distribution of production, employment or income earned by industry.
- Here we will look at income earned by industry, particularly wages, salaries, and employer-paid benefits (earnings).

Example of Percentage Distribution of Earnings by Industry

	Austin	Dallas-Fort Worth	Houston	San Antonio	United States
Mining	1.51%	3.70%	13.38%	1.69%	1.27%
Construction	6.77%	6.14%	7.38%	6.72%	6.51%
Manufacturing	15.19%	13.67%	13.78%	8.11%	12.42%
Durable goods	13.13%	8.79%	5.97%	4.20%	7.92%
Nondurable goods	2.06%	4.62%	7.80%	3.91%	4.50%
Transportation	1.35%	4.51%	5.13%	4.77%	3.34%

Example of Percentage Distribution of Earnings by Industry

	Austin	Dallas-Fort Worth	Houston	San Antonio	United States
Wholesale trade	7.84%	7.27%	6.11%	4.35%	5.25%
Retail trade	5.90%	5.99%	4.56%	6.82%	6.31%
Information	4.67%	5.16%	1.50%	3.31%	3.54%
Finance	5.74%	9.01%	4.74%	8.00%	7.78%
Professional Services	11.94%	9.83%	10.79%	7.10%	9.56%

Example of Percentage Distribution of Earnings by Industry

	Austin	Dallas-Fort Worth	Houston	San Antonio	United States
Federal, civilian	1.85%	2.19%	1.49%	4.95%	3.13%
Military	0.32%	0.35%	0.29%	6.19%	1.65%
State and local	14.81%	6.92%	7.87%	11.14%	11.70%

LQij = Percent share of income earned in industry i in city j
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Percent share of income earned in industry i in the U.S.

-- If LQ_{ij} is greater than one, it indicates a larger than normal concentration of activity in the city and that industry *i* is a likely source of local exports.

--If LQ_{ij} is less than one, the industry is not well represented in the city, and the goods produced by the industry are probably partly imported.

--Some goods are inherently local—dry cleaners and grocery stores—and the location quotient is typically close to one in all cities, as the goods are neither exported or imported.

Example of Location Quotients By Industry

	Austin	**Dallas**	**Fort Worth**	**Houston**	**San Antonio**
Mining	**1.19**	**2.41**	**4.37**	**10.52**	**1.33**
Construction	1.04	.90	1.08	1.13	1.03
Manufacturing	**1.22**	1.03	**1.31**	1.11	0.65
Durable goods	**1.66**	1.01	**1.41**	.75	.53
Nondurable goods	.46	.99	1.13	**1.73**	.87
Transportation	.40	.94	**2.54**	**1.53**	**1.43**

Note: LQ with values greater than 1.15 highlighted

Example of Location Quotients By Industry

	Austin	Dallas	Fort Worth	Houston	San Antonio
Wholesale trade	**1.49**	**1.49**	1.08	**1.16**	.83
Retail trade	.93	.90	1.11	.72	1.08
Information	**1.32**	**1.72**	.71	.42	.94
Finance	.74	**1.31**	.72	.64	1.03
Professional Services	**1.25**	**1.16**	.64	1.13	.74

Note: LQ with values greater than 1.15 highlighted

Example of Location Quotients By Industry

	Austin	Dallas	Fort Worth	Houston	San Antonio
Federal, civilian	.59	.60	1.01	.48	**1.58**
Military	.19	.18	.30	.17	**3.75**
State and local	**1.27**	.59	.73	.67	.95

Note: LQ with values greater than 1.15 highlighted

Detailed Location Quotients for Texas Triangle Cities Where LQ>1.15

- **Austin** – Oil and gas extraction (1.52), Heavy construction (1.49), Nonmetallic mineral manufacturing (1.27), Computer and electronic mfg (6.34), Oil refining (1.21), Retail electronics and appliances (1.22), Ground transportation (1.28), Publishing (2.29), Internet publishing (1.28), ISPs and search portals (1.33), Professional and technical services (1.25), Food and drink (1.16), Membership associations (1.24), State government (2.19)
- **Dallas** – Oil and gas extraction (2.41); Utilities (1.40), Nonmetallic mineral manufacturing (1.40), computer and electronic mfg (2.18); Printing (1.19), Wholesale trade (1.49), Retail electronics and appliances (1.37), General Merchandise stores (1.36), Broadcasting (1.95), Telecommunications (2.03), ISP and search portals (2.98), Central bank (3.16), Depository institutions (1.62), Insurance (1.28), Funds and trusts (1.47), Real estate (1.67), Professional and technical services (1.16), Administrative and support services (1.32)

Detailed Location Quotients for Texas Triangle Cities Where LQ >1.15

- **Fort Worth** – Oil and gas extraction (6.40); Oil services (2.23), Heavy construction (2.23), Nonmetallioc mineral production (1.53), Beverage and tobacco mfg (1.35), Leather mfg (1.25), Chemicals (1.75),Electronic and appliance retail (1.92), General merchandise stores (1.24), Air transportation (9.66), Rail transportation (4.52), Support for transportation services (1.80), Couriers and messengers (1.29), Administrative and support services (1.22), Repair and maintenance (1.24),
- **Houston** – Oil and gas extraction (14.53), Oil and gas services (8.94), Utilities (3.68), Construction of buildings (1.31), Heavy construction (1.70), Fabricated metal mfg (1.43), Machinery mfg (1.77), Refining (7.98), Chemicals (2.42), Wholesale trade (1.16), Air transportation (2.26), Water transportation (2.70), Pipelines (11.91), Support services for transportation (2.02),

Detailed Location Quotients for Texas Triangle Cities Where LQ >1.15

- **San Antonio** – Oil and gas extraction (1.61); Refining (1.91), Motor vehicle and parts retail (1.36), Nonstore retail (1.18), Pipeline transportation (10.06), Support activities for transportation (2.11), Telecommunications (1.33), Insurance (1.60), Ambulatory health care (1.24), Accommodations (1.43), food service (1.29), Federal civilian (1.58), Military (3.75)

Do the Cities Complement Each Other?

- Counting Dallas and Fort Worth separately, our five cities have 71 export sectors.
- The 71 exports sectors are in only 42 different industries, indicating overlap among industry exports across cities.
- Much of the overlap is more apparent than real: oil and gas extraction has headquarters in Houston, but regional activity in Fort Worth, Dallas, San Antonio; concrete, electric utilities, and distribution are regional in nature; heavy construction is for highways in Austin, oil and gas in Houston, etc.

Variance Change Among LQ's in the Texas Triangle

	Average LQ	Variance	Share
Austin	0.92	0.64	0.09
San Antonio	1.10	1.36	0.11
Dallas	0.98	0.33	0.28
Fort Worth	1.12	1.71	0.12
Houston	1.32	5.83	0.40
Weighted Avg	1.14	***2.84***	
Triangle Combined	0.95	***0.95***	

Exports from the Combined Texas Triangle Cities

Oil and gas extraction (5.17); Oil and gas services (4.20); Utilities (2.14); Construction of buildings (1.15); Heavy construction (1.31); Computer and electronic mfg (1.58); refining (3.62); Chemicals (1.54); Wholesale trade (1.25); Air transportation (2.33); Pipeline transportation (5.85); Support activities for transportation (1.53); Telecommunications (1.19); ISPs and search engines (1.38); Real estate (1.15); Administrative and support services (1.17)

The Lesson:

If we combine the 5 cities into one, and look for exports:

- -- The five cities export from 71 sectors individually
- -- After being combined, they sell from only 13 sectors, these are sales from the Texas Triangle to the rest of the world
- -- The sales from 58 (= 71-13 sectors) are to other Triangle cities; i,e., the cities are complementary

Testing Our Hypothesis?

- Yes, we seem okay on part one. The cities complement each other in industrial structure.
- Second question? What happens if we combine the four cities? Do they have the look and feel of New York, Chicago or LA?

Economic Characteristics of the Texas Triangle and Major U.S. Metro Areas, 2006

	Population		Personal Income		Per Capita	Cost of Living
	(millions)	Rank	(Billions of $)	Rank	Income ($)	Index (US = 100)
New York	18.8	1	935.2	1	49,739	N/A
Texas Triangle	***15.1***	**2**	**598.1**	**2**	***39,712***	***96.7***
Los Angeles	12.9	3	513.1	3	39,880	140.9
Chicago	9.4	4	393.4	4	41,591	N/A
Philadelphia	5.8	5	252.0	5	43,365	121.1
Washington	5.3	6	272.9	6	51,868	112.3
San Francisco	4.2	7	240.5	7	57,747	183.0

New York. Chemical mfg (1.39); clothing and apparel retail (1.63); local transportation (2.33); Publishing (1.61); Motion pictures (2.13); Broadcasting (2.73); credit intermediaries (1.34); Securities (4.84); Insurance (1.20); Real estate (1.27); Professional and technical services (1.29); Management services (1.40); Educational services (1.20); Social assistance (1.45); Performing arts (1.71); Museums (1.42); Private household workers (1.34)

Los Angeles. Computer and electronics mfg (1.60); Misc mfg (1.28); Apparel mfg (5.22); Leather mfg (1.41); Wholesale trade (1.18); Electronics and appliance retail (1.73); Clothing and apparel retail (1.49); Sporting goods retail (1.17); Support activities for transportation (2.08); Motion pictures (10.89); Broadcasting (1.67); Internet publishing (1.80); Credit intermediaries (1.17); Real estate (1.57); Rent and leasing (1.32); Professional and technical services (1.20); Administrative services (1.16); Performing arts (3.64); Museums (1.56); Amusements (1.21); Private household workers (1.63)

Philadelphia. Priniting and publishing (1.25); Chemical mfg (2.11); Nonstore retail (1.74); Ground transportation (1.18); Credit intermediaries (1.41); Insurance (1.36); Professional and technical services (1.36); Management services (1.17); Educational services (2.18); Hospitals (1.38); Nursing facilities (1.46); Social assistance (1.20); Museums (1.20)

Chicago. Primary metal mfg (2.25); Fabricated metal (1.47); Electrical equipment mfg (1.47); Misc mfg (1.53); Printing and publishing (1.56); Chemical mfg (1.28); Plastics mfg (1.37); Wholesale trade (1.28); Electronics and appliance retail (1.38); Air transportation (2.40); ground transportation (1.28); Credit intermediaries (1.29); Securities (1.45); Professional and technical services (1.35); Management services (1.42); Educational services (1.25); Membership organizations (1.22)

San Francisco. Construction of buildings (1.28); Computer and electronic mfg (1.21); Refining (1.93); Chemicals (1.32); Electronics and appliance retail (1.38); Clothing and apparel retail (1.18); Misc retail (1.16); Air transportation (2.13); Sightseeing transportation (2.57); Support activities for transportation (1.31); Publishing (1.93); Motion pictures (1.65); Internet publishing (2.65); ISPs and search portals (1.60); Credit intermediaries (1.25); Securities (1.93); Real estate (1.34); Professional and technical services (1.77); Management services (1.42); Performing arts (1.31); Amusements (1.45); Private household workers (1.46)

Washington-Baltimore. Publishing (1.15); Telecommunications (1.63); ISPs and search portals (2.38); Real estate 1.15); Professional and technical services (2.25); Educational services (1.18)Membership organizations (2.39); Federal civilian (5.59); Military (1.80)

Number of Large Export Industries In Major Metro Areas

Cities	**No. of Major Export Industries**
San Francisco	22
Los Angeles	21
New York	17
Texas Triangle	***17***
Chicago	17
Philadelphia	13
Washington	10

Metro Area Participation in Exports By Industry
(1= this metro exports good or service, 0 = no exports)

	Triangle	**Chicago**	**Los Angeles**	**New York**	**Wash**	**Phil**	**San Fran**	**Total Cities**
Prof essional services		1	1	1	1	1	1	6
Chemical mfg	1	1		1		1	1	5
Credit Intermediaries		1	1	1		1	1	5
Real estate	1		1	1	1		1	5
Management services		1		1		1	1	4
Educational services		1		1	1	1		4
Museums			1	1		1	1	4
Computer and electror	1		1				1	3
Wholesale services	1	1	1					3
Electronic and appliance retail		1	1				1	3
Clothing and apparel retail			1	1			1	3
Air transportation	1	1					1	3
Ground transportation		1		1		1		3
Support activities for tr	1		1				1	3
Publishing				1	1		1	3
Motion pictures			1	1			1	3
ISPs ands search port	1				1		1	3
Securieits		1		1			1	3
Performing arts			1	1			1	3
Private households			1	1			1	3
Total Industries	7	10	12	14	5	7	17	72

Testing Our Hypothesis?

- Yes, we seem okay on part one. The cities complement each other in industrial structure.
- Yes, part two seems to work, also. The profile of a combined Texas Triangle is much like the very largest U.S. metros in terms of the number and combination of exports.

Industry Clusters

- Knowledge Spillovers – the easy exchange of knowledge and innovations
- Localized Value – Ready access to suppliers and financing
- Labor-Market Pooling – Sharing of labor skills, specialization, facilitates mobility

Are the Cities Really Rivals?

- Cities have long competed with each other for growth, especially Houston and Dallas.
- Can they really be rivals if they don't do the same thing?
- Industry clustering is a major barrier to stealing an established industry from another city.
- Growth in any one city is a boon to the others – because they are complements.
- Inter-city rivalry is probably a waste of time, energy and resources. Co-operative approach to growth would benefit all.

Conclusions

- The Texas Triangle cities, despite the distance between them, appear to function as a single large metropolitan area.
- The cities complement each other in industrial structure, and when added together have an industrial structure much like the largest U.S. metro areas.
- A long history of rivalry for economic development and growth probably is a waste of resources. These cities rarely compete for similar industries, and clustering makes it difficult or impossible to steal established industries from each other.

Closer Look at D/FW

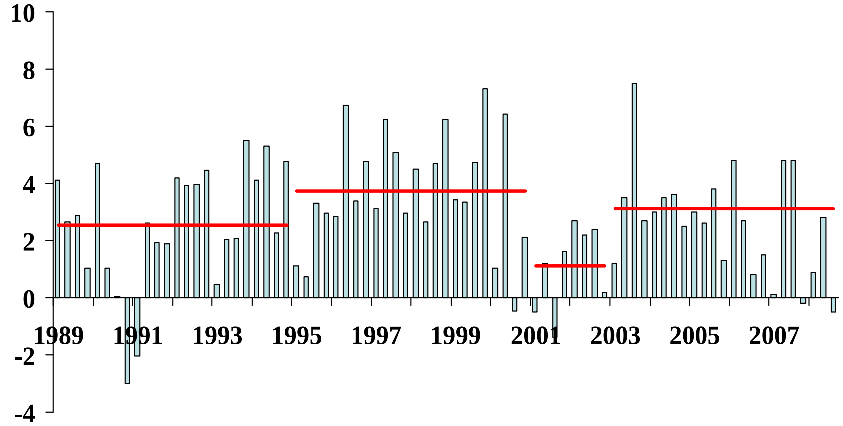
- **Dallas** – Oil and gas extraction (2.41); Utilities (1.40), Nonmetallic mineral manufacturing (1.40), computer and electronic mfg (2.18); Printing (1.19), Wholesale trade (1.49), Retail electronics and appliances (1.37), General Merchandise stores (1.36), Broadcasting (1.95), Telecommunications (2.03), ISP and search portals (2.98), Central bank (3.16), Depository institutions (1.62), Insurance (1.28), Funds and trusts (1.47), Real estate (1.67), Professional and technical services (1.16), Administrative and support services (1.32)

- **Fort Worth** – Oil and gas extraction (6.40); Oil services (2.23), Heavy construction (2.23), Nonmetallic mineral production (1.53), Beverage and tobacco mfg (1.35), Leather mfg (1.25), Chemicals (1.75),Electronic and appliance retail (1.92), General merchandise stores (1.24), Air transportation (9.66), Rail transportation (4.52), Support for transportation services (1.80), Couriers and messengers (1.29), Administrative and support services (1.22), Repair and maintenance (1.24),

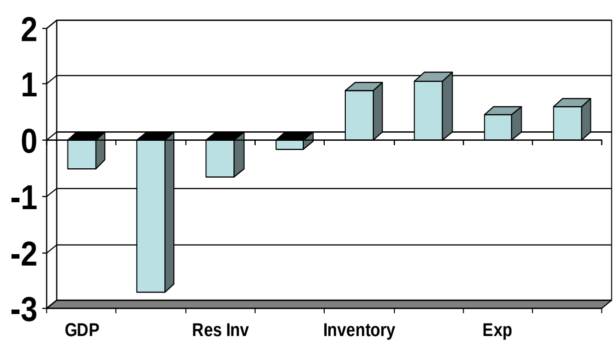
US Recession and the Metroplex …

Gross Domestic Product

Quarterly Percent Growth, Chained 2000 Dollars

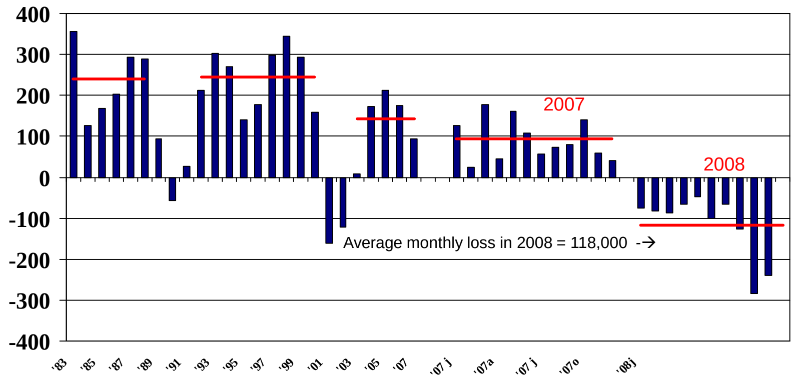


Percent Contribution to 2008 Q3 GDP:By Sector

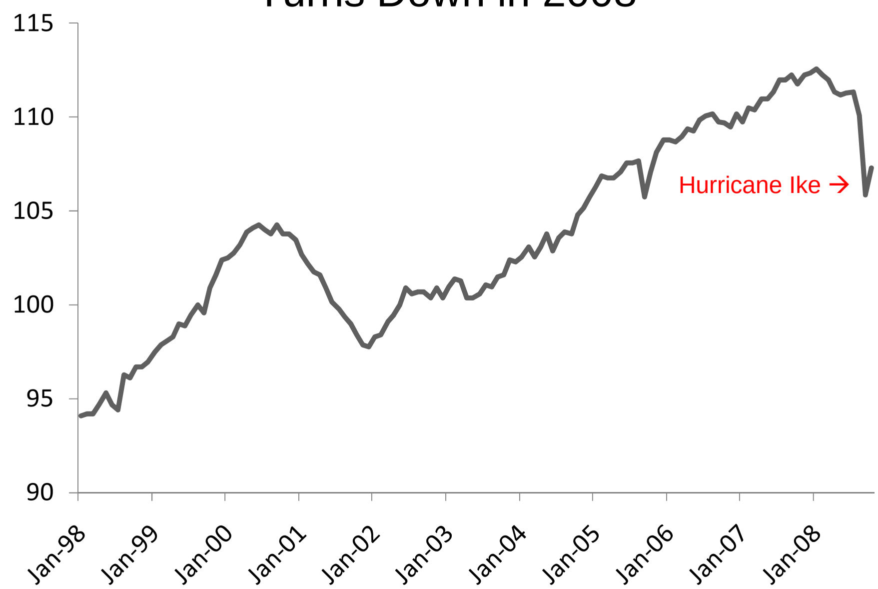


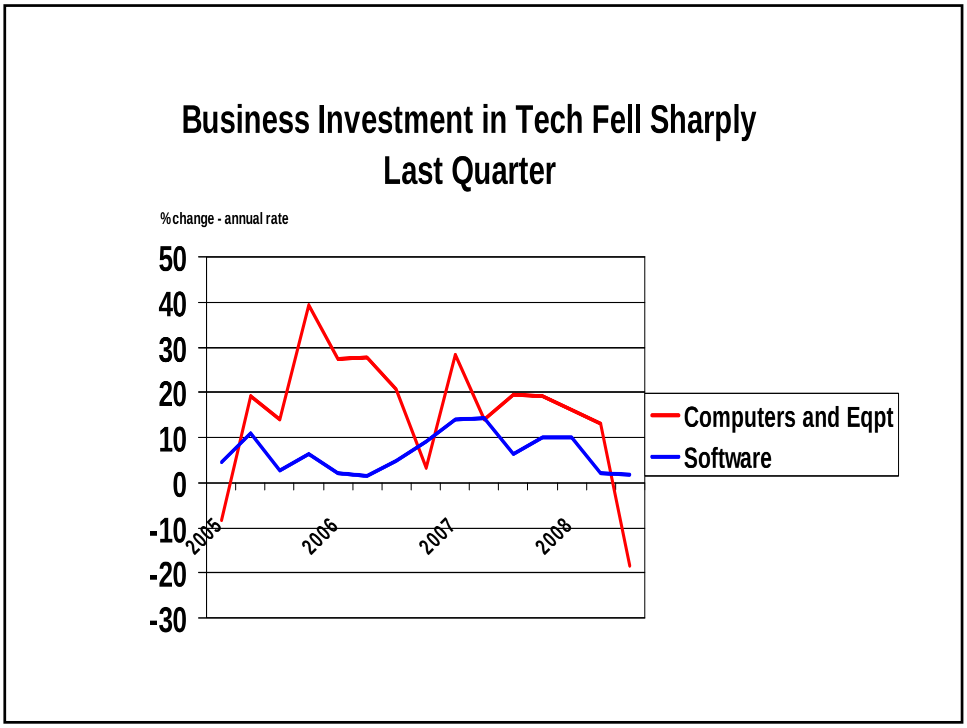
U.S. Employment Growth

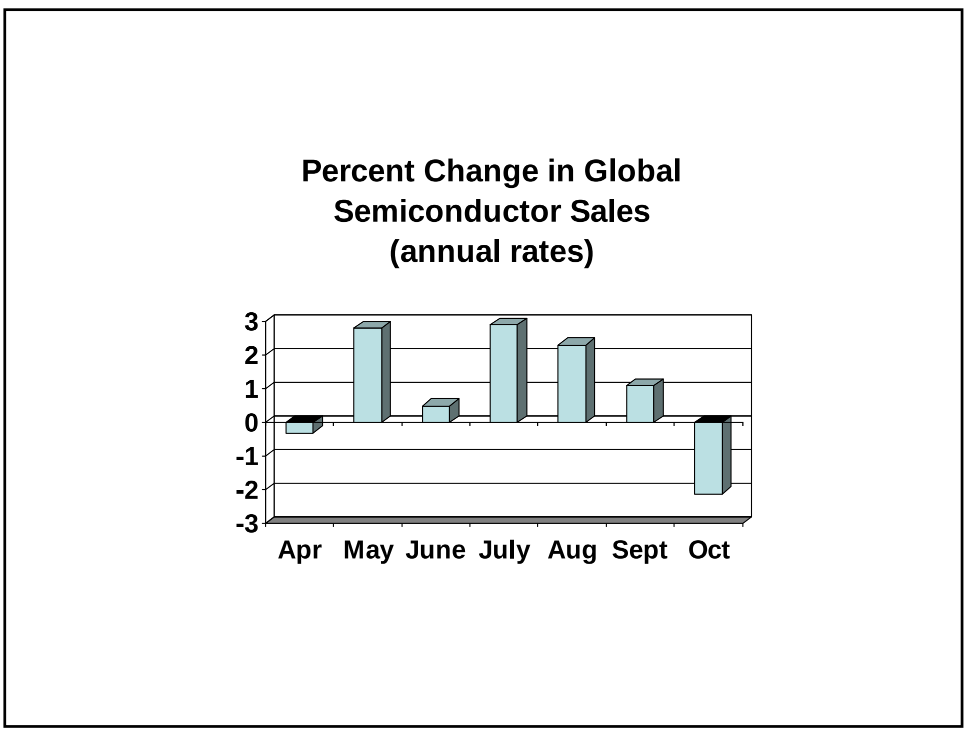
In Thousands of New Jobs per Month,1983 to 2008

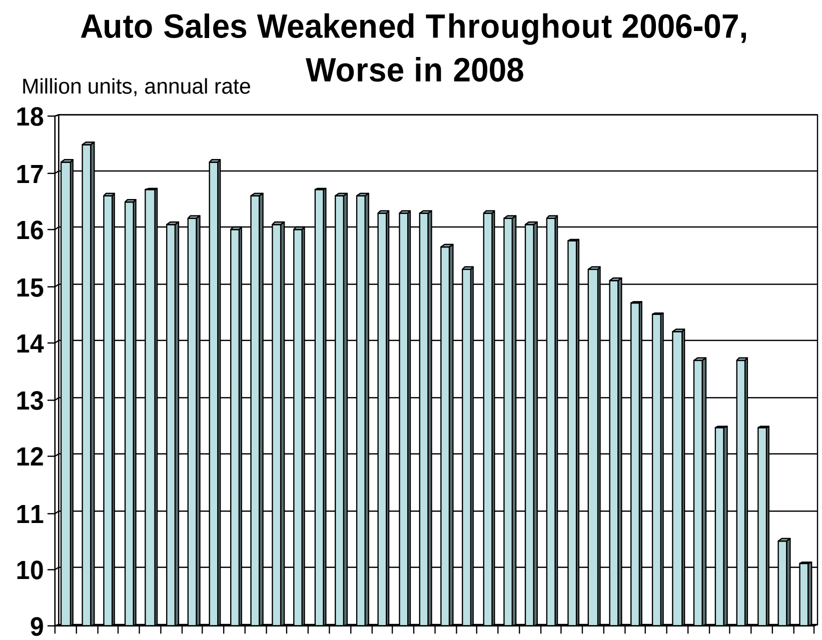


Industrial Production: Growth Turns Down in 2008



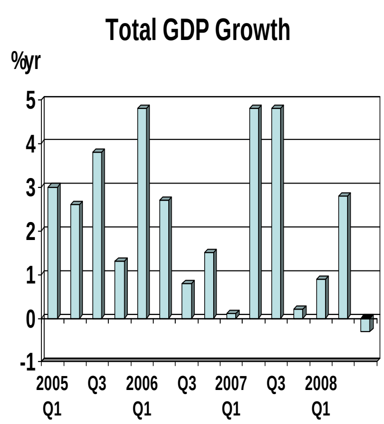

Business Investment in Tech Fell Sharply
Last Quarter
% change - annual rate
50
40
30
20
10
0
-10
-20
-30
2005
2006
2007
2008
Computers and Eqpt
Software

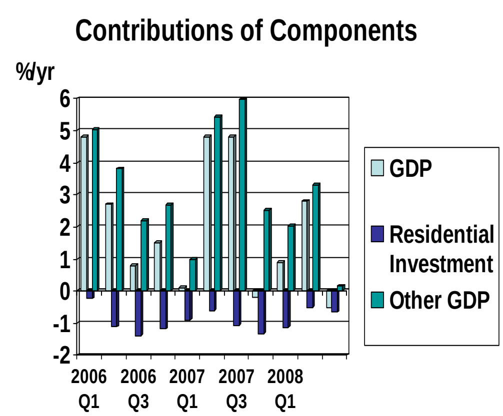

Percent Change in Global
Semiconductor Sales
(annual rates)
3
2
1
0
-1
-2
-3
Apr
May
June
July
Aug
Sept
Oct

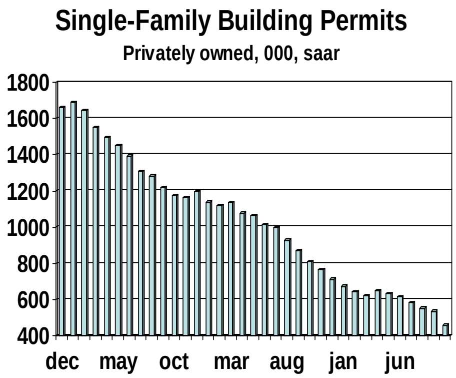


Gross Product Slows in 2006-08

Housing Weakens, Strength Elsewhere Evaporates







Year over year changes*:

New starts -38.0%

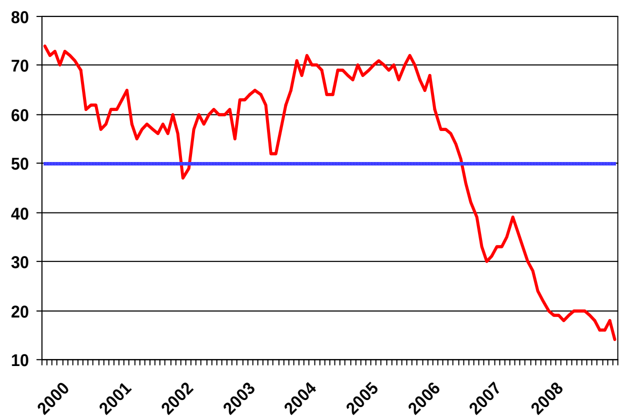
New home sales -40.1%

Existing home sales -1.6%

Existing home price -11.0%

*12-month change Oct to Oct

NAHB Housing Market Index Shows Depth of Pessimism

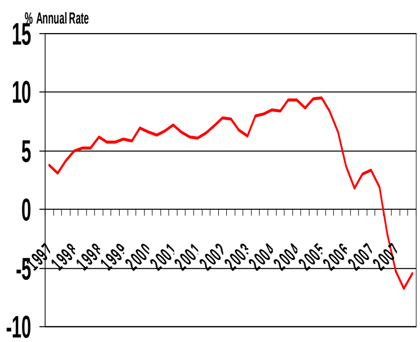


Percent of Local Families that Can Afford Median-Priced Home

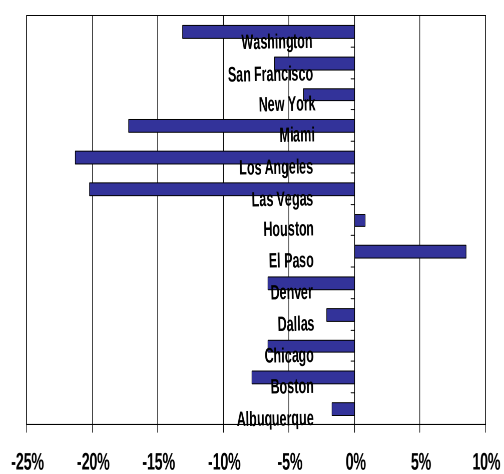
	1999:Q4	2008:Q3	*Low Point*
United States	*64*	*56*	*40*
Los Angeles	43	21	2
New York	55	10	5
Miami	59	22	10
Chicago	61	47	40
Dallas	64	64	54
Houston	66	64	47
Atlanta	73	72	64

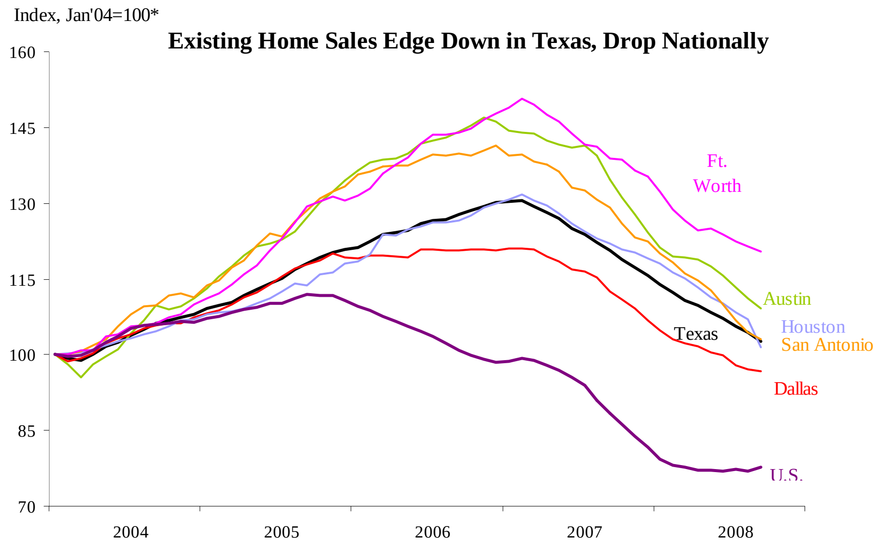
Source: Wells Fargo Housing Opportunity Index, by metro area or major division

Home Price Appreciation in the US: Percent Change for Repeat Sales

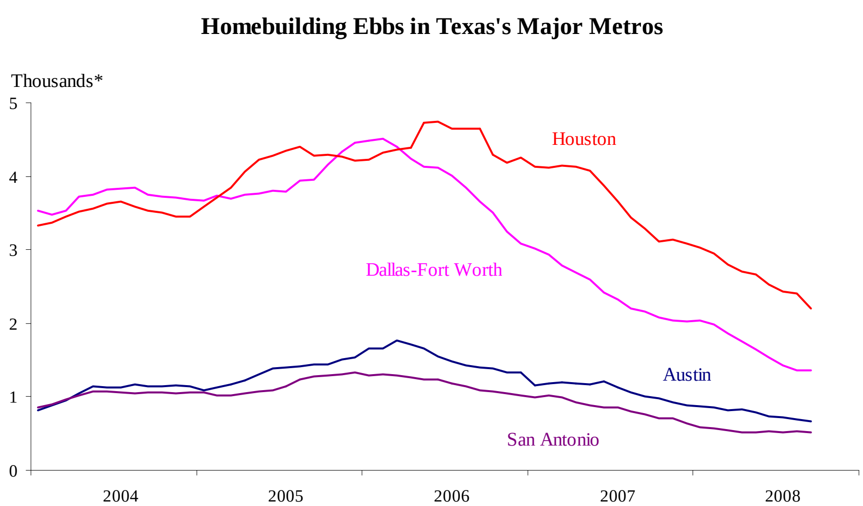


Metro Price Changes: 12-Month Change in Median SF Home Price





Note: *=Six-month moving average
Source: National Association of Realtors, Texas Real Estate Center, seasonal and other adjustments by Dallas Fed.



Note: *=Five month moving average
Source: Bureau of the Census. Adjusted by the Dallas Fed.

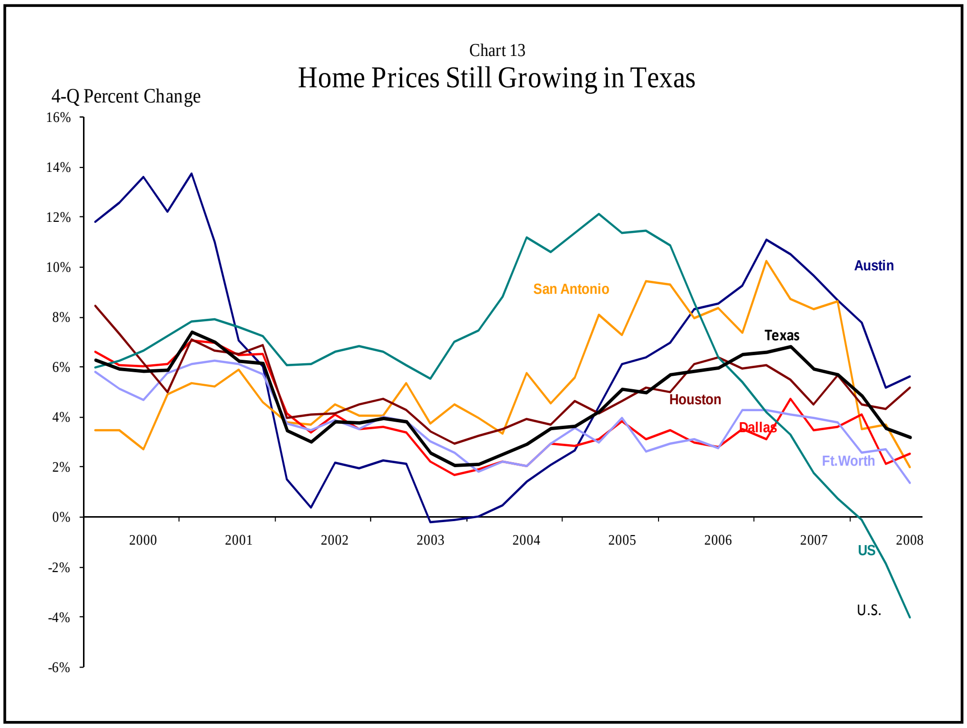


Chart 13
Home Prices Still Growing in Texas
4-Q Percent Change
16%
14%
12%
10%
8%
6%
4%
2%
0%
-2%
-4%
-6%
2000
2001
2002
2003
2004
2005
2006
2007
2008
Austin
San Antonio
Texas
Houston
Dallas
Ft.Worth
US
U.S.

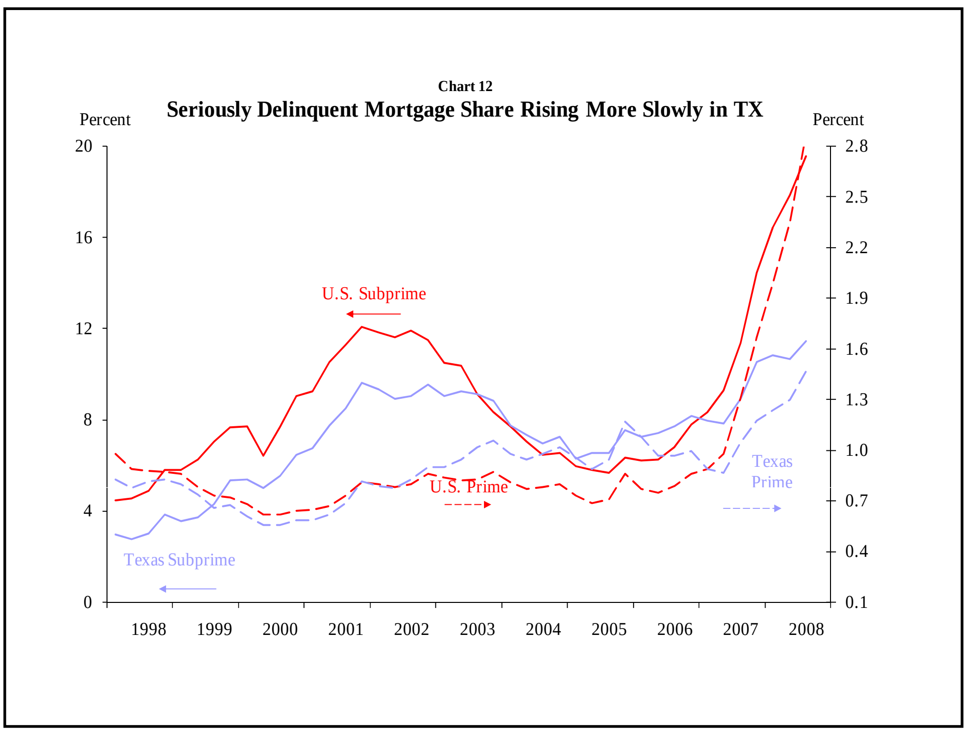


Chart 12
Seriously Delinquent Mortgage Share Rising More Slowly in TX
Percent
Percent
20
16
12
8
4
0
2.8
2.5
2.2
1.9
1.6
1.3
1.0
0.7
0.4
0.1
U.S. Subprime
U.S. Prime
Texas Prime
Texas Subprime
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008

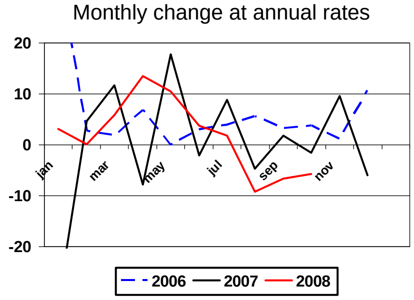
Use of High-Cost Mortgages By Metro Area
(Percent of Mortgages in 2006)

- Detroit 37.2%
- Miami 45.1%
- Dallas-Fort Worth 29.4%
- Houston 33.9%
- Los Angeles 32.3%
- Washington, DC 22.7%
- Phoenix 31.2%
- Chicago 27.2%
- Boston 17.7%
- Atlanta 25.6%
- Philadelphia 18.4%
- New York 22.4%
- San Francisco 22.4%

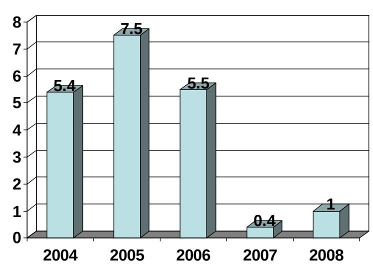
Source: Home Mortgage Disclosure Act

Retail sales, ex autos and gasoline 2004-2008

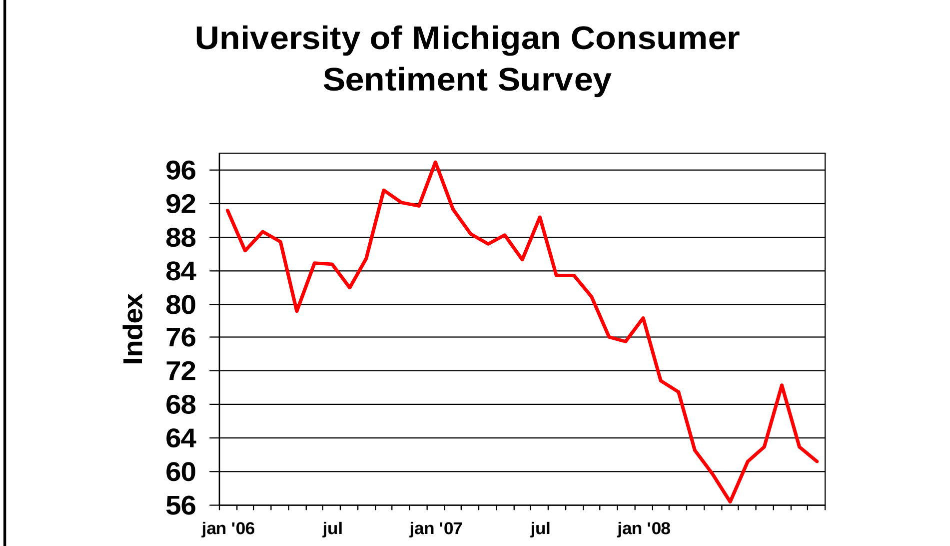
Monthly change at annual rates



October to October changes



Seasonally adjusted data



Survey of Professional Forecasters
Housing Hits Bottom in 2008-09

	Housing Starts (million, at annual rates)	Residential Fixed Investment (% change)	Total Consumption Expenditures (% change)
2008 Q3	.88	-19.1	-3.1
Q4	.81	-20.0	-3.1
2009 Q1	.80	-11.0	-0.0
Q2	.82	-6.9	1.0
Q3	.85	3.1	1.8
Q4	.90	4.4	1.2
2008	.94	-20.9	1.4
2009	.84	-10.6	-0.4

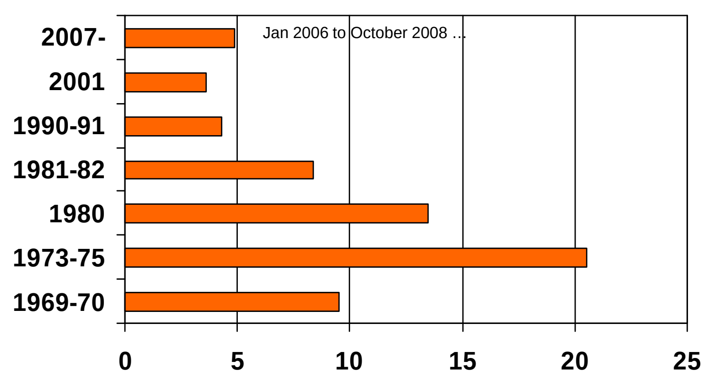
Federal Reserve Bank of Philadelphia, *Survey of Professional Forecasters, Nov* 2008

Survey of Professional Forecasters
General Outlook for 2008-09

	GDP (annual rate)	Unemployment Rate (%)	Employment (monthly gain)	Industrial Production (Index)	Non-Res Investment (% change)
2008 Q3	- 0.3	6.0	-216	109.7	-1.0
Q4	-0.4	6.6	-222	108.4	-8.2
2009 Q1	0.9	5.7	-219	107.4	-9.5
Q2	2.0	7.0	-108	107.2	-7.3
Q3	3.3	7.6	-7	107.5	-2.5
Q4	4.2	7.7	19.6	108	-0.3
2008	3.7	5.7	-15.1	110.4	-2.7
2009	1.9	7.4	-130.1	107.5	-5.7

Federal Reserve Bank of Philadelphia, *Survey of Professional Forecasters, Nov 2008*

Percent Decline in Leading Indicators in Recent Recessions



Quarterly Percentage Growth During Recession, 1969-2001

Recession	Months Peak to Trough	Q1	Q2	Q3	Q4	Q5	Q6	Q7
2001	8	-0.5	1.2	-1.4				
1990-91	8	0	**-3.0**	-2.0				
1981-82	16	4.9	**-4.9**	**-6.4**	2.2	-1.5	0.4	
1980	6	1.3	**-7.8**	-0.7				
1973-75	16	3.9	**-3.4**	**1.2**	**-3.8**	**-3.8**	-1.6	**-4.7**
1969-70	11	-1.9	-0.7	0.8	3.6	**-4.2**		

Fourth Quarter: It Could Be Worse!

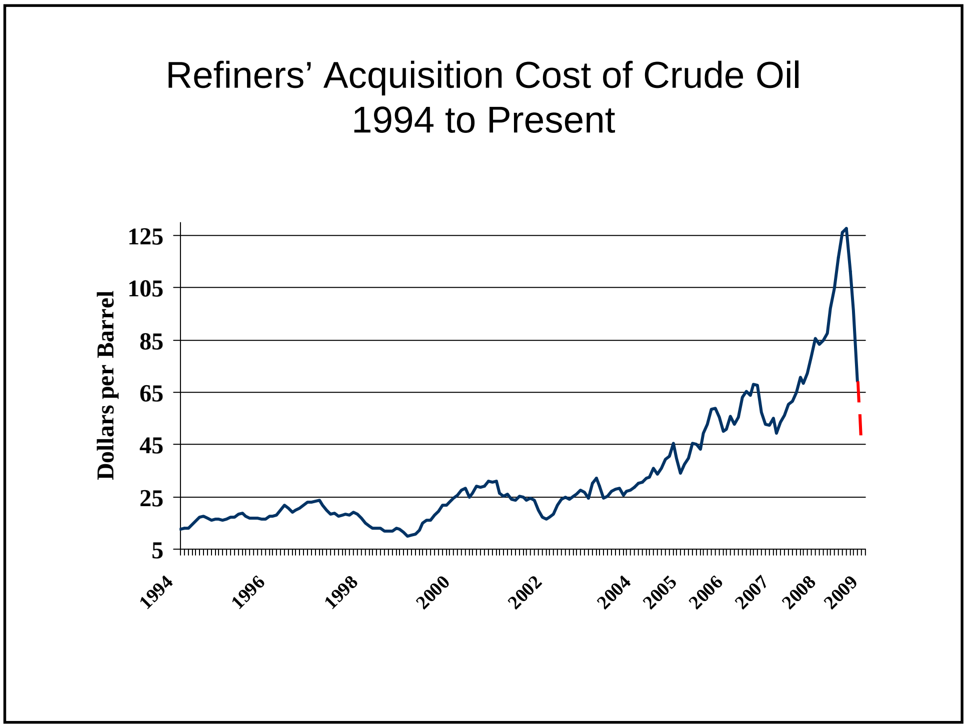
	Decline of 3.5 Percent		Decline of 6.0 Percent		Decline of 7.8 Percent (1980 Q2)	
	Annual Rate	Contribution to GDP (pp)	Annual Rate	Contribution to GDP (pp)	Annual Rate	Contribution to GDP (pp)
GDP	-3.5		-6.0		-7.8	
Consumption	-3.5	-2.5	-5.0	-3.5	-8.6	-5.6
Residential Investment	-15.0	-0.5	-20.0	-0.7	-55.9	-3.6
Business Investment	-7.5	-0.8	-10.0	-1.1	-18.8	-2.7
Inventories	---	+0.5	---	-0.2	---	-0.3
Government	-2.4	-0.5	-3.0	-0.6	1.3	0.3
Net Exports	---	+0.4	---	+0.1	---	4.1

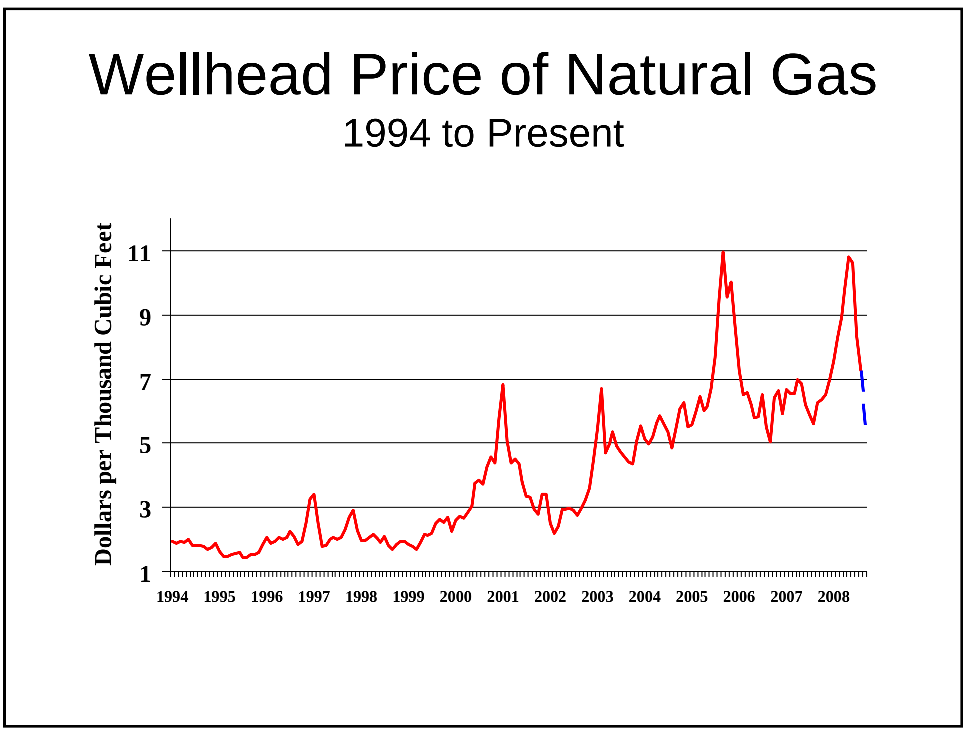
Source: Goldman Sachs

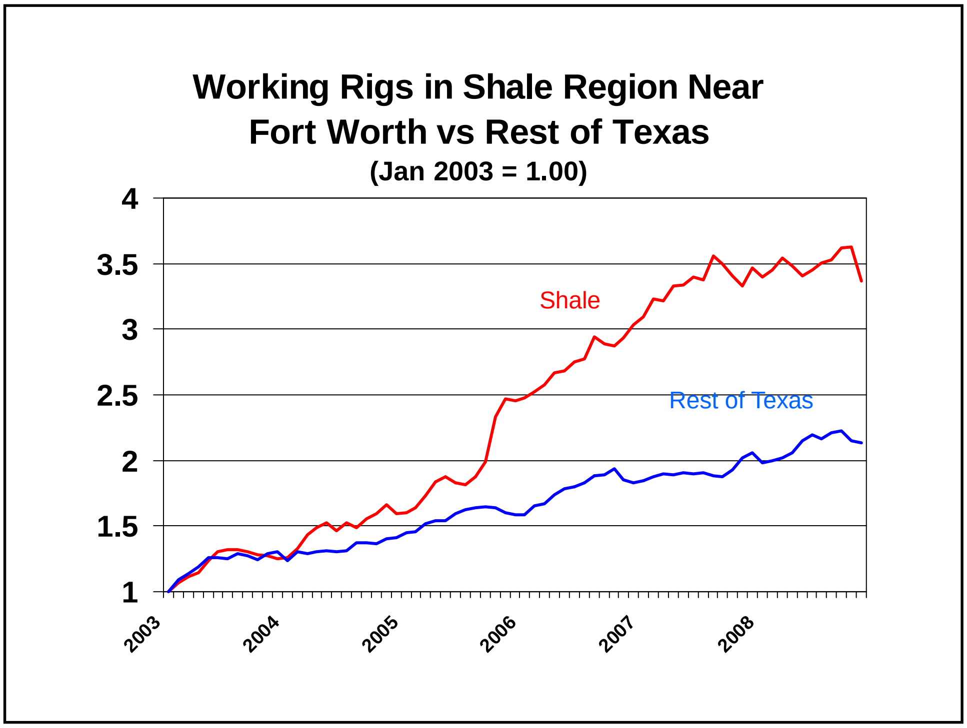
Current US Outlook

- The U.S. economy slowed in 2006-2007 along with housing and autos. Growth flirted with stall speed throughout 2008, and the latest financial shock has tilted it into recession.
- Expectations that housing might stabilize in 2008 were too optimistic, especially for new construction.
- The consumer has pulled back *hard* on spending. Fatigued by high and food gasoline prices, falling home prices, losses in 401(k), now add the weak job market as one more reason for concern.
- Recession? Now we know – it began December 2007. How long? How deep? Recent data are now consistent with the most serious US economic downturn in 25 years.

Oil and natural gas have separated much of Texas from national economic conditions for the last four years …


Refiners' Acquisition Cost of Crude Oil
1994 to Present
Dollars per Barrel
125
105
85
65
45
25
5
1994
1996
1998
2000
2002
2004
2005
2006
2007
2008
2009


Wellhead Price of Natural Gas
1994 to Present
Dollars per Thousand Cubic Feet
11
9
7
5
3
1
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008



OPEC's Price Band and the Old Paradigm

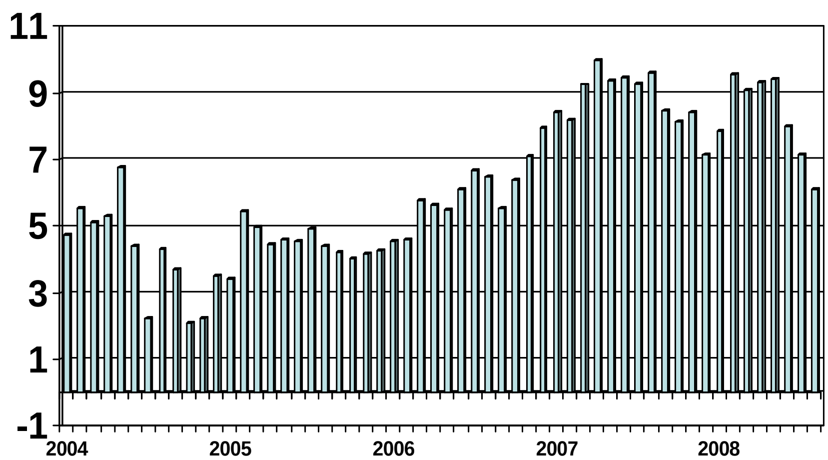
- In March 2000, OPEC established a price range of $22-$28 for crude oil
- The lower band of $22 was to protect OPEC's revenue at a sufficiently high level
- The upper band of $28 was to keep price from going too high, to avoid offering exploration incentives to non-OPEC producers
- Non-OPEC producers saw this as a range of moderate prices, with likely periodic collapses in price due to slack demand and OPEC-member cheating

Growth in the Demand for Crude Oil (Annual Percentage Rate)

		1989-2001	2001-2008	1989-2007
OECD	*Total*	*2.0*	*0.7*	*1.5*
	North America	1.8	1.2	1.6
	Europe	1.5	0.3	1.1
	Pacific	3.4	0.0	2.2
	…			
Non-OECD	*Total*	*0.2*	*4.1*	*1.6*
	Former Soviet Union	-7.1	0.4	-4.5
	China	6.1	7.8	6.7
	Other Asia	3.5	3.7	3.6
	Middle East	3.4	5.3	4.1
	…			
World	*Total*	*1.3*	*2.1*	*1.5*

OPEC Spare Capacity Rose in 2006-07

(Percent Sustainable Production)



Excludes Iraq and Angola, and excludes Nigeria, Venezuela and Indonesia from spare capacity calculations. IEA, *Oil Market Report*

Change in World Oil Supplies, 2003-08

(million bbl/d)

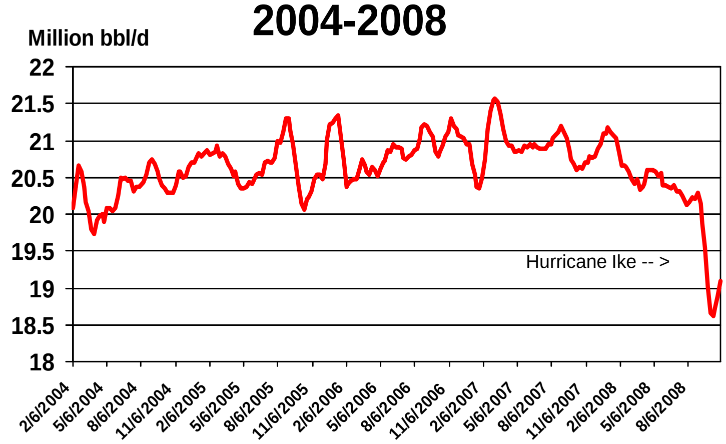
	2003	2008	Change 2003-2008
Non-OPEC	49.1	51.1	2.0
North Am	14.6	14.2	-0.4
Europe	6.3	5.5	-0.8
FSU	10.3	12.9	2.6
OPEC	30.8	36.6	5.8
World	79.8	87.7	7.8

IEA *Oil Market Report*, 2008 data is first half, and OPEC is extrapolated based on crude deliveries only.

Why Haven't Oil Supplies Responded?

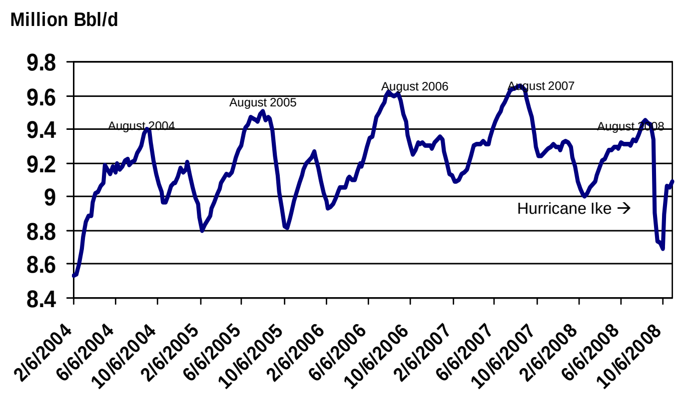
- Reluctance by producers to buy into this price cycle until 2004.
- Global scarcity of equipment and oil-related skills once they did buy into the expansion. This raised the price of oil investment.
- Reluctance to move into or expand exploration in politically unsettled regions. Geologic uncertainty preferred to political uncertainty.
- Oil fields getting smaller, scarcer. Higher prices justified for conventional oil.
- Oil is increasingly coming from unconventional areas that technical barriers in development

US Consumption of Crude Oil, 2004-2008



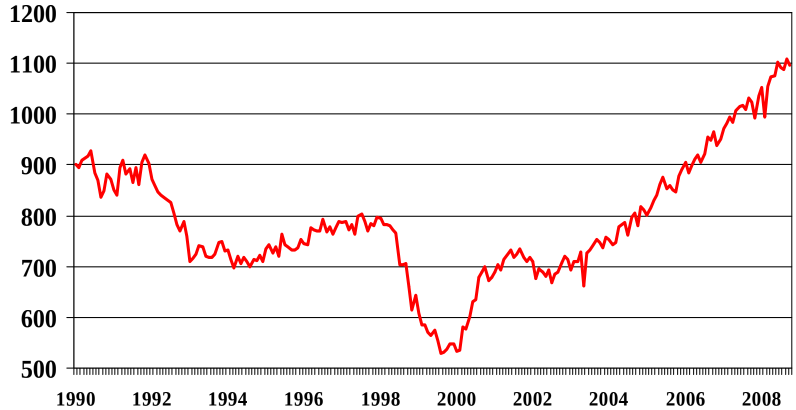
Data from EIA/DOE, four-week average of apparent consumption

US Consumption of Gasoline Finally Chokes at $4/gallon



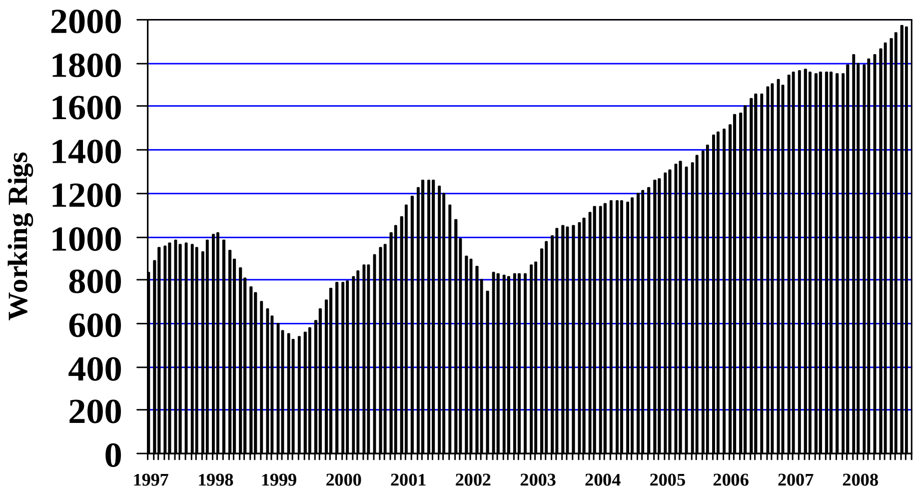
Data from EIA/DOE, four week average of apparent consumption

International Rig Count Highest Since 1982



Excludes Iran and the Sudan

Drilling in the U.S. Slowly Returns to Highest Levels Since 1986

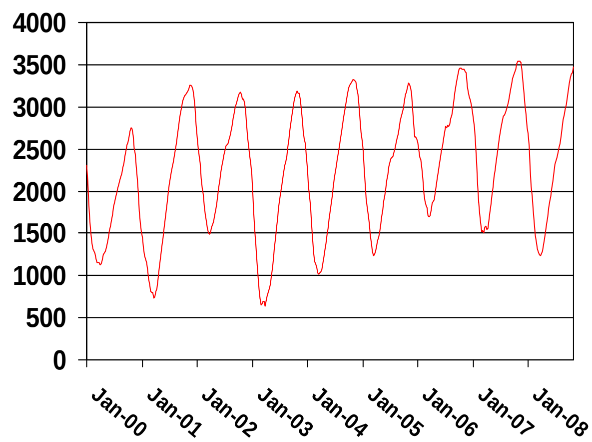


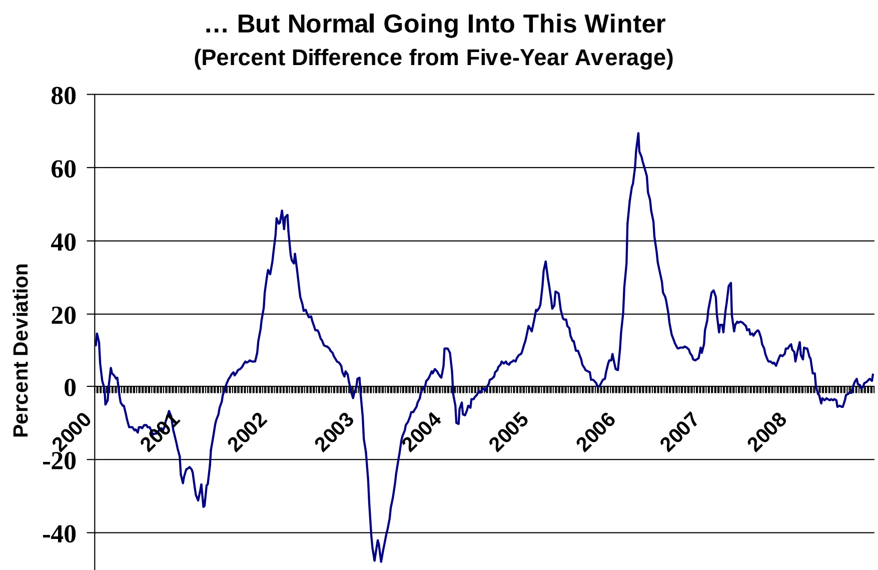
Baker Hughes rig count, seasonally adjusted

Natural Gas-Directed Drilling

- Production up 8 percent this year from last year
- No damage to Gulf from hurricanes
- Canadian production and exports higher than expected
- Inventories in good order this year
- Falling oil prices weaken gas prices
- Winter weather is the big question mark

High Natural Gas Inventories In Last Two Years …





Oil and natural gas …
Boom over?

Dallas/Ft. Worth Job Growth Slows, But Much Faster than U.S.

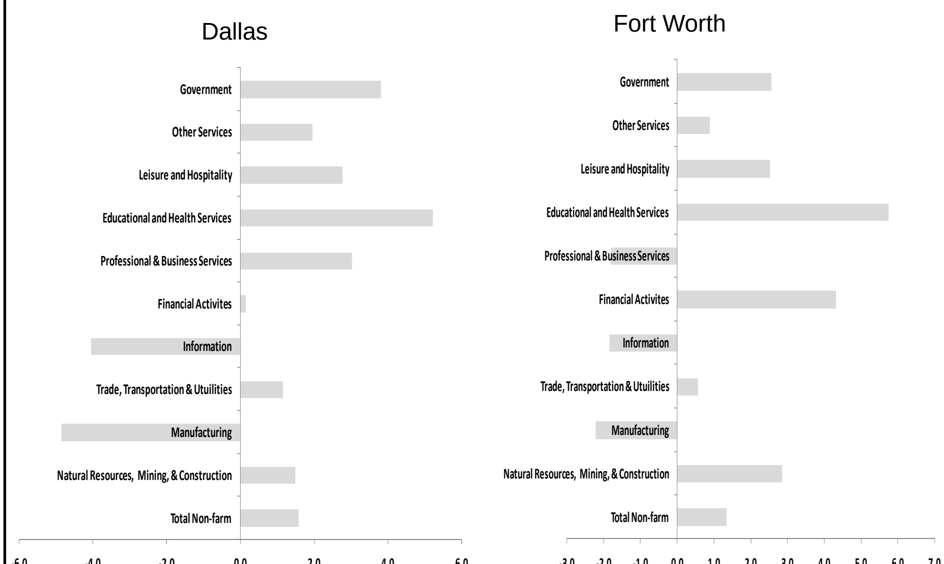
(Growth at Annual Rates)

	U.S.	Dallas	Fort Worth
1-Month	-2.1	2.6	0.3
3-Month	-1.9	0.8	0.7
6-Month	-1.3	1.6	1.5
12-Month	-0.8	1.6	1.3
24-Month	0.1	2.3	2.5

Comparison through most recent available, data seasonally adjusted

Annual Growth of Jobs by Sector, 2008

(Year-Over-Year Changes)



Going Forward in D/FW?

- Don’t discount regional recession
- Should be better here than elsewhere?
  - Housing downturn milder
  - Tech better than most industries this time
  - Lower taxes, operating cost. Newer plant and equipment
- But …
  - Airlines and autos dragged into it
  - Retail important here
  - Barnett shale makes the region an important energy producer

Dallas-Fort Worth Metroplex: Economic Headwinds Build Rapidly

Robert W. Gilmer
Senior Economist and Vice President
Federal Reserve Bank of Dallas