



Economic Forecast of South Central Region

Presented to:

National Ready Mix Concrete Association
Promotion Plus Forum

March 23, 2000
Dallas, Texas

The Greystone Group LLC
Investment Banking



Presentation Outline

- I. U.S. Macro Economic Overview
- II. Economic Assessment of South Central Region
- III. Ready Mix Concrete Consumption Forecast by Region
- IV. Current M&A Market Conditions
- V. Consolidation of the U.S. Construction Materials Industry
 - A. Recent Transaction Activity
 - B. Most Active Buyers
 - C. Greystone's Outlook for Continued M&A Activity
- VI. Today's M&A Valuation Methodology



I. U.S. Macro Economic Overview



Macro Economic Assessment

- The current economic expansion has now run for 106 consecutive months (February 2000), and will soon be the longest period of growth in U.S. history.
- More importantly, bullish economists feel the trend will continue well into the 21st Century, and the market bears are currently few and far between.
- According to the Wall Street Journal's semiannual economic forecasting survey, strong consumer spending, rising business productivity and tame inflation will keep the U.S. economy humming through the year 2000 – shattering records for the longest economic expansion in U.S. history.



Macro Economic Assessment

- The bullish sentiment is summarized by the following comments from select U.S. economists:

“There is no end in sight to the expansion.”

“These are the best of economic times by any measure.”

“The Federal Reserve would have to clamp down on interest rates aggressively to stop this expansion, and that is very unlikely.”

- The views are not surprising as 1999 was perhaps the best year in the nation’s economic history depending on how you measure it.



Macro Economic Assessment

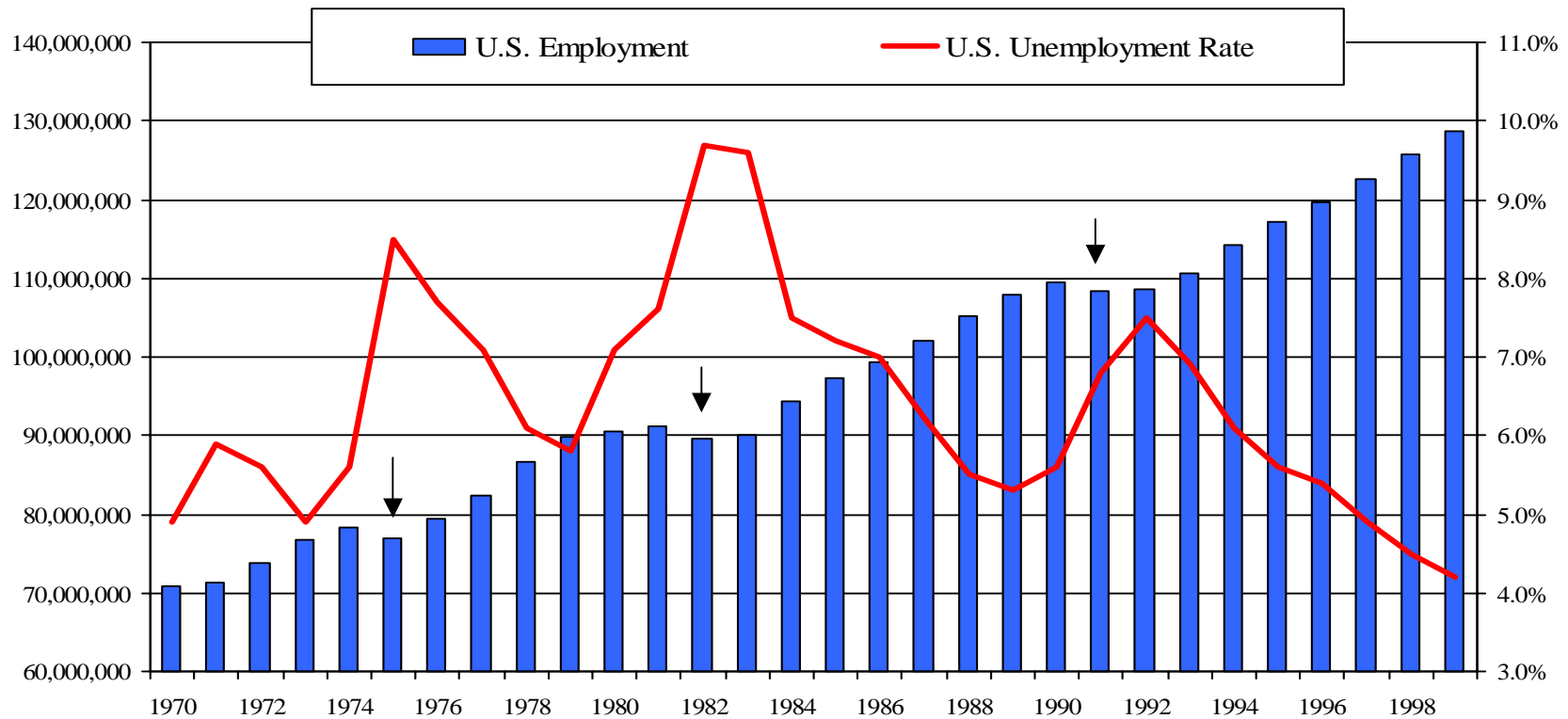
- Looking back at 1999, several economic milestones are noteworthy:
 - The Gross Domestic Product grew by more than 4.0 percent (est.).
 - The jobless rate was a low 4.1 percent in December 1999, and 4.2 percent for the full year
 - Consumer price inflation was benign at only 2.0 percent.
 - U.S. living standards have never been higher as real median household income exceeded a record \$40,000.
 - U.S. homeownership has risen to more than two-thirds of households.
 - The share of families owning stock has grown to over one-half.
- In summary, during the current expansion, we have generated over 20 million jobs and \$2 trillion in additional economic output.



Macro Economic Assessment

Employment & Unemployment Rate

1970-1999



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Macro Economic Assessment

So what were the reasons for 1999's stellar growth, and will they remain?

- From a global perspective, the U.S. economy has benefited from international social and political changes that have disrupted foreign economies.
- Consequently, U.S. companies became the investment vehicle of choice. Despite a parallel slowdown in goods export, the influx of capital has allowed continued investment in productivity and new technology.
- Conversely, a turn-around in Asian, European or South American economies could hurt U.S. counterparts as competition heats up.



Macro Economic Assessment

- A rising stock market has also afforded continued access to capital for U.S. corporations, as well as increased exuberance and confidence among consumers which has translated into record retail spending.
- However, while the stock markets are setting new records, today's equity markets are also seeing extreme volatility, a possible warning sign of a peaking, and subsequently falling, market.
- Rising volatility is, among other things, caused by increasing stock market speculation, which in turn makes the stock market very vulnerable to a significant correction.



Macro Economic Assessment

- Affordability, easy to use and accessibility to trading via the Internet is fueling at least part of the volatility which we see evidenced on the Nasdaq and in so called “day-trading.”
- Consumer confidence, which translates into retail spending, was another important contributor to 1999’s growth, and was particularly evident during the 1999 holiday season.
- However, many of the fundamentals driving consumer spending could moderate as the new year progresses, and consumer confidence can quickly take a turn.



Macro Economic Assessment

“Everything I have experienced suggests that, at core, economic conditions and markets are grounded in the human psyche. That is, confidence or the lack thereof profoundly affects markets and economies, and confidence in turn has throughout the history of markets and economies tended to swing from excesses in one direction to excesses in the other.”

- Robert Rubin, former secretary of the United States Treasury
The Economist, The World in 2000



Macro Economic Assessment

- Interest rates, an effective consumer confidence deflator, will likely rise further in 2000. The current consensus calls for yet another 0.25 percent hike in the Fed Funds rate during the March 30th FOMC meeting, and a surprise move at some point this year is quite possible.
- Although Greenspan has moved cautiously during the last four interest rate hikes, he has also shown boldness in the past. For example, twice in his tenure (1984 and 1994), he set out on aggressive programs of monetary tightening, raising rates by some 300 basis points each time to cool the economy.
- Finally, labor market conditions have supported the elated economy during the 1990s as companies have been able to attract skilled labor without raising wages to inflationary levels.



Macro Economic Assessment

- This trend may now come to a stop as the unemployment rate is at a very low 4.0 percent (January 2000).
- The nation added an additional 315,000 new jobs in December 1999 and 2.7 million for the full year, contributing to additional inflationary pressure.
- At this point, productivity growth is the primary cause for low inflation, but no one knows how long this phenomena will last.
- With progressive tightening in labor markets, wage and inflationary pressures should either slow productivity or raise interest rates in 2000.



Macro Economic Assessment

- In summary, we need as many of the following conditions as possible to achieve additional growth in 2000:
 - Continued productivity improvements
 - Accelerated pace of technological change
 - Continued globalization
 - Commitment to further deregulation (i.e. financial services, telecom)
 - Aging baby boom generation
 - The “wealth effect”
 - Continued consumer confidence
 - Liquidity fuels growth in equity markets (leverage, foreign investors, Federal Reserve)
 - Y2K OK



Macro Economic Assessment

- Conversely, the following hurdles to continued growth could easily slow down economic activity during the first year of the 21st Century:
 - Tightening labor markets
 - Accelerating growth in labor compensation
 - Inflationary pressures
 - Expectations of higher interest rates
 - Increased global competition
 - Slower than anticipated Asian recovery (i.e. Japan)
 - Overvalued stock market leads to a correction
 - Low savings rate combined with spending based on the wealth effect
 - Presidential election in 2001
 - Eroding corporate profit margins



Macro Economic Assessment

Construction Industry Outlook

- Driven by strong economic and demographic growth, the U.S. construction materials industry had a record year in 1998, and when the numbers for 1999 are final, last year will be another milestone.
- At this point, the latest 1999 econometric data indicate that:
 - The U.S. added 3.1 million new residents, a 1.2 percent jump.
 - Construction employment grew 4.4 percent to 6.2 million total jobs.
 - Specifically, aggregate mining employment advanced 1.1 percent, and highway construction employment grew 4.3 percent.
 - Residential permits increased 3.0 percent to more than 1.6 million units.
 - Cement consumption was up 5.8 million metric tons, or 5.9 percent.
 - Ready mix concrete consumption increased by 18.3 million cubic yards, a 6.1 percent improvement.
 - Aggregate production jumped 4.9 percent, a 134 million short ton increase.



Macro Economic Assessment

Construction Industry Outlook

- But was 1999 the peak of the current cycle or will we see continued growth in 2000?
- Industry sector economists at the October 1999 North American Construction Forecast conference in Washington, D.C. believes that “1999’s torrid pace of construction will continue into the year 2000 virtually unabated”.
- The Portland Cement Association sees “a positive outlook for the U.S. cement industry”, but also cautions that “there are risks”.
- We agree with the long-term positive outlook for the construction materials industry, but predict a general slowdown in 2000-2001.



Macro Economic Assessment

Construction Industry Outlook

- Despite, or perhaps because of, the aggressive expansion to date at the tail end of a fantastic up-cycle, we feel that increased competition, weakening corporate margins and tightening labor markets will cause a slowdown in general economic trends in 2000.
- Additionally, increasing wage pressure and inflationary ghosts will cause the Fed to hike interest rates, a particularly sensitive issue for construction spending.
- Despite all the hype around TEA-21, bottlenecks in channeling the additional funds into actual highway work has caused virtually non-existent increases, and highway spending could stall another year.
- Furthermore, new public spending programs will be hamstrung by changes and uncertainty in the political arena.



Macro Economic Assessment

Construction Industry Outlook

- In the long run, public spending will be healthy because federal, state and local government budgets are in surplus.
- Consequently, institutional building and public works construction will support increases in construction materials spending.
- Also, the Revenue Aligned Budget Authority (RABA) provision built into TEA-21 will make additional gas tax revenue directly available to state DOTs.
- Finally, when TEA-21 funds eventually find it's way to materials producers, consumptive demand will get a boost.



Macro Economic Assessment

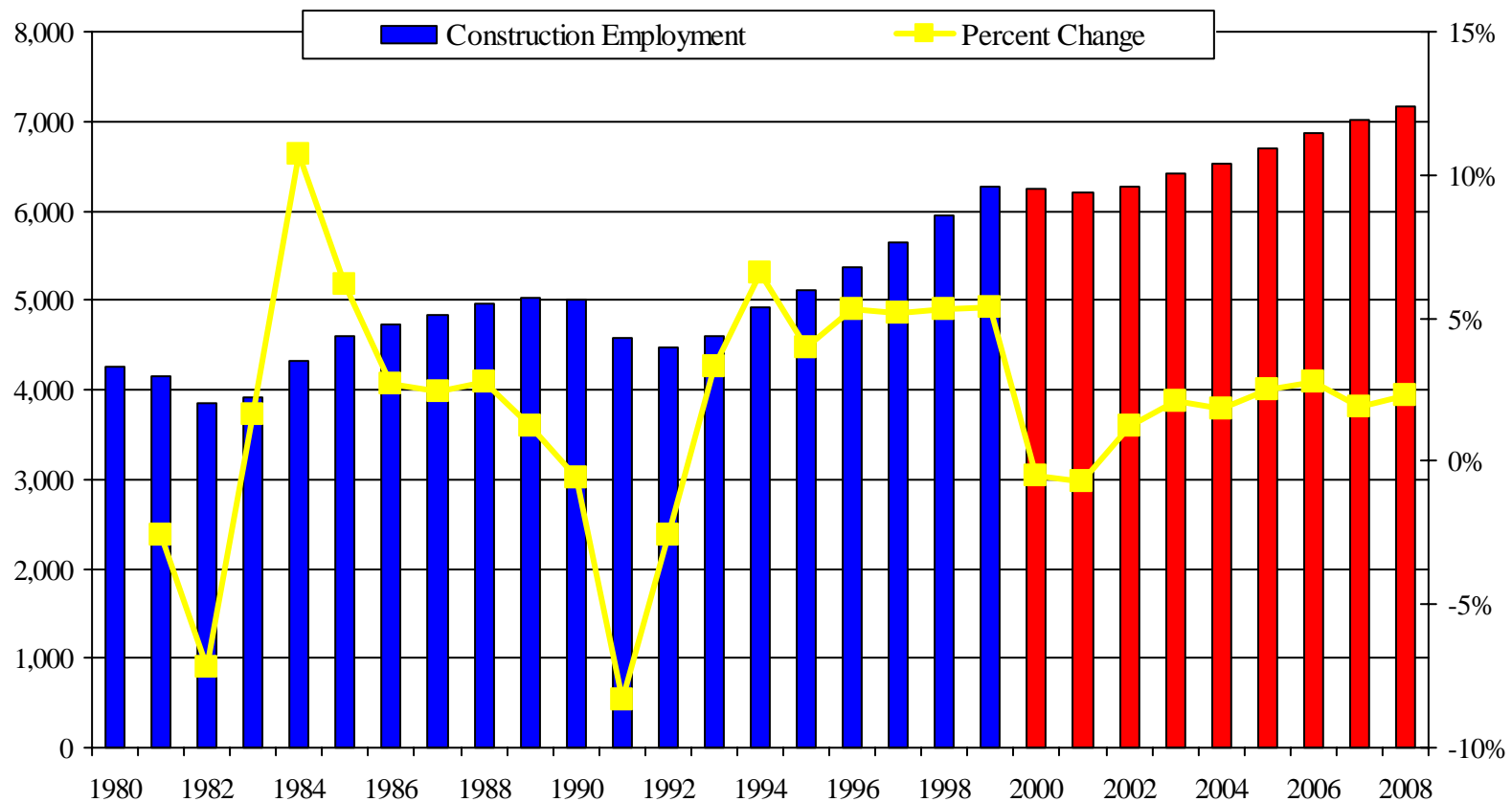
Construction Industry Outlook

- Accordingly, construction employment will decline by an estimated 75,000 jobs during the next two years from today's peak of nearly 6.3 million jobs.
- However, this is only a 1.2 percent loss over the two year period, and the sector will experience new gains during the remainder of the ten-year projection period.
- Between 1999 and 2008, the construction industry will support an average of nearly 6.6 million workers per year, comparing favorably to an annual average of 5.1 million workers between 1989 and 1998.



Macro Economic Assessment

Construction Employment (000 Persons)



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Macro Economic Assessment

Construction Industry Outlook

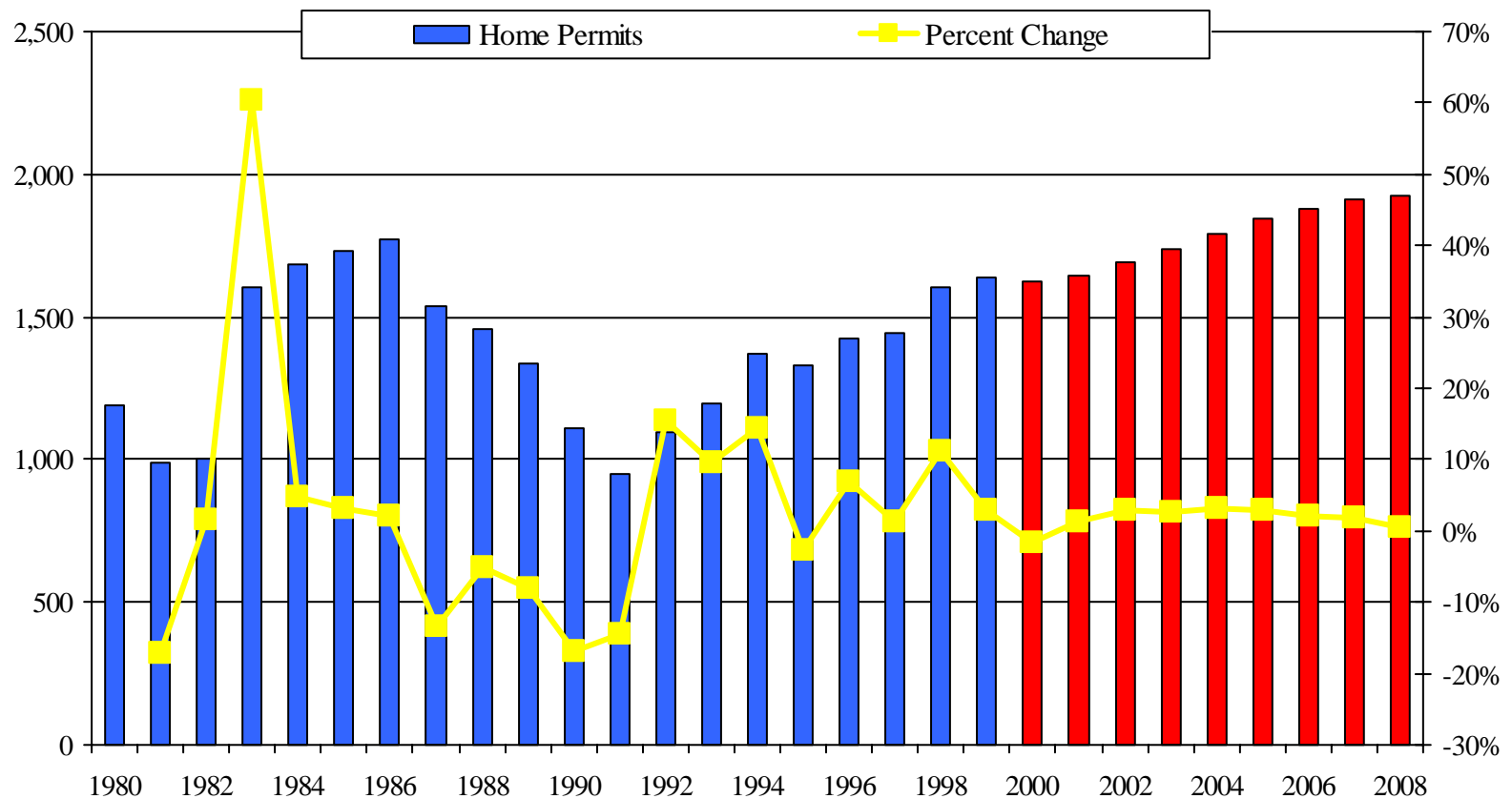
- Residential construction, accounting for roughly half all construction spending, will not sustain at today's record levels.
- Accordingly, we suggest that new home permits will cool from 1999's peak of 1,652,000 units to 1,625,000 units in 2000, a 1.7 percent drop.
- The moderate decline on the national level is caused by varying regional pacing. For example, the Northeast region is expected to see a 1.7 percent advance in home permits in 2000 compared to a 3.7 percent decline in the South region.
- In the same fashion, varying regional pacing will influence the long-term national growth trend and diminish future cycle gyrations.



Macro Economic Assessment

Home Permits

(000 Authorized Units)



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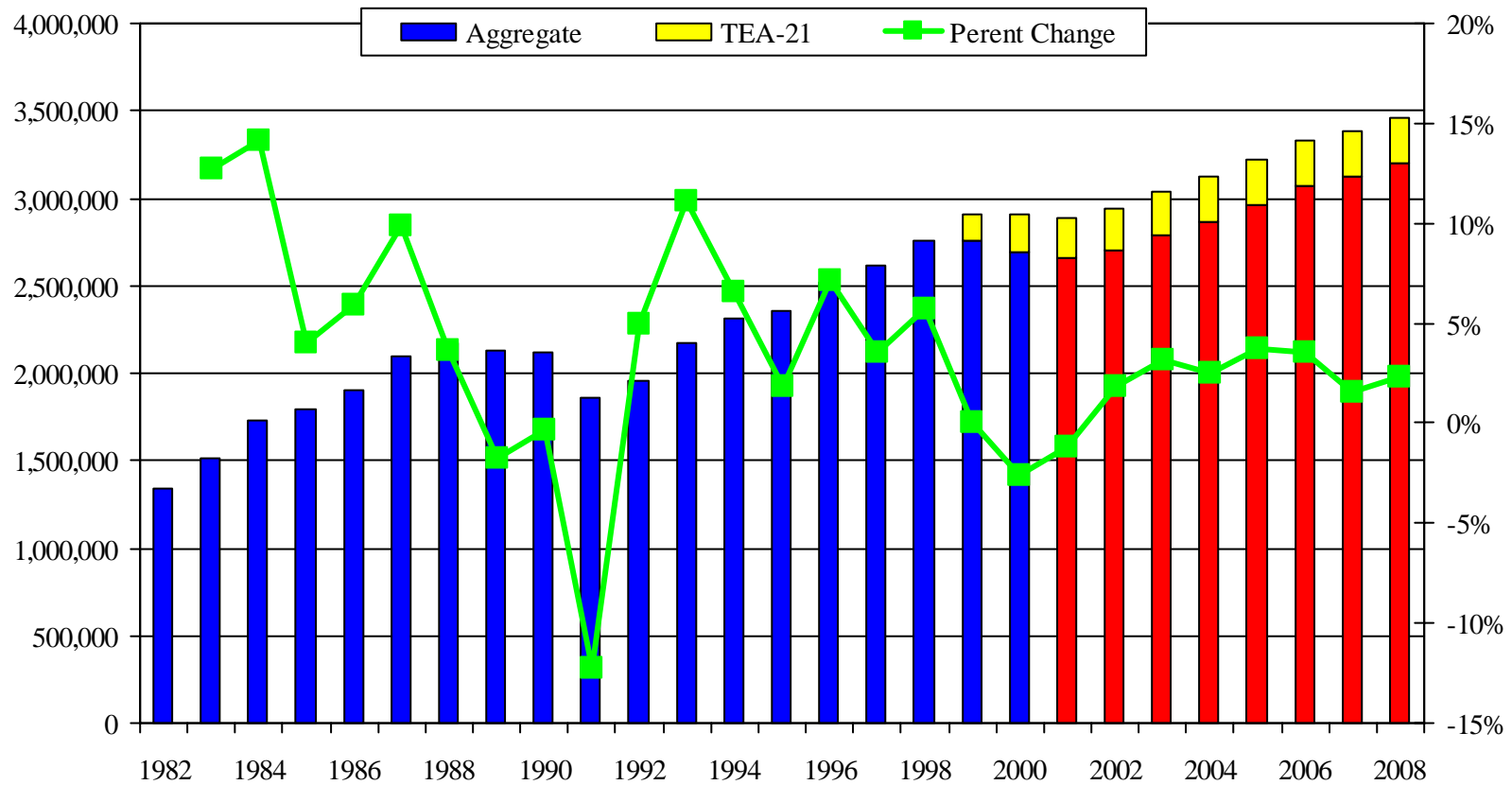
Construction Industry Outlook

- With an overall improvement in construction activity during 1999, the nation's largest construction materials producers recorded strong growth in both revenues and earnings driven by escalation in aggregate volumes and prices.
- Accordingly, U.S. aggregate production increased by an estimated 134 million short tons or 5.7 percent to more than 2.9 billion short tons.
- During the next decade, U.S. aggregate production is cast to average 3.1 billion short tons per year, comparing favorably with the past decade which recorded average annual production levels of approximately 2.3 billion short tons.



Macro Economic Assessment

Aggregate Production (000 ST)



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Macro Economic Assessment

Construction Industry Outlook

- In summary, during the next decade construction materials companies will see record consumption levels well above any previous ten-year period.
- However, we don't think 2000 will be as strong as 1999 because of last year's incredible growth on top of an already long expansion period.
- Despite a smoothing effect on the national level, regional and local materials consumption will continue to record modulations from year to year.
- Particularly, we believe the California aggregate production cycle will perform differently than the overall U.S. cycle during the next decade, and initially outlast the current national upswing which is expected to level off soon.



II. Economic Assessment of South Central Region



III. Ready Mix Concrete Consumption Forecast by Region

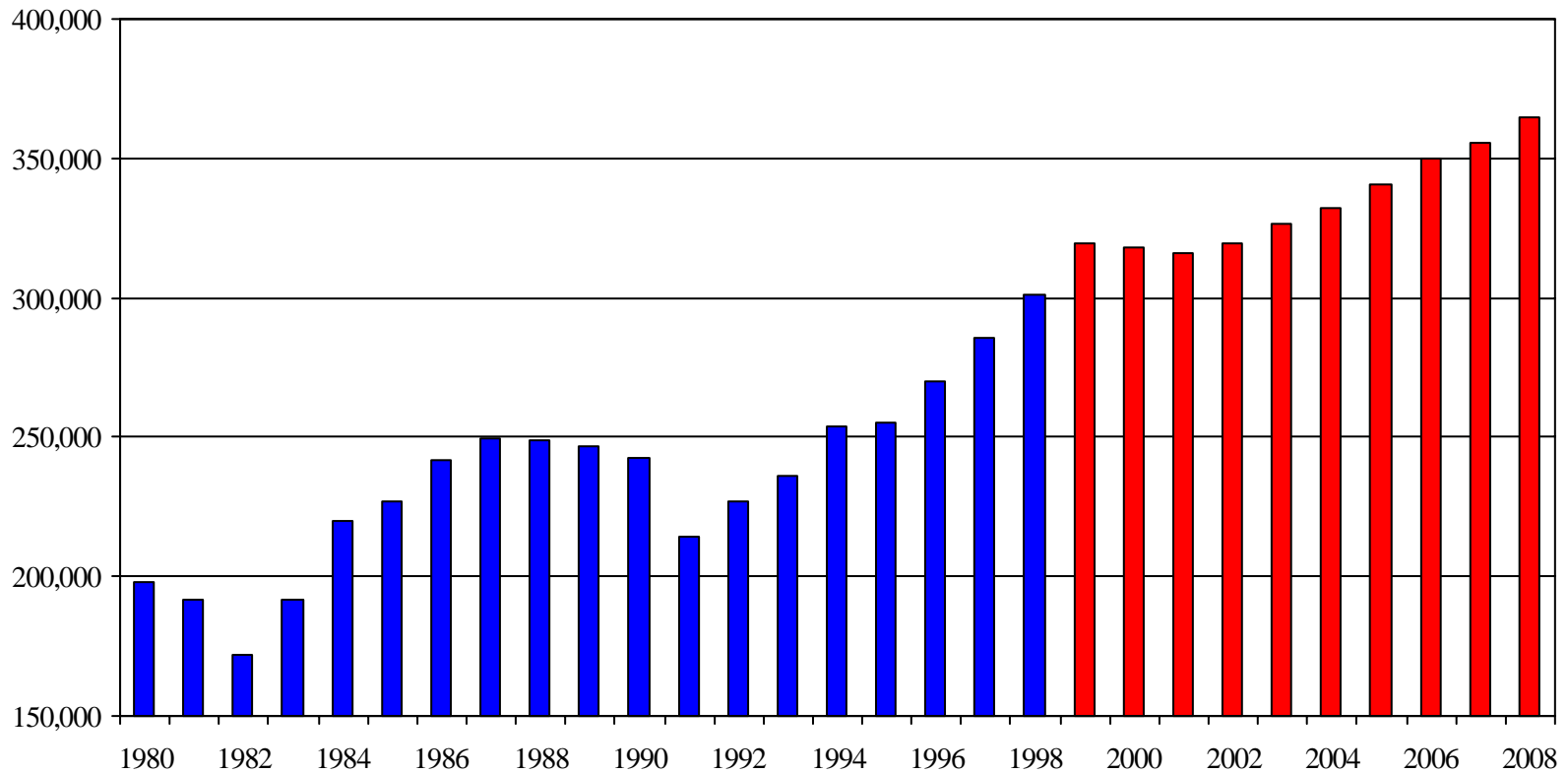
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United States

Ready Mix Concrete Consumption (000 CYD)



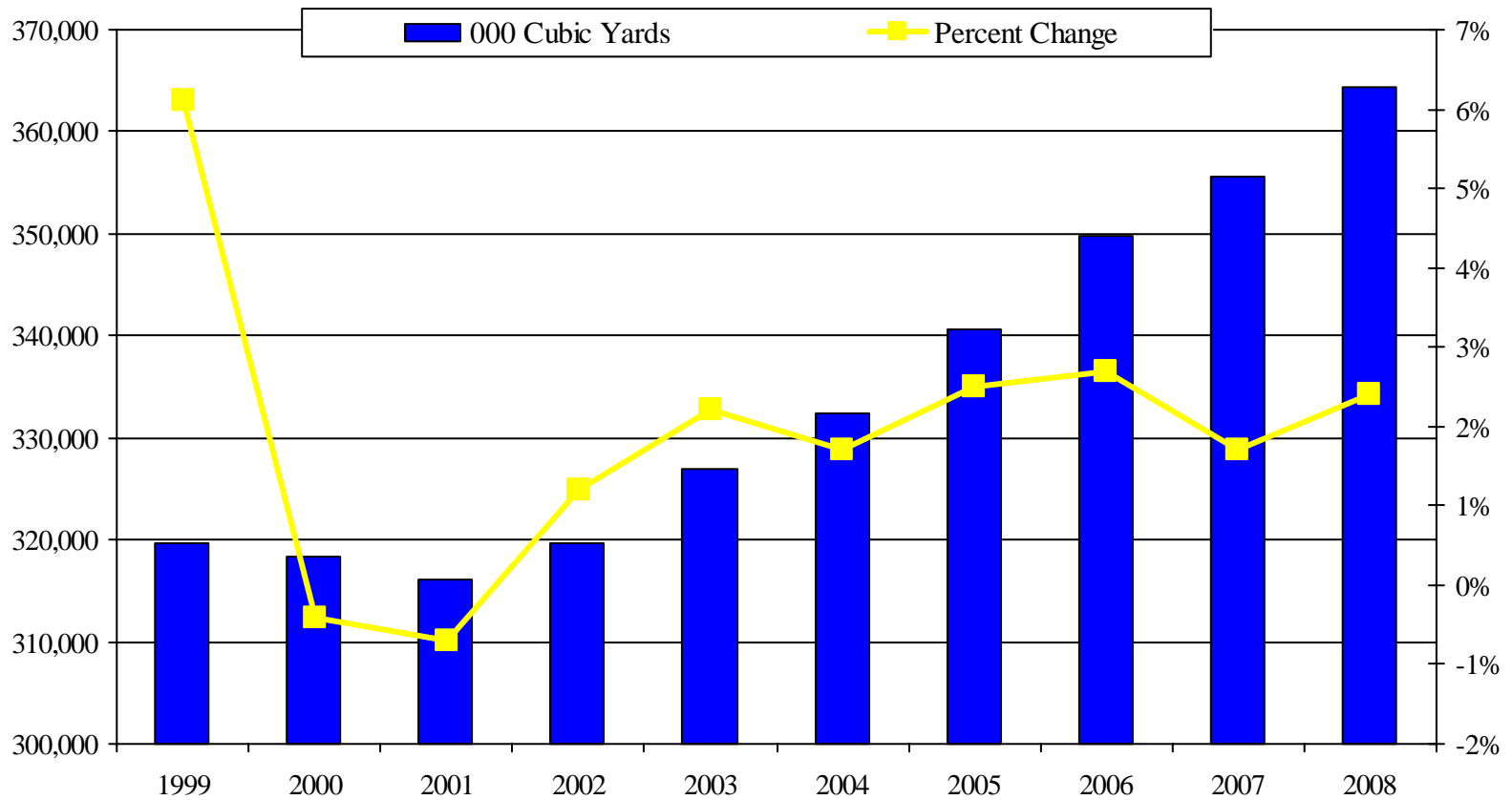
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United States

Ready Mix Concrete Consumption (000 CYD)



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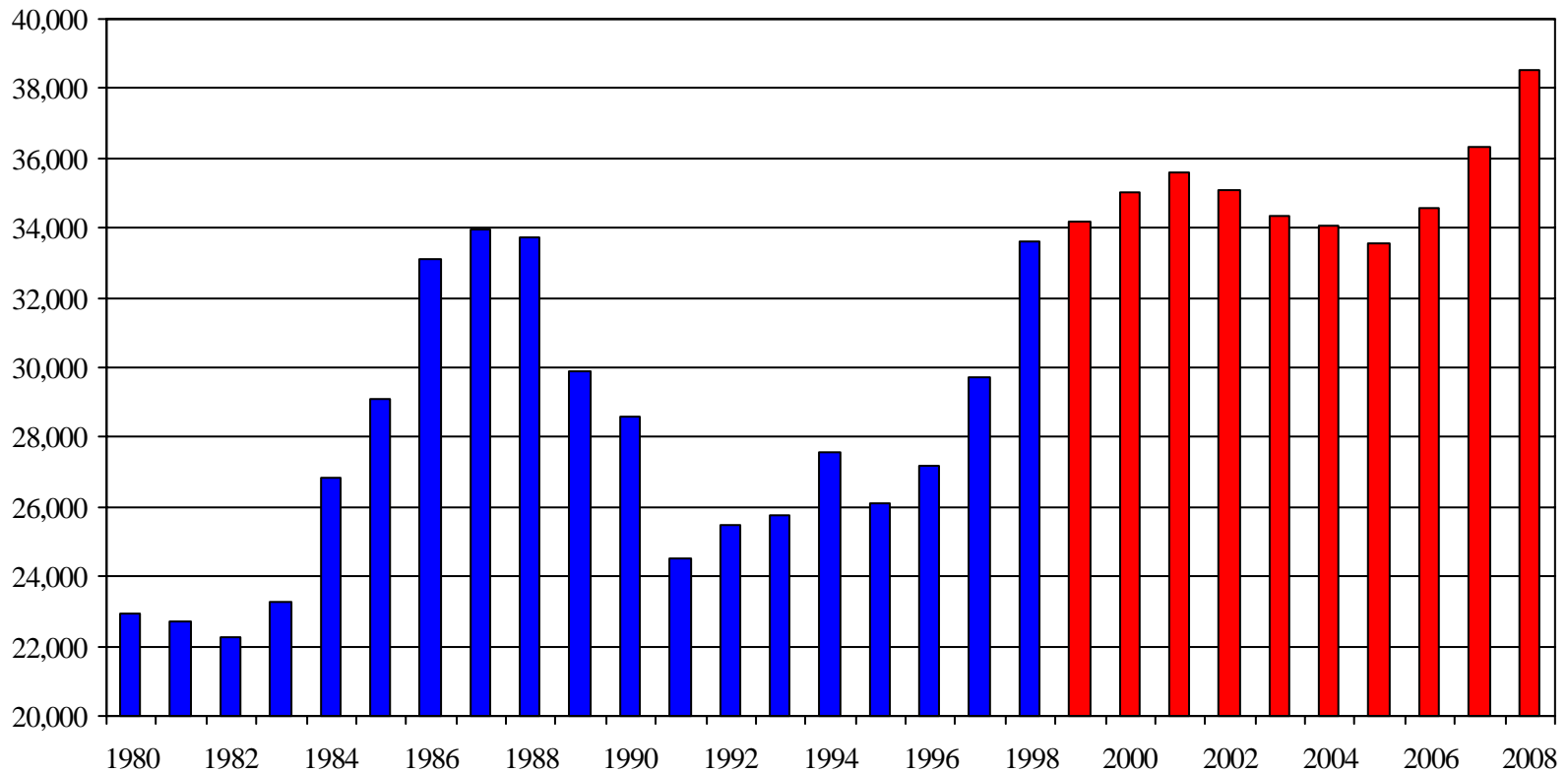
United States

Ready Mix Concrete Consumption (000 CYD)

	<u>1989-1998</u>	<u>1999-2008</u>	<u>Avg. Annual % Change</u>
High	301,355	364,355	2.1%
Low	214,017	316,024	4.8%
Average	253,083	334,340	3.2%



South Central Region Ready Mix Concrete Consumption (000 CYD)

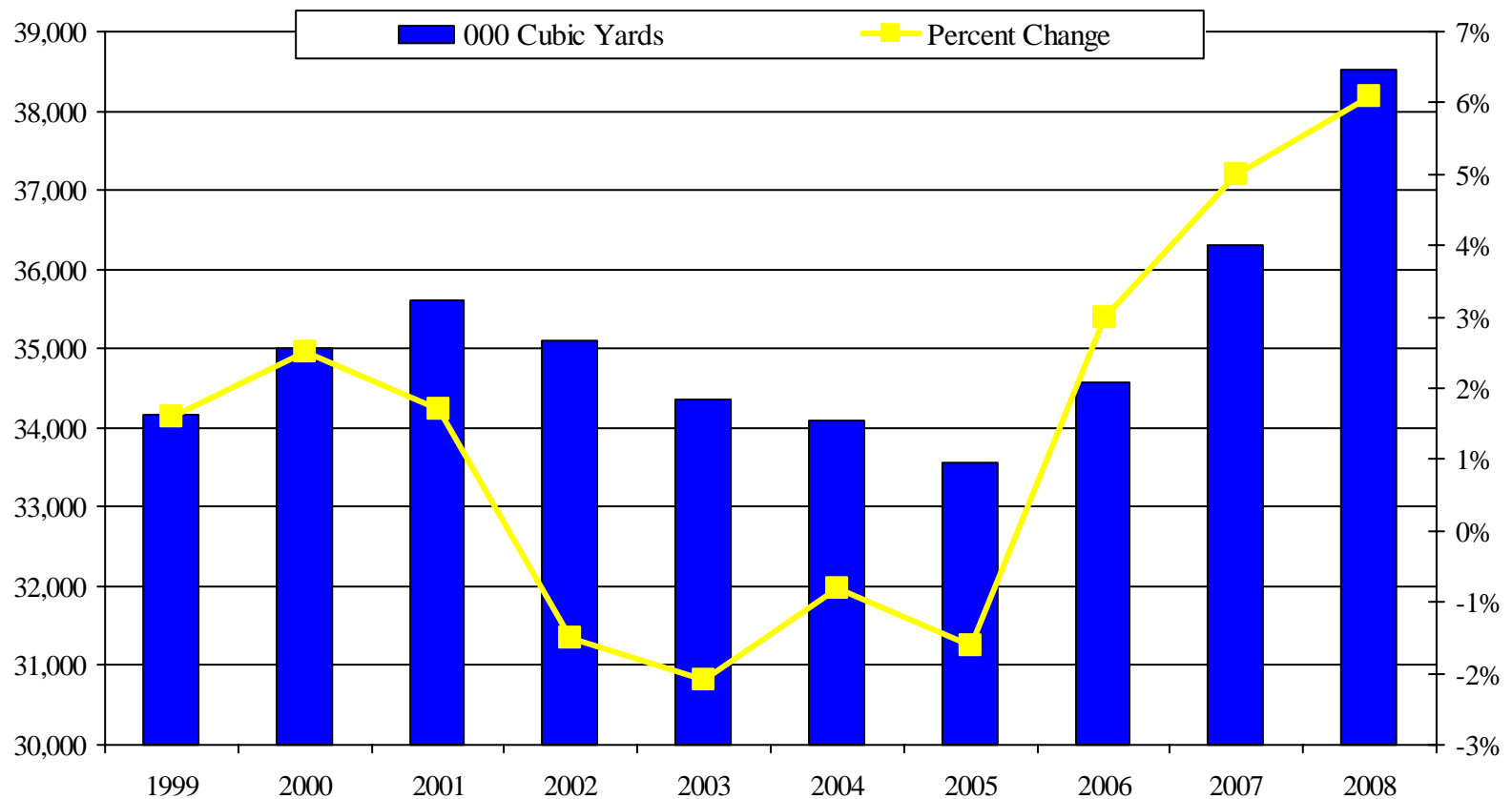


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South Central Region Ready Mix Concrete Consumption (000 CYD)



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South Central Region

Ready Mix Concrete Consumption

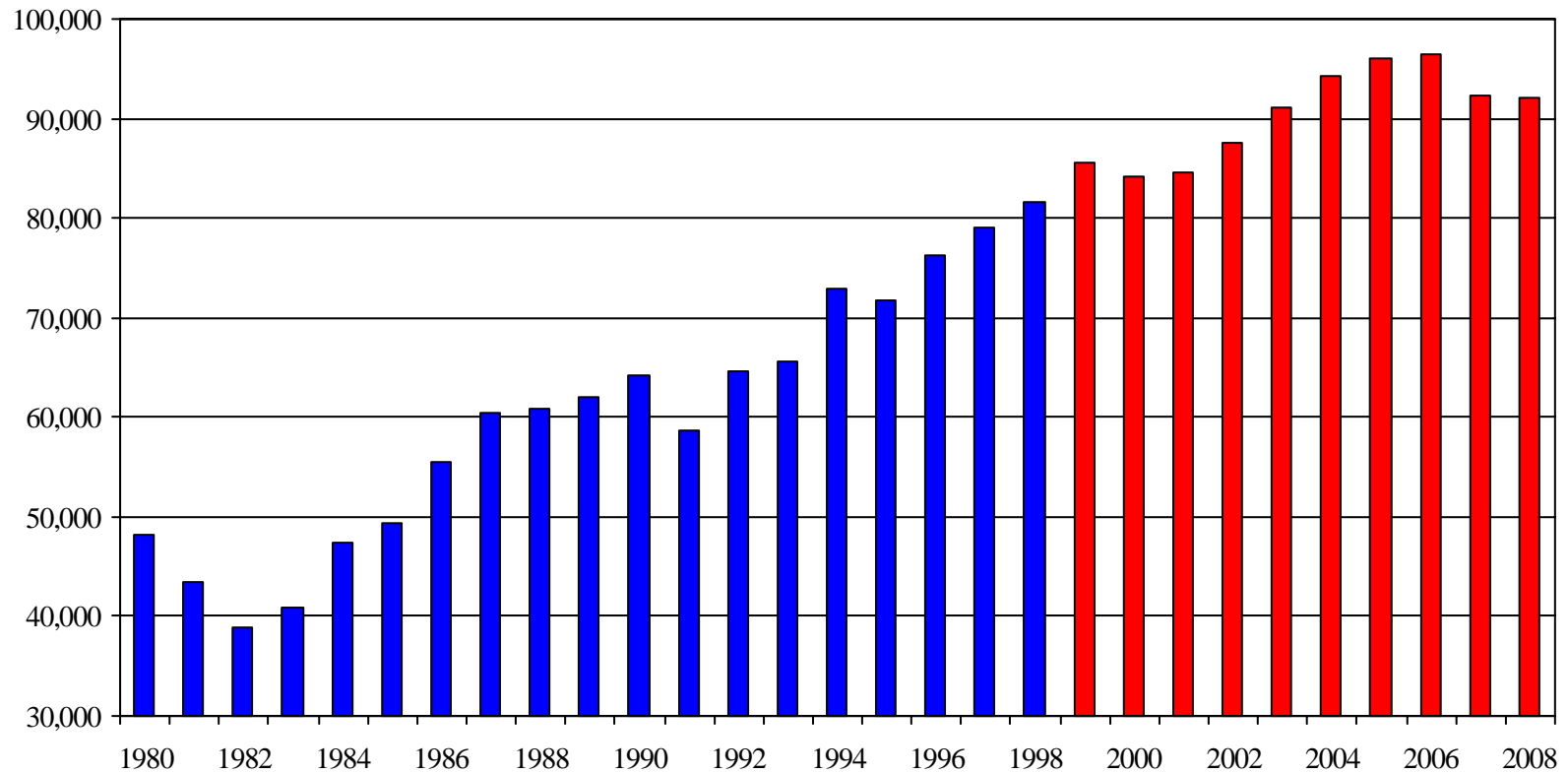
(000 CYD)

	<u>1989-1998</u>	<u>1999-2008</u>	<u>Avg. Annual % Change</u>
High	33,613	38,515	1.5%
Low	24,499	33,559	3.7%
Average	27,849	35,128	2.6%



Texas

Ready Mix Concrete Consumption (000 CYD)



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Texas

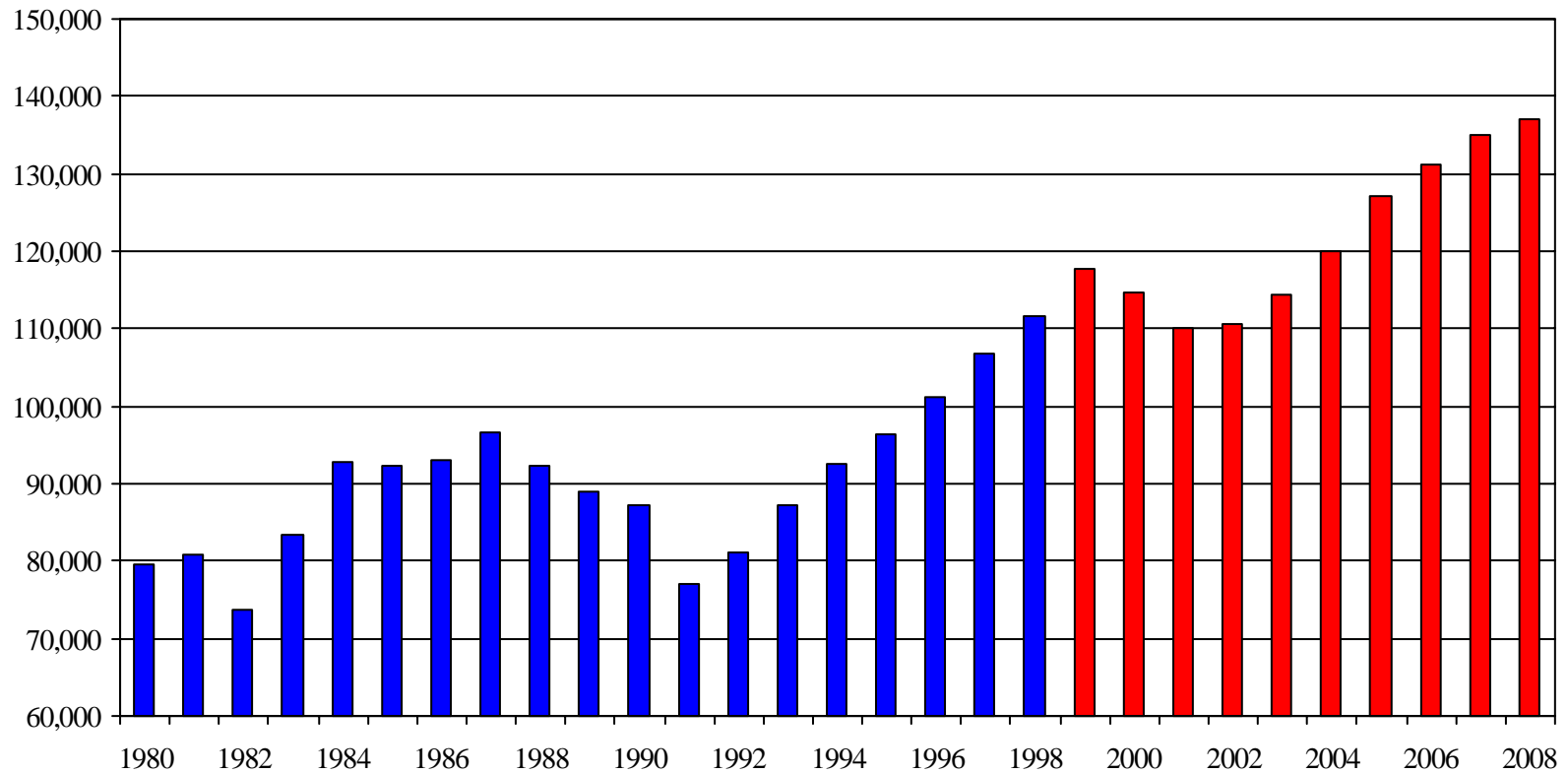
Ready Mix Concrete Consumption (000 CYD)

	<u>1989-1998</u>	<u>1999-2008</u>	<u>Avg. Annual % Change</u>
High	81,539	96,404	1.8%
Low	58,731	84,238	4.3%
Average	69,660	90,439	3.0%



Okla homa

Ready Mix Concrete Consumption (000 CYD)



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Okla homa

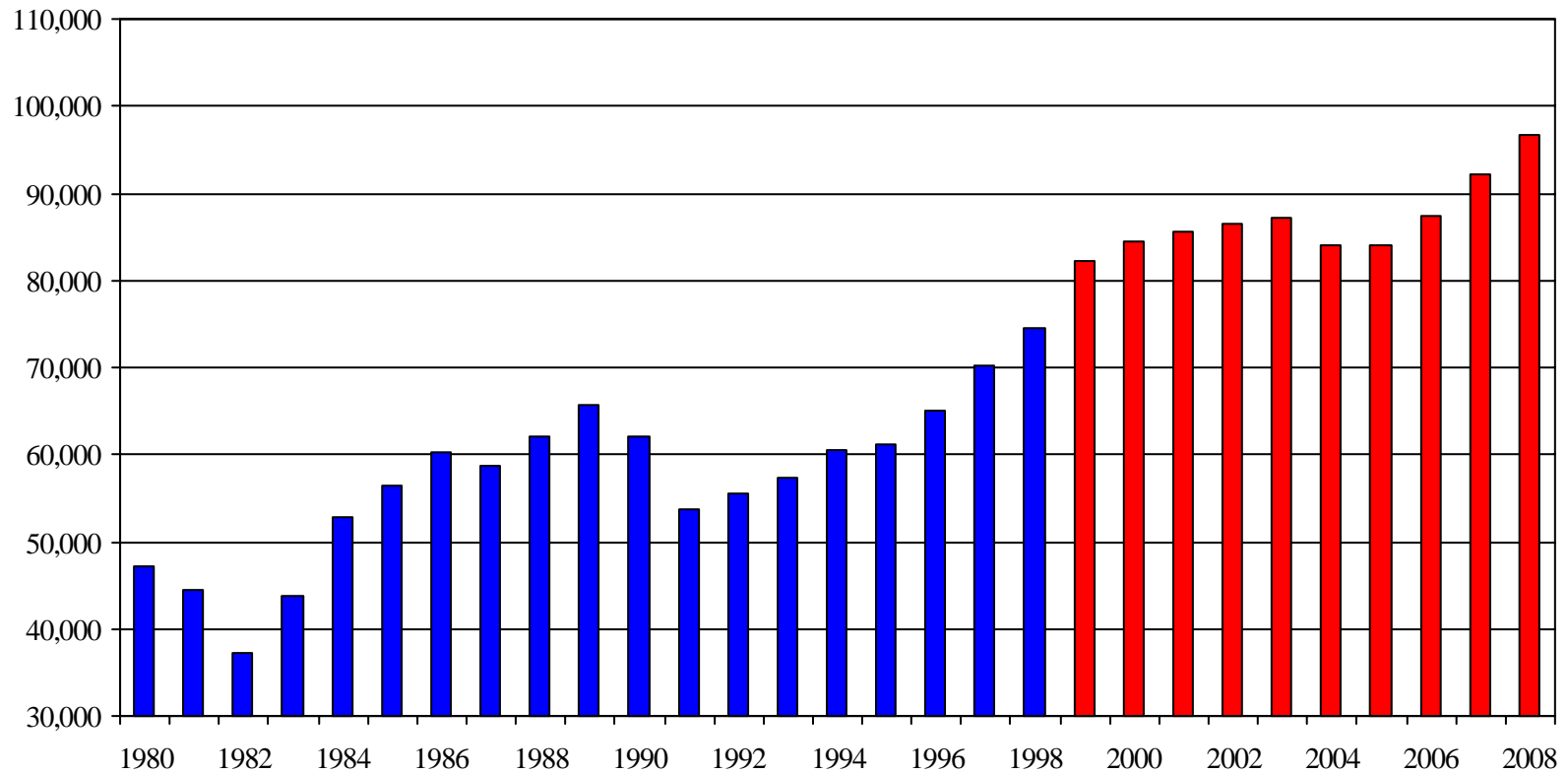
Ready Mix Concrete Consumption (000 CYD)

	<u>1989-1998</u>	<u>1999-2008</u>	<u>Avg. Annual % Change</u>
High	111,730	136,942	2.3%
Low	76,975	110,205	4.3%
Average	92,984	121,732	3.1%



Kansas

Ready Mix Concrete Consumption (000 CYD)



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Kansas

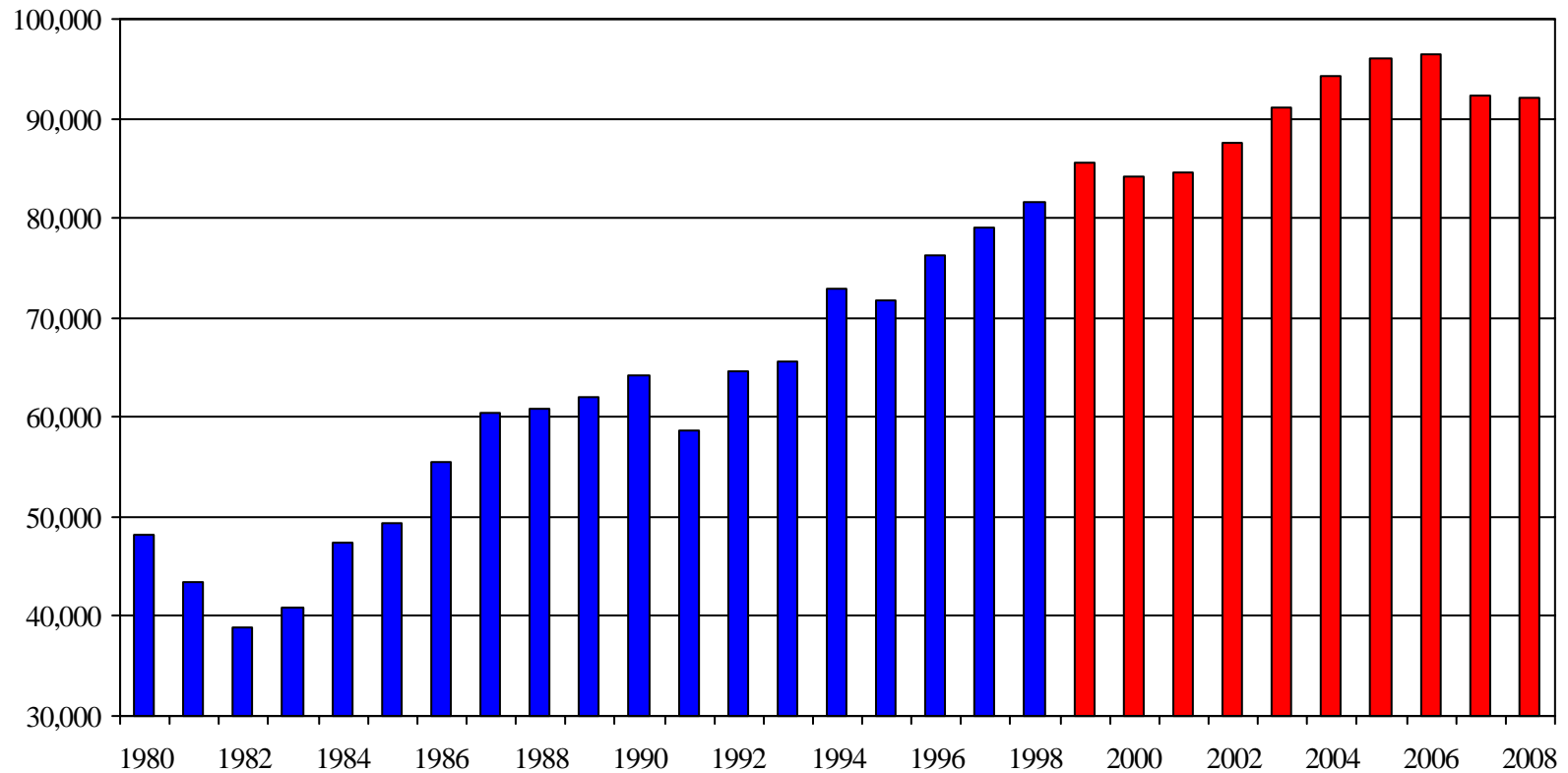
Ready Mix Concrete Consumption (000 CYD)

	<u>1989-1998</u>	<u>1999-2008</u>	<u>Avg. Annual % Change</u>
High	74,473	96,711	3.0%
Low	53,812	82,238	5.3%
Average	62,591	87,041	3.9%



Mississippi

Ready Mix Concrete Consumption (000 CYD)



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Mississippi

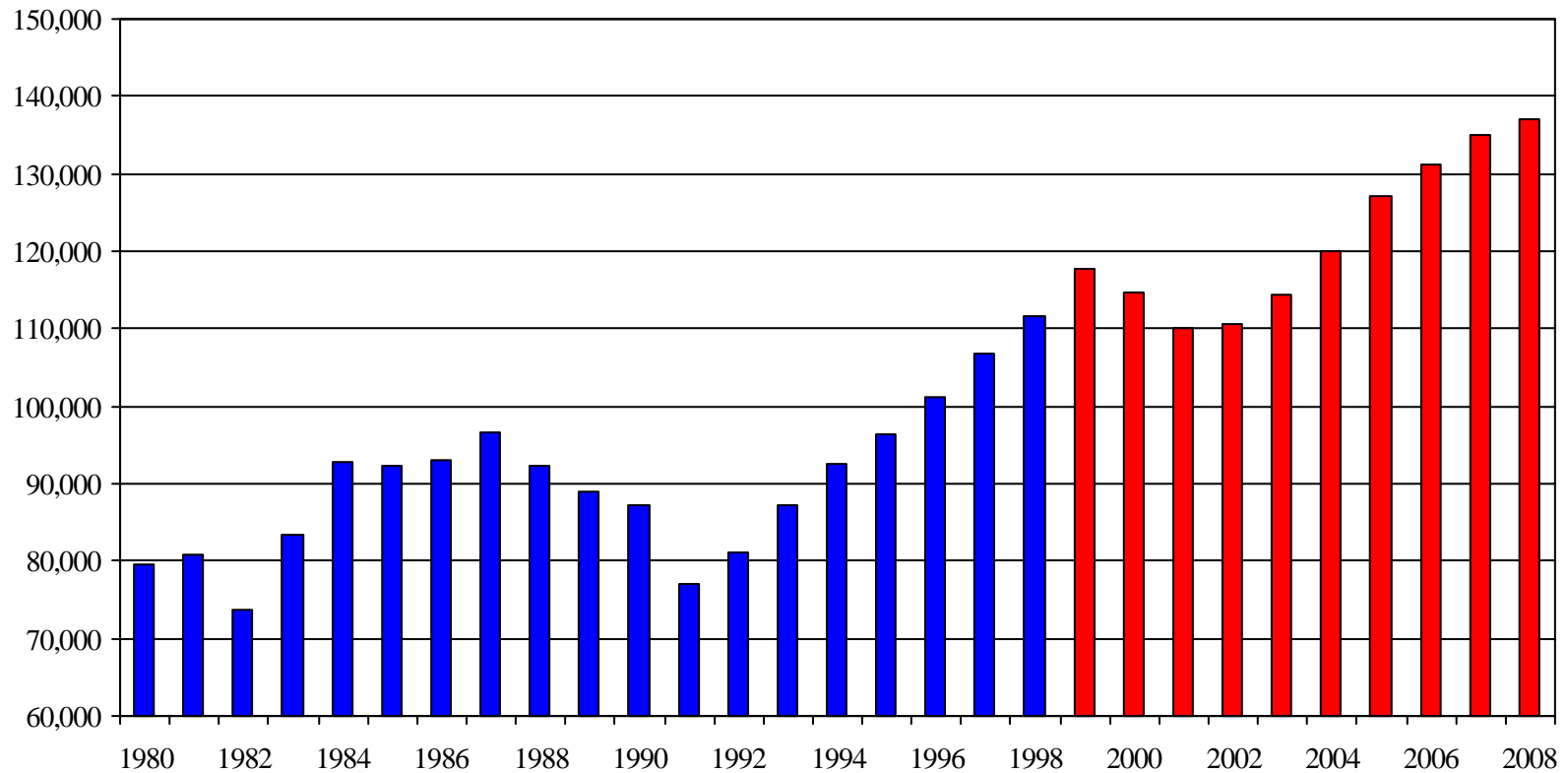
Ready Mix Concrete Consumption (000 CYD)

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Arkansas

Ready Mix Concrete Consumption (000 CYD)



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Arkansas

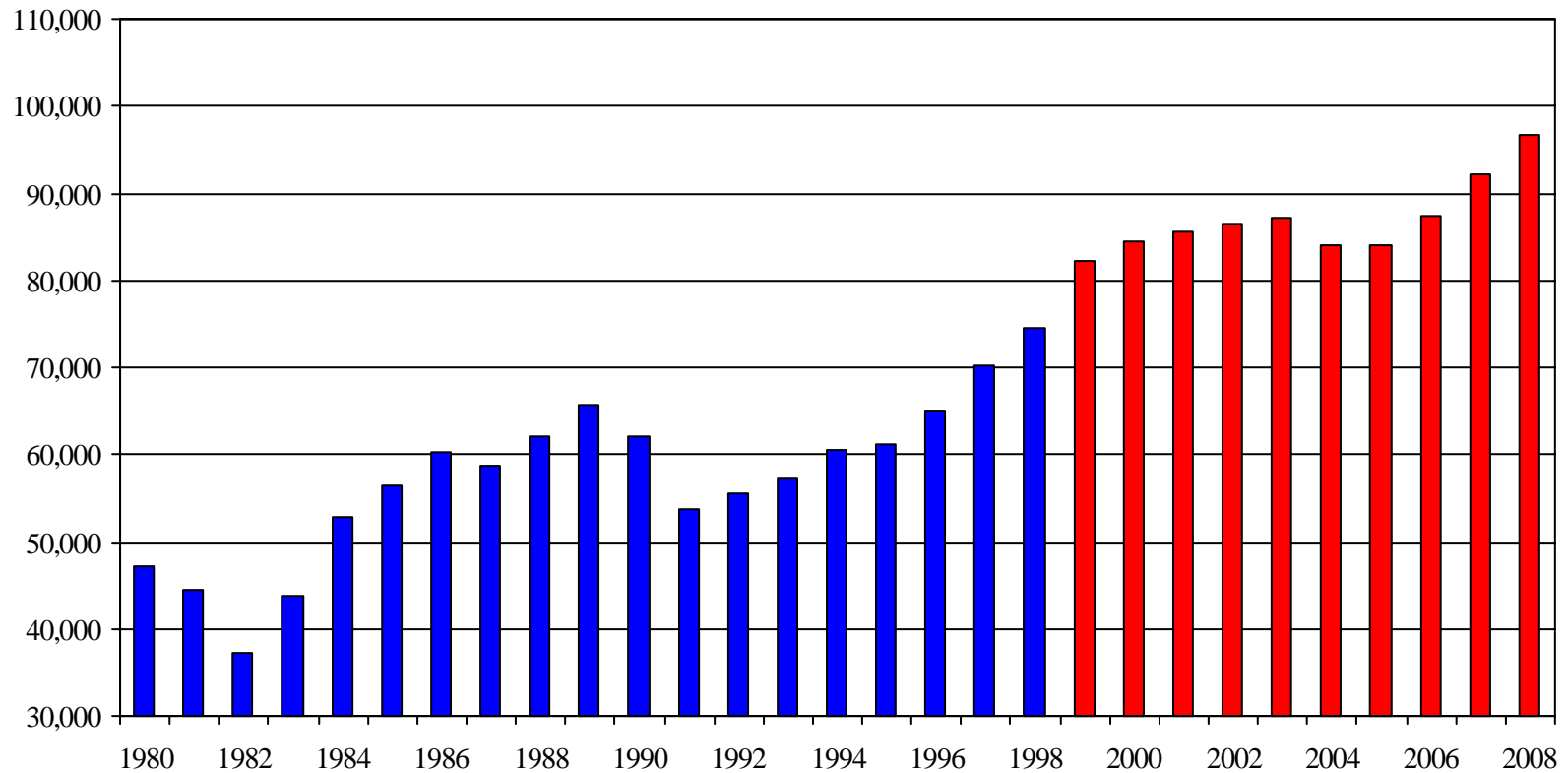
Ready Mix Concrete Consumption (000 CYD)

	<u>1989-1998</u>	<u>1999-2008</u>	<u>Avg. Annual % Change</u>
High	111,730	136,942	2.3%
Low	76,975	110,205	4.3%
Average	92,984	121,732	3.1%



Louisiana

Ready Mix Concrete Consumption (000 CYD)



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Louisiana

Ready Mix Concrete Consumption (000 CYD)

	<u>1989-1998</u>	<u>1999-2008</u>	<u>Avg. Annual % Change</u>
High	74,473	96,711	3.0%
Low	53,812	82,238	5.3%
Average	62,591	87,041	3.9%



IV. Current M&A Market Conditions



Current M&A Market Conditions

- During 1999, worldwide announced M&A volume soared to \$3.4 trillion, setting a new single year record.
- The exceptional deal flow came as a surprise to many observers because 1998 was itself a record year with more than \$2.5 trillion in global M&A activity.
- The tremendous increase in business combinations was driven primarily by deals in Europe and other regions as acquirors sought entrée into new global markets.

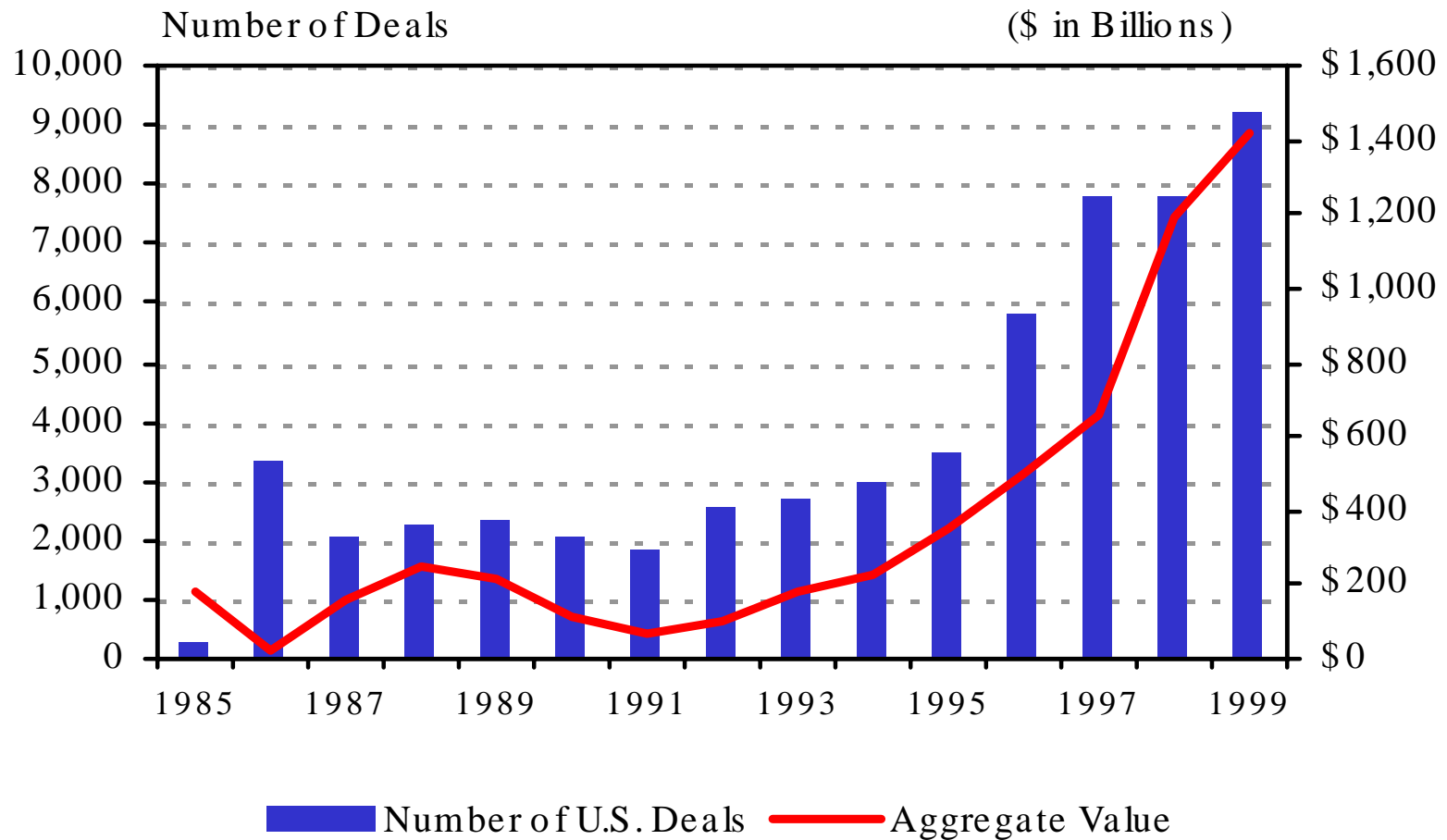


Current M&A Market Conditions

- While merger and acquisition advancement was more tempered in the United States, total deal value did increase from approximately \$1.2 trillion in 1998 to \$1.4 trillion in 1999.
- Moreover, the number of announced U.S. deals grew from 7,809 in 1998 to 9,218 in 1999, an 18 percent improvement.
- As in 1998, strategic combinations dominated the deal flow in 1999 with strategic buyers paying more than financial buyers.



Current M&A Market Conditions



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Current M&A Market Conditions

- Some causes for the current explosive M&A market include:
 - The U.S. economy is strong and other world economies are rebounding
 - Fears have dissipated – confidence among CEO's are back
 - Mergers and acquisitions are the fastest avenue for growth
 - Largeness is in – executives believe in economies of scale
 - Companies have the means for large deals through high market caps (strong currency and ability to raise cash)



V. Consolidation of the Construction Materials Industry

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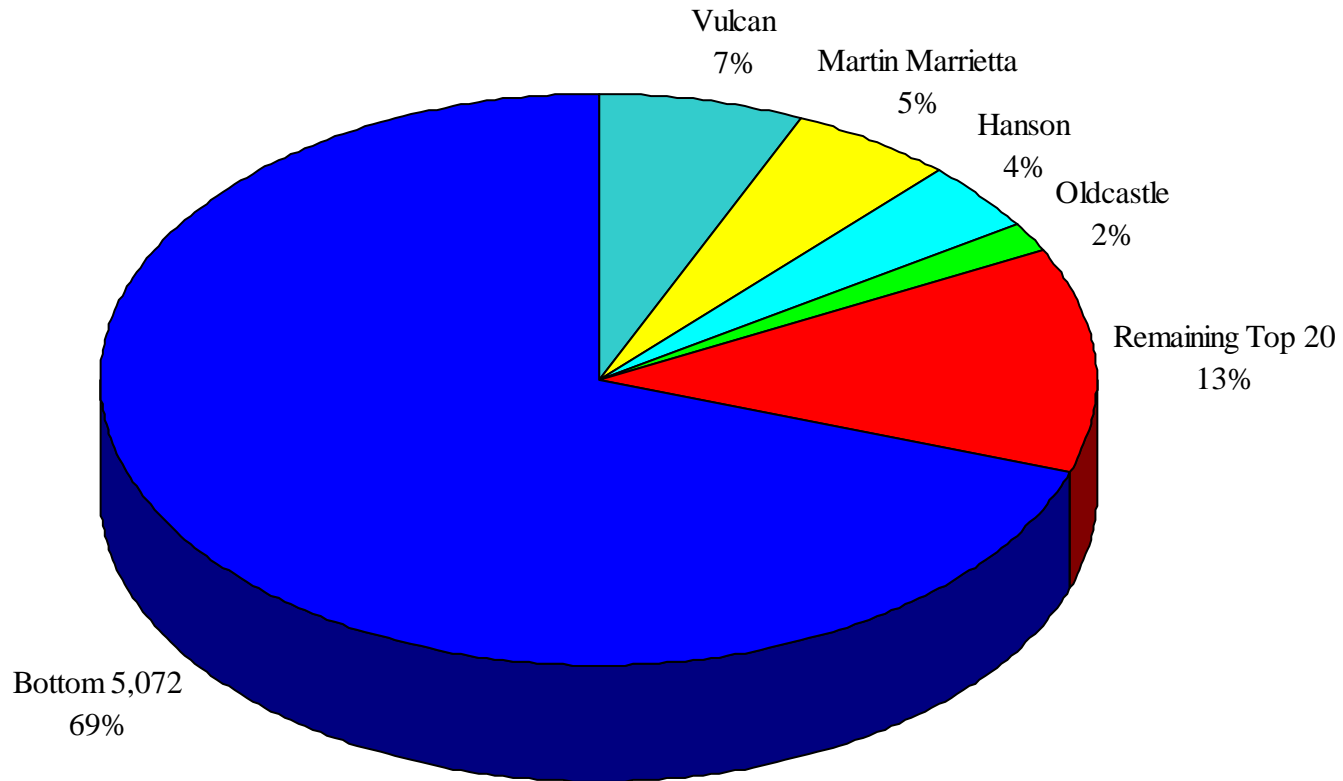


Consolidation Summary

- The top twenty U.S. aggregate producers own approximately 30 percent of the total domestic aggregate production.
- Furthermore, the top three producers, Vulcan, Martin Marietta and Hanson, control less than 16 percent of the total U.S. production. (Excluding Hanson's potential ownership of Pioneer's assets)
- Accordingly, over 5,072 companies control the remaining 70 percent of the U.S. aggregate production, providing substantial opportunity for further consolidation.



Share of U.S. Aggregate Production by Producer



Excludes Hanson's approx. \$2.5 billion tender offer for Pioneer International.

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Recent Transaction Summary

Vulcan Materials Co.

Major Acquisitions

<u>Target</u>	<u>Geographic Location</u>	<u>Purchase Price</u>
CalMat Co.	Southwest	\$890M
Columbia Quarry	Illinois	NA
C. W. Mathews Quarries	Atlanta, GA	NA
Burn Stone Company	Tennessee	NA
Maryland Stone Company	North Carolina	NA
R.C Fulfer Company	San Antonio, TX	NA
Garves W. Yates & Sons, Inc.	Abilene, TX	NA

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Recent Transaction Summary

Martin Marietta Materials, Inc.

Major Acquisitions

<u>Target</u>	<u>Geographic Location</u>	<u>Purchase Price</u>
Mid-State Construction & Materials	Arkansas	NA
Caldwell Stone Company, Inc.	North Carolina	NA
Geismer Underground, Inc.	Missouri	NA
Redland Stone Products Company	San Antonio, TX	\$272M
Meridian Aggregates Co.	Western U.S.	NA
Fogle Quarry Company, Inc.	Kansas	NA
Greenbrier Aggregate, Inc.	West Virginia	NA
Tri City Concrete	Little Rock, AR	NA
Acme Limestone Co., Inc.	West Virginia	NA
Marock, Inc.	Dallas, Fort Worth	\$41.0M
Menefee Crushed Stone	Nashville, TN	NA
L.J. Earnest, Inc.	Louisiana & Arkansas	\$39M

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Recent Transaction Summary

Hanson Building Materials America

Major Acquisitions

<u>Target</u>	<u>Geographic Location</u>	<u>Purchase Price</u>
Lopke Granite	Las Vegas, NV	\$11.2M
Nelson & Sloan	San Diego, CA	\$37.3M
Becker Minerals	N. Carolina & S. Carolina	\$122.5M
H.G. Fenton	San Diego, CA	\$83.0M
Gifford Hill (50%)	Concrete Pipe	\$25.0M
Condux Corp.	Concrete Pipe	\$77.1M
Tidewater Sand & Gravel	San Francisco, CA	\$44.0M
Jannock Limited	N. American Brick Unit	\$265.9M
Opelika Materials, LLC	Alabama	NA
Jones Sand Co. & Brewer Sand Co.	CA, NC	\$55.1M
DeWitt & Superior Products	NY, PA, OH	\$72.7M
Excludes Hanson's approx. \$2.5 billion tender offer for Pioneer International.		

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Recent Transaction Summary

U.S. Concrete, Inc. Major Acquisitions

<u>Target</u>	<u>Geographic Location</u>	<u>Purchase Price</u>
Central Concrete Supply Co., Inc.	San Jose, CA	NA*
Walker's Concrete, Inc.	Hayward, CA	NA*
Bay Cities Building Mat. Co., Inc.	San Francisco, CA	NA*
Opportunity Concrete Corporation	Washington, D.C.	NA*
Baer Concrete, Inc.	Roseland, New Jersey	NA*
Santa Rosa Cast Products Co.	Santa Rosa, CA	NA*
Carrier Concrete Co.	Knoxville, TN	NA
Ready Mix Concrete Co.	Knoxville, TN	NA
San Diego Precast Concrete, Inc.	Santee, CA	NA
Western Concrete Products, Inc.	Pleasanton, CA	NA
DYNA Corporation	D.C., MD, VI	NA
Olive Branch Ready Mix	TN, MS	NA

* IPO transactions totaling approx. \$109.8M

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Recent Transaction Summary

Other Significant Transactions

<u>Target</u>	<u>Buyer</u>	<u>Geographic Location</u>	<u>Purchase Price</u>
Morse Bros., Inc.	MDU Resources Group	Oregon	\$93.0M
Angell Bros., Inc.	MDU Resources Group	Oregon	NA
Hap Taylor & Sons	MDU Resources Group	Oregon	NA
Bend Agg. & Paving	MDU Resources Group	Oregon	NA
JTL Group, Inc.	MDU Resources Group	Montana, Wyoming	NA
Hotmix, Inc.	CAMAS inc.	Denver, CO	NA
Redland PLC	Lafarge Corp.	North America	\$690M
Medusa Corp.	Southdown Inc.	U.S.	+ \$1.0 B
P.W. Gillibrand Co.	CalMat Co.	L.A. Basin	N/A
Los Banos Gravel Co.	CalMat Co.	Central Calif.	N/A

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Recent Transaction Summary

Other Significant Transactions

<u>Target</u>	<u>Buyer</u>	<u>Geographic Location</u>	<u>Purchase Price</u>
Hammer Group	Aggregate Industries	Denver Co.	\$18.7M
Jobe Concrete	RMC Industries	Texas & New Mexico	NA
Harper Bros.	Florida Rock	Florida	\$87.0M
United Building Materials	National	L.A. Basin	NA
United Building Materials	Colas	L.A. Basin	NA
Commercial Stone Co.	U.S. Silica	Pittsburgh	+\$130M
Wilder Construction Co.	Granite Construction Inc.	WA, OR, AK	\$13.1M
Kiewit Mining Group	Solano Concrete	Solano, CA	NA

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Greystone's Outlook for Continued M&A Activity

- Given the fact that only 30 percent of U.S. aggregate production is in the hands of the top twenty aggregate producers, significant consolidation opportunities exist.
- However, current transaction activity cannot sustain forever.
- Current transaction activity is the result of:
 1. High Industry Earnings
 2. Dividends vs. Expansion
 3. Cash – “A Non-Performing Asset”
 4. Foreign Ownership
 5. Strong U.S. Markets



VI. Today's Valuation Methodology

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Greystone Methodology

Today's valuation methodology incorporates three separate disciplines:

1. Market Assessment
2. Operational Review
3. Financial Analysis



Market Assessment

- A target's entire relevant market is carefully scrutinized to quantify its existing position as it relates to its competition.
- Additionally, relevant factors that influenced historical consumption of construction materials are examined and thereafter, an economic model is architected which is assumed to track the salient factors that influence future consumption.
- Market share, competitive reserves and cost efficiencies are also reviewed.
- At the conclusion of the market assessment, a consumption forecast is generated and unit prices are estimated, cast over a period of ten years. The forecast is then included in the financial review described below.



Operational Review

- Typically, an on-site inspection is conducted for each of the target's operating facilities and are scrutinized from an analytical perspective, enabling the investor to review costs, by location, and forecast potential efficiencies inclusive of identifying all non-continuing expenses.
- As a result of the operational assessment, efficiencies and inefficiencies can be identified, as well as mandatory and discretionary capital expenditures. This part of the review allows an investor to comprehend the operational capabilities of the target in order to more accurately forecast its financial performance.



Financial Analysis

- The financial review includes, among other things, an extensive review of the target's historical financial records, inclusive of volume, price and cost information.
- As a result of consolidating each of the above mentioned disciplines, an integrated financial model can be generated that can be utilized to forecast the operating results of the target.
- This model is used to quantify the fair market value of the target.



Valuation Methodology

- Today, the construction materials industry primarily utilizes the discounted cashflow methodology (“DCF”) which is based upon the assumption that all future cash flow is totally paid out to the selling shareholders in the form of cash dividends.
- Financial results are expressed in constant dollars and the ultimate enterprise value is quantified as net present values utilizing various discount rates.
- The residual value, or value of the business at the end of the ten year projection period, is calculated to assume that the cashflow continues over the economic life of the assets and/or mineral reserves.
- In order to calculate the residual value, the tenth year’s cashflow is typically capitalized at a specific discount rate and thereafter, discounted to a present value.



Net Cash Flow Definition

- Net Cash Flow is defined as net after-tax income, plus non-cash expenses (i.e. depreciation), plus/minus changes in working capital, minus capital expenditures and principal debt service:

Net Cash Flow Definition	
	Pre-Tax Earnings
Less:	Corporate Income Taxes
Equals:	Net Income
Plus:	Non-Cash Expenses
Plus/Minus:	Changes in Working Capital
Minus:	Capital Expenditures
	Debt Service (if any)
Equals:	Net Cash Flow *
<i>* The amount available to dividend to shareholders.</i>	



Discount Rate Definition

A Discount Rate is used to convert amounts earned in the future (Future Values) to Present Values. Discount rates are determined based on an investor's cost of capital and its rate of return necessary to reward investors for assuming the risk of generating future cash flow. Discount rates are generally a function of the following:

- Length of the Investment
- Risk Associated with the Investment
- General Economic Conditions
- Cost of Capital



Present Value Definition

Present Value is based upon the principle that a dollar today is worth more than a dollar tomorrow.

$$\text{Present Value} = \frac{\text{Future Value}}{(1 + \text{Discount Rate})^{\text{Years}}}$$



Present Value Example

- Assume that a target's forecast Net Cash Flow for the year 2001 was precisely \$2,800,000.
- An investor would be willing to pay the Present Value of \$2,117,202 today (12/31/99) in order to receive \$2,800,000 in 2001, as noted below:

If an investor's cost of capital is 15.0 percent, and if he were to receive \$2,800,000 in 2001 (two years), he would be willing to pay no more than \$2,117,202 today (Present Value).

$$\text{\$2,117,202 (present Value)} = \frac{\text{\$2,800,000 (Future Value)}}{(1 + 0.15 \text{ (Discount Rate)})^2 \text{ (Years)}}$$



Net Present Value of Forecast Net Cash Flow

- The Discounted Cash Flow methodology applies the Present Value concept over a stream of future cash flows, identical to the example previously described.
- Assume that a target's forecast Net Cash Flow was as follows:

	Year	Future Value	Present Value at 15.0 Percent
2000	1	\$2,600,000	\$2,260,870
2001	2	2,800,000	2,117,202
2002	3	3,200,000	2,104,052
2002	4	3,500,000	2,001,136
2004	5	3,800,000	1,889,272
2005	6	3,700,000	1,599,612
2006	7	3,500,000	1,315,780
2007	8	3,300,000	1,078,776
2008	9	3,600,000	1,023,345
2009	10	4,400,000	1,087,613
Total		\$34,400,000	\$16,477,657

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Net Present Value of Forecast Net Cash Flow

(Continued)

- Consequently, the Net Present Value of the Forecast Net Cash Flow stream is \$16,477,657 when applying a discount rate of 15.0 percent.
- That means that an investor would be willing to pay \$16,477,657 today, in order to receive the anticipated Cash Flow Stream in the future.
- When an investor evaluates the risk associated with the investment, together with the general economic conditions, the Discount Rate will fluctuate accordingly.
- An investment subject to greater risk will result in the application of a higher discount rate, hence lower Net Present Value.



Residual Value - Definition

- The Residual Value of an enterprise is calculated to assume that the Cash Flow continues perpetually.
- In order to calculate the Residual Value, the tenth year's Net Cash Flow is capitalized at a specific Discount Rate and thereafter, discounted to a Present Value.



Residual Value - Example

- Assuming a target's Net Cash Flow in year 10 was \$4,400,000 the Residual Value would be calculated as follows:

$$\frac{\$4,400,000}{15.0\%} = \$29,333,333$$

- Since the investor would not recognize the Residual Value for ten years, it must be converted to a Present Value as follows:

$$\text{Present Value of } \$29,333,333 \text{ at } 15.0\% \text{ in } 10 \text{ Years} = \$7,250,751$$



Total Net Present Value

- Based on the aforementioned hypothetical assumptions, the Total Net Present Value of the Forecast Net Cash Flow of the target including the Residual Value, and applying a 15.0 percent discount rate, would be calculated as follows:

Total Net Present Value	
Net Present Value of Forecast Net Cash Flow	\$16,477,657
Present Value of Residual Value	\$7,250,751
Total Net Present Value	<u>\$23,728,408</u>