

Analysis of Colorado and U.S. Gross Domestic Product by Sector 1997 Through 2012

Colorado-based Business and Economic Research

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Overview of GDP Analysis 1997 to 2012 and 2007 to 2012

This analysis of U.S. and Colorado GDP includes the following:

- Purpose
- Gross Domestic Product (Nominal) – U.S. and Colorado
- Annualized Rate of Growth – Real GDP by sector
- Historical Real GDP – U.S. and Colorado
 - Historical Real GDP – Total, Private, and Government
 - Historical Real GDP – U.S. sectors with negative rates of change (Mining, Other services, Construction).
 - Historical Real GDP – Advanced technology
 - Historical Real GDP – Leisure and hospitality
 - Historical Real GDP – Trade
 - Historical Real GDP – Financial activities
 - Historical Real GDP – Other sectors
- Summary of Analysis
- Conclusions

If additional information is needed about the definition of the sectors, refer to the U.S. Census website, <http://www.census.gov/eos/www/naics/>.

Note: U.S. GDP (sum of the states) is slightly different from U.S. GDP. See the BEA website for clarification (www.bea.gov).



Purpose

The purpose of this analysis is to show the importance of looking at output as a metric for evaluating the strength, growth, or performance of an industry or the economy.

A common way to evaluate the performance of an industry or the economy is to measure changes in employment. Frequently job growth and output have a direct relationship. In other words, an increase in output is accompanied by an increase in jobs.

It is also possible for job growth and output to have an inverse relationship. For example, output may grow, while jobs decrease. Over the past decade increased manufacturing productivity has resulted from technological changes. As a result, output has increased while employment has declined.

This analysis focuses on the sector output contributions for the U.S. and Colorado economies.

Note: For this analysis, the U.S. GDP is the sum of the GDP of all states. There is a slight difference between this value and the “headline” value calculated by BEA on a quarterly basis for the U.S.

- Gross Domestic Product (Nominal)
- United States and Colorado
-

2012 Gross Domestic Product (Nominal) United States and Colorado

The next two slides show 2012 Nominal GDP by NAICS sector for the United States and Colorado. The top industries for both are similar, but they are ranked in different order.

United States Gross Domestic Product 2012 (Sum of States)

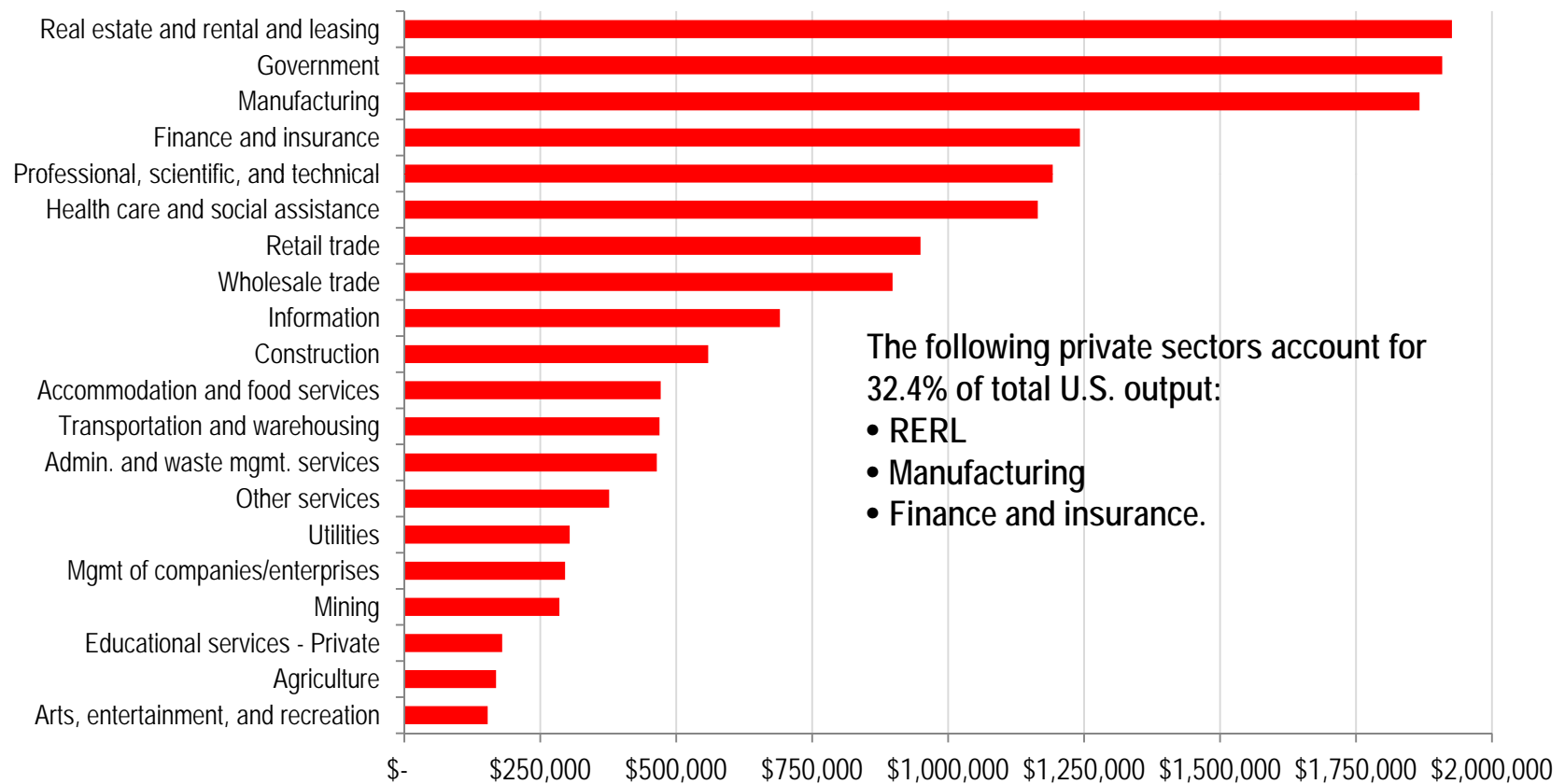
- \$15.566 trillion.
- Private sector is 87.7% of total GDP; Government is 12.3%.
- The top 3 private sectors were:
 - Real estate and rental and leasing
 - Manufacturing
 - Finance and insurance.In 2012, they accounted for 32.4% of total GDP.
- The private sectors ranked 4th through 6th were:
 - Professional, scientific, and technical
 - Health care and social assistance
 - Retail trade.In 2012 they were 21.3% of total GDP.

Colorado Gross Domestic Product 2012

- \$264.308 billion.
- Private sector is 87.3% of total GDP; Government is 12.7%.
- The top 3 private sectors were:
 - Real estate and rental and leasing
 - Professional, scientific, and technical
 - Information.In 2012 they were 30.5% of total GDP.
- The private sectors ranked 4th through 6th were:
 - Manufacturing
 - Finance and insurance
 - Health care and social assistance.In 2012 they were 19.7% of total GDP.

- 2012 Gross Domestic Product by Sector
- United States (Sum of All States)

Gross Domestic Product – Millions of Current Dollars



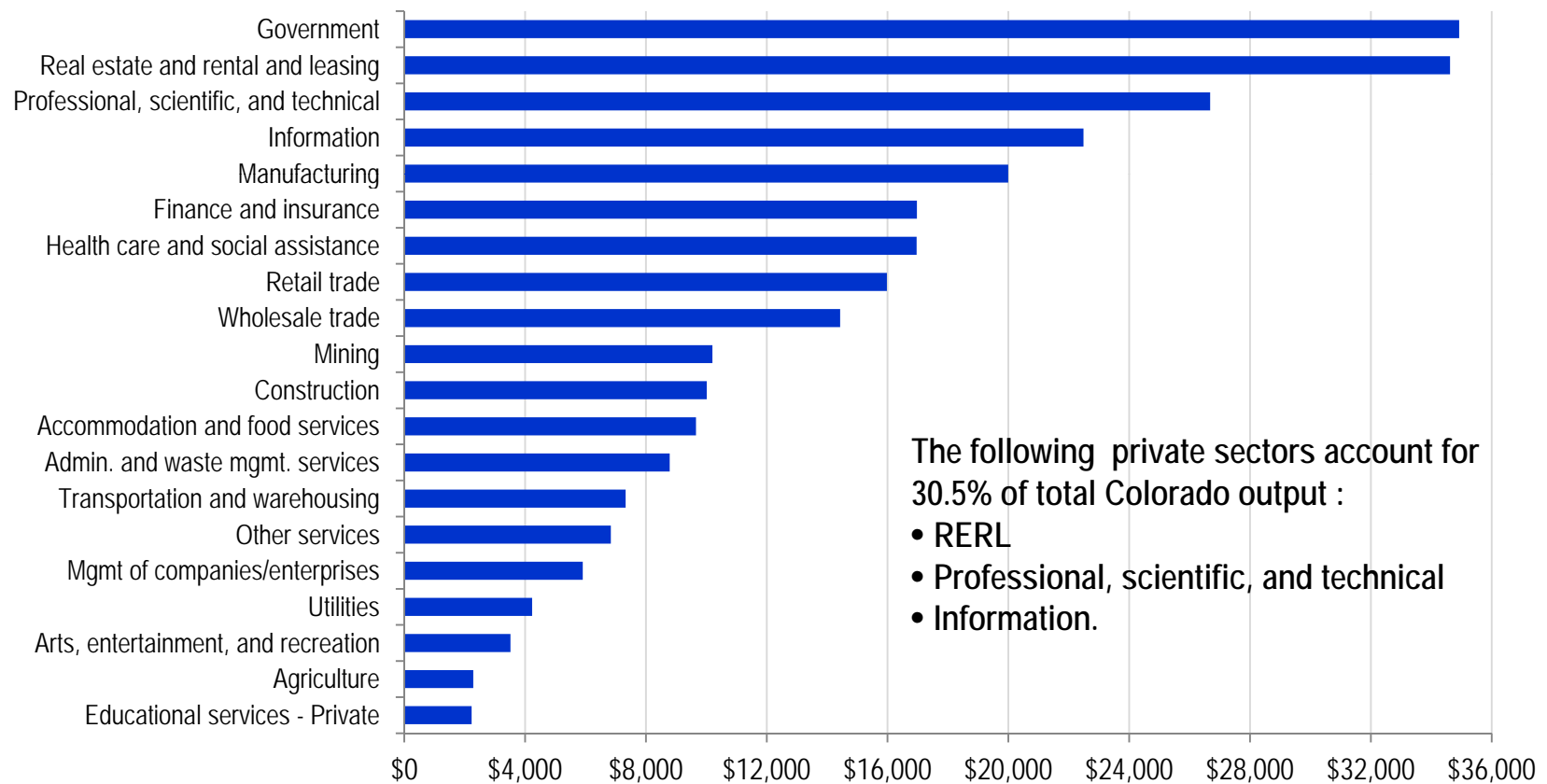
Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
<http://cber.co>

2012 Gross Domestic Product by Sector

Colorado



Gross Domestic Product – Millions of Current Dollars



Source: Bureau of Economic Analysis.
Colorado-based Business and Economic Research
<http://cber.co>

2012 Colorado GDP vs. Employment

Top Ten Sectors – Output vs. Employment

There are distinct differences between the top 10 Colorado sectors for output and employment. The Government sector is at the top of both lists. The sectors in green are top industries for their output and total employment.

Colorado Gross Domestic Product 2012

1. Government
2. Real estate and rental and leasing
3. Professional, scientific, and technical
4. Information
5. Manufacturing
6. Finance and insurance
7. Health care and social assistance
8. Retail trade
9. Wholesale trade
10. Mining.

The top 10 sectors account for 77.7% of total output.

Colorado Employment 2012

1. Government
2. Health care and social assistance
3. Accommodations and food services
4. Retail trade
5. Professional, scientific, and technical
6. Administrative and waste management
7. Manufacturing
8. Construction
9. Finance and insurance
10. Other services.

The top 10 sectors account for 81.9% of total employment.

GDP – Sector as a Percent of Total United States vs. Colorado

The following two slides compare percentages by NAICS sector for the U.S. and Colorado. The two charts contain the same data, but the first is sorted by the U.S. and the second is sorted by Colorado. The purpose is to easily show sectors where the percentage is different. There are distinct differences between the composition of the U.S. and Colorado economies.

United States Gross Domestic Product 2012 (Sum of States)

The U.S. has a higher percentage of output than Colorado in the following sectors:

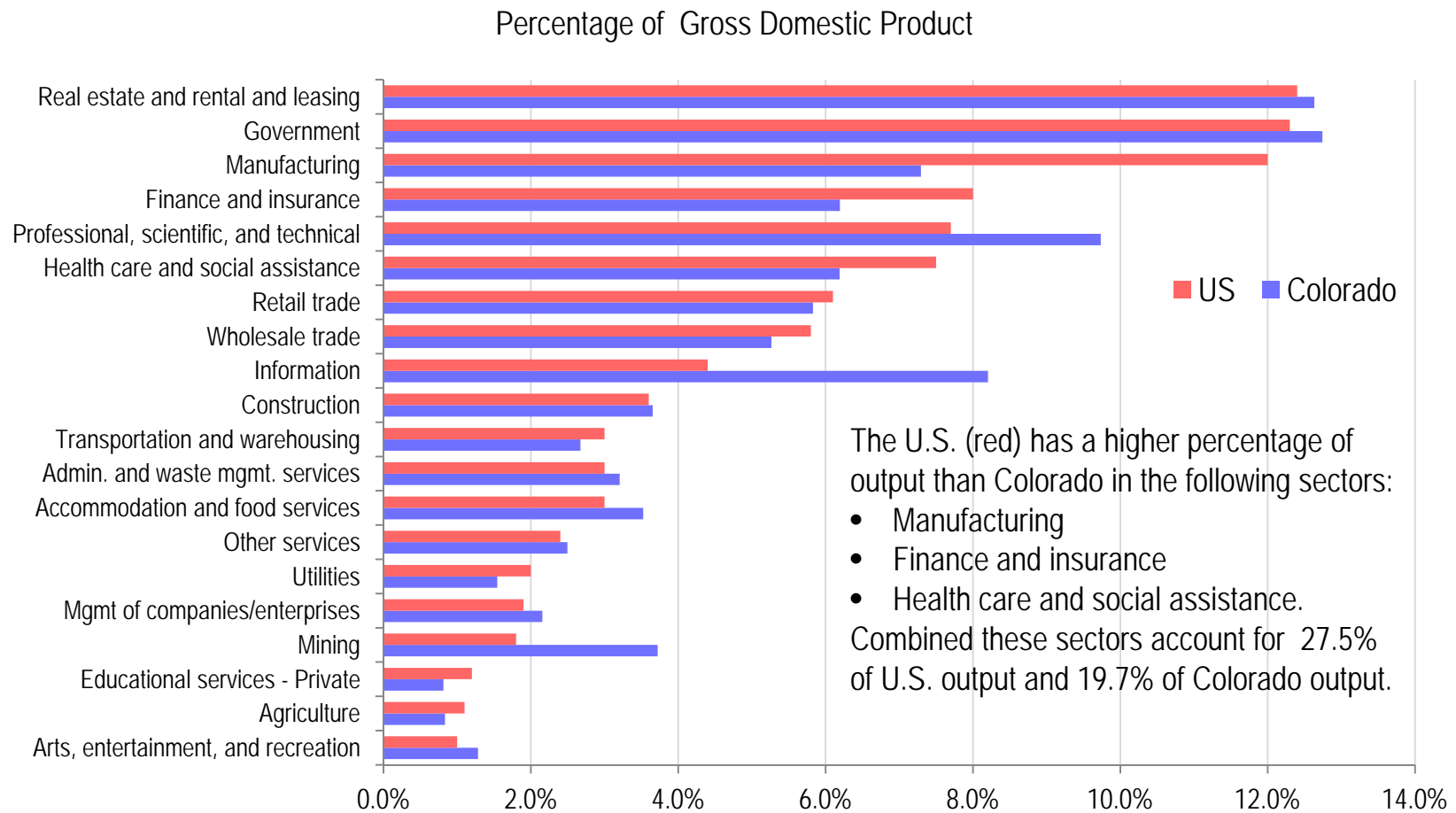
- Manufacturing
- Finance and insurance
- Health care and social assistance.

Colorado Gross Domestic Product 2012

Colorado has a noticeably higher percentage of output than the U.S. in the following sectors:

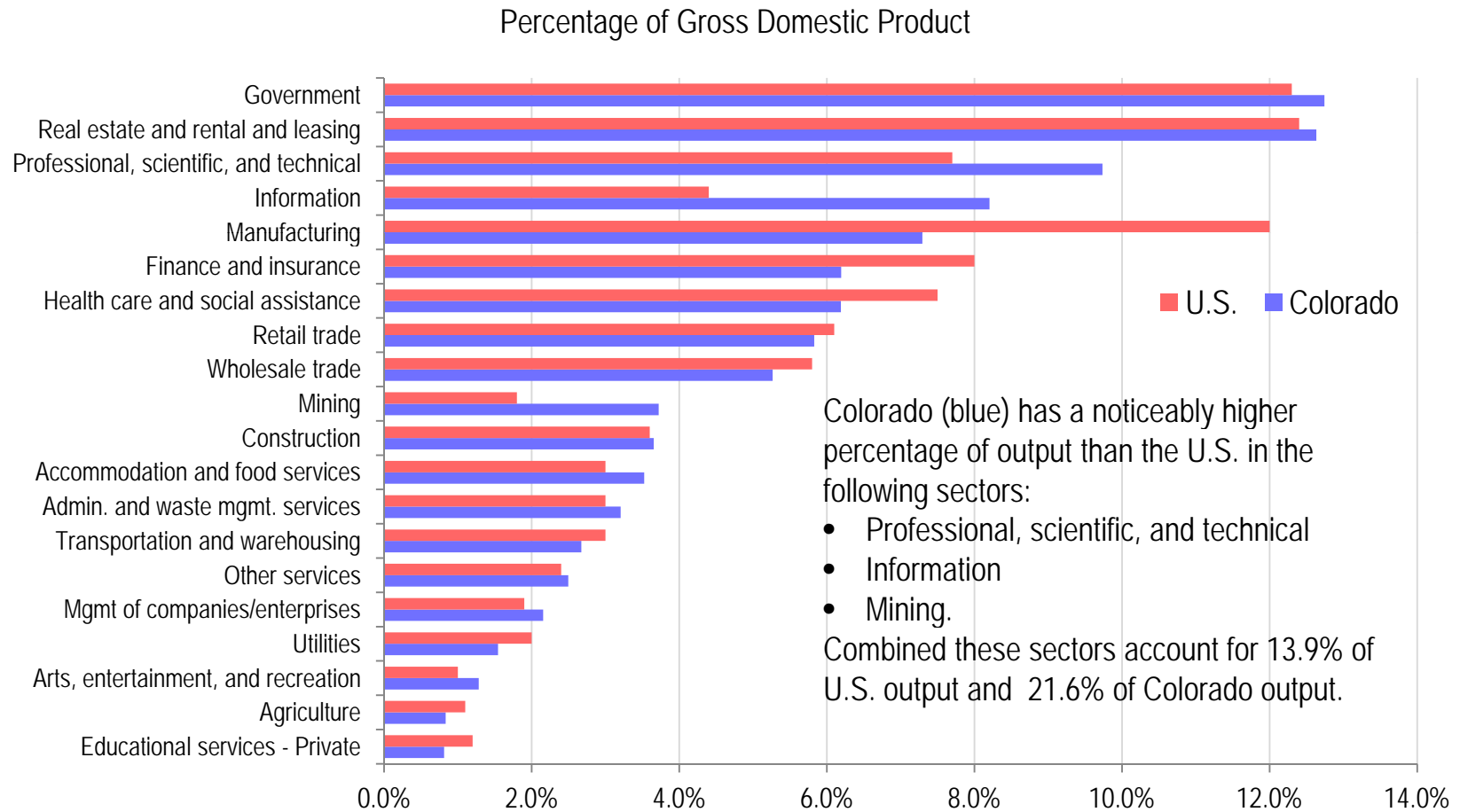
- Professional, scientific, and technical
- Information
- Mining.

- 2012 Gross Domestic Product
- United States and Colorado – Sorted by U.S. (Red)
- Sector Percentage of Total



Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
<http://cber.co>

- 2012 Gross Domestic Product
- United States and Colorado – Sorted by Colorado (Blue)
- Sector Percentage of Total



Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
<http://cber.co>



Questions

The following questions relate to the previous slides.

There are distinct differences in the mix of sector output between Colorado and the U.S.

1. Colorado has a lower percentage of output in Manufacturing, Finance and insurance, and Health care and social assistance. Does this benefit or hurt the state to have a lower percentage in these areas? As Colorado grows, will the percentages in these areas come in line with the U.S.?
2. Colorado has a higher percentage of output than the U.S. in the following sectors: Professional, scientific, and technical; Information, and Mining. How can Colorado maintain its strength in these areas?

- Annualized Rate of Growth
- Real GDP by Sectors
-

Annualized Rate of Growth by Sector United States vs. Colorado 1997 to 2012

The following 4 slides show the annualized rate of growth by sector for 2 time periods, 1997 to 2012 and 2009 to 2012. These slides illustrate differences in the fast growth sectors for the U.S. and Colorado economy for both time periods.

United States (Sum of States) 1997 to 2012

The sectors with the fastest rate of growth were:

- Information
- Finance and insurance
- Wholesale trade
- Professional, scientific, and technical
- Administrative and waste management.

In 2012 these sectors represented 28.9% of total output.

2009 to 2012

The sectors with the fastest rate of growth were:

- Manufacturing
- Accommodations and food services
- Arts, entertainment, and recreation
- Information
- Administrative and waste management.

In 2012, these sectors represented 23.4% of total output.

Colorado 1997 to 2012

The sectors with the fastest rate of growth were:

- Information
- Management of corporations and enterprises
- Manufacturing
- Professional, scientific, and technical
- Wholesale trade

In 2012, these sectors represented 32.7% of total output.

2009 to 2012

The sectors with the fastest rate of growth were:

- Utilities
- Arts, entertainment, and recreation
- Accommodations and food services
- Manufacturing
- Administrative and waste management.

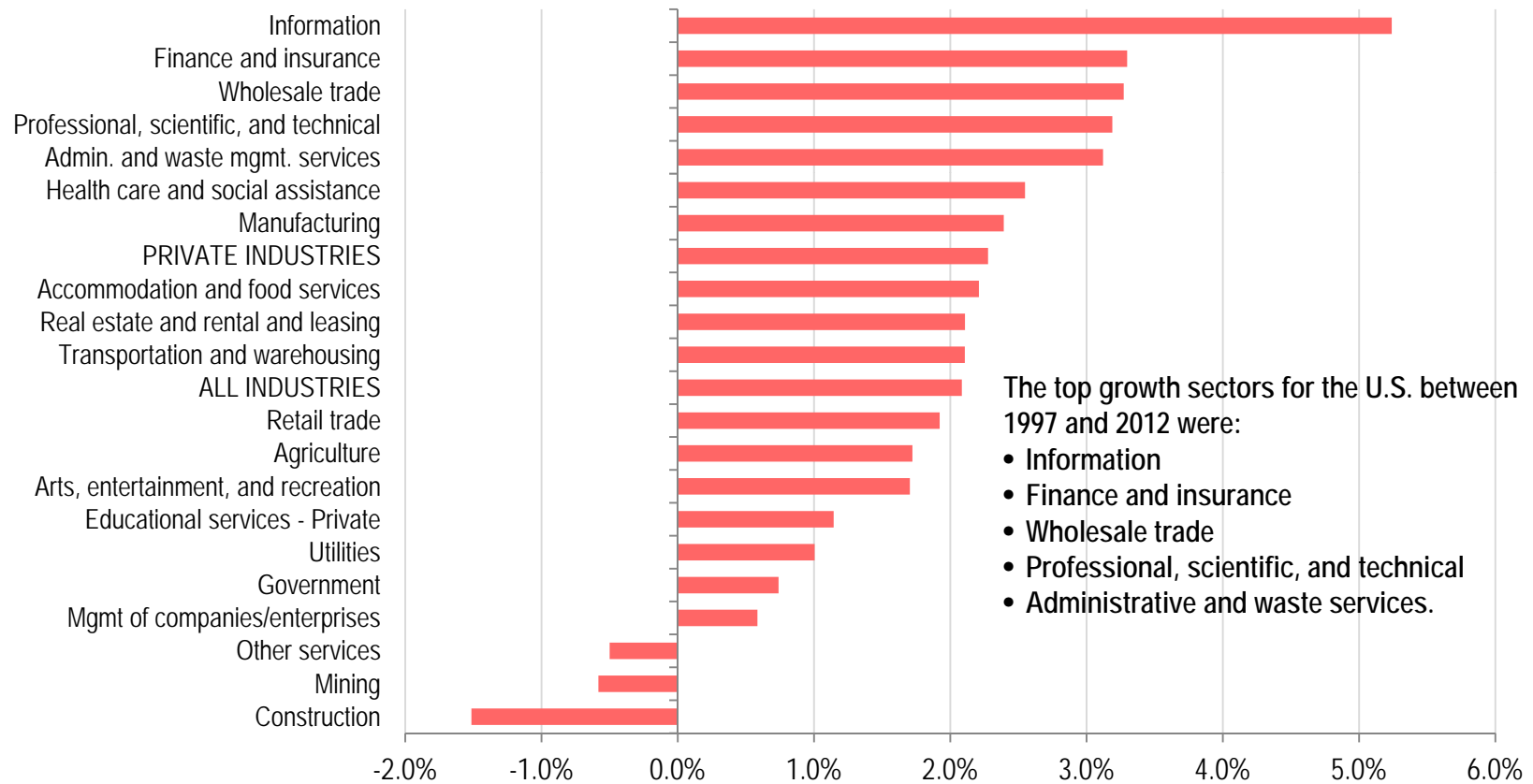
In 2012, these sectors represented 16.8% of total output.

1997 to 2012 Real GDP U.S. (Sum of States)

Annualized Rate of Growth



Gross Domestic Product – Annualized Rate of Growth



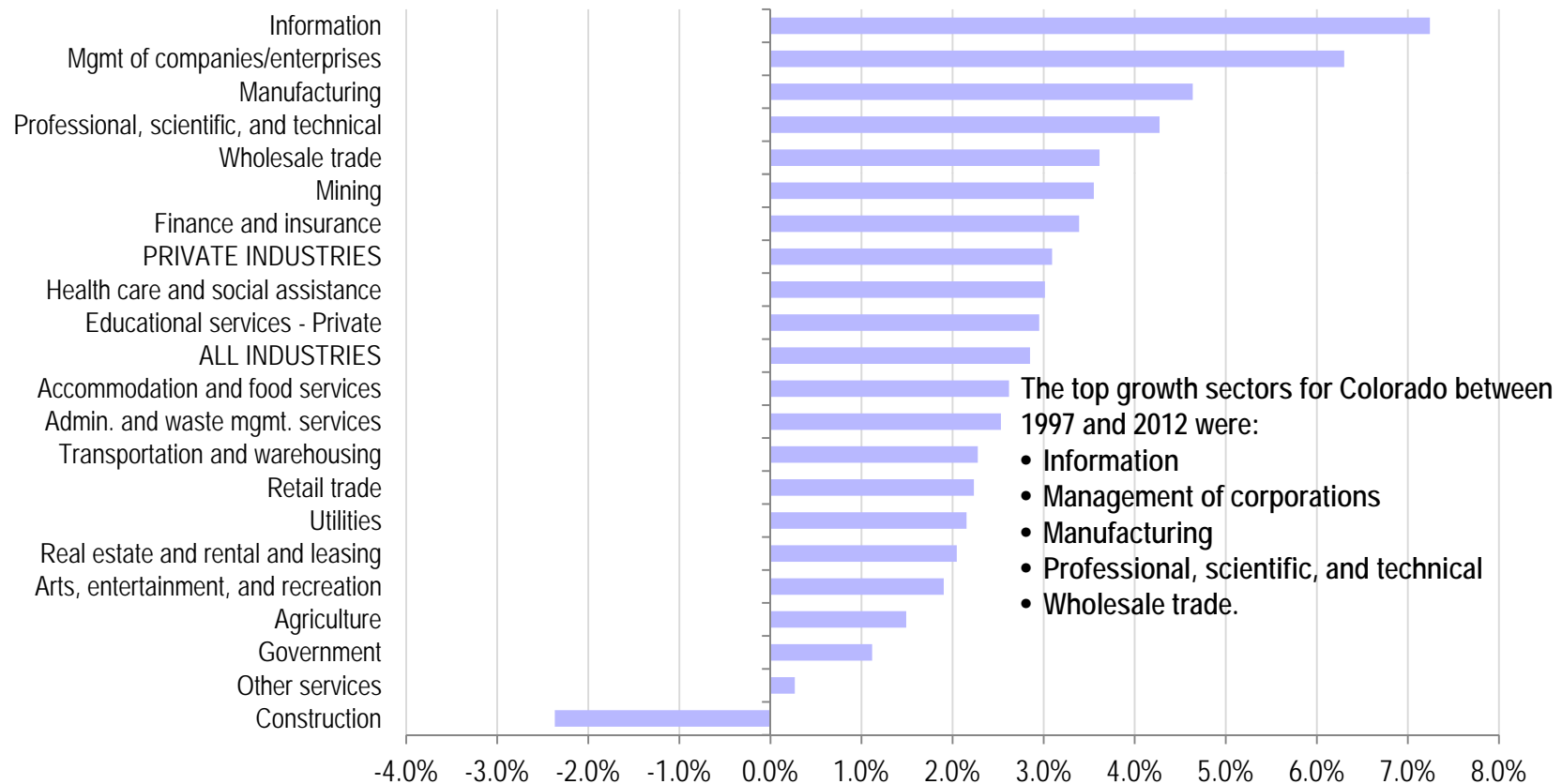
Source: Bureau of Economic Analysis.
Colorado-based Business and Economic Research
<http://cber.co>

1997 to 2012 Real GDP Colorado

Annualized Rate of Growth



Gross Domestic Product – Annualized Rate of Growth



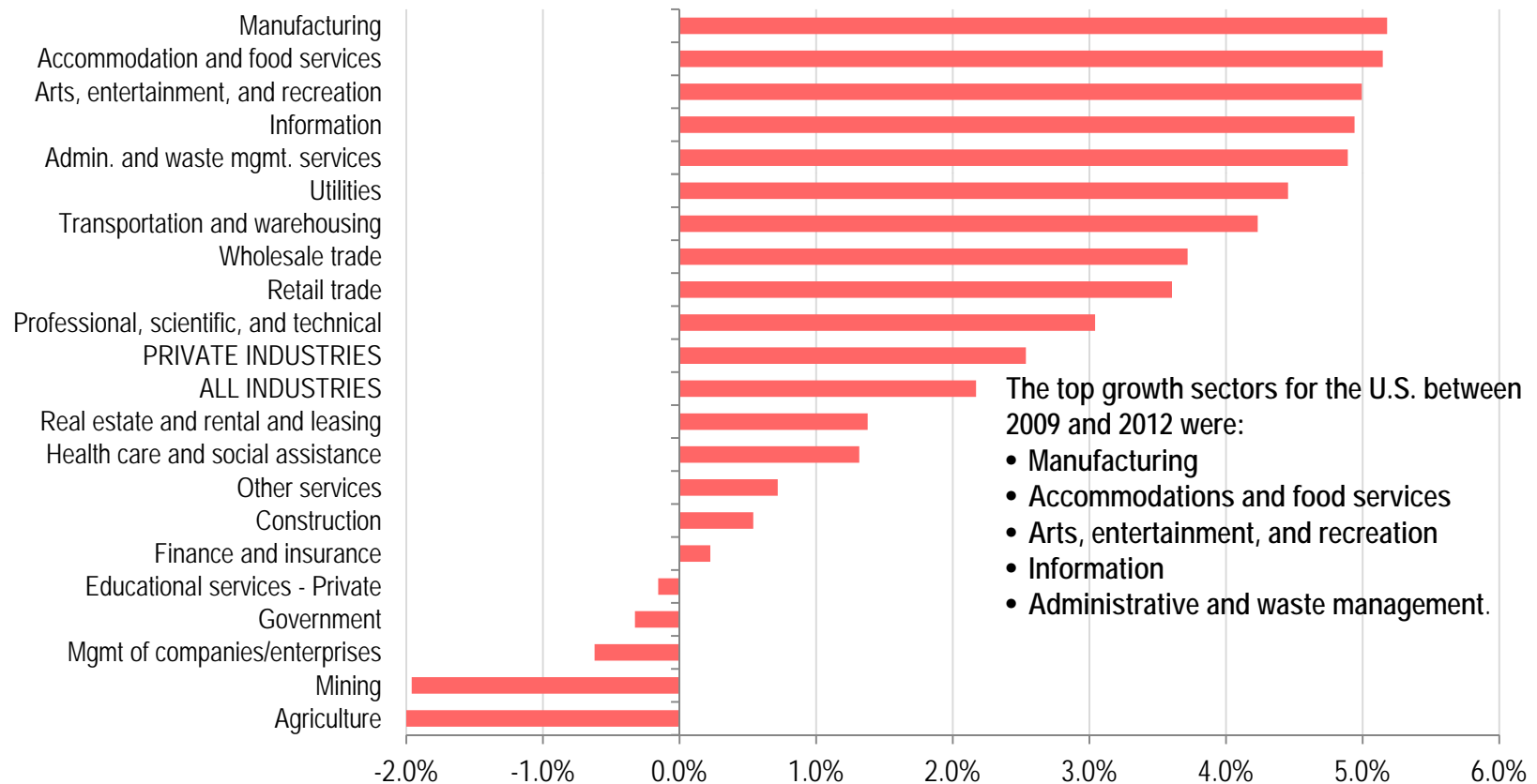
Source: Bureau of Economic Analysis.
Colorado-based Business and Economic Research
<http://cber.co>

2009 to 2012 Real GDP U.S. (Sum of States)

Annualized Rate of Growth



Gross Domestic Product – Annualized Rate of Growth



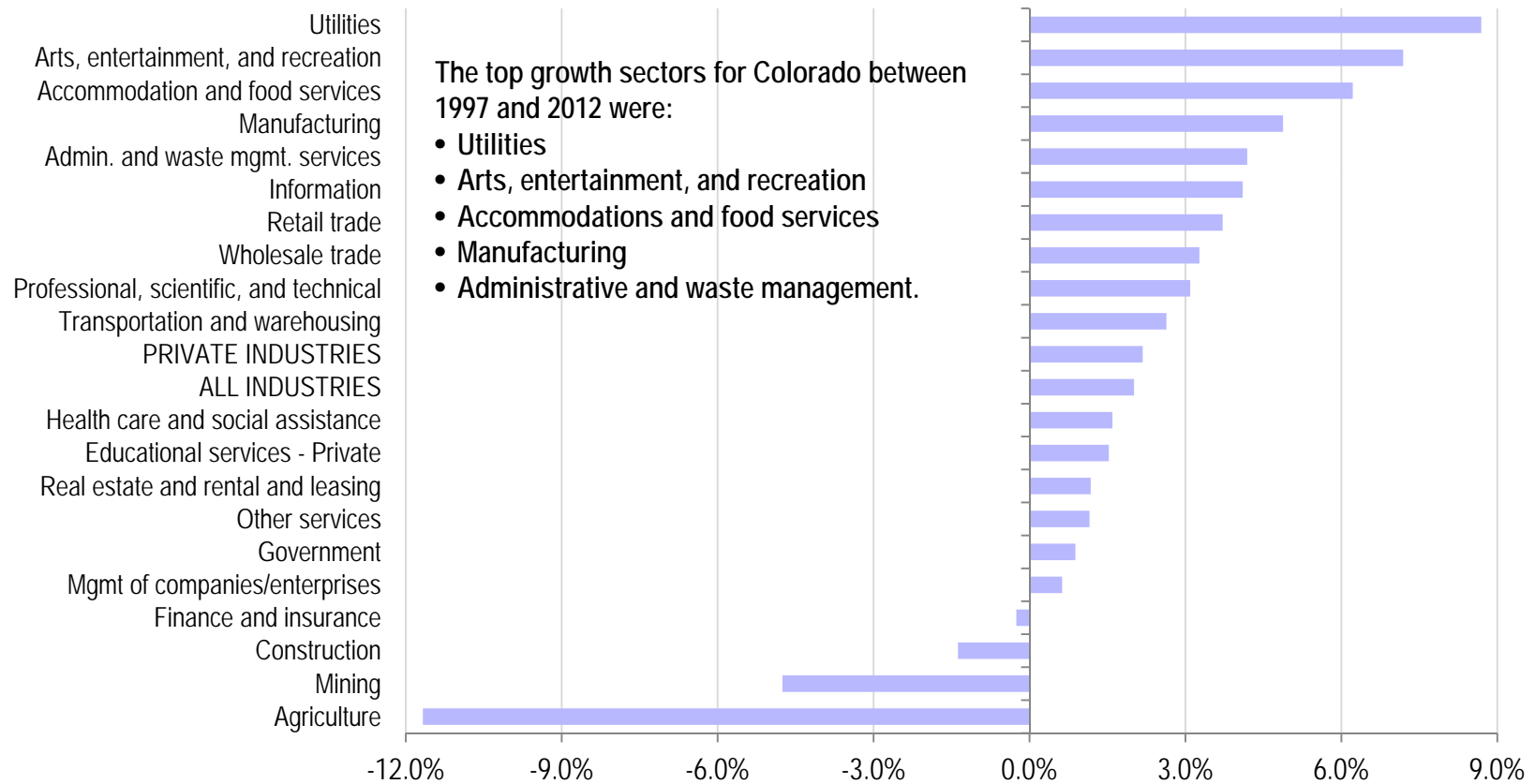
Source: Bureau of Economic Analysis.
Colorado-based Business and Economic Research
<http://cber.co>

2009 to 2012 Real GDP Colorado

Annualized Rate of Growth



Gross Domestic Product – Annualized Rate of Growth



Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
<http://cber.co>



Questions

1. Nationally, the sectors that had the fastest rate of growth in output for 1997 to 2012 are different than the sectors with the fastest rate of output growth for 2009 to 2012. Components of Advanced Technology (MCE, PST, Information, Manufacturing) posted strong growth during both time periods. The Tourism sector (AER and AFS) was a leader in the growth for 2009 to 2012, but not the earlier period. Will these trends continue
2. Between 2009 and 2012 Tourism has grown at a faster rate than many advanced technology sectors. Will that continue to be the case in the near term?
3. In Colorado, several of the smaller sectors experienced strong growth rates. Will these sectors continue to enjoy strong growth?
4. Recently there has been a spike in the growth rate for Utilities. Will output for the sector continue to show stronger than normal growth?

- Historical Real GDP
- United States and Colorado
-

● Historical Real Gross Domestic Product ● Colorado vs. U.S. (Sum of States) ●

The previous section showed the annualized rate of growth for the sectors. The following slides show the historical change in Real GDP for Colorado and the U.S. from 1997 to 2012. It is important to understand the annual changes in data to more clearly understand the annualized rate of change.

This section has 7 subsections grouped as follows:

- Comparison between total, private, and government
- U.S. sectors with a negative rate of change
- Advanced technology
- Leisure and hospitality
- Trade
- Financial activities
- Other sectors.

Note: The analysis for this section is based on Real Gross Domestic Product (chained 2005 dollars).



Historical Real GDP United States and Colorado Total, Private, and Government Sectors

Historical Real Gross Domestic Product Colorado vs. U.S. (Sum of States)

The following three slides show the historical annualized change in Real GDP for Colorado and the U.S. from 1997 to 2012.

1997 to 2012

Colorado's Real GDP grew at a faster annualized rate than the U.S. Real GDP from 1997 to 2012.

Colorado's Private Sector Real GDP grew at a faster annualized rate than the U.S. Private Sector Real GDP from 1997 to 2012.

Colorado's Government Real GDP grew at a slightly faster annualized rate than the U.S. Government Real GDP from 1997 to 2012.

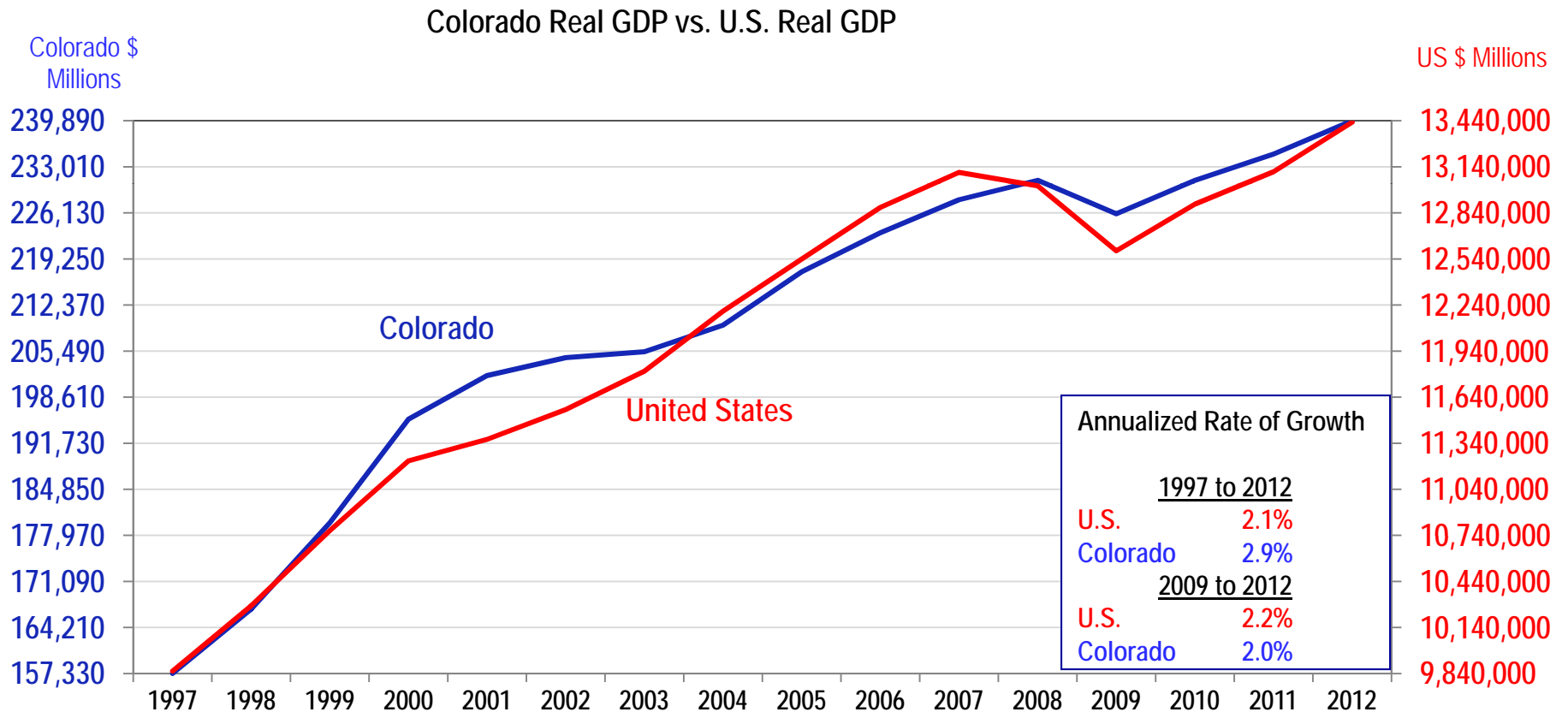
2009 to 2012

Colorado's Real GDP grew at a slightly slower annualized rate than the U.S. Real GDP from 2009 to 2012.

Colorado's Private Sector Real GDP grew at a slightly slower annualized rate than the U.S. Private Sector Real GDP from 2009 to 2012.

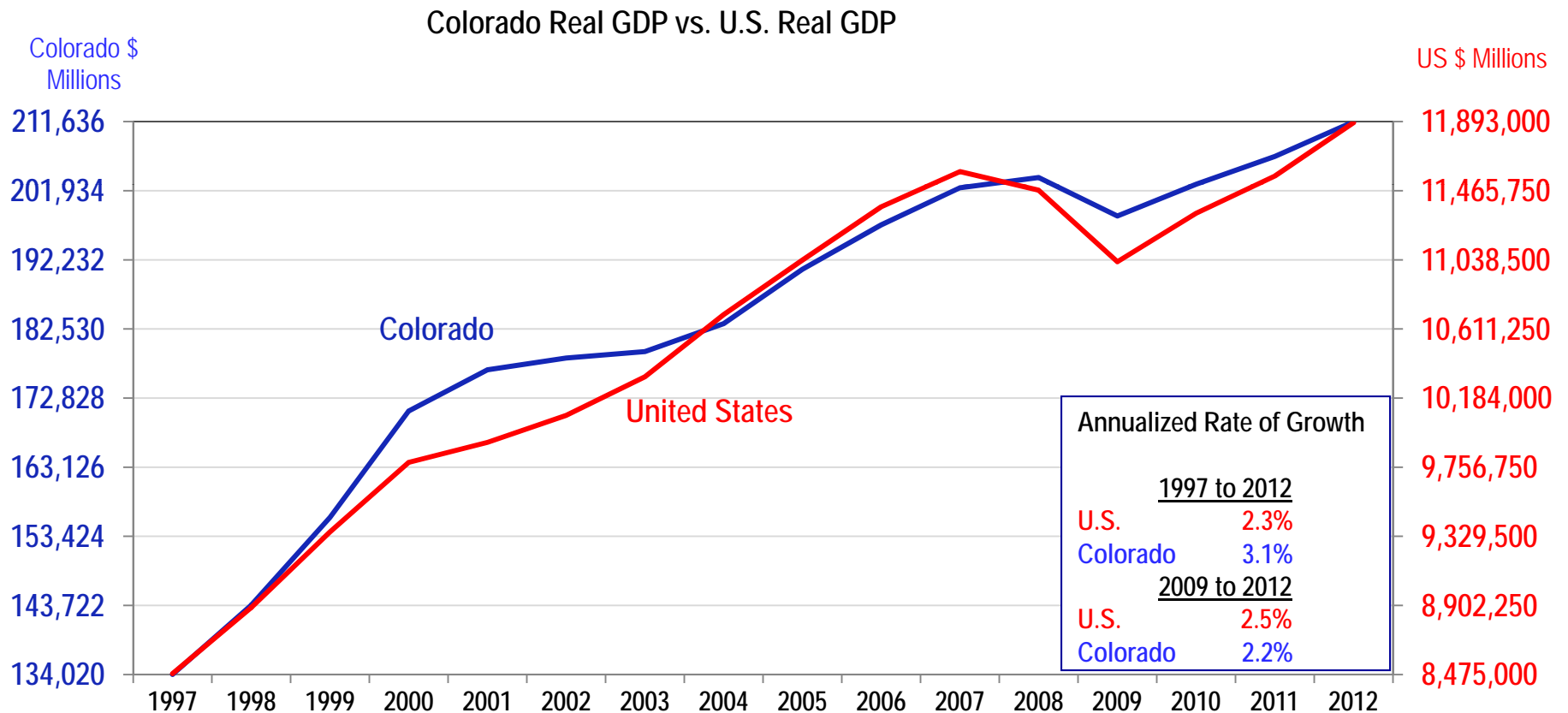
Colorado's Government Real GDP grew at a much faster annualized rate than the U.S. Government Real GDP from 2009 to 2012.

- Total Real Gross Domestic Product
- Colorado vs. U.S. (Sum of States)
-



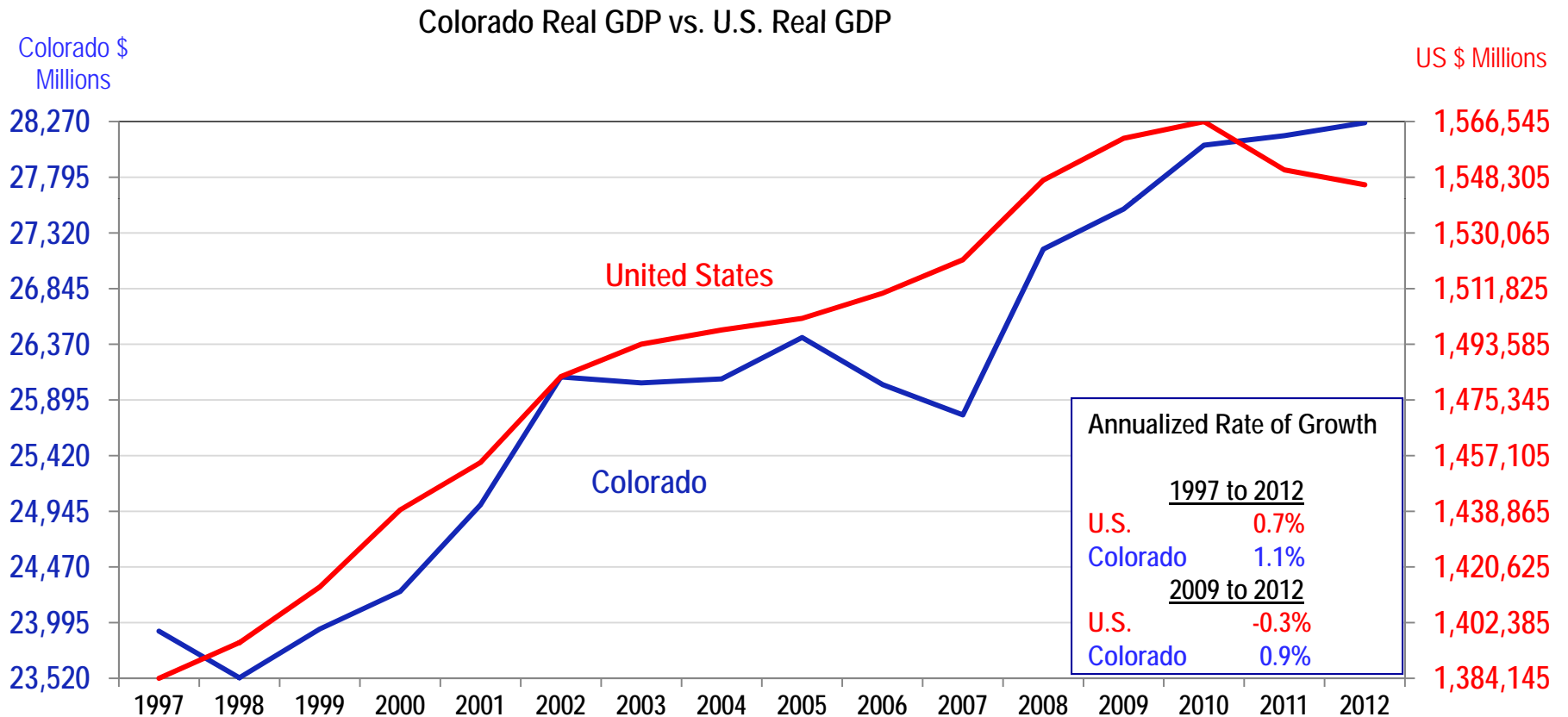
Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
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- Total Real Gross Domestic Product – Private Sector
- Colorado vs. U.S. (Sum of States)



Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
<http://cber.co>

- Total Real Gross Domestic Product - Government
- Colorado vs. U.S. (Sum of States)
-



Source: Bureau of Economic Analysis. Note: Government includes military.
 Colorado-based Business and Economic Research
<http://cber.co>



Questions

The following questions relate to the previous slides:

1. Why would Colorado's economy grow at a significantly faster rate than the U.S. from 1997 to 2012, but grow at a slower rate from 2009 to 2012, particularly when Colorado job growth outpaced the nation from 2009 to 2012?
2. Why did Colorado government output grow at a faster rate than the U.S. between 1997 to 2012 and 2009 to 2012?



Historical Real GDP United States and Colorado Sectors with Negative Rate of Change–U.S.

Real GDP by Sector 1997 to 2012

Colorado vs. U.S. - U.S. Negative Change

Three sectors showed negative change in Real GDP for the U.S. from 1997 to 2012. The sectors are Mining, Other services, and Construction. In 2012, these 3 sectors accounted for 9.9% of output in Colorado and 7.8% of output in the U.S.

Mining

During this period the U.S. Mining GDP declined at an annualized rate of -0.6%, while the Colorado Mining sector increased by 3.6%.

Other Services

During this period the U.S. Other services GDP declined at an annualized rate of -0.5%, while the Colorado sector posted a meager gain of 0.3%.

Construction

During this period the U.S. Construction sector declined at an annualized rate of -1.5%, while the Colorado Construction sector changed by -2.4% annually. In Colorado output declined several years before the employment began to decline. The Construction sector was the only sector to show an annualized rate of decline for the state.

Overall Growth

United States

- Annualized growth 2.1%
- Annualized growth Private 2.3%

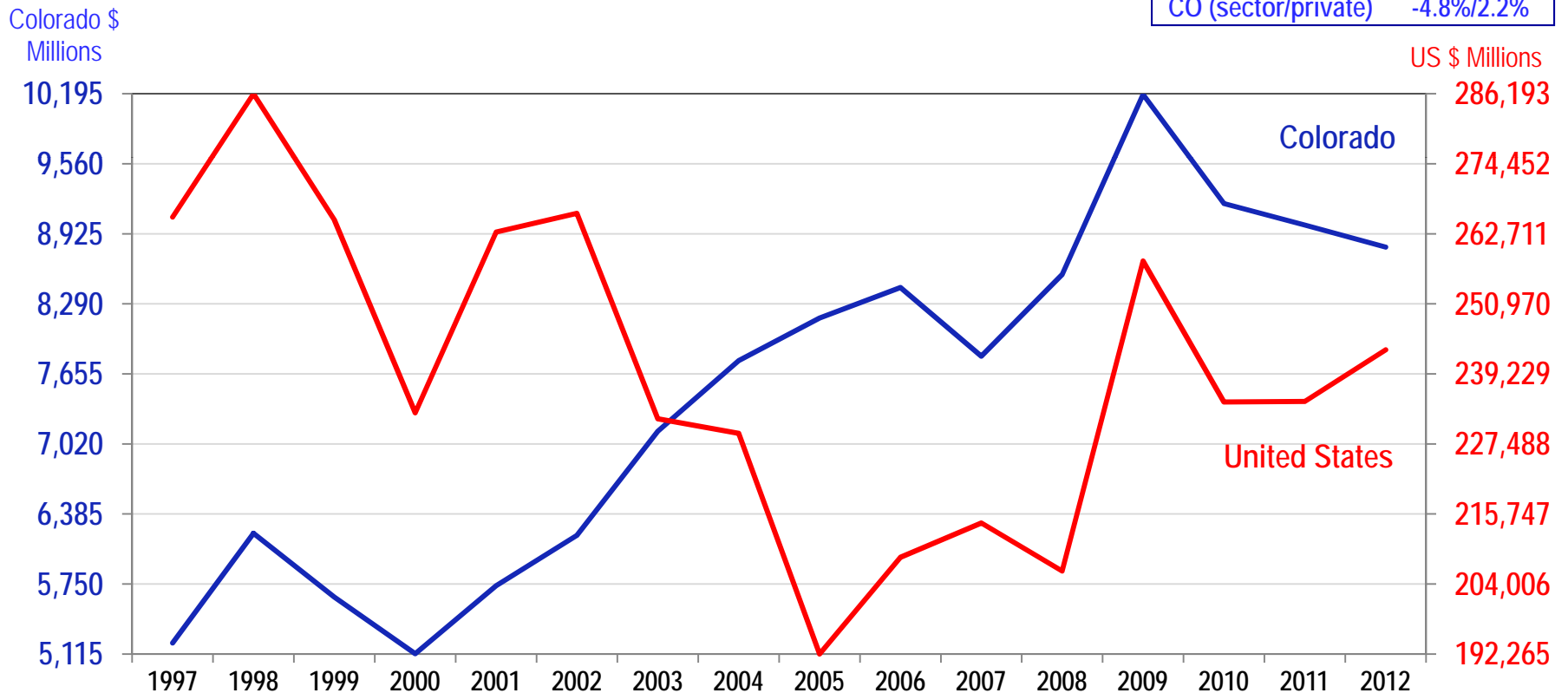
Colorado

- Annualized growth 2.9%
- Annualized growth Private 3.1%

- Total Real Gross Domestic Product
- Mining
- Colorado vs. U.S. (Sum of States)

Colorado Real GDP vs. U.S. Real GDP

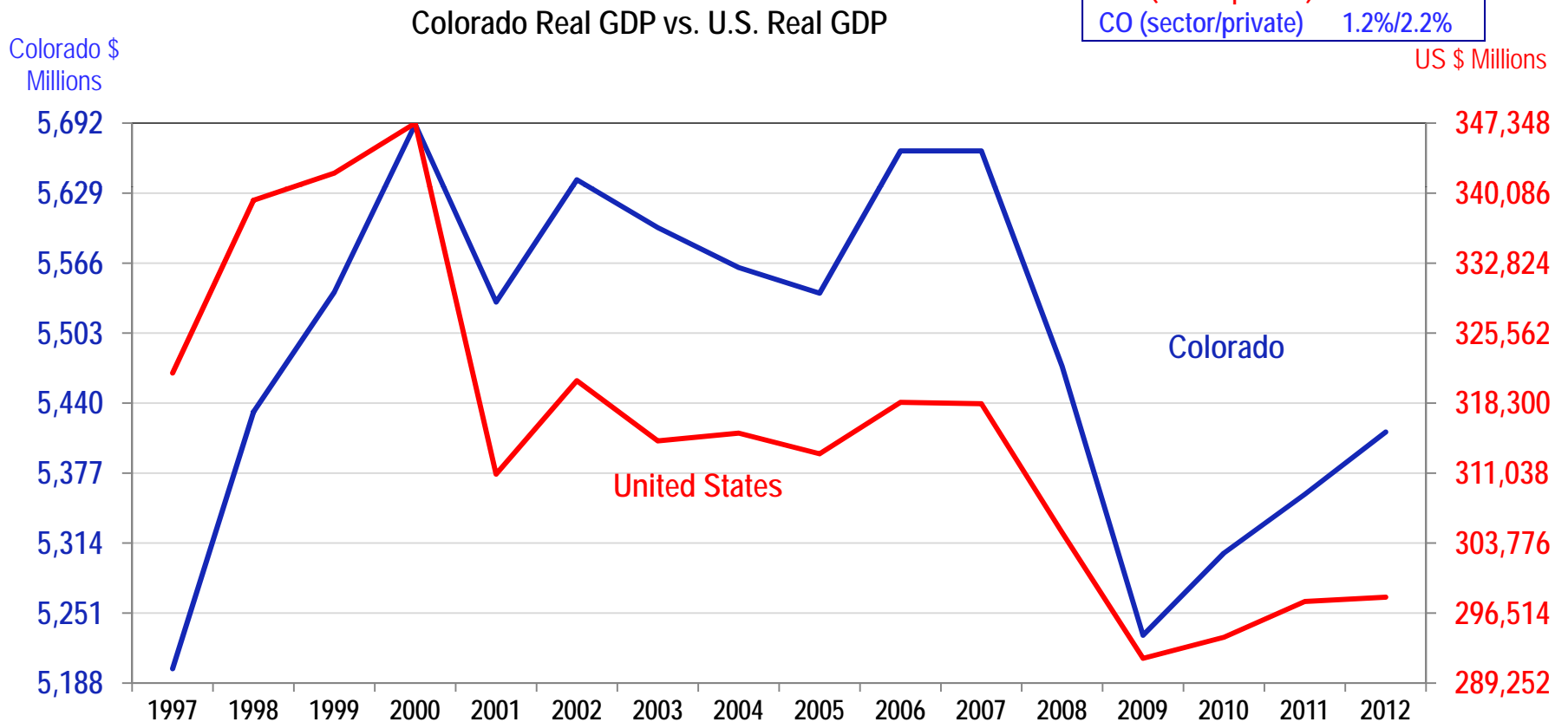
Annualized Rate of Growth	
<u>1997 to 2012</u>	
U.S. (sector/private)	-0.6%/2.3%
CO (sector/private)	+3.6%/3.1%
<u>2009 to 2012</u>	
U.S. (sector/private)	-2.0%/2.5%
CO (sector/private)	-4.8%/2.2%



Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
<http://cber.co>

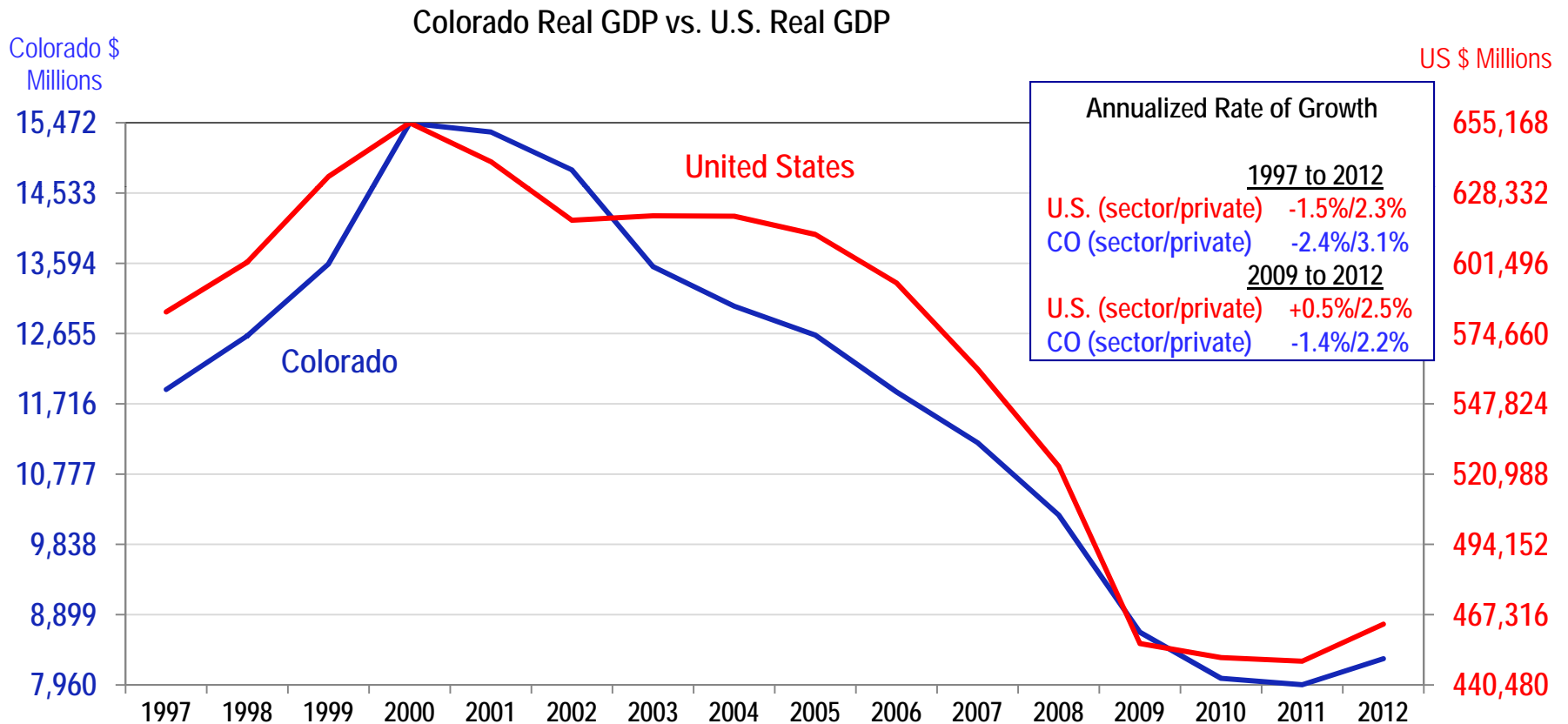
- Total Real Gross Domestic Product
- Other Services
- Colorado vs. U.S. (Sum of States)

Annualized Rate of Growth	
<u>1997 to 2012</u>	
U.S. (sector/private)	-0.5%/2.3%
CO (sector/private)	0.3%/3.1%
<u>2009 to 2012</u>	
U.S. (sector/private)	0.7%/2.5%
CO (sector/private)	1.2%/2.2%



Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
<http://cber.co>

- Total Real Gross Domestic Product
- Construction
- Colorado vs. U.S. (Sum of States)



Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
<http://cber.co>

Questions

The following questions relate to the previous slides:

1. The downturn in Colorado's construction industry has reversed course, although the rebound has been modest. In the near-term, will the pace of growth remain tepid or will it increase? Will activity occur in commercial, infrastructure, or residential markets? What sectors will have the greatest need for the services of the Construction sector (Extractive industries, Manufacturing, Retail, Government, etc.)?
2. Colorado experienced a downturn in housing prices that was less severe than other parts of the country. The local recovery has been stronger than elsewhere. On the downside, home affordability has again become an issue in parts of Colorado. Will appreciation in housing prices constrain future growth of residential markets?
3. In the past, major infrastructure projects such as DIA, Coors Field, and T-Rex have supported growth of Construction employment and output. Will there be similar projects in the future that will drive construction output?



Gross Domestic Product United States and Colorado Advanced Technology

Real GDP by Sector 1997 to 2012

Colorado vs. U.S. - Advanced Technology

Four sectors are often used as a proxy for the Advanced Technology cluster. The sectors are Manufacturing; Information; Professional scientific, and technical services, and Management of corporations and enterprises. In 2012, these 4 sectors accounted for 27.4% of output in Colorado and 26.0% of output in the U.S.

Manufacturing

- U.S. annualized rate of growth 2.4%
- CO annualized rate of growth 4.6%.

Information

- U.S. annualized rate of growth 5.2%
- CO annualized rate of growth 7.2%.

Professional, Scientific, and Technical Services

- U.S. annualized rate of growth 3.2%
- CO annualized rate of growth 4.3%.

Management of Corporations and Enterprises

- U.S. annualized rate of growth 0.6%
- CO annualized rate of growth 6.3%.

Overall Growth

United States

- Annualized growth 2.1%
- Annualized growth Private 2.3%.

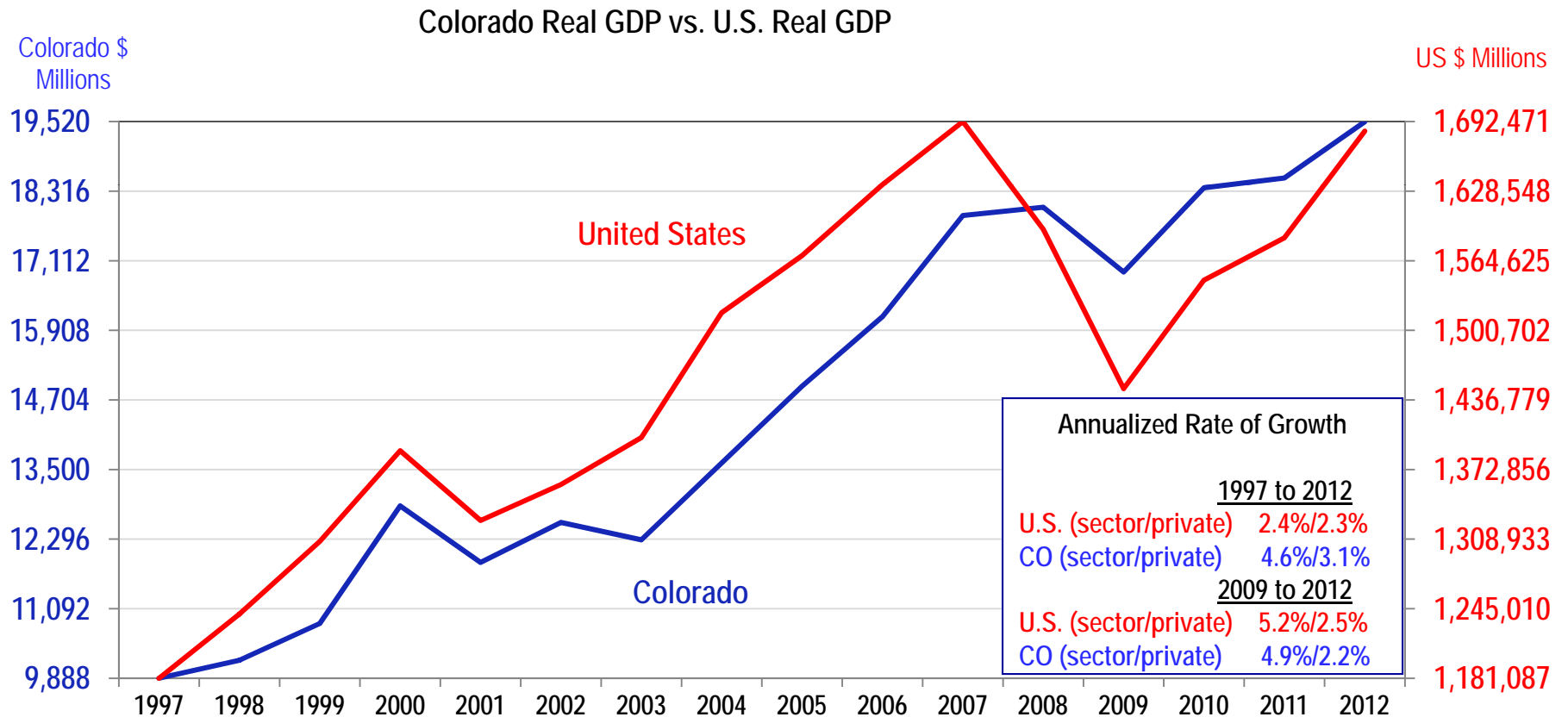
Colorado

- Annualized growth 2.9%
- Annualized growth Private 3.1%.

Only the U.S. MCE sector grew at a rate below the average for the U.S. during this period.

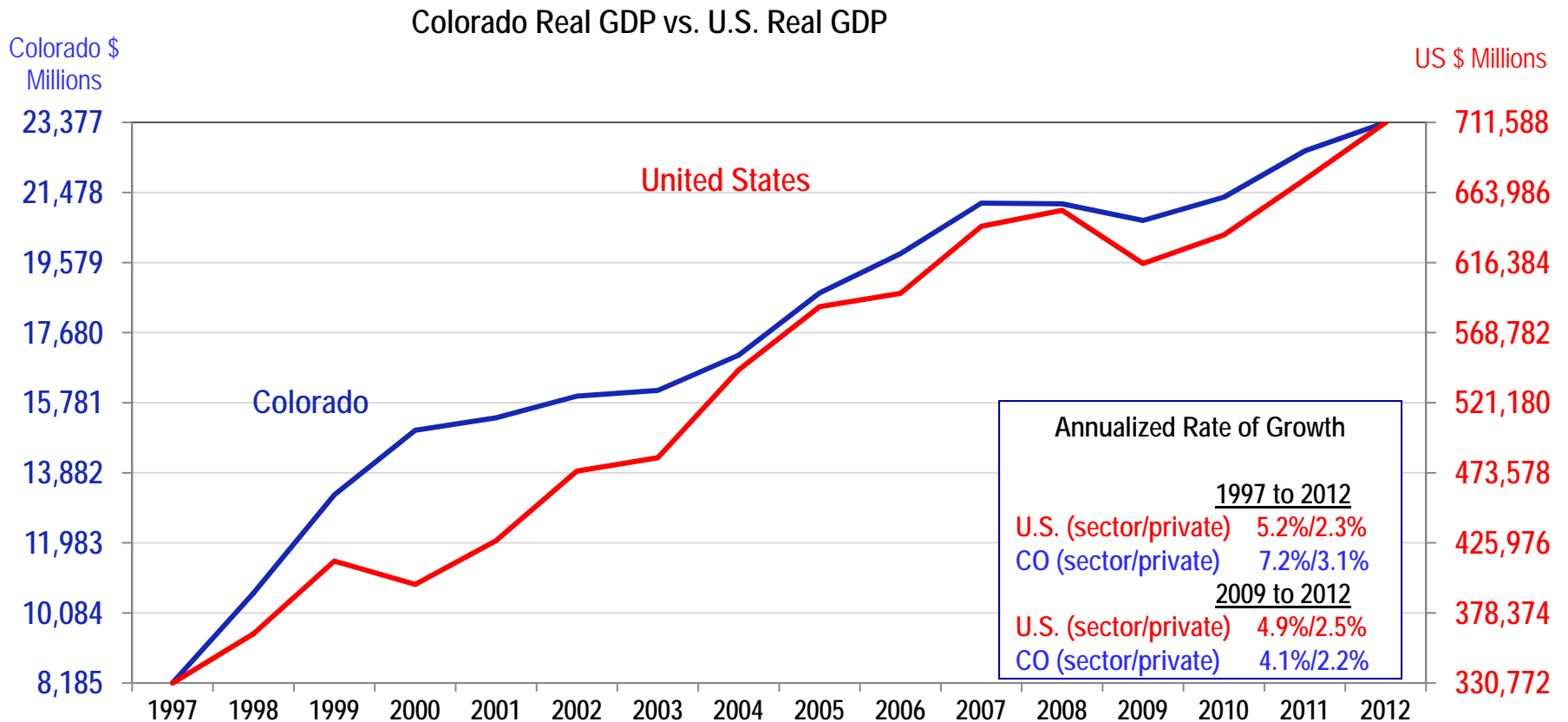
The rates of output growth for all 4 sectors in Colorado were greater than the U.S. sector rates. As well, all 4 sectors expanded at rates greater than the overall rate for the state.

- Total Real Gross Domestic Product
- Manufacturing
- Colorado vs. U.S. (Sum of States)



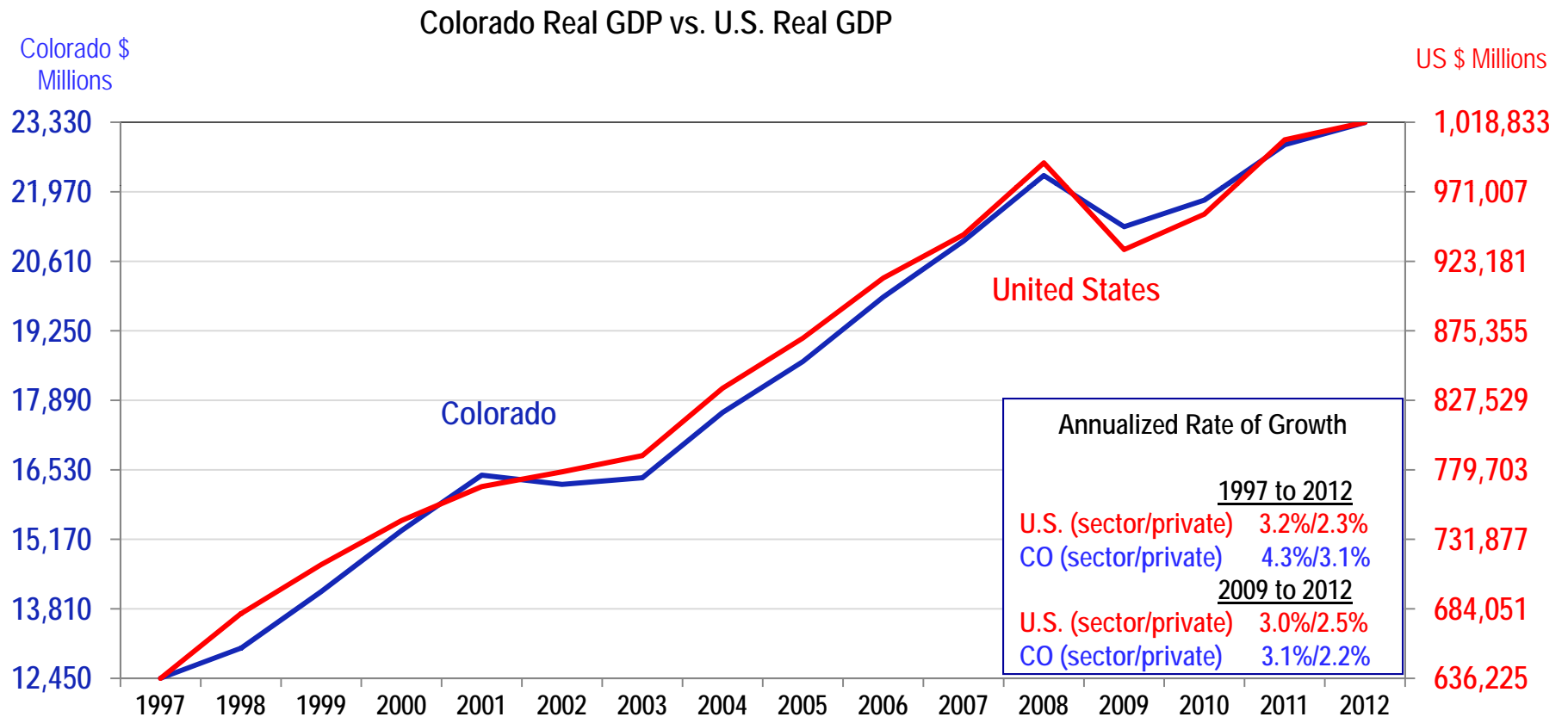
Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
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- Total Real Gross Domestic Product
- Information
- Colorado vs. U.S. (Sum of States)



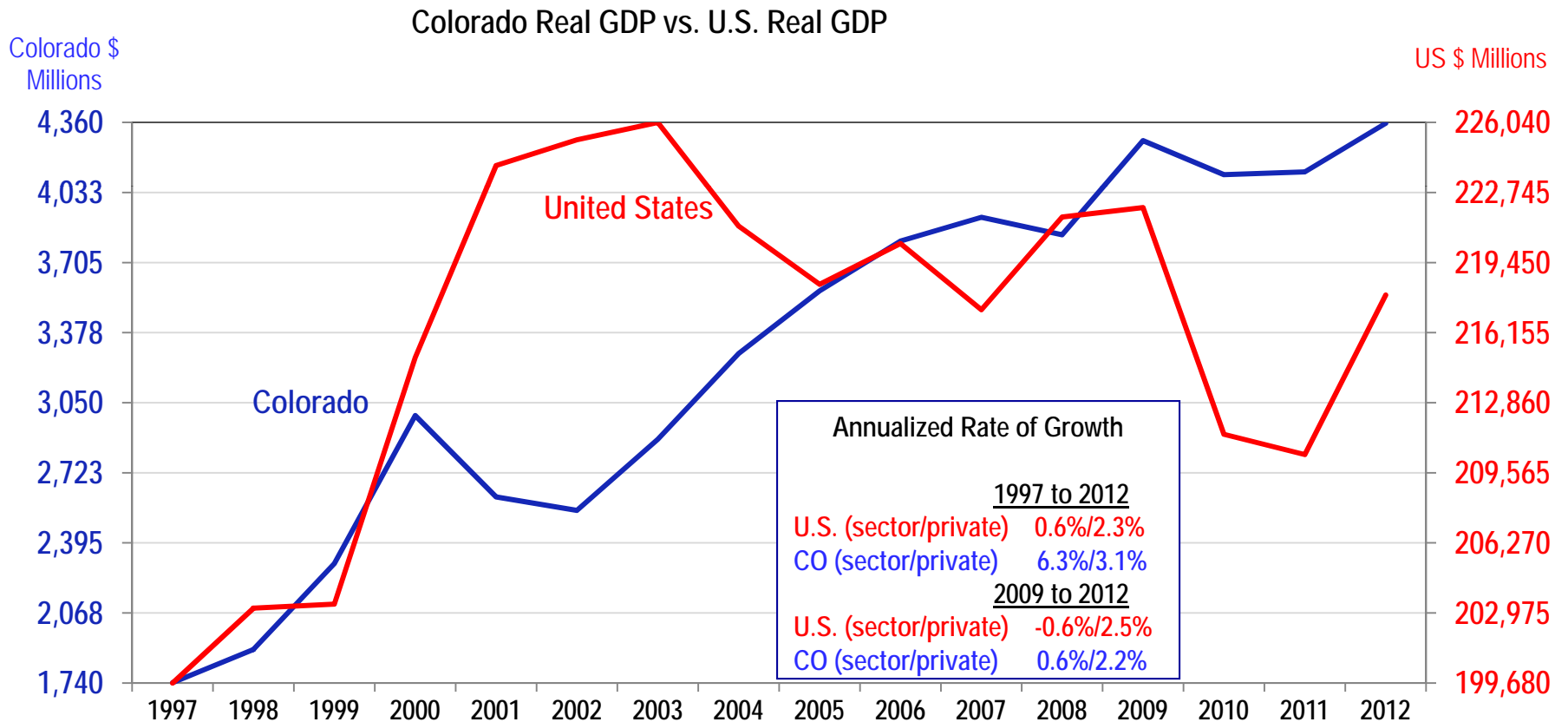
Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
<http://cber.co>

- Total Real Gross Domestic Product
- Professional, Scientific, and Technical
- Colorado vs. U.S. (Sum of States)



Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
<http://cber.co>

- Total Real Gross Domestic Product
- Management of Companies and Enterprises
- Colorado vs. U.S. (Sum of States)



Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
<http://cber.co>



Questions

The following questions relate to the previous slides:

1. Over the past 15 years the Information and Manufacturing sectors have improved productivity through consolidations, mergers, and improved technology. As a result, employment in both sectors has declined sharply. At what point will companies in these sectors find it necessary to boost productivity by adding workers?
2. Colorado has a lower concentration of output in the Manufacturing sector than the U.S. What can be done to increase the presence of the sector in Colorado?
3. The growth rate of output in the Information, MCE, and PST sectors was slower between 2009 to 2012 than previous years. Will this slower rate of growth continue in the years ahead?
4. What can Colorado do to protect its distinctive competencies in the Advanced Technology industries?



Gross Domestic Product United States and Colorado Leisure and Hospitality

Real GDP by Sector 1997 to 2012

Colorado vs. U.S. - Leisure and Hospitality

The Tourism industry is comprised of two sectors: Arts, entertainment, and recreation; and Accommodations and food services. In 2012, these 2 sectors accounted for 4.8% of output in Colorado and 4.0% of output in the U.S.

AER

- U.S. annualized rate of growth 1.7%
- CO annualized rate of growth 1.9%.

AFS

- U.S. annualized rate of growth 2.2%
- CO annualized rate of growth 2.6%.

Overall Growth

United States

- Annualized growth 2.1%
- Annualized growth Private 2.3%.

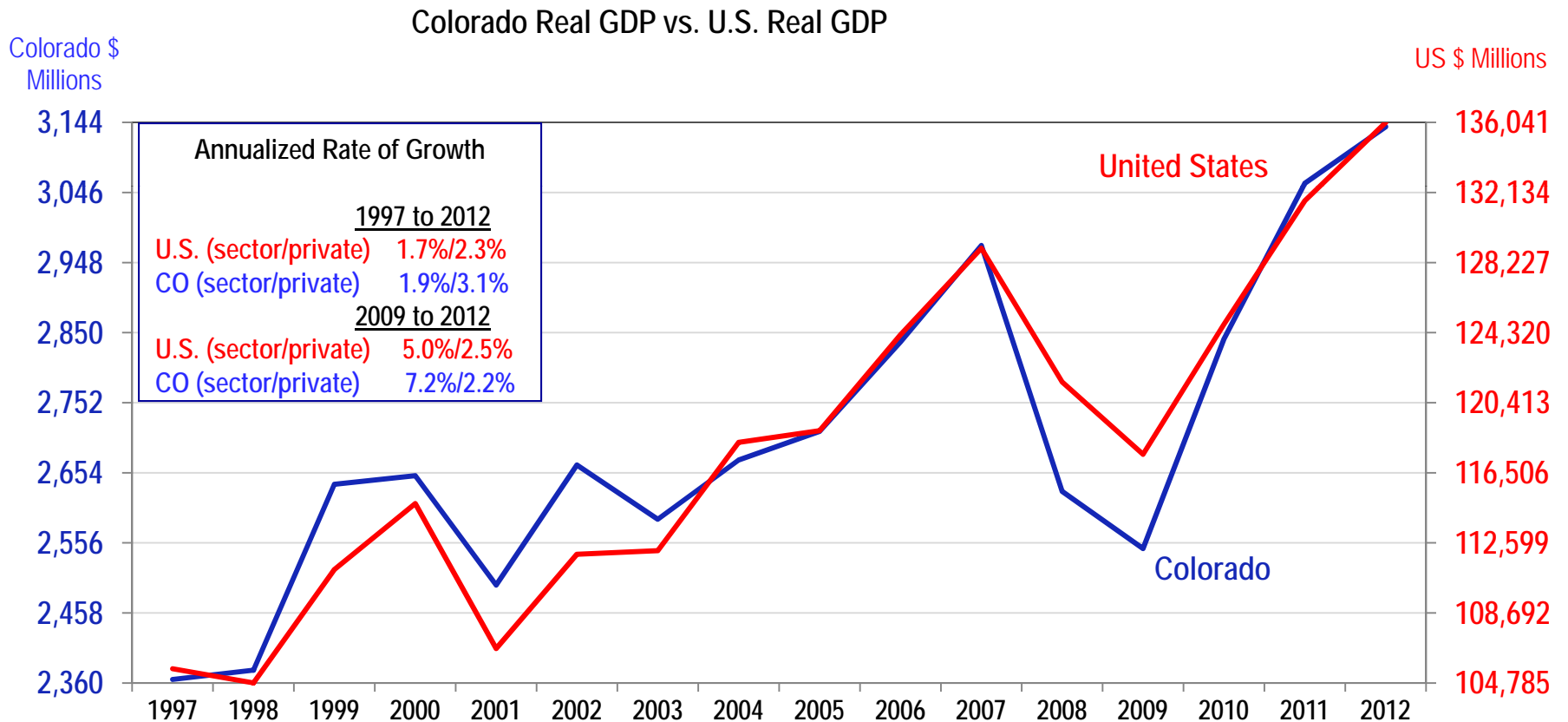
Colorado

- Annualized growth 2.9%
- Annualized growth Private 3.1%.

Tourism is a visible and important sector for Colorado because it touches all 64 counties.

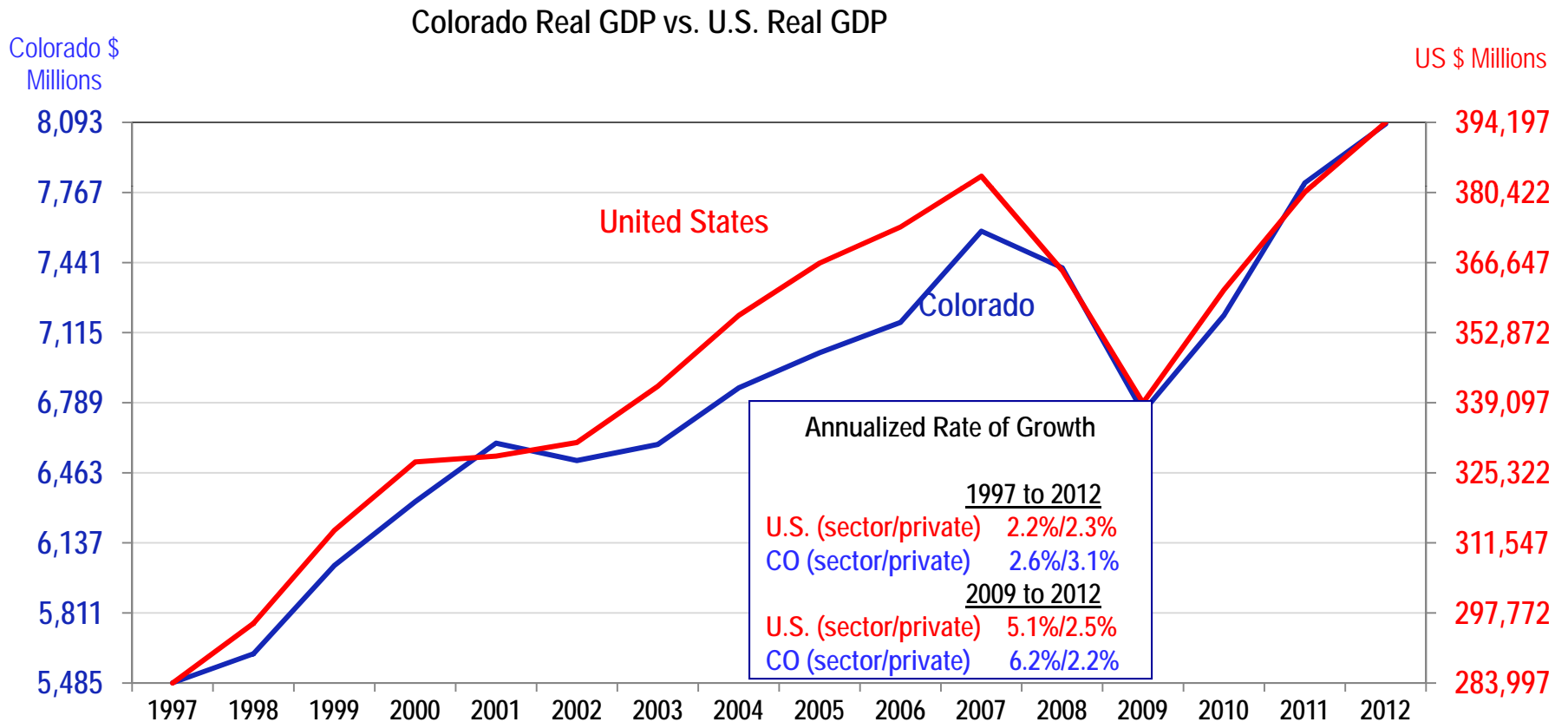
State tourism output increased at a faster rate than the U.S. tourism rates.

- Total Real Gross Domestic Product
- Arts, Entertainment, and Recreation
- Colorado vs. U.S. (Sum of States)



Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
<http://cber.co>

- Total Real Gross Domestic Product
- Accommodation and Food Services
- Colorado vs. U.S. (Sum of States)



Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
<http://cber.co>



Questions

The following questions relate to the previous slides:

1. What has driven the recent steep growth in tourism output for Colorado and the U.S.? Can this level of growth be sustained or is it an anomaly?
2. What can Colorado do to protect its competitive advantage in tourism?
3. How can Colorado attract more tourism revenue without jeopardizing the natural assets of the state? What must Colorado do to attract the optimal number of tourists?



Gross Domestic Product United States and Colorado Trade

Real GDP by Sector 1997 to 2012

Colorado vs. U.S. - Trade

Colorado trade includes the Wholesale and Retail trade sectors. Retail trade sector output is the 8th largest. In 2012, these 2 sectors accounted for 11.1% of output in Colorado and 11.9% of output in the U.S.

Wholesale Trade

- U.S. annualized rate of growth 3.3%
- CO annualized rate of growth 3.6%.

Retail Trade

- U.S. annualized rate of growth 1.9%
- CO annualized rate of growth 2.2%.

Overall Growth

United States

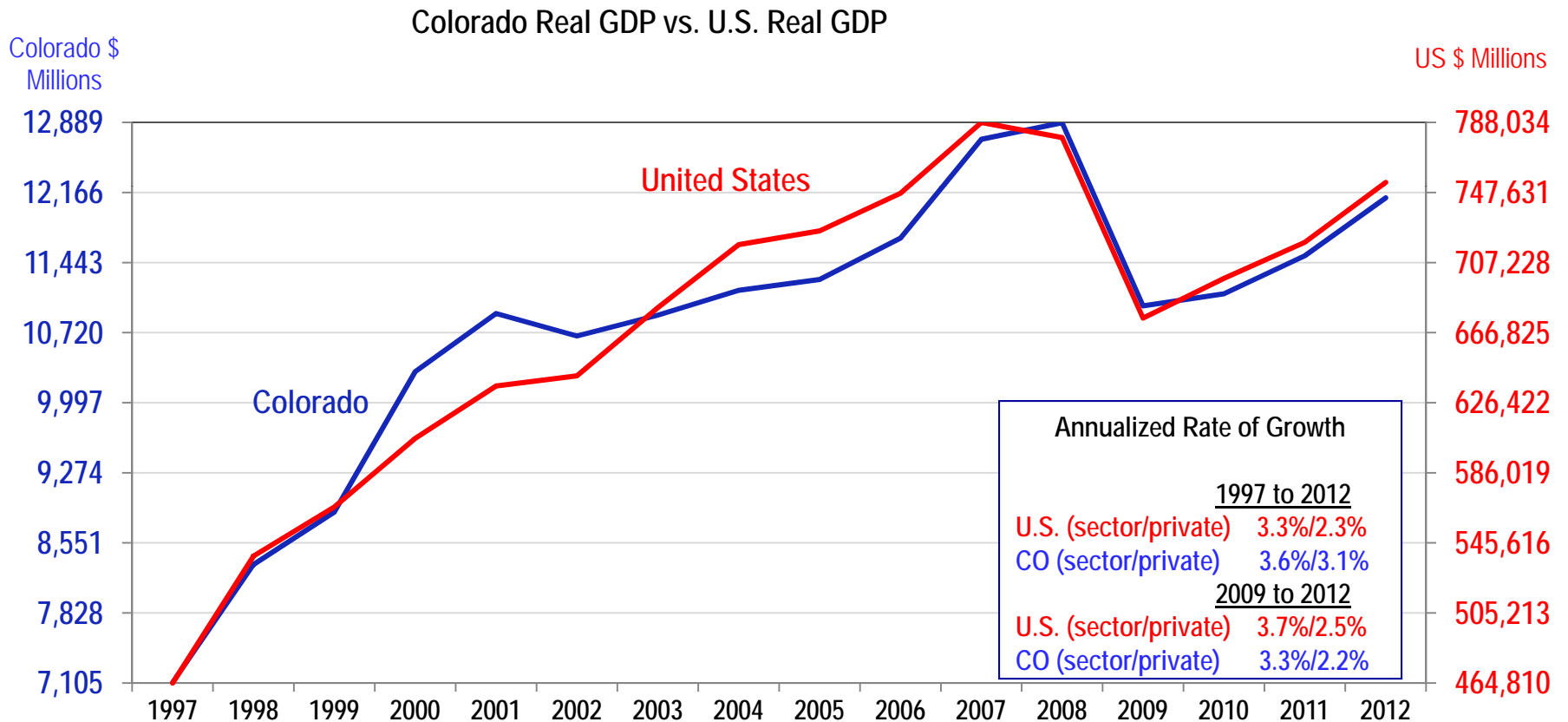
- Annualized growth 2.1%
- Annualized growth Private 2.3%.

Colorado

- Annualized growth 2.9%
- Annualized growth Private 3.1%.

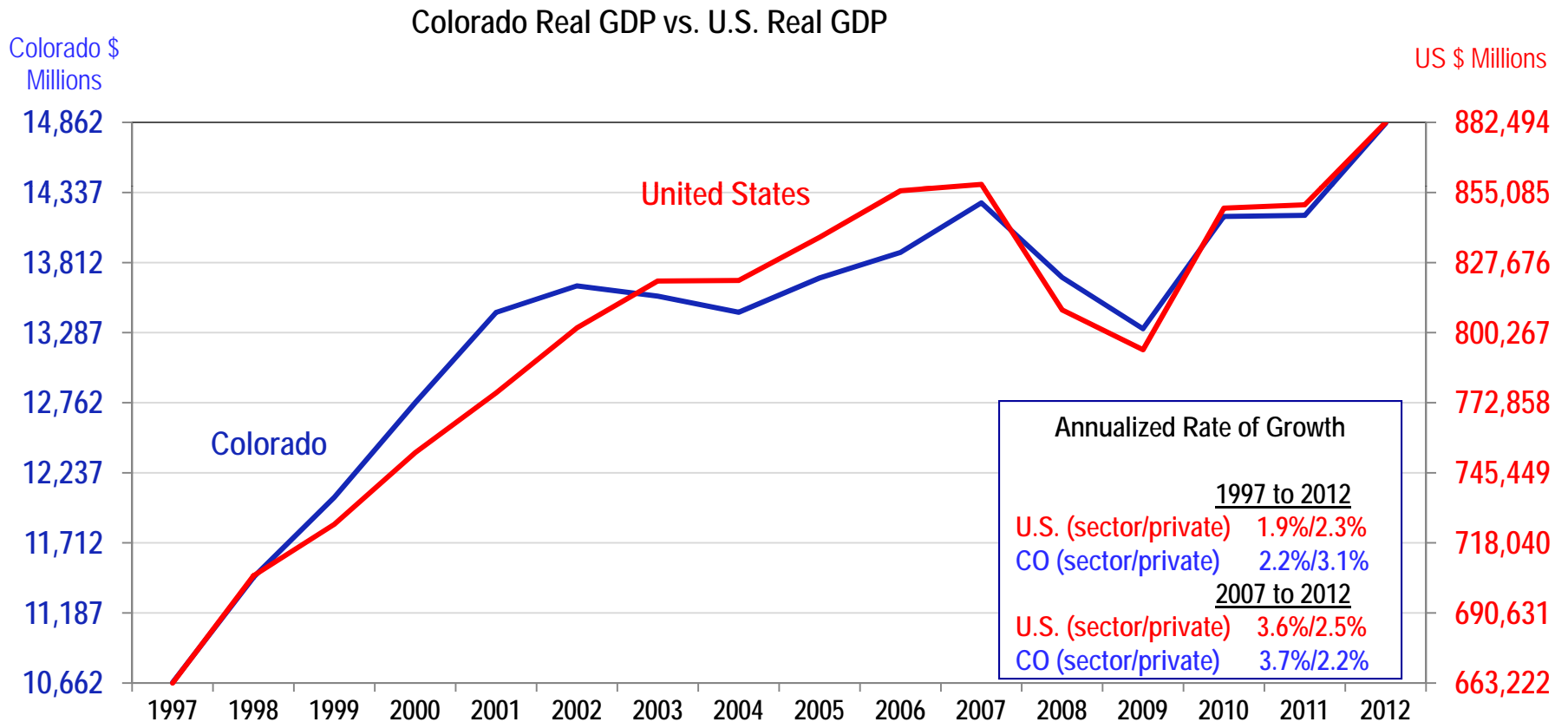
Colorado's Trade sectors grew at a faster rate than the comparable U.S. Trade sectors.

- Total Real Gross Domestic Product
- Wholesale Trade
- Colorado vs. U.S. (Sum of States)



Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
<http://cber.co>

- Total Real Gross Domestic Product
- Retail Trade
- Colorado vs. U.S. (Sum of States)



Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
<http://cber.co>



Questions

The following questions relate to the previous slides:

1. What can Colorado do to increase activity in the Manufacturing sector, as a way of strengthening activity in the Wholesale trade sector?
2. How can Colorado better utilize its transportation assets as a way of encouraging increased Wholesale trade activity?
3. Is Colorado's retail market saturated?



Gross Domestic Product United States and Colorado Financial Activities

Real GDP by Sector 1997 to 2012

Colorado vs. U.S. - Financial Activities

The Financial activity sector includes Finance and insurance; and Real estate rental and leasing. RERL is the largest sector in the U.S. and the second largest sector in Colorado. In 2012 the Financial activity sector accounted for 18.8% of output in Colorado and 20.4% of output in the U.S.

Finance and Insurance

- U.S. annualized rate of growth 3.3%
- CO annualized rate of growth 3.4%

RERL

- U.S. annualized rate of growth 2.1%
- CO annualized rate of growth 2.0%

Overall Growth

United States

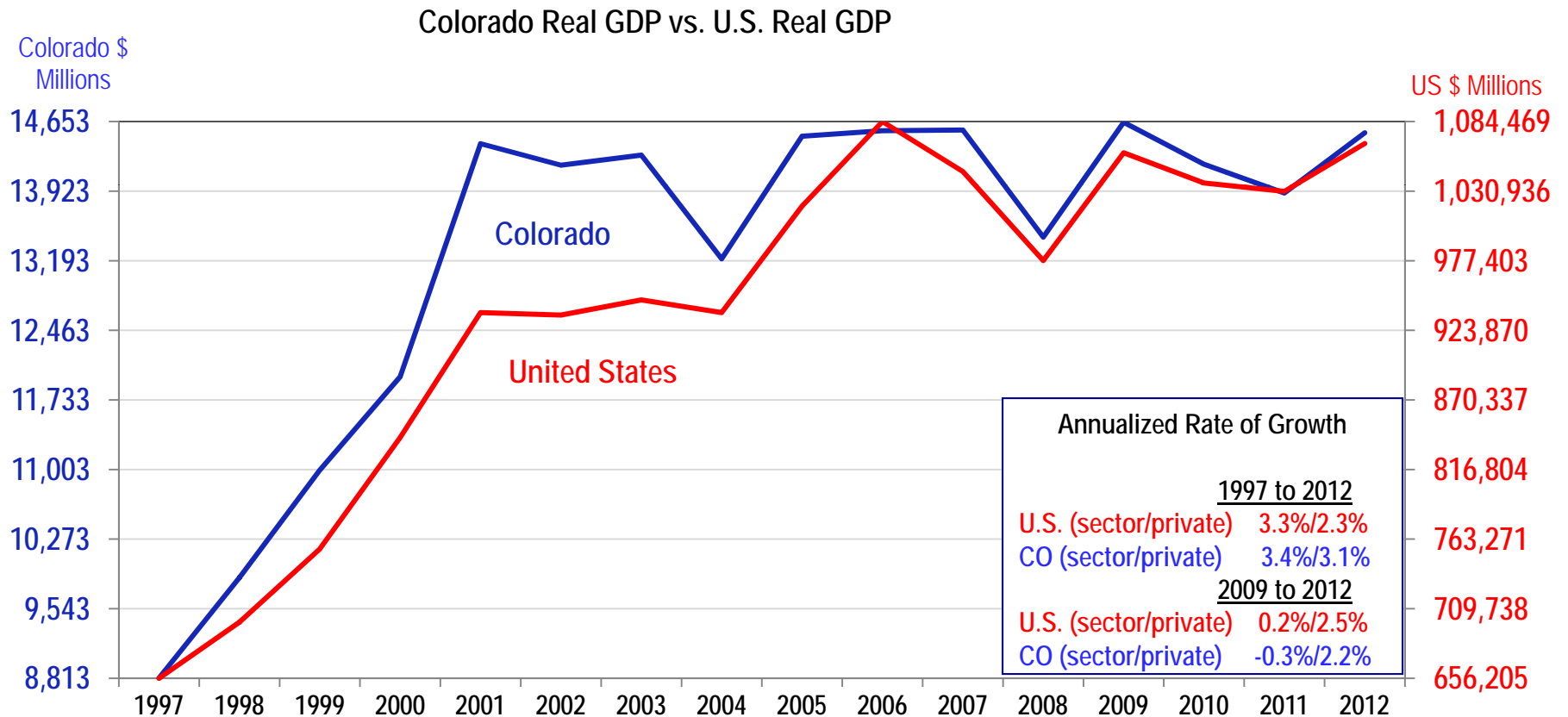
- Annualized growth 2.1%
- Annualized growth Private 2.3%

Colorado

- Annualized growth 2.9%
- Annualized growth Private 3.1%

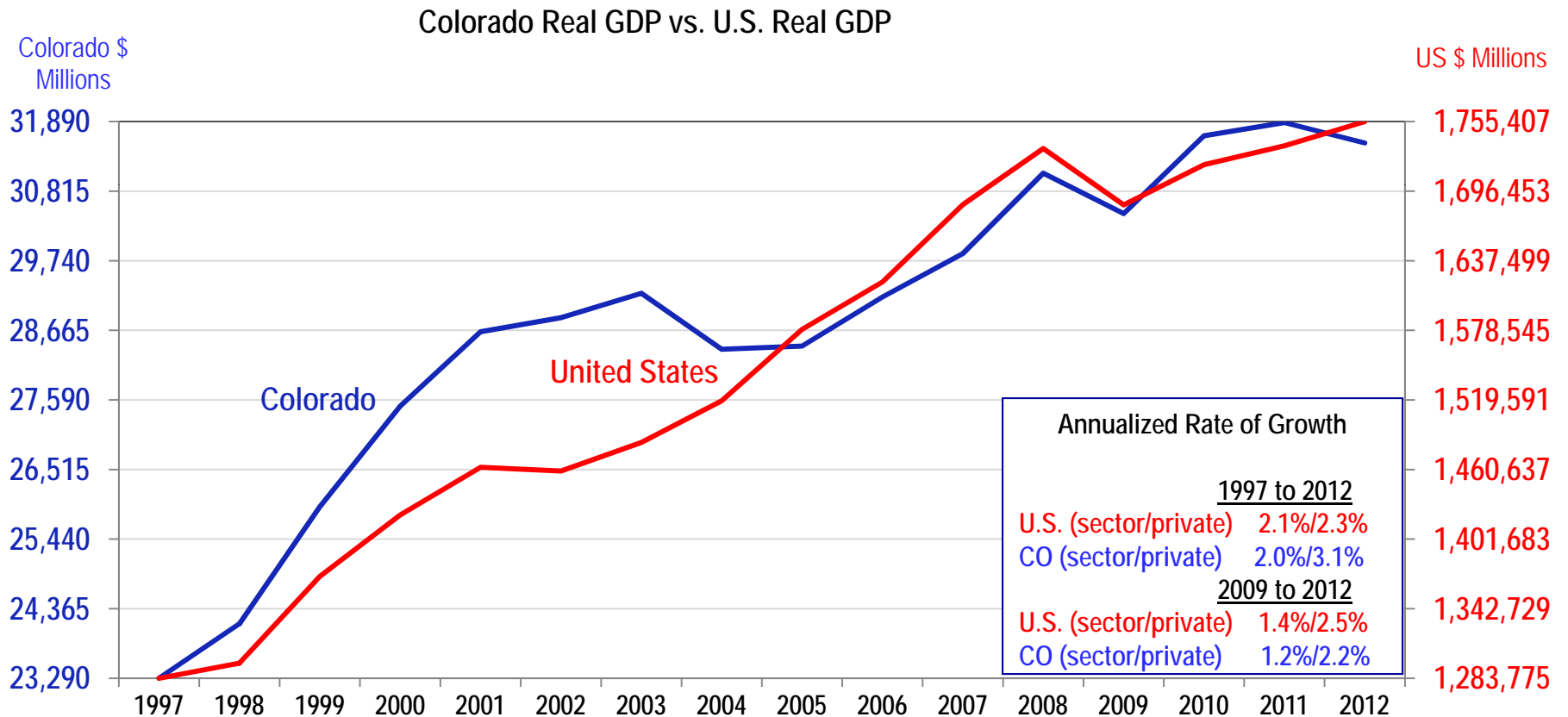
The Colorado Finance and insurance sector expanded at a faster rate than the state rate for all sectors; however, the growth of the RERL sector was below the state rate for all sectors.

- Total Real Gross Domestic Product
- Finance and Insurance
- Colorado vs. U.S. (Sum of States)



Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
<http://cber.co>

- Total Real Gross Domestic Product
- Real Estate and Rental and Leasing
- Colorado vs. U.S. (Sum of States)



Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
<http://cber.co>



Questions

The following questions relate to the previous slides:

1. Colorado is not a center of financial activity, i.e. there are very few financial firms headquartered in Colorado. This may have been a benefit during the past two recessions; however, is this a long-term detriment to the state?
2. At what point will Front Range residential properties become unaffordable? Will rental and leasing output increase as housing prices become less affordable for the general public?



Gross Domestic Product United States and Colorado Other Sectors

Real GDP by Sector 1997 to 2012

Colorado vs. U.S. - Other Sectors

This section includes 6 miscellaneous sectors. In 2012, they accounted for 15.2% of output in Colorado and 17.8% of output in the U.S.

Health Care

- U.S. annualized rate of growth 2.5%
- CO annualized rate of growth 3.0%.

Administrative and Waste Management

- U.S. annualized rate of growth 3.1%
- CO annualized rate of growth 2.5%.

Transportation and Warehousing

- U.S. annualized rate of growth 2.1%
- CO annualized rate of growth 2.3%.

Utilities

- U.S. annualized rate of growth 1.0%
- CO annualized rate of growth 2.2%.

Agriculture

- U.S. annualized rate of growth 1.7%
- CO annualized rate of growth 1.5%.

Educational Services - Private

- U.S. annualized rate of growth 1.1%
- CO annualized rate of growth 3.0%.

Overall Growth

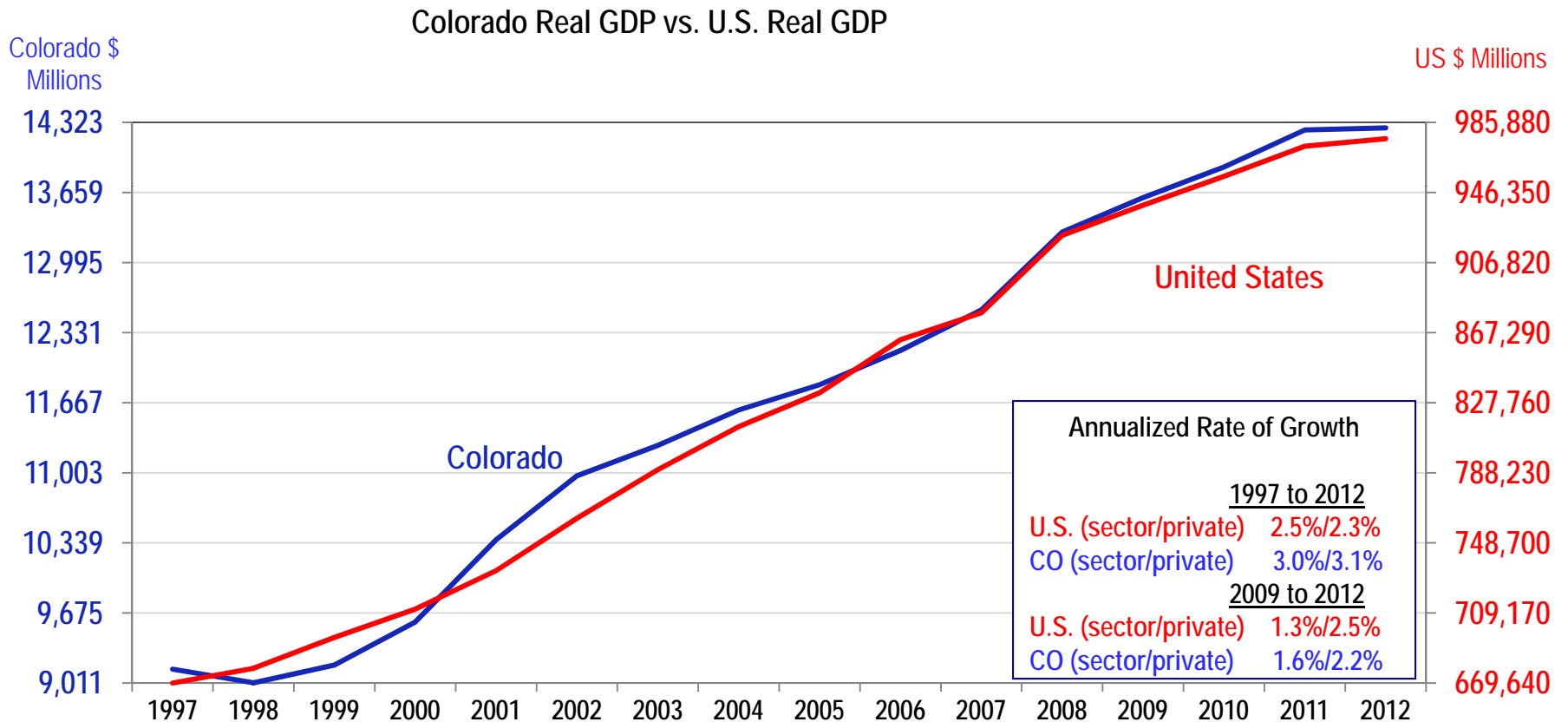
United States

- Annualized growth 2.1%
- Annualized growth Private 2.3%.

Colorado

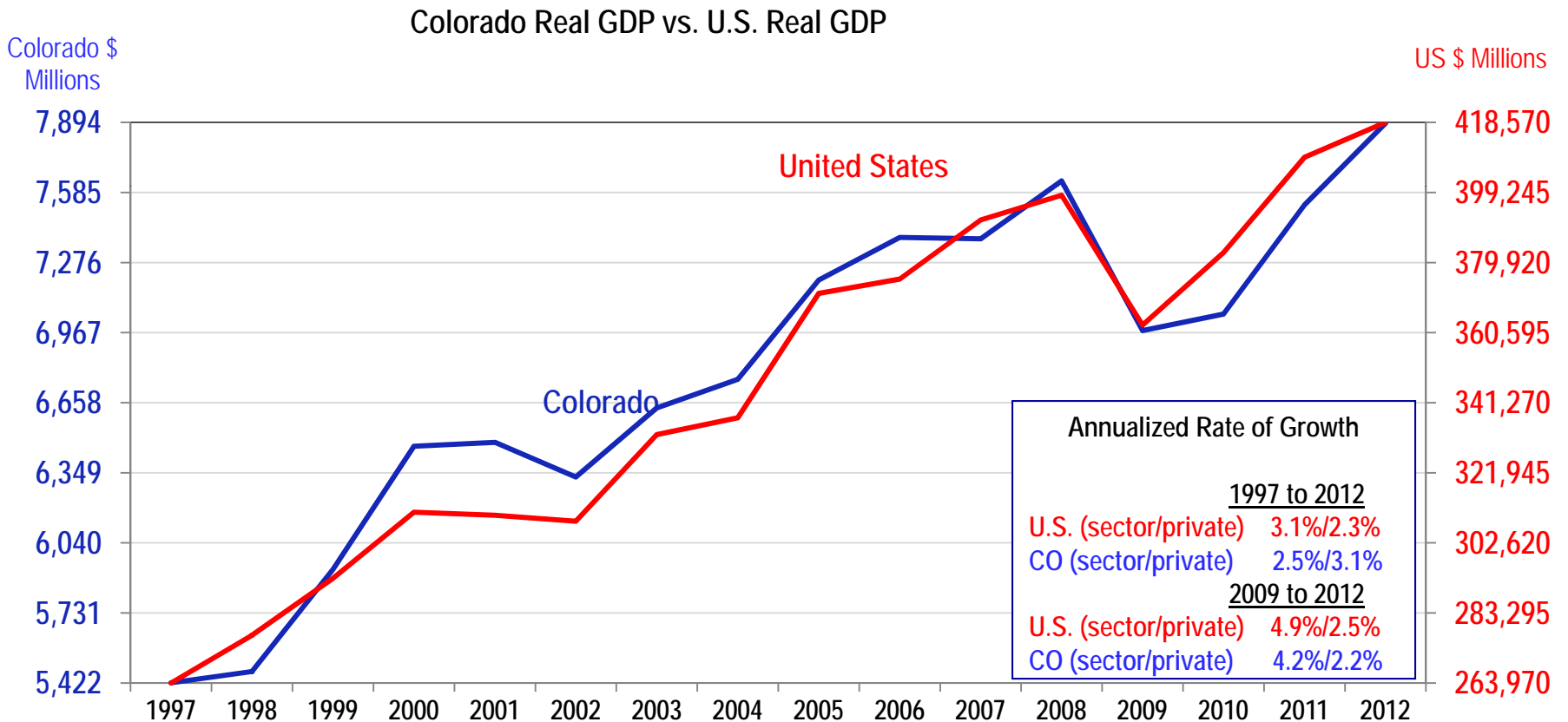
- Annualized growth 2.9%
- Annualized growth Private 3.1%.

- Total Real Gross Domestic Product
- Health Care and Social Assistance
- Colorado vs. U.S. (Sum of States)



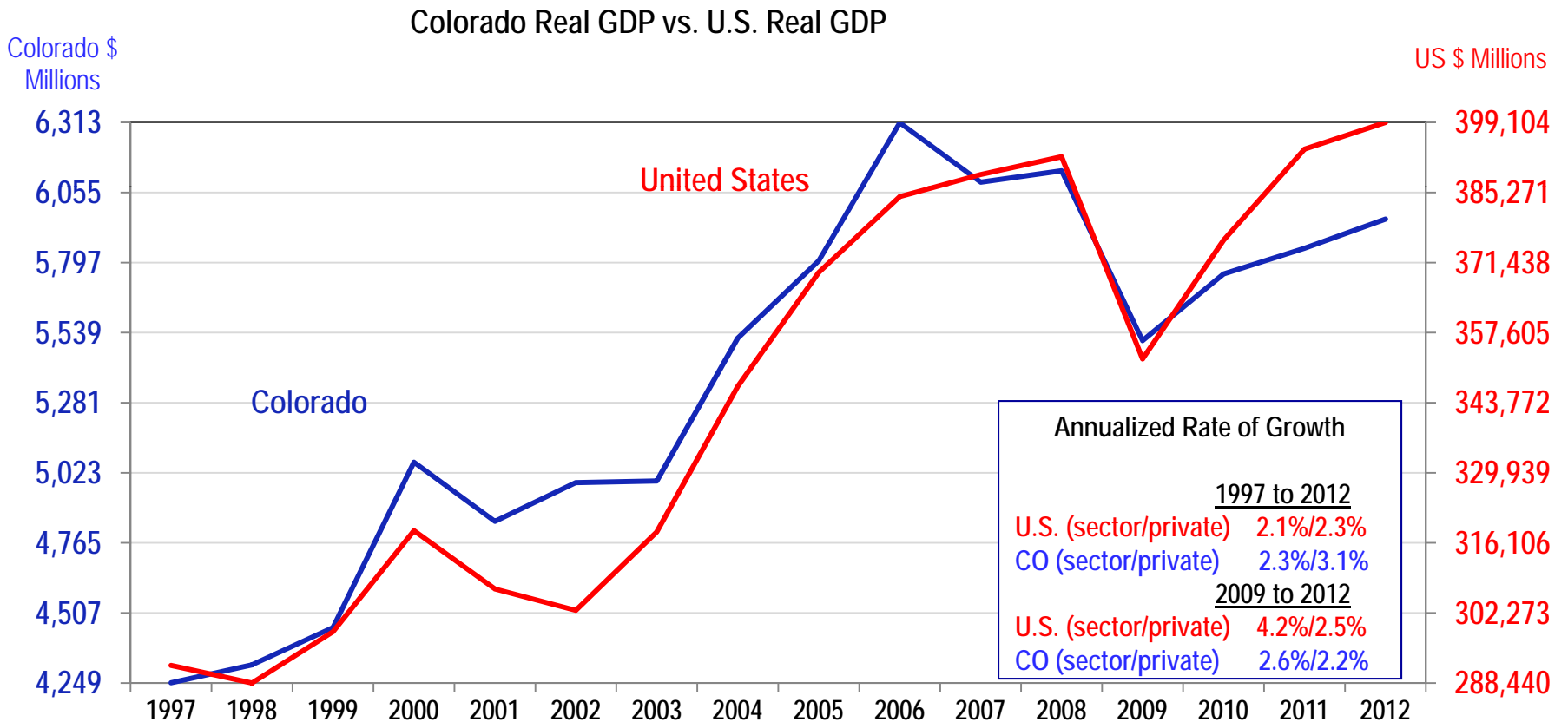
Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
<http://cber.co>

- Total Real Gross Domestic Product
- Administrative and Waste Management Services
- Colorado vs. U.S. (Sum of States)



Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
<http://cber.co>

- Total Real Gross Domestic Product
- Transportation and Warehousing
- Colorado vs. U.S. (Sum of States)

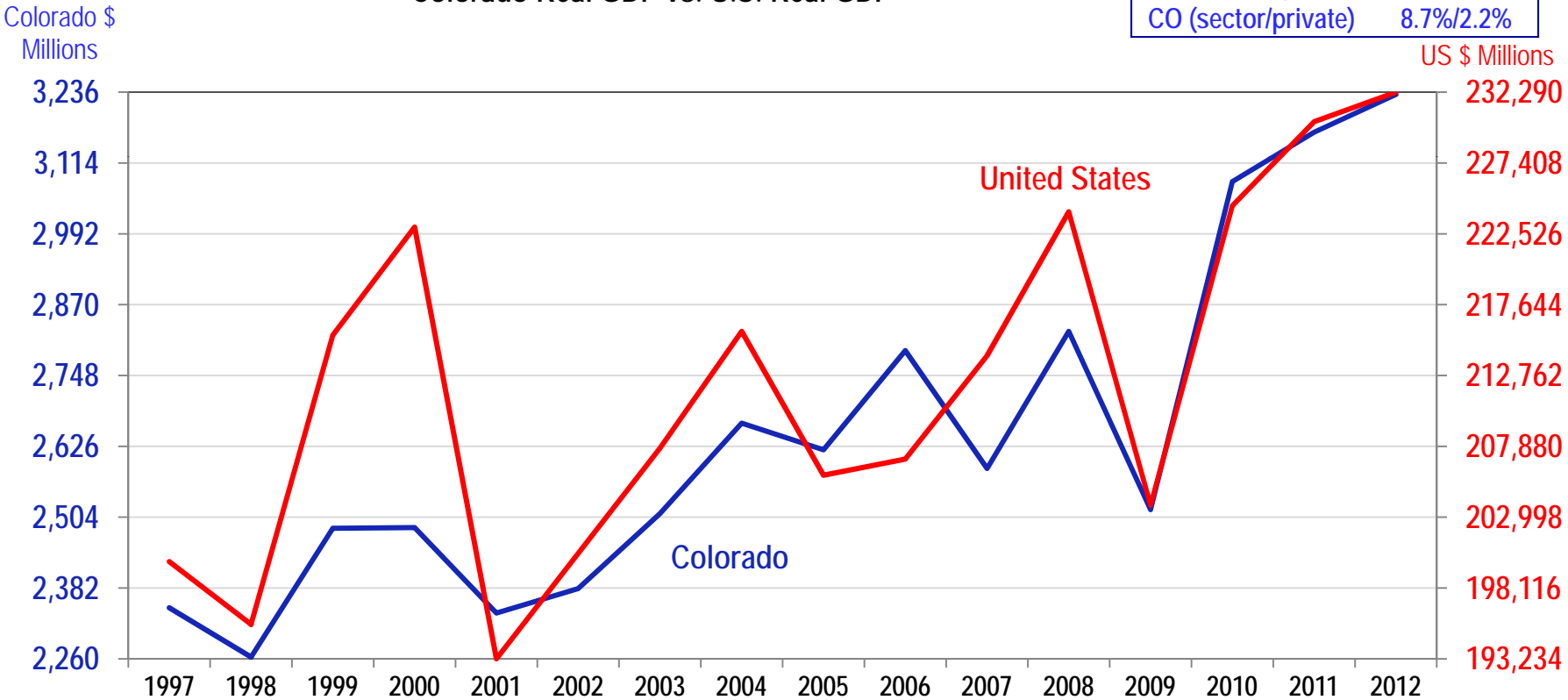


Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
<http://cber.co>

- Total Real Gross Domestic Product
- Utilities
- Colorado vs. U.S. (Sum of States)

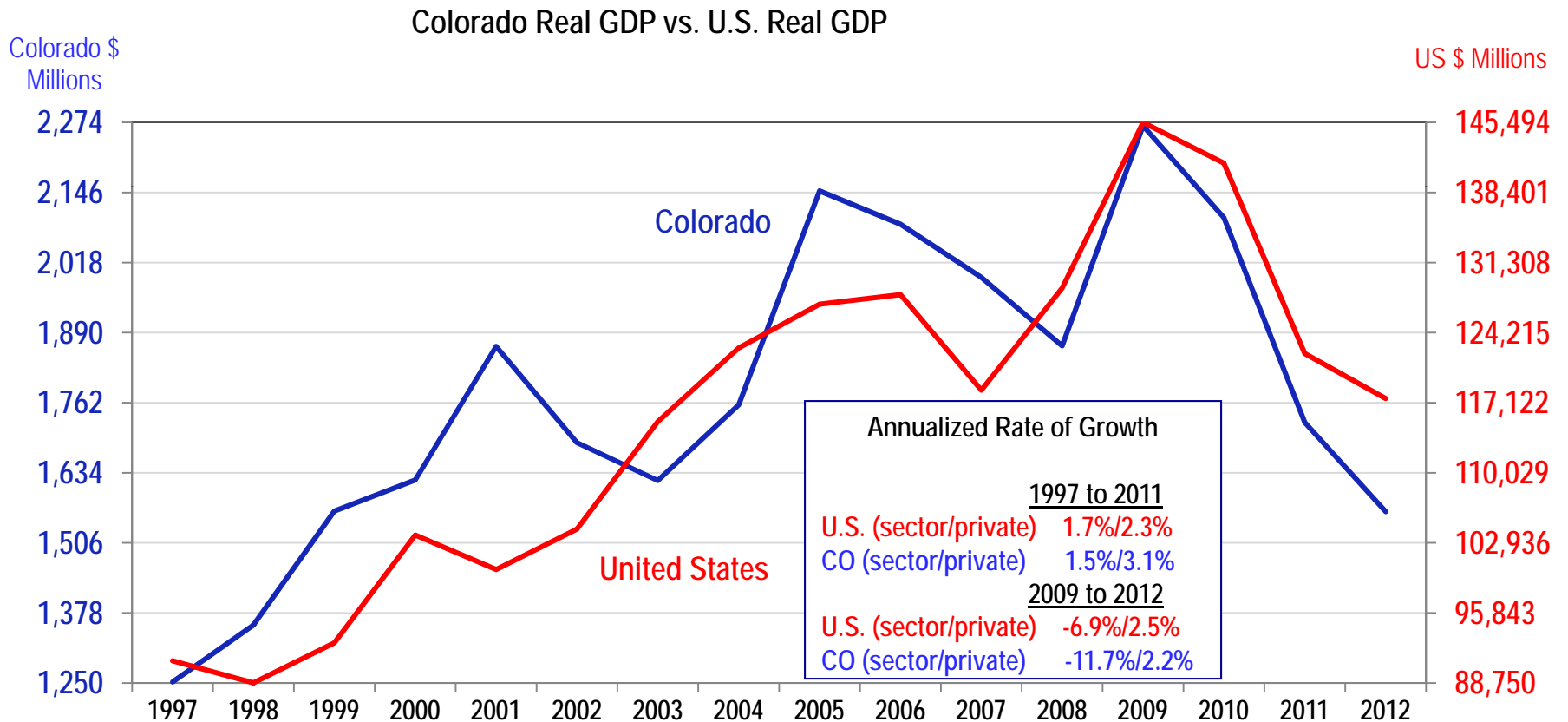
Annualized Rate of Growth	
<u>1997 to 2012</u>	
U.S. (sector/private)	1.0%/2.3%
CO (sector/private)	2.2%/3.1%
<u>2009 to 2012</u>	
U.S. (sector/private)	4.5%/2.5%
CO (sector/private)	8.7%/2.2%

Colorado Real GDP vs. U.S. Real GDP



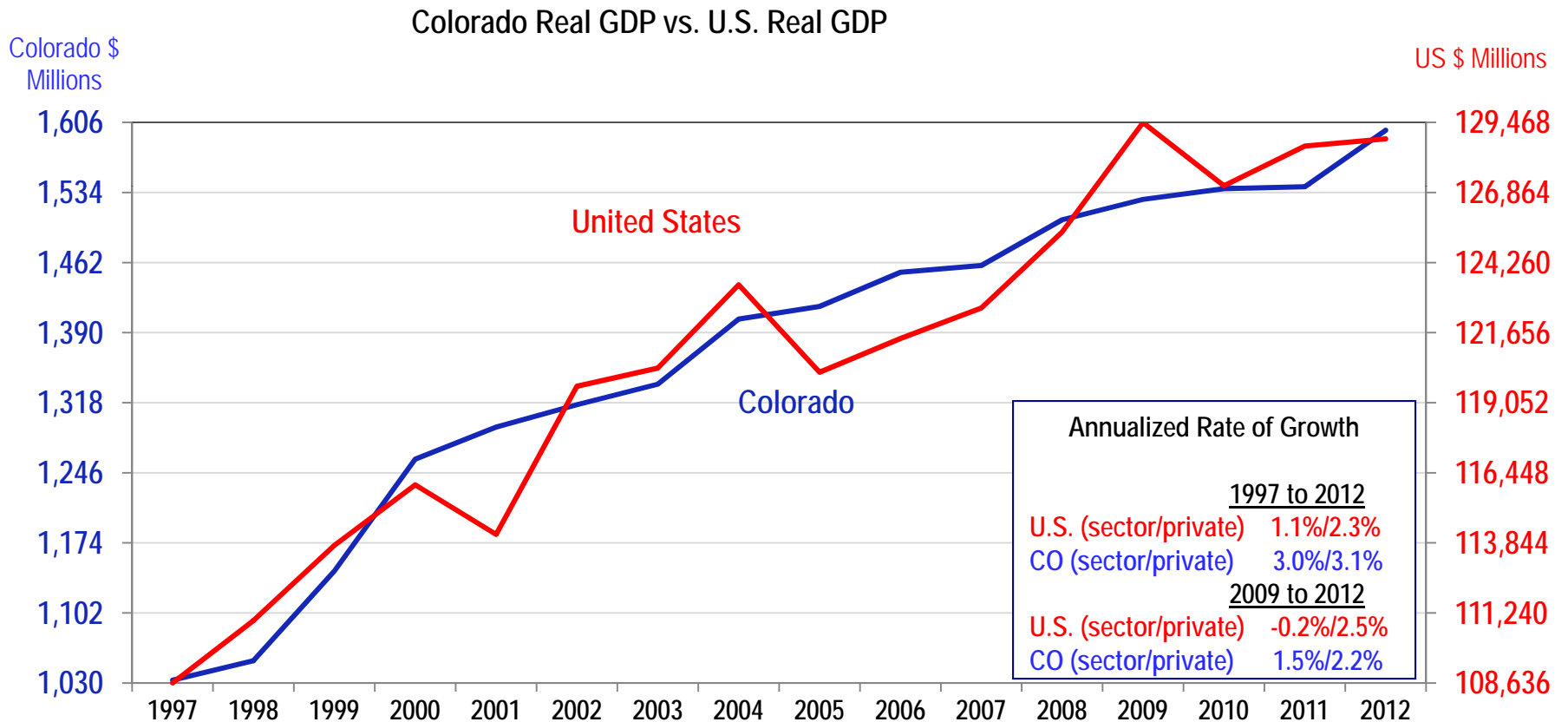
Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
<http://cber.co>

- Total Real Gross Domestic Product
- Agriculture
- Colorado vs. U.S. (Sum of States)



Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
<http://cber.co>

- Total Real Gross Domestic Product
- Educational Services - Private
- Colorado vs. U.S. (Sum of States)



Source: Bureau of Economic Analysis.
 Colorado-based Business and Economic Research
<http://cber.co>



Questions

The following questions relate to the previous slides:

1. Looking forward, will output for the Health care sector increase as a result of the Affordable Care Act?
2. Has output for the Utilities sector increased as a result of alternative energy? How much more will it increase?
3. Will Agriculture continue its recent downward trend?
4. Will Private sector education output increase at a faster rate as the economy continues to improve? Why is private sector education growing at a faster rate in Colorado than the U.S.?

-
- Summary of Analysis
-

Summary

Sectors with Greatest Value

The sectors with greatest value for the U.S. and Colorado are listed below.

United States

Top 5 sectors

- Real estate and rental and leasing
- Government
- Manufacturing
- Finance and insurance
- Professional, scientific, and technical

In 2012, the top 5 sectors accounted for 52.4% of total output.

The top 5 sectors for the U.S. and Colorado are similar.

Colorado

Top 5 sectors

- Government
- Real estate and rental and leasing
- Professional, scientific, and technical
- Manufacturing
- Information.

In 2012, the top 5 sectors accounted for 50.6% of total output.

Colorado's Real GDP grew at a faster annualized rate than U.S. Real GDP from 1997 to 2012.

Colorado's Private Sector Real GDP grew at a faster annualized rate than the U.S. Private Sector Real GDP from 1997 to 2012.

Colorado's Government Real GDP grew at a slightly faster annualized rate than the U.S. Government Real GDP from 1997 to 2012.

2012 Colorado GDP vs. Employment

Top Ten Sectors – Output vs. Employment

There are distinct differences between the top 10 Colorado sectors for output and employment. Government tops both lists. The sectors in green are common to both lists and are particularly important to the Colorado economy.

Colorado Gross Domestic Product 2012

1. **Government**
2. Real estate and rental and leasing
3. **Professional, scientific, and technical**
4. Information
5. **Manufacturing**
6. **Finance and insurance**
7. **Health care and social assistance**
8. **Retail trade**
9. Wholesale trade
10. Mining

The top 10 sectors account for 77.7% of total output.

Colorado Employment 2012

1. **Government**
2. **Health care and social assistance**
3. Accommodations and food services
4. **Retail trade**
5. **Professional, scientific, and technical**
6. Administrative and waste management
7. **Manufacturing**
8. Construction
9. **Finance and insurance**
10. Other services

The top 10 sectors account for 81.9% of total employment.



Summary

Annualized Rate of Growth by Sector

The following 4 slides show the annualized rate of growth by sector for 2 time periods, 1997 to 2012 and 2009 to 2012. These slides illustrate differences in the drivers of the U.S. and Colorado economy.

United States (Sum of States) 1997 to 2012

The sectors with the fastest rate of growth were:

- Information
- Finance and insurance
- Wholesale trade
- Professional, scientific, and technical
- Administrative and waste management.

In 2012 these 5 sectors represented 28.9% of total output.

2009 to 2012

The sectors with the fastest rate of growth were:

- Manufacturing
- Accommodations and food services
- Arts, entertainment, and recreation
- Information
- Administrative and waste management.

In 2012, these 5 sectors represent 23.4% of total output.

Colorado 1997 to 2012

The sectors with the fastest rate of growth were:

- Information
- Management of corporations and enterprises
- Manufacturing
- Professional, scientific, and technical
- Wholesale trade

In 2012, these 5 sectors represent 32.7% of total output.

2009 to 2012

The sectors with the fastest rate of growth were:

- Utilities
- Arts, entertainment, and recreation
- Accommodations and food services
- Manufacturing
- Administrative and waste management.

In 2012, these 5 sectors represent 16.9% of total output.

Summary

Sectors with Negative Rates of Change

From 1997 to 2012 the U.S. had 3 sectors with negative rates of change and Colorado had 1 sector. From 2009 to 2012 the U.S. had 5 sectors with negative rates of change and Colorado had 4 sectors.

United States

1997 to 2012

- Mining
- Other services
- Construction.

In 2012, these sectors accounted for 7.8% of U.S. output.

2009 to 2012

- Agriculture
- Mining
- Mgmt. of companies and enterprises
- Government
- Educational services – private.

In 2012, these sectors accounted for 18.3% of U.S. output.

Government was responsible for 12.3% of output.

Colorado

1997 to 2012

- Construction.

In 2012, this sector accounted for 3.7% of state output.

2009 to 2012

- Finance and insurance
- Construction
- Mining
- Agriculture.

In 2012, these sectors accounted for 14.4% of U.S. output.

Conclusions

All industries are important to the economy for different reasons! Some may generate tax revenue for governments, they may create jobs, or they might pay higher than average wages. Others may be lifestyle industries or they may be strong producers of output. By comprehending how industries contribute to the economy, it is possible to better understand how they relate to each other and how they cause an economy to expand or contract.

- In Colorado, the sectors that include advanced technology companies (PST, Information, Manufacturing, and MCE) experienced strong output growth between 1997 and 2012. In 2012, these sectors accounted for more than 27% of state output. Technological improvements have allowed many of the companies in these industries to increase productivity through investments in capital rather than labor, i.e. they have contributed more significantly to output growth than net job creation.
- Since 2009, the tourism sector has been a leader in the rate of output growth, both nationally and in Colorado. Public and private leaders must continue to work together to protect Colorado's tourism assets.
- Output for the Utilities sector has also increased at a rapid rate as a result of increased fuel and infrastructure costs. It remains to be seen whether these increased costs will adversely affect businesses in other sectors.
- The extractive industries are a small, but very important part of the state economy. The data shows that Colorado has a distinctive competency in extractive industries. Policy makers will be challenged to protect the states natural resource assets in a responsible manner.
- Agriculture is another small, but important sector of the Colorado economy. Since 2009, the industry has declined both nationally and statewide.
- From 1997 to 2012, Colorado enjoyed stronger output growth than the nation. Unfortunately, that has not been the case from 2009 to 2012. Time will tell whether this is an aberration or a permanent change.
- Moving forward, it is imperative to have public and private leaders who understand that industries are important to the economy for different reasons. They must recognize that some industries create jobs, others generate output, and some produce both. In Colorado, the following sectors most effectively produce both: Health care; Retail trade; Professional, scientific, and technical; Manufacturing; and Finance and insurance.



Analysis of Colorado and U.S. Gross Domestic Product by Sector 1997 Through 2012

This analysis is for informational purposes only. Any opinions or interpretations of data are those of the presenter. As such, they do not represent the viewpoints of any group or particular organization.

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