Where Have All the Startups Gone?

Colorado-based Business and Economic Research

February 2, 2012

Purpose

The purpose of this month's review of the Colorado economy is to look at the relationship of private sector gross job gains and gross jobs losses as a way of understanding the fluctuations in net jobs. Quarterly data will be evaluated from Q1 1993 to Q2 2011, a total of 74 quarters.

This will be followed by a brief discussion of the performance of startups in the U.S. and Colorado economies.

Executive Summary

The job churn of the 1990s was reflected in steady gross job losses and gross job gains, with gross gains always exceeding gross losses. The pattern for the 2000s was much different.

Gross job gains trended downward during the 2000s.

During the past decade, gross job losses have fluctuated; they increased during recessions and decreased during recoveries. In other words, the recovery from both recessions was more a result of a decrease in gross job losses than an increase in gross job gains.

The number of startup firms has declined since 2006. Despite Colorado's entrepreneurial spirit, the general pattern for startups is similar for the U.S. and Colorado.

The average number of jobs created at startups has increased at a declining rate since 1999 for both Colorado and the U.S.

The average number of jobs created at Colorado startups is less than U.S. startups.

Overview

- U.S. and Colorado gross job gains and losses
- U.S. and Colorado gross job gains and losses with average gains and losses
- U.S. and Colorado gross firm gains and losses
- U.S. and Colorado gross firm gains and losses with average gains and losses
- Gross job changes per firm
- Key points and questions – gross job changes
- What is a startup?
- Firms and employment less than one-year old
- Changes in employment and number of firms over time - 1994 startups
- Survival rates; historical rates 2-years, 5–years, 8-years
- Key points and questions - startups
- Sources and scope of BED data
- Definitions

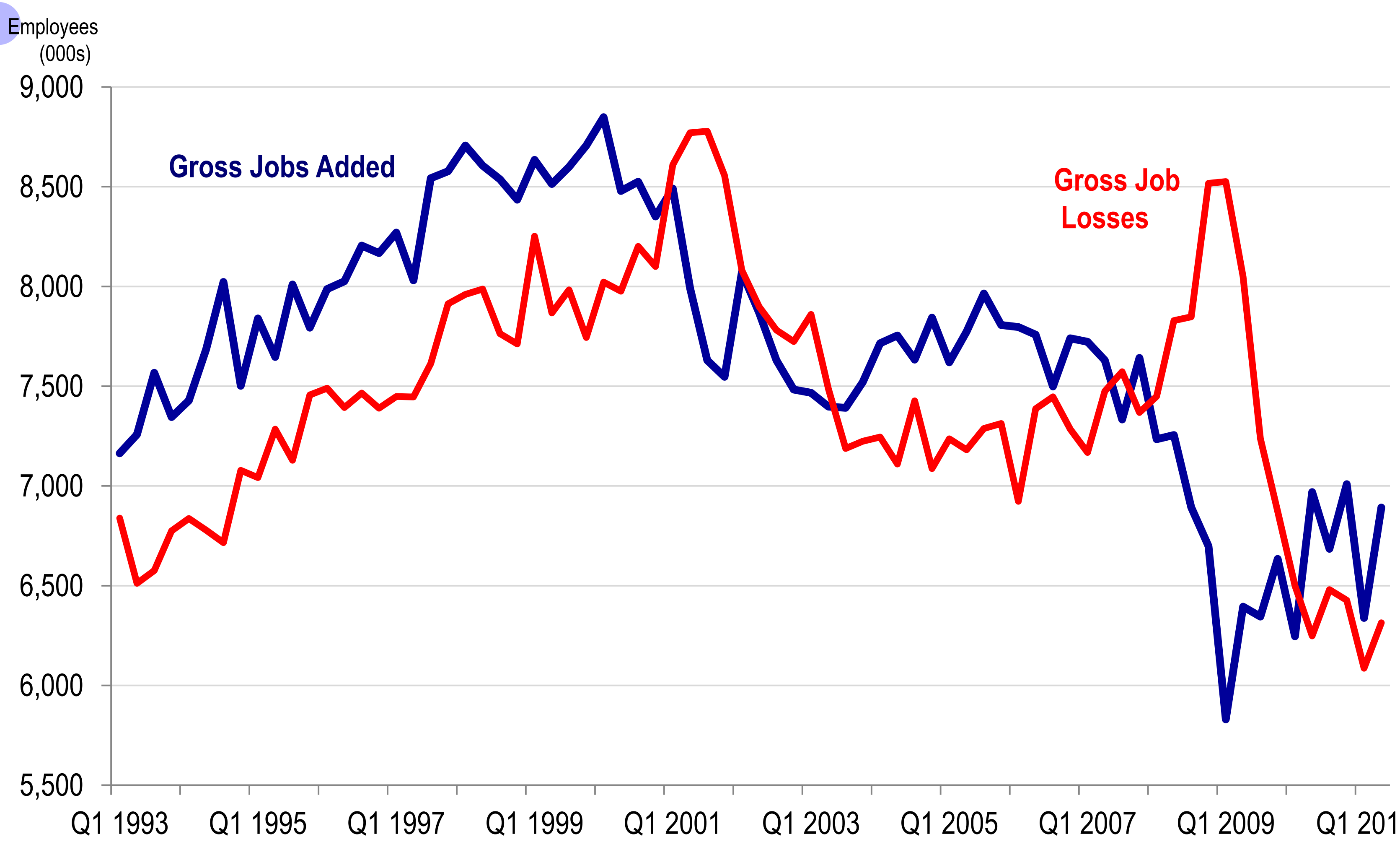
U.S. and Colorado Gross Job Gains and Losses

The next two slides show U.S. and Colorado gross job gains and losses. Gains may occur from expanding or new firms. Losses may occur from declining or closing firms. A scope of the database used for this analysis and more extensive definitions are included at the end of the presentation.

At first glance there are four general trends to note:

- The 1990s were a period of innovation and growth. There was significant job churn. Gross job gains and gross losses increased at similar rates and were highly correlated.
- During the two recessions during the 2000s gross jobs losses rose significantly. Gross losses dropped off during the recovery periods.
- Gross job gains increased at a declining rate during the two recessions. There was a weak increase in job gains after the 2001 recession and a stronger gain after the 2007 recession; however, the overall trend for the decade was downward.
- The quarterly changes for the U.S. and Colorado had similar patterns.

U.S. Job Gains and Job Losses



Source: Bureau of Labor Statistics.

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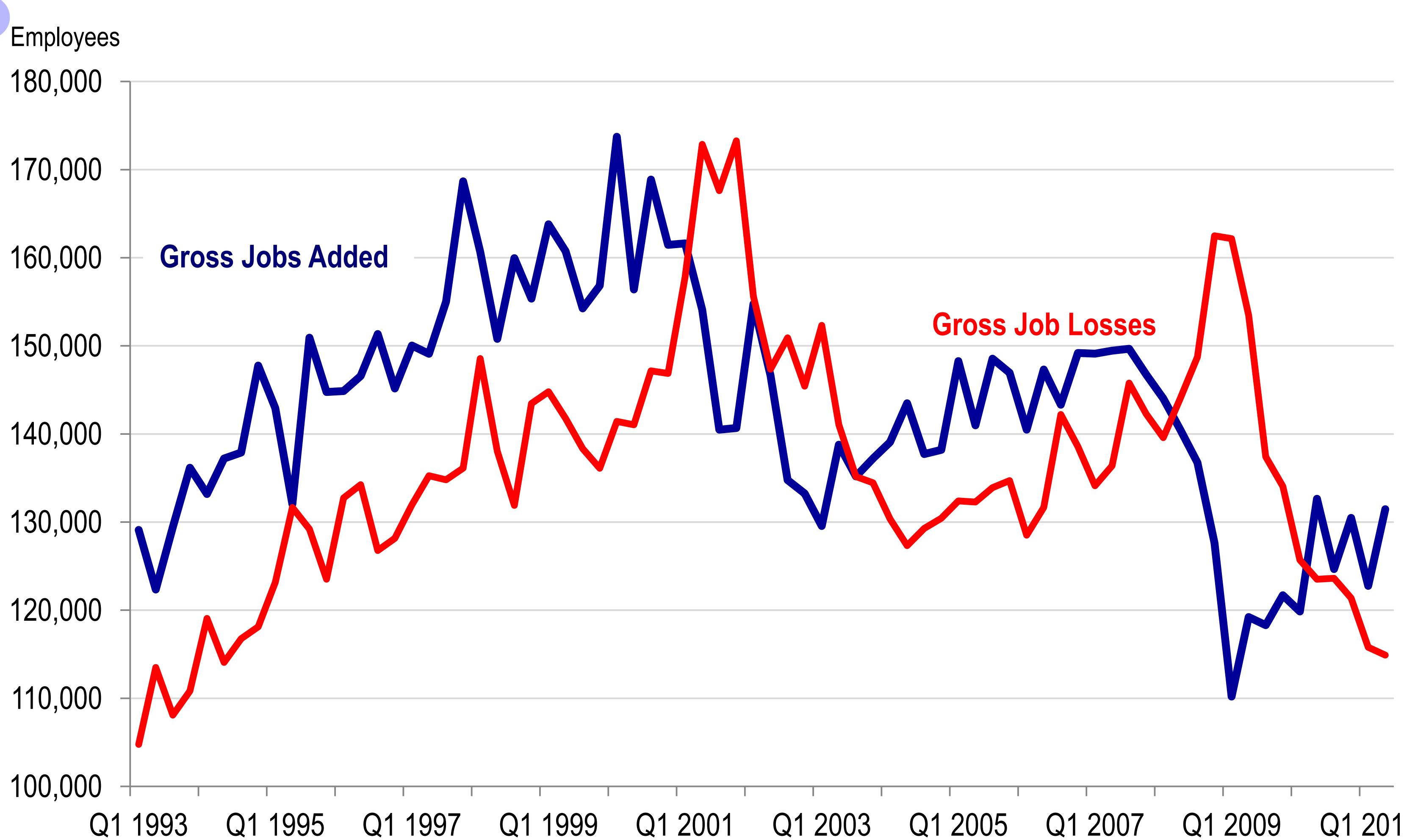
Colorado Job Gains and Job Losses



Source: Bureau of Labor Statistics.

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U.S. Gross Job Gains and Losses With Average Gains and Losses

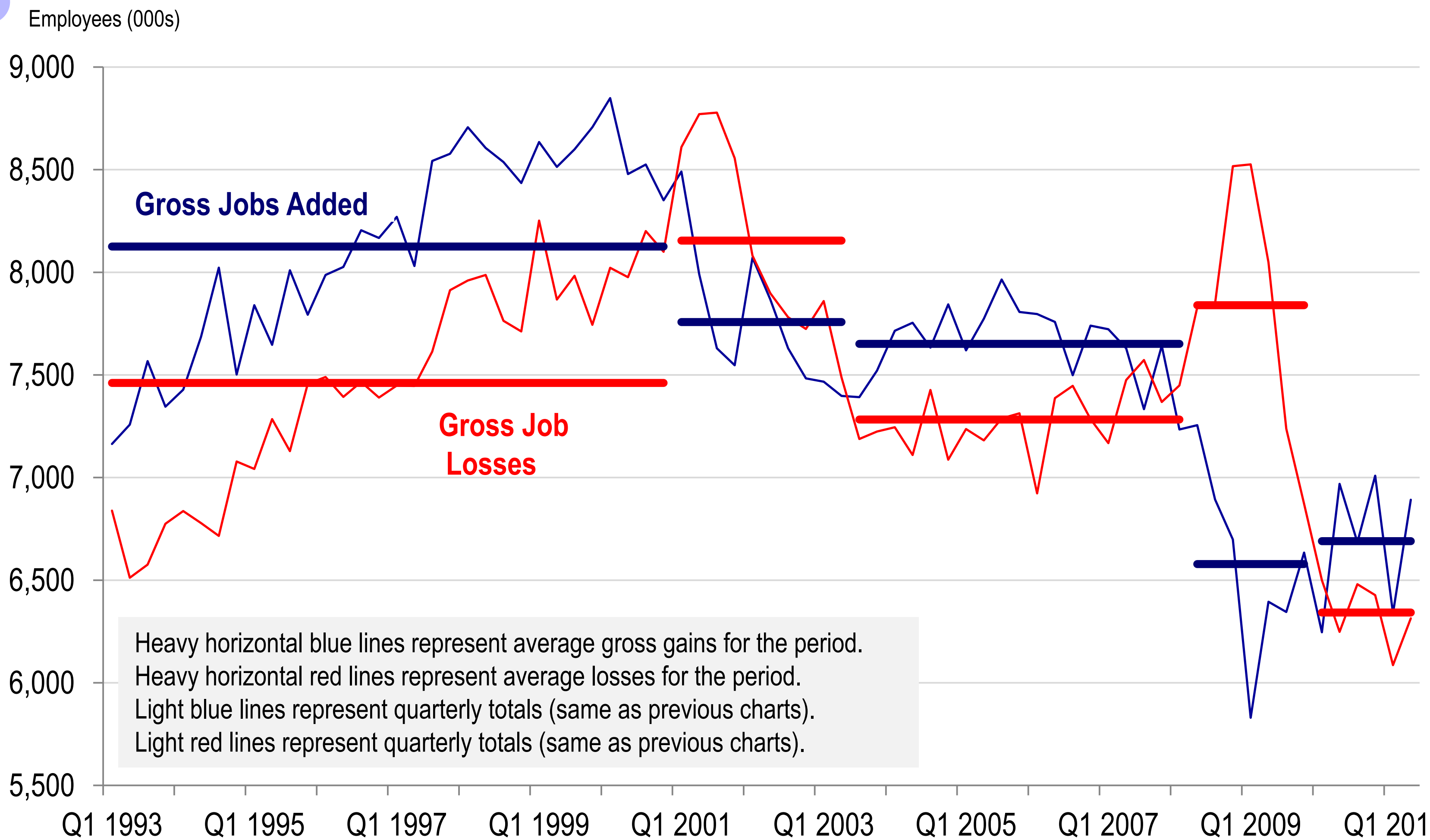
The following analyses shows U.S. and Colorado gross job gains and losses with averages for the following periods.

- Q1 1993 to Q4 2000 (32 quarters or 96 months).
  - Gross job gains exceeded gross job losses in each of the 32 quarters, for the U.S. and Colorado.
- Q1 2001 to Q2 2003 (10 quarters or 30 months).
  - Gross job losses exceeded gross job gains in each of the 10 quarters for the U.S. and for 8 of the 10 quarters for Colorado.
- Q3 2003 to Q1 2008 (19 quarters or 57 months).
  - Gross job gains exceeded gross job losses in 17 of 19 quarters, for both the U.S. and Colorado.
- Q2 2008 to Q4 2009 (7 quarters or 21 months).
  - Gross job losses exceeded gross job gains in all 7 quarters for both the U.S. and Colorado.
- Q1 2010 to present (6 quarters or 18 months).
  - Gross job gains exceeded gross job losses in 5 of the 6 quarters for both the U.S. and Colorado.

Key points from the review of gross job gains and losses are:

- Average gross job gains (horizontal blue lines) have declined over these five periods.
- Average gross job losses (red lines) have fluctuated; they increased during recessions and decreased during recoveries.
- The current recovery is driven by the sharp decrease in job losses, not a significant increase in gross job gains.
- The quarterly changes for the U.S. and Colorado had similar patterns.

U.S. Job Gains and Job Losses



Source: Bureau of Labor Statistics.

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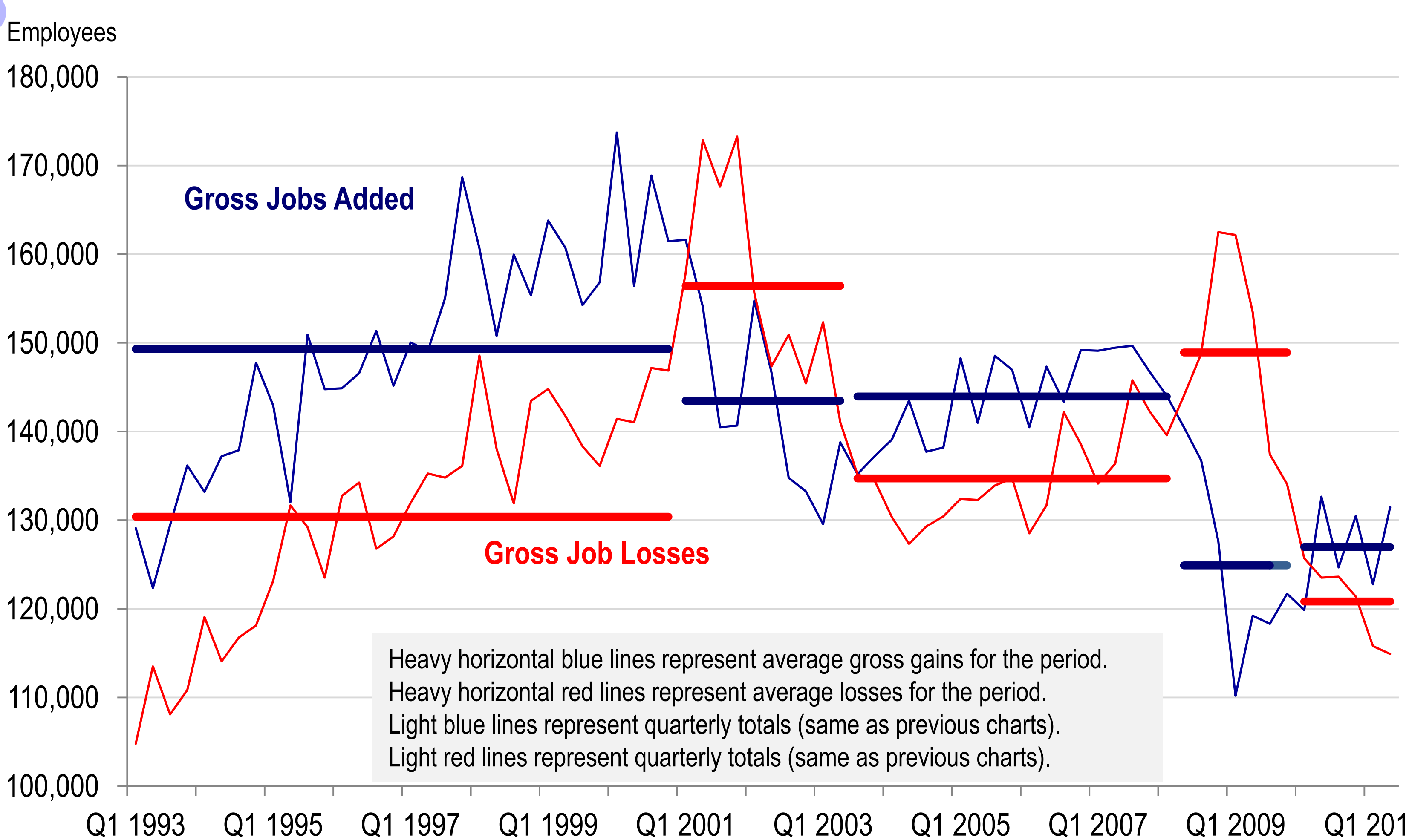
Colorado Job Gains and Job Losses



Source: Bureau of Labor Statistics.

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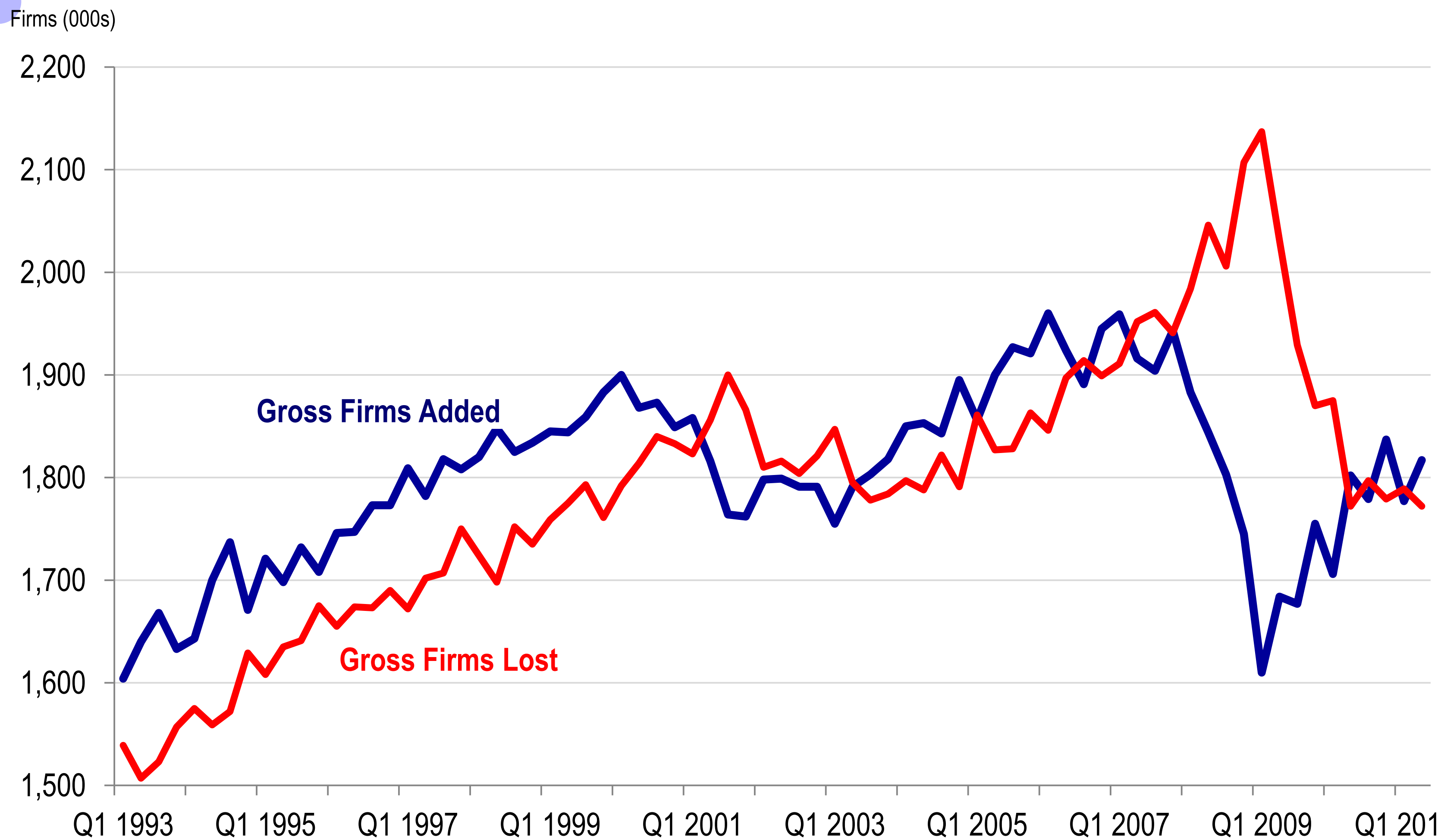
U.S. and Colorado Gross Firm Gains and Losses

The next two slides show U.S. and Colorado gross firm gains and losses. Gains may occur from expanding or new firms. Losses may occur from declining or closing firms.

At first glance there are four general trends to note. These trends are similar to employment trends.

- The 1990s were a period of innovation and growth. There was significant firm churn. Gross firm gains and gross losses increased at similar rates and were highly correlated.
- During the two recessions during the 2000s gross firm losses increased; they dropped off during the recovery periods.
- During the two recessions during the 2000s the general trend was for gross firm gains to decline; they increased during the recovery periods.
- The quarterly changes for the U.S. and Colorado had similar patterns.

U.S. Firm Gains and Firm Losses



Source: Bureau of Labor Statistics.

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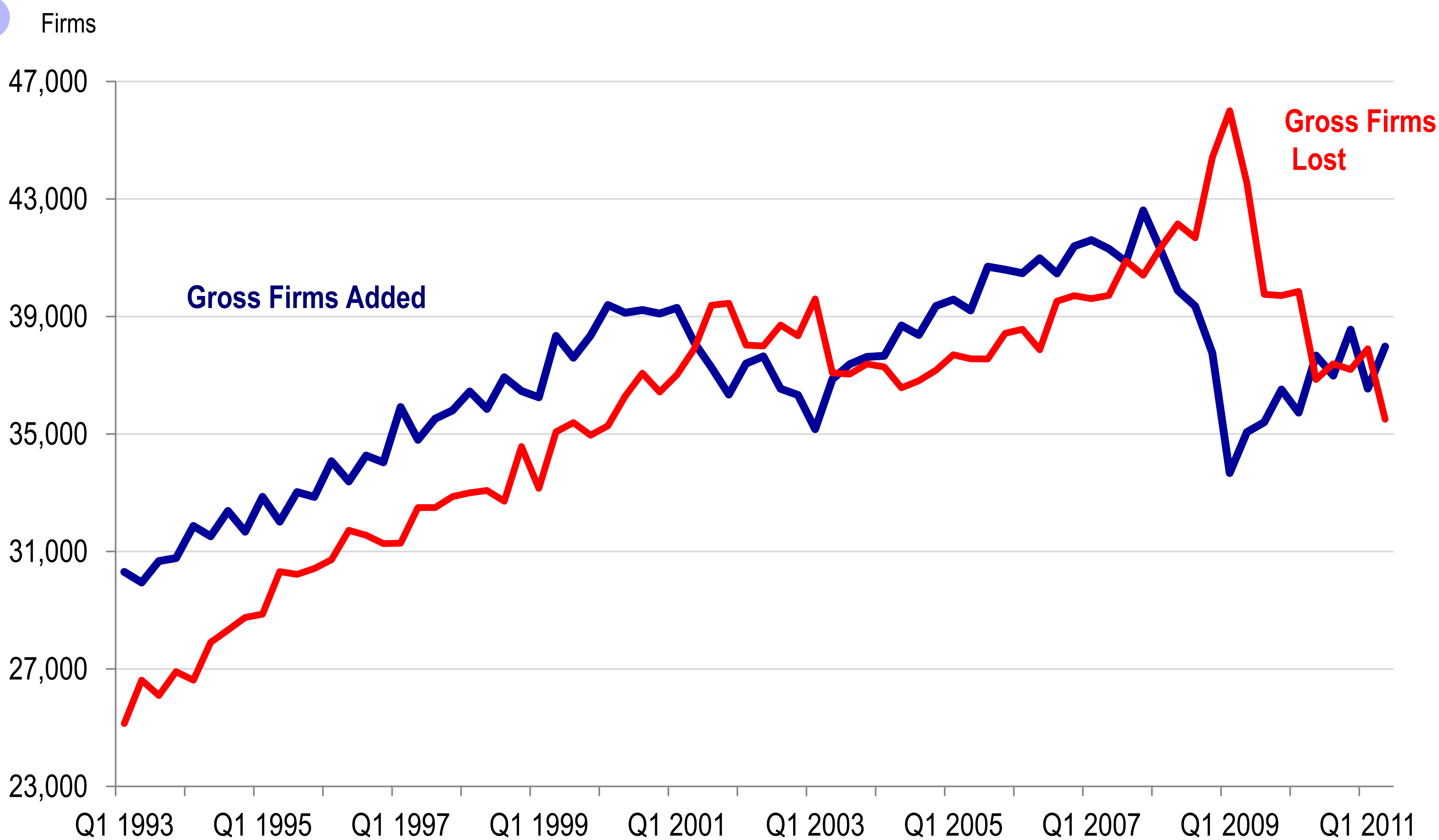
Colorado Firm Gains and Firm Losses



Source: Bureau of Labor Statistics.

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U.S. and Colorado
Average Gross Firm Gains and Losses

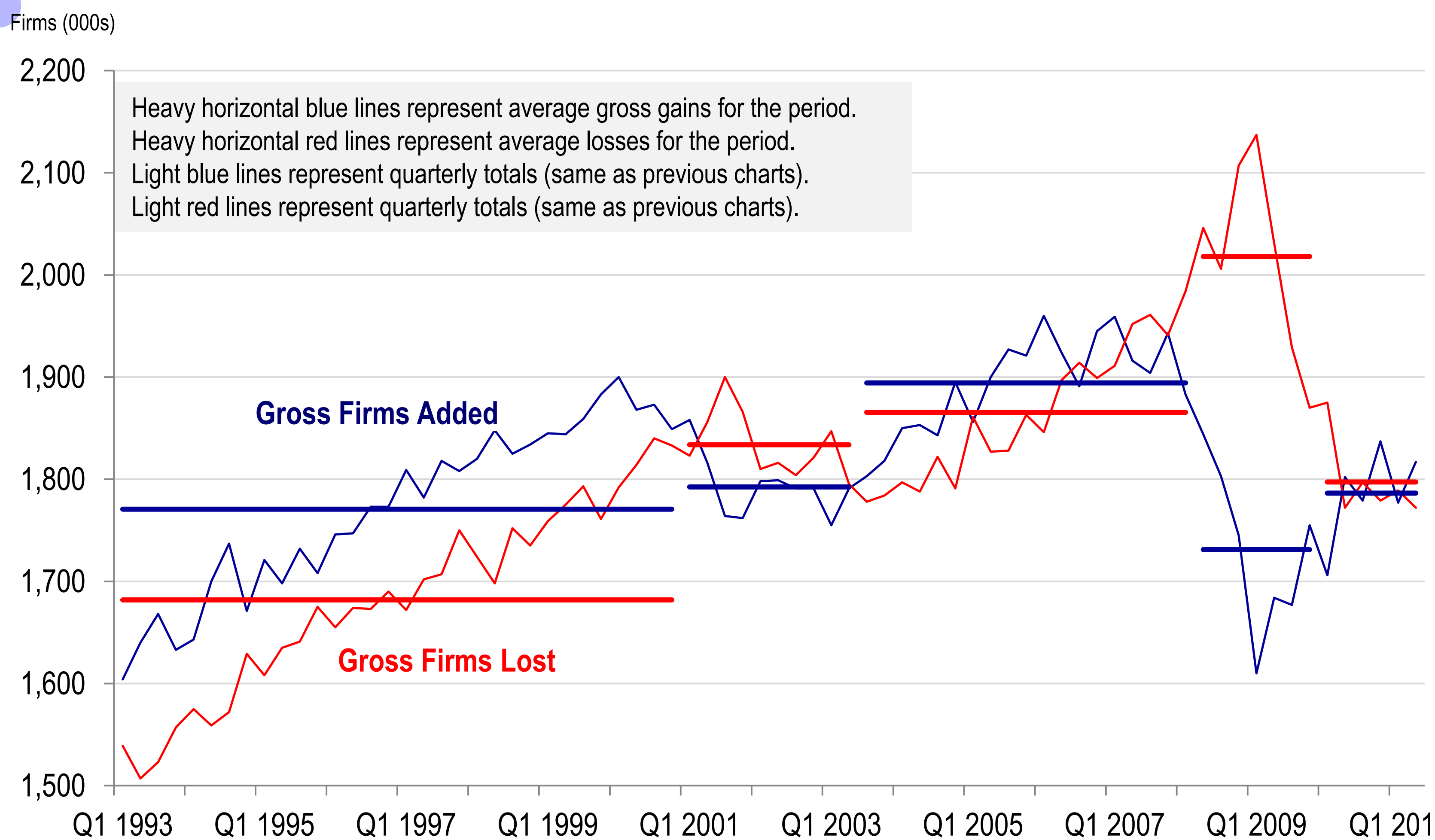
This analysis shows U.S. gross firm gains and losses for the following periods.

- Q1 1993 to Q4 2000 (32 quarters or 96 months).
  - Gross firm gains exceeded gross firm losses in each of the 32 quarters, for the U.S. and Colorado.
- Q1 2001 to Q2 2003 (10 quarters or 30 months).
  - Gross firm losses exceeded gross firm gains in 9 of the 10 quarters for the U.S. and Colorado.
- Q3 2003 to Q1 2008 (19 quarters or 57 months).
  - Gross firm gains exceeded gross firm losses in 14 of 17 quarters, for both the U.S. and Colorado.
- Q2 2008 to Q4 2009 (7 quarters or 21 months)
  - Gross firm losses exceeded gross firm gains in all 7 quarters for both the U.S. and Colorado.
- Q1 2010 to present (6 quarters or 18 months).
  - Gross firm gains exceeded gross firm losses in 3 of the 6 quarters for both the U.S. and Colorado.
- The quarterly changes for the U.S. and Colorado firms had similar patterns.

Key points from the review of gross job gains and losses are:

- Growth patterns for employment and firms are different.
- Average gross firm gains (horizontal blue lines) increased through 2007, then declined.
- Average gross firm losses (horizontal red lines) increased through 2010, then declined.
- The quarterly changes for the U.S. and Colorado had similar patterns.

U.S. Firm Gains and Firm Losses



Source: Bureau of Labor Statistics.

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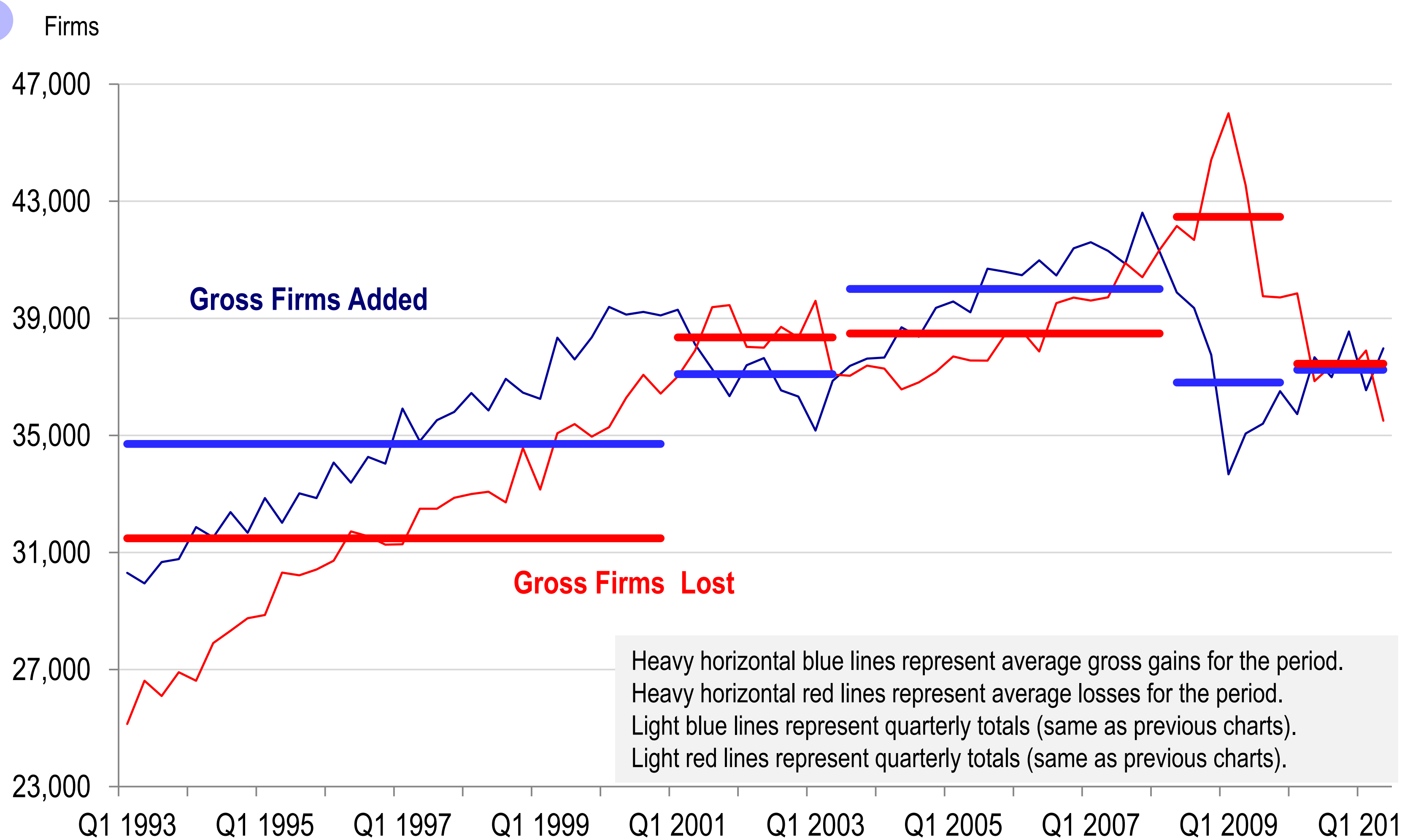
Colorado Firm Gains and Firm Losses



Source: Bureau of Labor Statistics.

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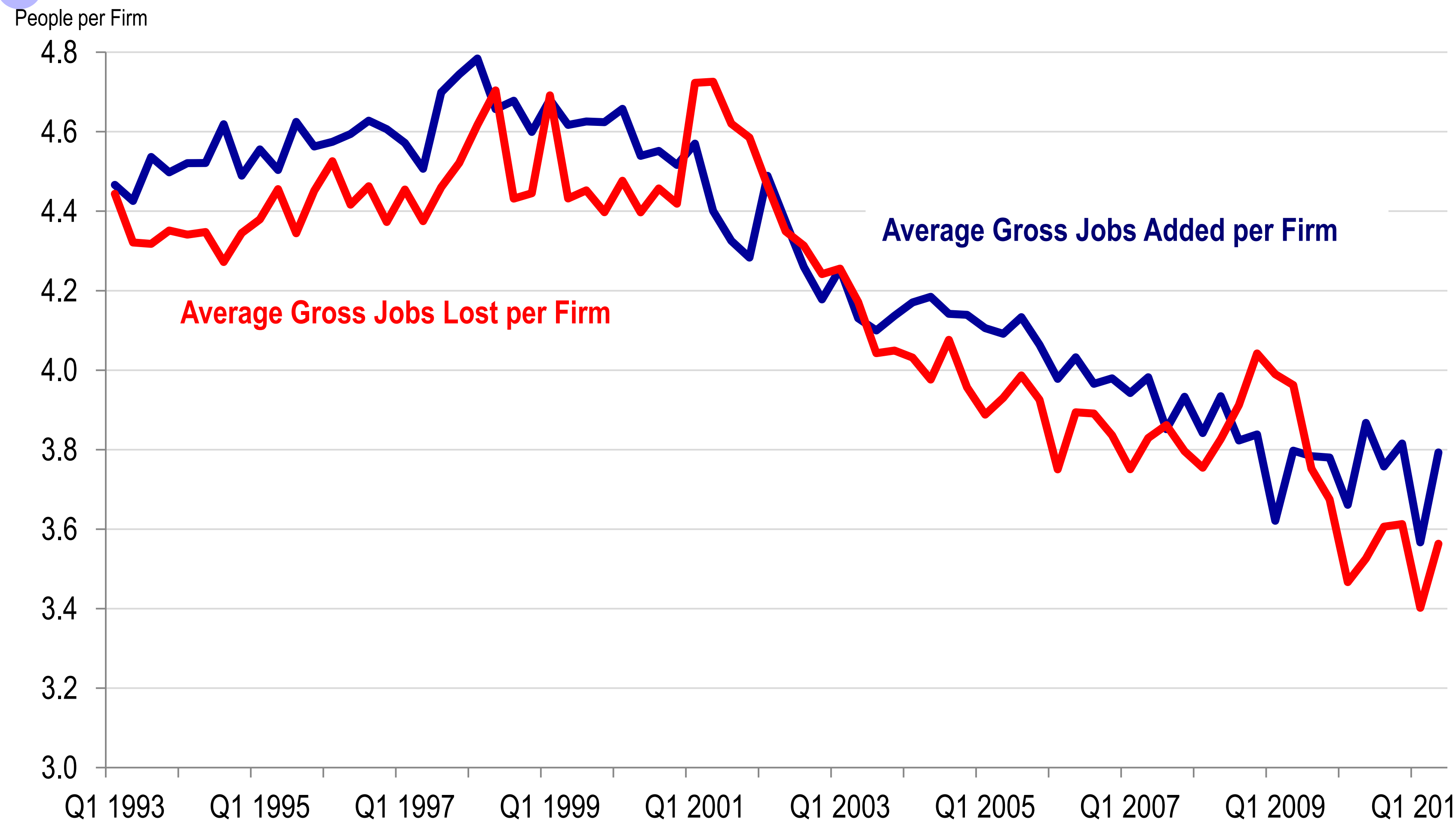
Gross Job Changes per Firm

The following two slides look at the average gross changes for the U.S. and Colorado. This includes average gross jobs added per firm that added jobs and average gross jobs lost per firm that lost jobs.

Key Findings

- Average gross job changes for the U.S. are typically greater than for Colorado.
- In 59 of the 74 quarters the average gross jobs added was greater than gross jobs lost for the U.S.
  - Gross jobs added per firm had a slight upward trend from 1993 through Q1 2001.
  - Gross jobs lost per firm had a slight upward trend from 1993 through Q1 2002.
  - Gross job changes per firm have declined in the 2000s.
- In 51 of the 74 quarters the average gross jobs added was greater than gross jobs lost for Colorado.
  - Gross jobs added per firm had a slight upward trend from 1993 through Q1 2000. The upward trend ended a year earlier than the U.S.
  - Gross jobs lost per firm had a slight upward trend from 1993 through Q4 2001.
  - Gross job changes per firm have declined in the 2000s.

U.S. Average Gross Job Changes per Firm



Source: Bureau of Labor Statistics.

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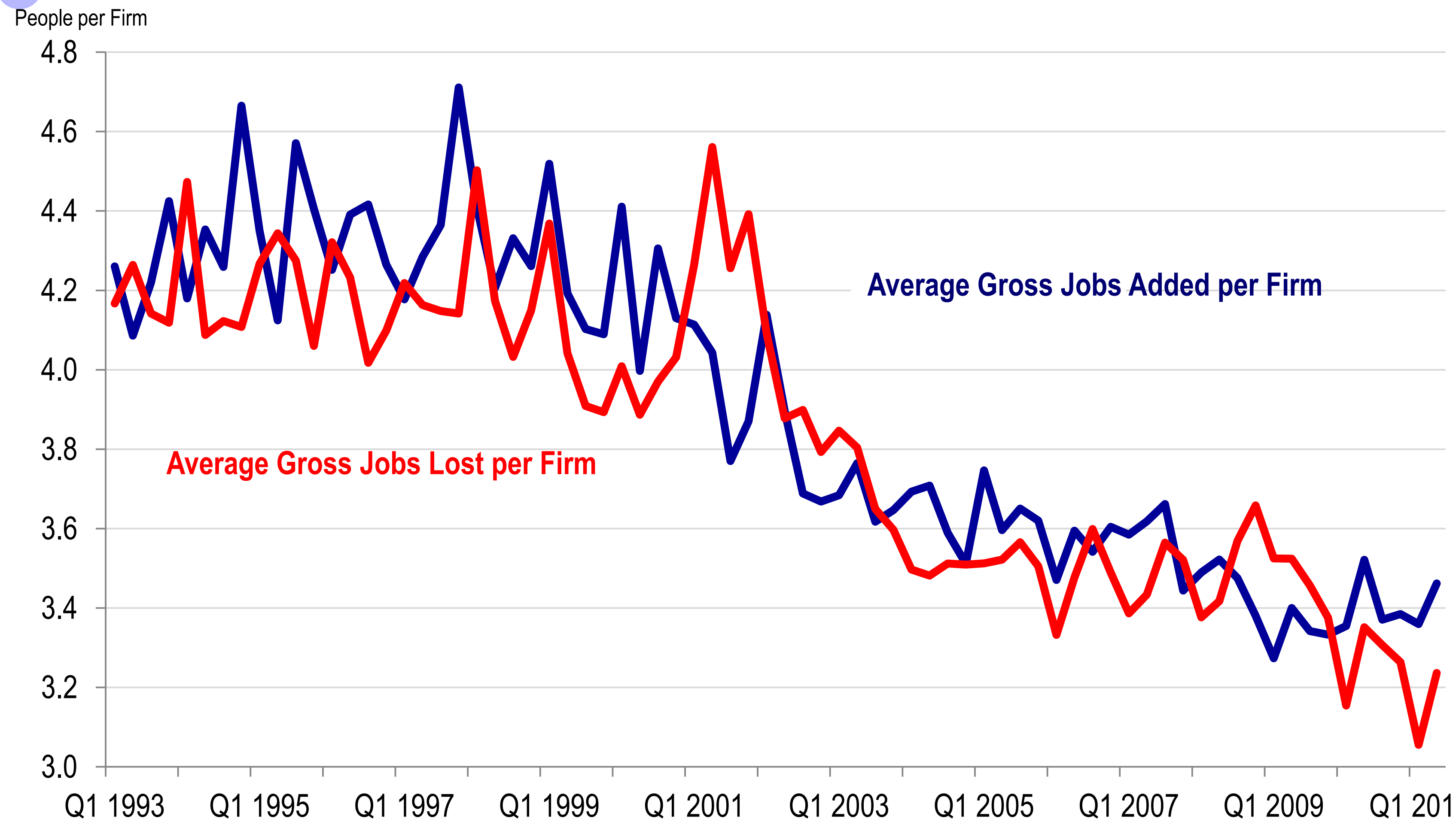
Colorado Average Gross Job Changes per Firm



Source: Bureau of Labor Statistics.

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Key Points and Questions Gross Job Changes

Conclusions

- Since 2000 average gross job gains have declined for Colorado and the U.S.
- During the 1990s gross job losses grew at a steady pace in conjunction with gross job gains because of the job churn.
- During the 2000s, job losses have fluctuated; they increased during recessions and decreased during recoveries. In other words, the recovery from the recessions was more a result of a decrease in job losses than an increase in gross job gains.
- The quarterly gross changes in U.S. and Colorado employment have similar patterns.
- Growth patterns for employment and firms are different. Gross firm gains increased from 1993 through 2007, whereas gross job gains increased from 1993 to 2000 and decreased after 2000.
- Gross job changes per firm have declined in the 2000s.
- On average, firms have added fewer workers than in previous years.

Questions

- Fewer firms were formed and more went out of business as a result of the 2007 recession. What were the causes? Lack of demand? Poor management? Access to capital?
- Since 1999 firms have added fewer employees. Why? Increased efficiency? Cost cutting measures?

What is a Startup?

There are many ways to define an entrepreneurial business venture or a start-up company.

- No formal structure.
- Type - Sole proprietorships or LLCs.
- Funding - Microenterprises.
- Size - A company with 1-4 employees.
- Age - A company less than 1 year in age with employees.

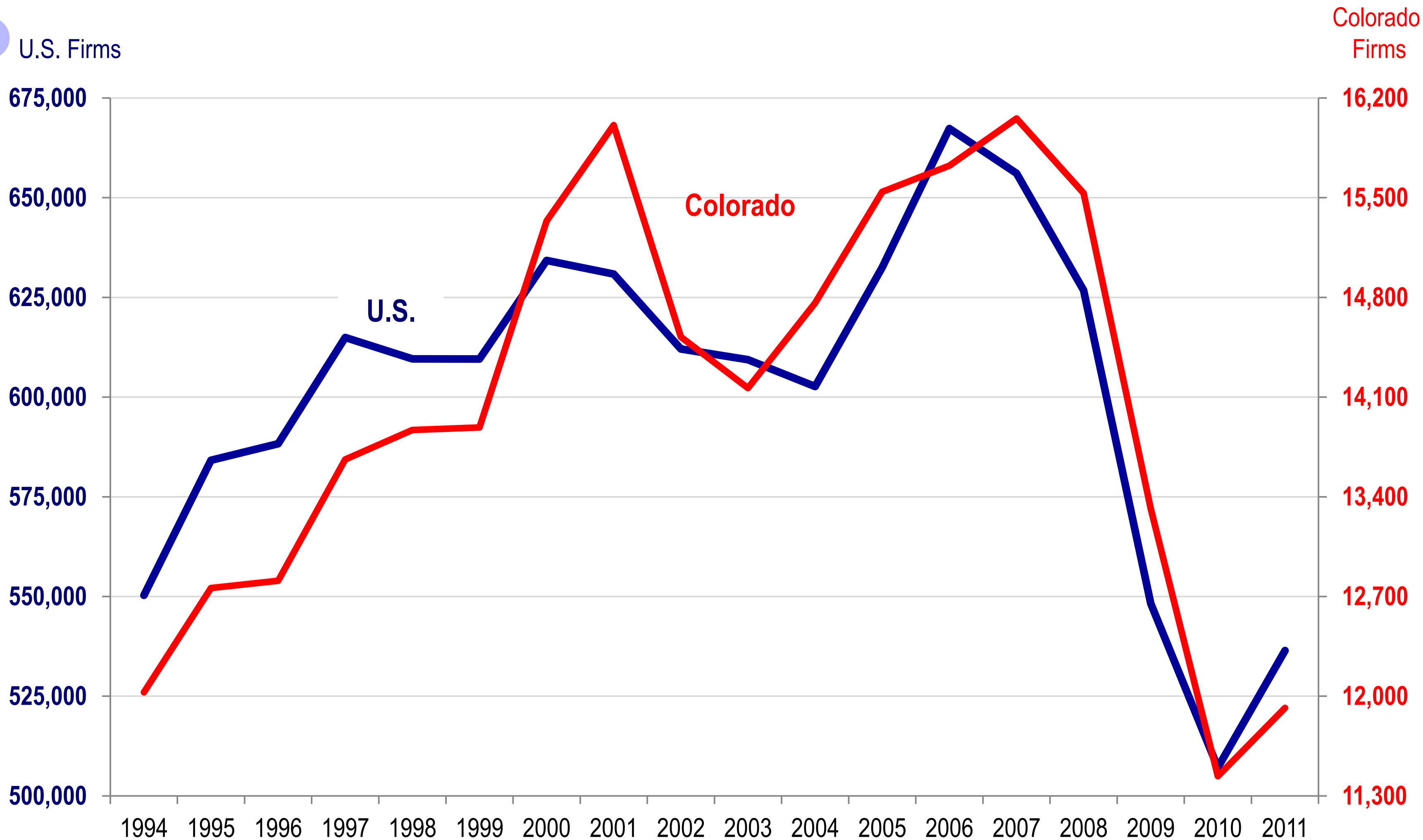
For purposes of this presentation, firms less than one-year in age will be referred to as startups. By definition, it does not include sole proprietorships and may not include LLCs, microenterprises, or all companies with 1-4 employees.

Firms and Employment Less than One Year Old

The following charts show the number of startups and the number of employees in those firms. They are measured for the year ending in March, for example April 1993 through March 1994.

- The number of startups, U.S. and Colorado, typically increases and decreases with the different phases of the U.S. business cycle. The changes in the number of startups were at their lowest level for the year ending in March 2010. This period includes the last three months of the 2007 recession and the first 9 months of the recovery.
- The number of jobs created at these firms has increased at a declining rate since 1999 for both Colorado and the U.S.
- The average number of jobs created at these firms has increased at a declining rate since 1999 for both Colorado and the U.S.
- The average number of jobs created at Colorado startups is less than U.S. startups.

Number of Firms Less than One Year Old



Source: Bureau of Labor Statistics.

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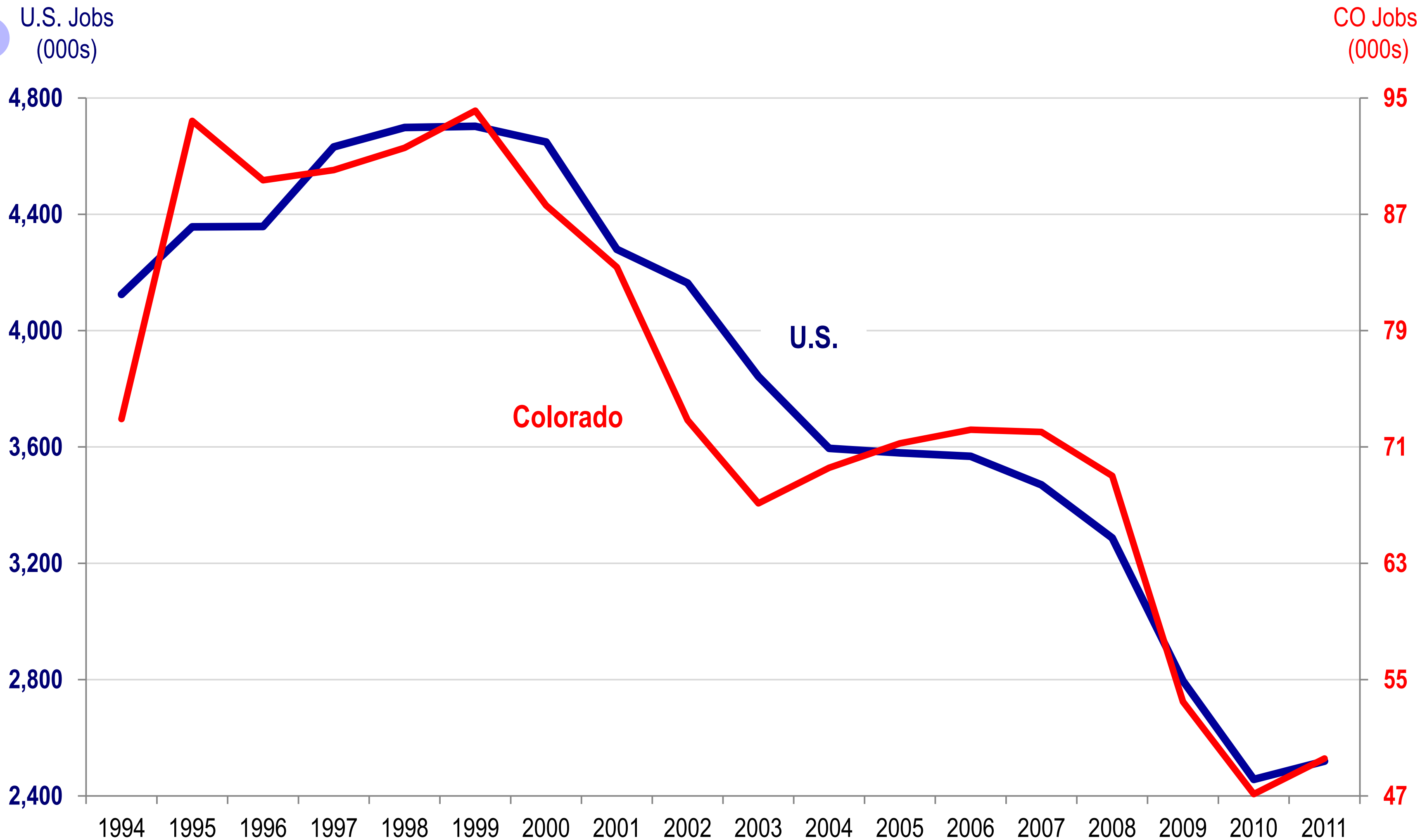
Jobs Created by Firms Less than One Year Old



Source: Bureau of Labor Statistics.

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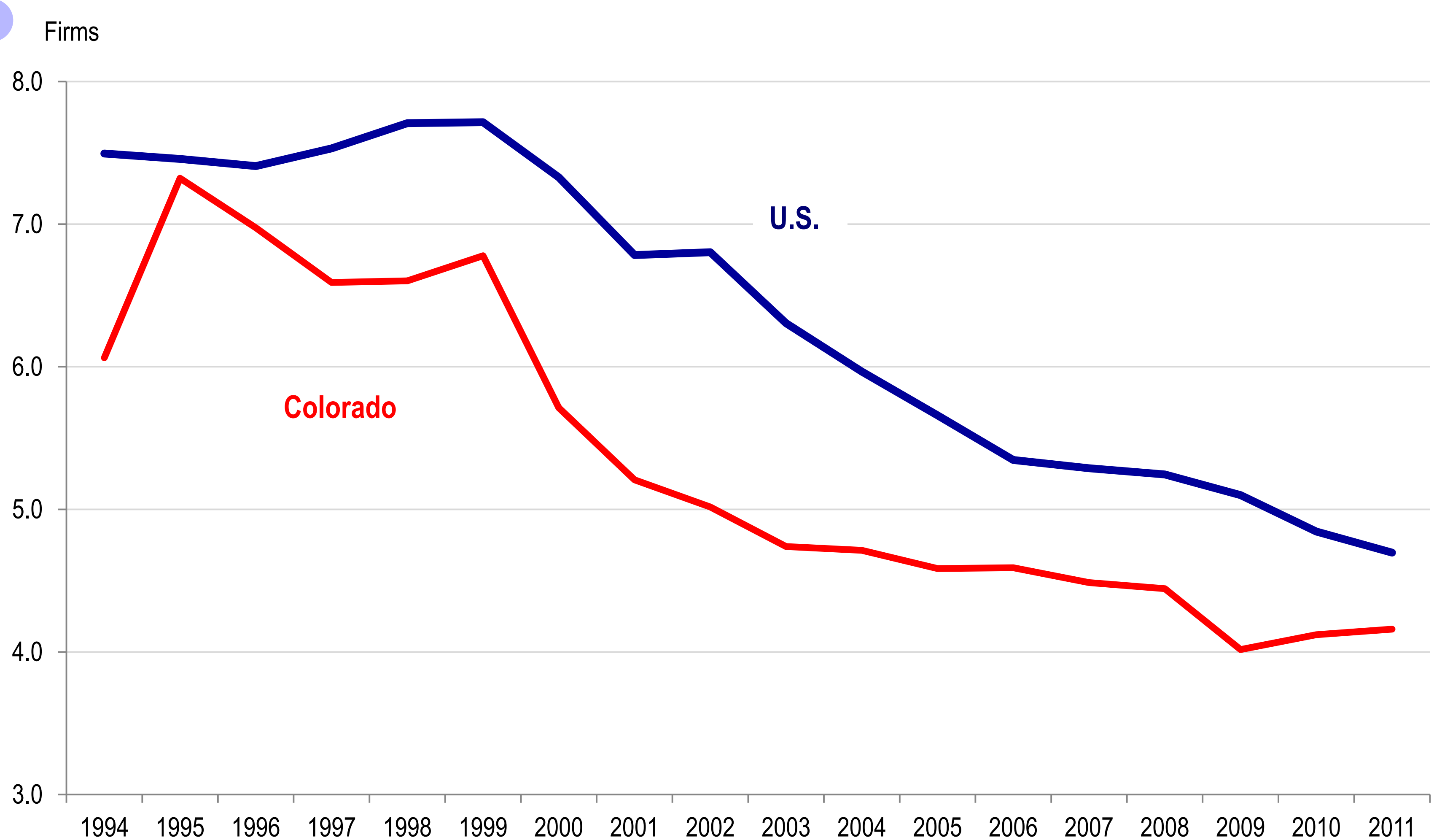
Average Employment at Firms Less than One Year Old



Source: Bureau of Labor Statistics.

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Changes in Employment and Number of Firms Over Time
1994 Startups

As a way of understanding the success of startups over time, the following two slides show what happened to the startups that were formed in the year ending in March 1994.

By definition, the number of jobs and firms will always be positive in the first year. In subsequent years some firms went out of business . As well, some firms added jobs and others lost jobs. The net change in employment was positive in 5 of 17 years.

Employees

- In 1994 the firms had 72,918 employees.
- In 2011 firms had 48,987 employees.

Firms

- In 1994 there were 12,027 firms.
- In 2011 there were 2,679 firms.

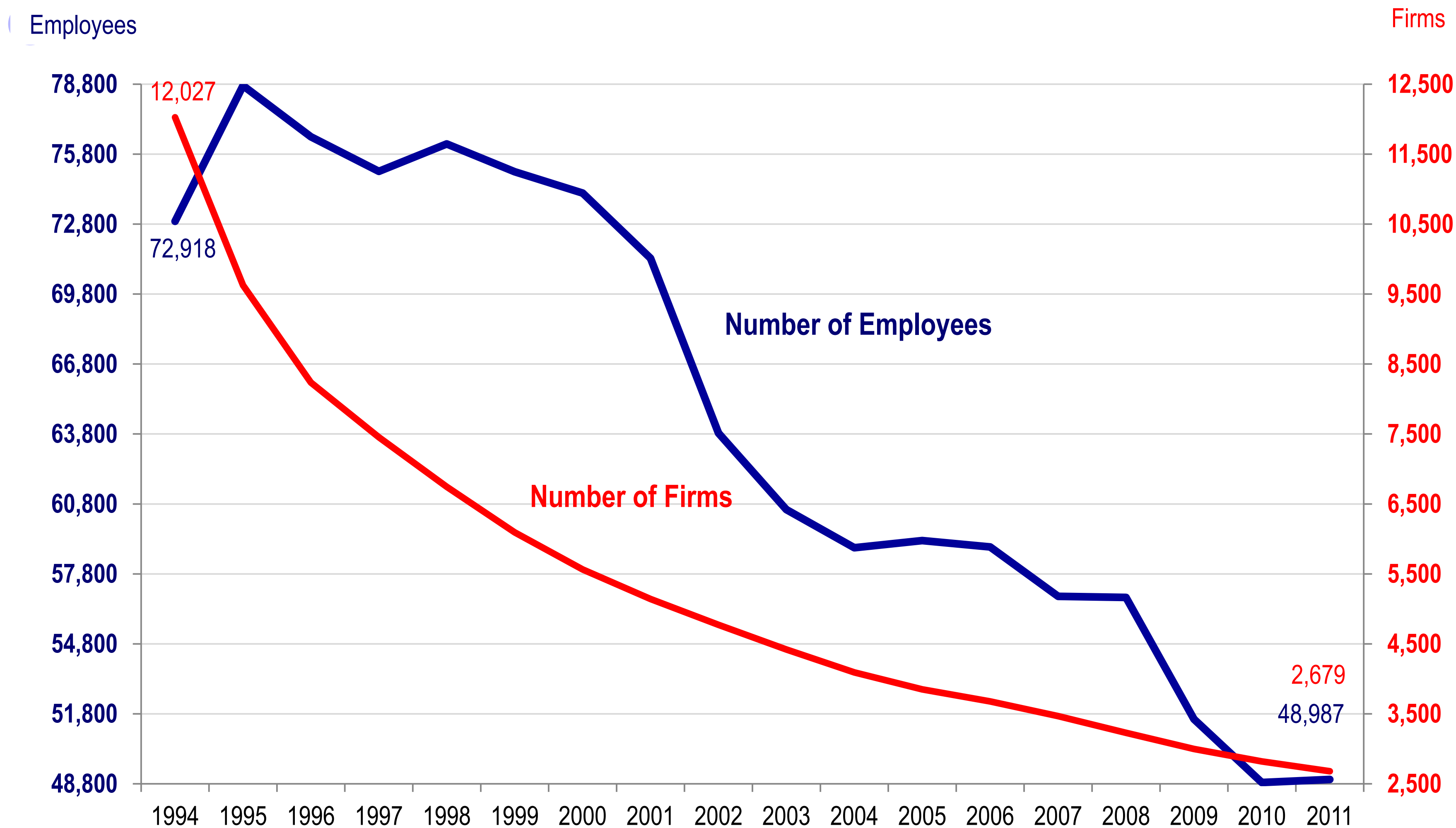
Average Firm Size

- In 1994 the average firm size was 6.1 employees.
- In 2011 the average firm size was 18.3 employees.

Survival Rate

- In 1994 the survival rate was 100%.
- In 2011 the survival rate was 22.3%.

Colorado Survival of the Fittest - 1994 Startups
Number of Jobs and Firms



Source: Bureau of Labor Statistics.

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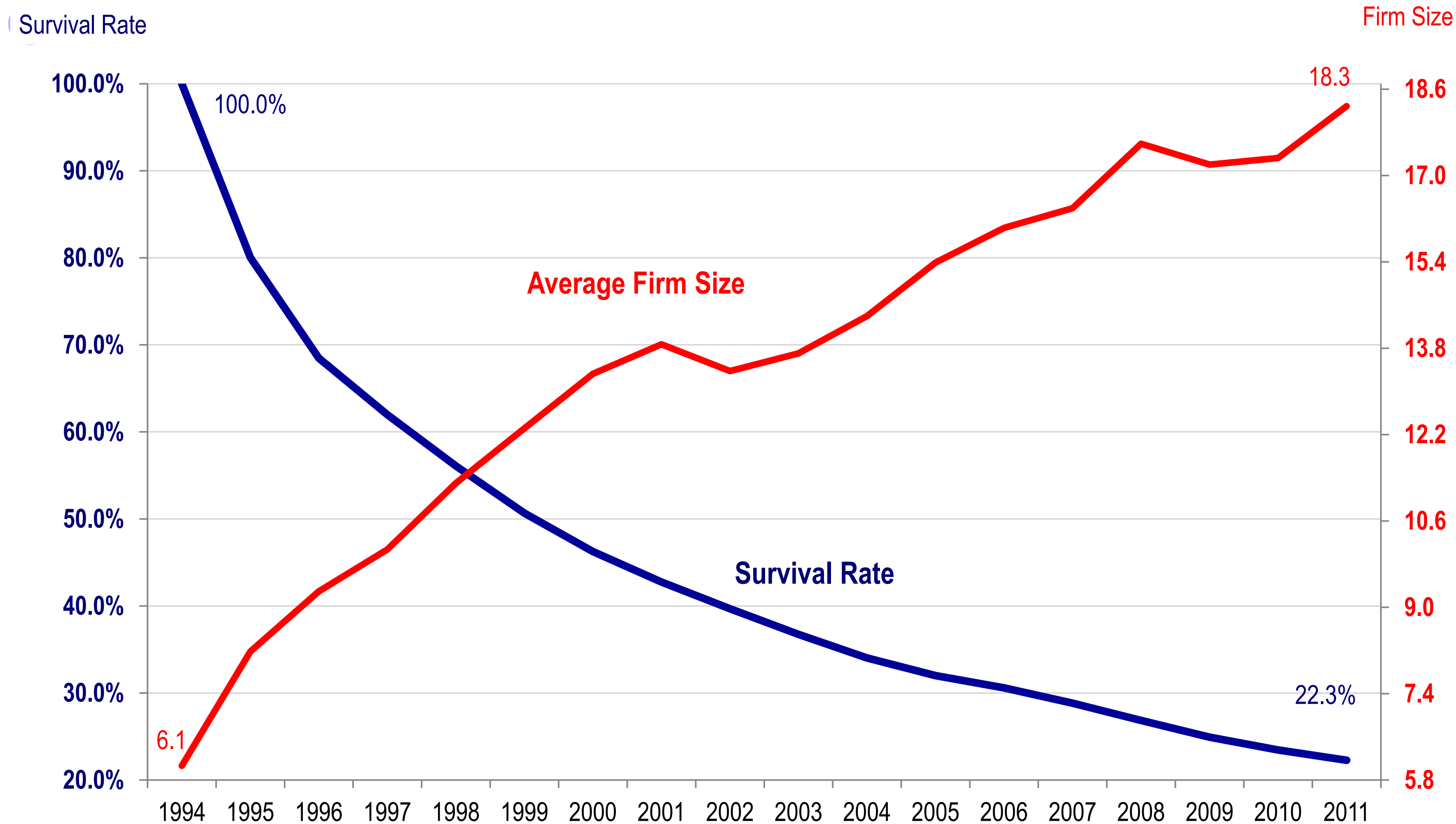
Colorado Survival of the Fittest

Survival Rates and Average Firm Size



Source: Bureau of Labor Statistics.

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Survival Rates, 1994 to Present
Historical Rates 2-Years, 5–Years, 8-Years

What the Following Chart Measures

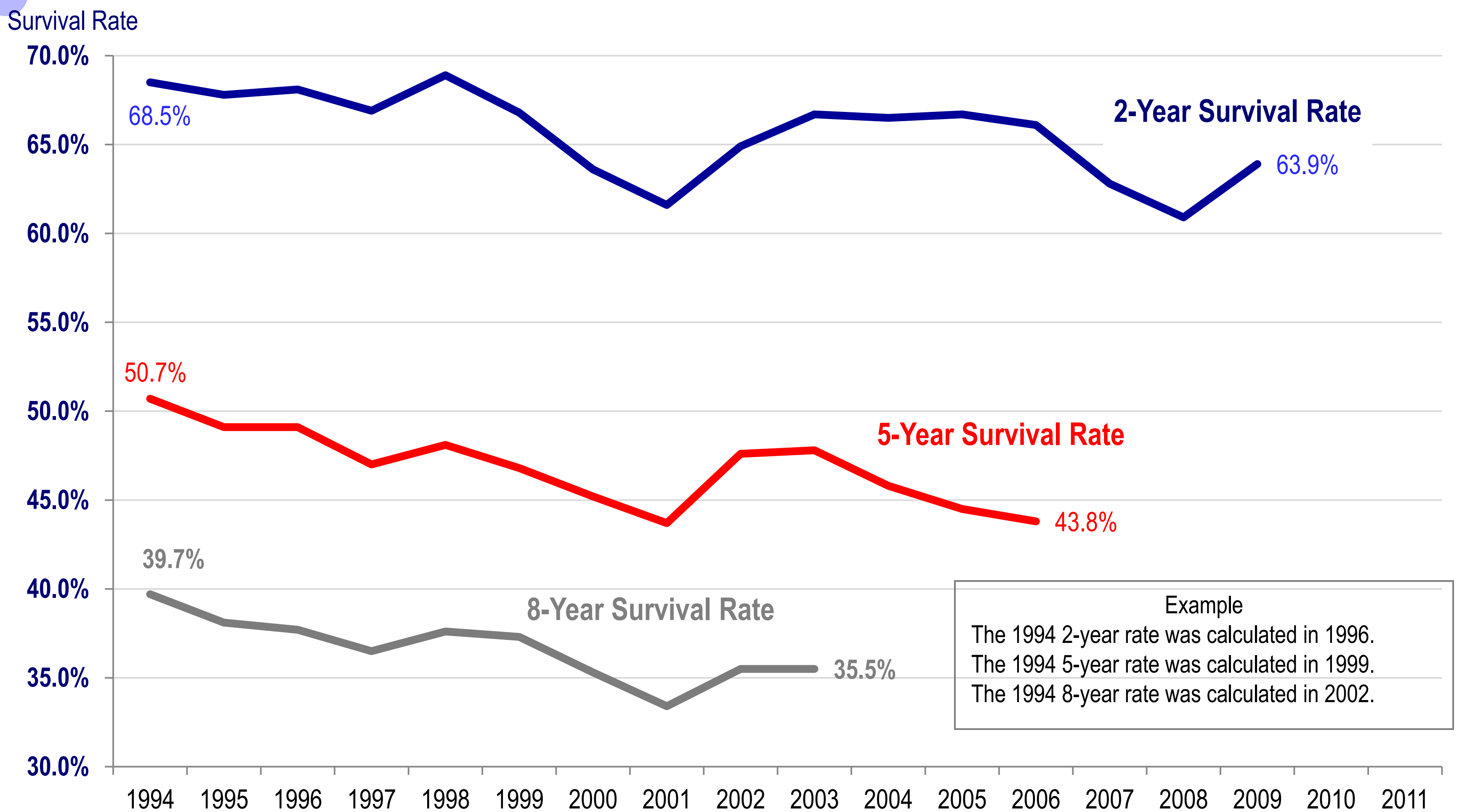
This period included some extreme economic conditions, rapid growth during the 1990s and two recessions in the 2000s. This raises the question, “Is the survival rate different based on when the firm was started?”

- The previous slides looked at the 2011 survival rates of firms that were startups in the year ending March 1994 (1994 data); 22.3% of the firms survived. The following chart looks at 2-year, 5-year, and 8-year survival rates for 1994 to present.
  - The 2-year rates associated with 1994 were calculated in 1996, the 2-year rates associated with 1995 were posted in 1997 and so forth. Obviously, there are not two-year survival rates for 2010 and 2011 startups.
  - The 5-year rates associated with 1994 were recorded in 1999, the 5-year rates for 1995 were posted in 2000, etc. Clearly, 5-year rates cannot be calculated for years after 2006.
  - The 8-year rate associated with 1994 were recorded in 2002, the 8-year rate associated with 1995 were posted in 2003, and so on. At this time, the 8-year rates cannot be calculated for years after 2003.

Is the survival rate different based on when the firm was started?

- The 2-year rates began declining in 1999, posted a slight increase in 2002, declined in 2006 and rebounded in 2009. These changes coincide with changes in the business cycle.
- The 5-year rates showed a steady decline beginning in 1995. There was an uptick in 2002 and 2003, but the downward trend reappeared in 2004.
- The 8-year rates showed a downward trend beginning in 1995. There was slight upward movement in 2002 and 2003.

Colorado Survival of the Fittest
Historical Rates 2-Years, 5–Years, 8-Years



Source: Bureau of Labor Statistics.

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Key Points and Questions Startups

Comments - Startups

- The number of startup firms has declined since 2006. Despite Colorado's entrepreneurial spirit, the general pattern for startups is similar for the U.S. and Colorado. If anything, Colorado may lag national trends.
- The average number of jobs created at these firms has increased at a declining rate since 1999 for both Colorado and the U.S.
- The average number of jobs created at Colorado startups is less than U.S. startups.

Comments – Firms that were startups in 1994

- In 1994 there were 12,027 startup firms with 72,918 employees.
- In 2011 the number of firms had declined to 2,679 and there were 48,987 employees.
- The net change in employment was positive in only 5 of 17 years.
- The 2011 survival rate was 22.3% for 17 years and the average firm size had increased from 6.1 employees to 18.3 employees over that period.

Comments – Survival Rates 1994 to Present

- It appears that survival rates move in conjunction with the business cycle.
- Over time, there has been a decline in survival rates.

Questions

- Why are fewer people starting businesses? Lack of ideas? Access to capital? Demand? Lower survival rates?
- There are many definitions for startups. Is the decline shown in this analysis a reflection of federal data sets not accurately capturing companies that are startups?
- Is the survival rate of 22.3% for 1994 startups good or bad? How can the economy flourish given that the number of firms and total employment in this group declined significantly?
- What happened in the businesses that caused the net change in the 1994 startups to be negative for 12 of 17 years? Lack of strategic direction? Poor management? Demand?

Source and Scope of BED Data

Business Employment Dynamics (BED) are derived from reports of employment and wage data for workers covered by unemployment insurance (UI) and Unemployment Compensation for Federal Employees (UCFE). The reports are a result of the administration of State unemployment insurance programs that require most employers to pay quarterly taxes based on employment and wages of workers covered by UI.

The data are compiled from quarterly contribution reports submitted to the states by employers. In addition to the quarterly contribution reports, employers who operate multiple establishments within a State complete a questionnaire, called the "Multiple Worksite Report," which provides detailed information on the location of their establishments. These reports are based on place of employment rather than place of residence.

Source: Business Employment Dynamics.

Definitions

Gross Job Gains can occur either by openings and expansions.

- Openings - These are either establishments with positive third month employment for the first time in the current quarter, with no links to the prior quarter, or with positive third month employment in the current quarter following zero employment in the previous quarter.

- Expansions - These are establishments with positive employment in the third month in both the previous and current quarters, with a net increase in employment over this period.

Gross Job Losses can occur either by closings and contractions.

- Closings - These are either establishments with positive third month employment in the previous quarter, with no positive employment reported in the current quarter, or with positive third month employment in the previous quarter followed by zero employment in the current quarter.

- Contractions - These are establishments with positive employment in the third month in both the previous and current quarters, with a net decrease in employment over this period.

Source: Business Employment Dynamics.

Where Have All the Startups Gone?

February 2012

For additional information contact CBER at cber@cber.co.