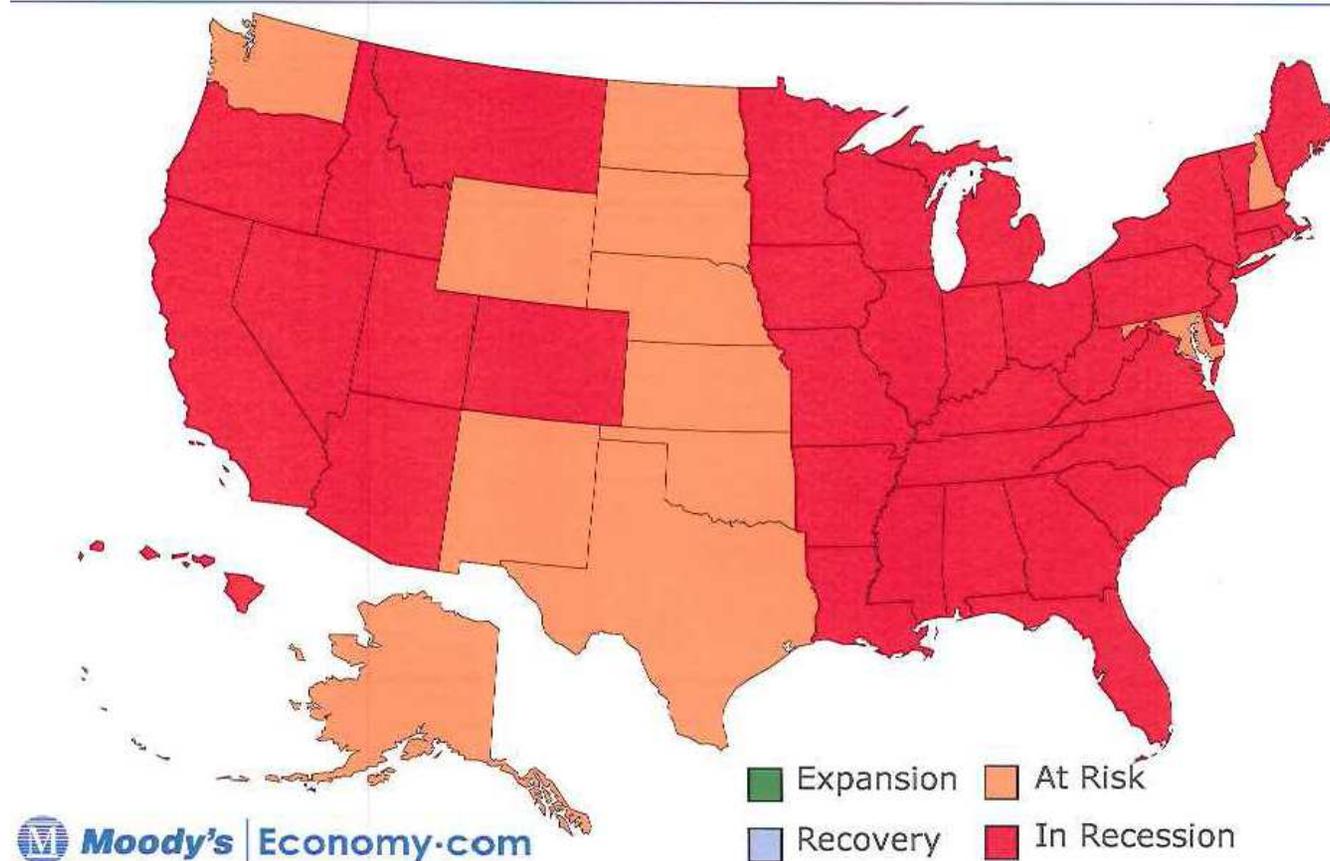

The American Recovery and Reinvestment Plan – Science, Technology & Energy

Gabrielle Giffords
U.S. Representative
February 2009



The Majority of States are in Recession



Moody's assessment is based on four key indicators used by the National Bureau of Economic Research: employment, industrial production, retail sales adjusted for inflation and income to develop a composite indicator. A state is considered to be in recession if that indicator falls for six months or longer. An area is "at risk" if it has declined for three months.

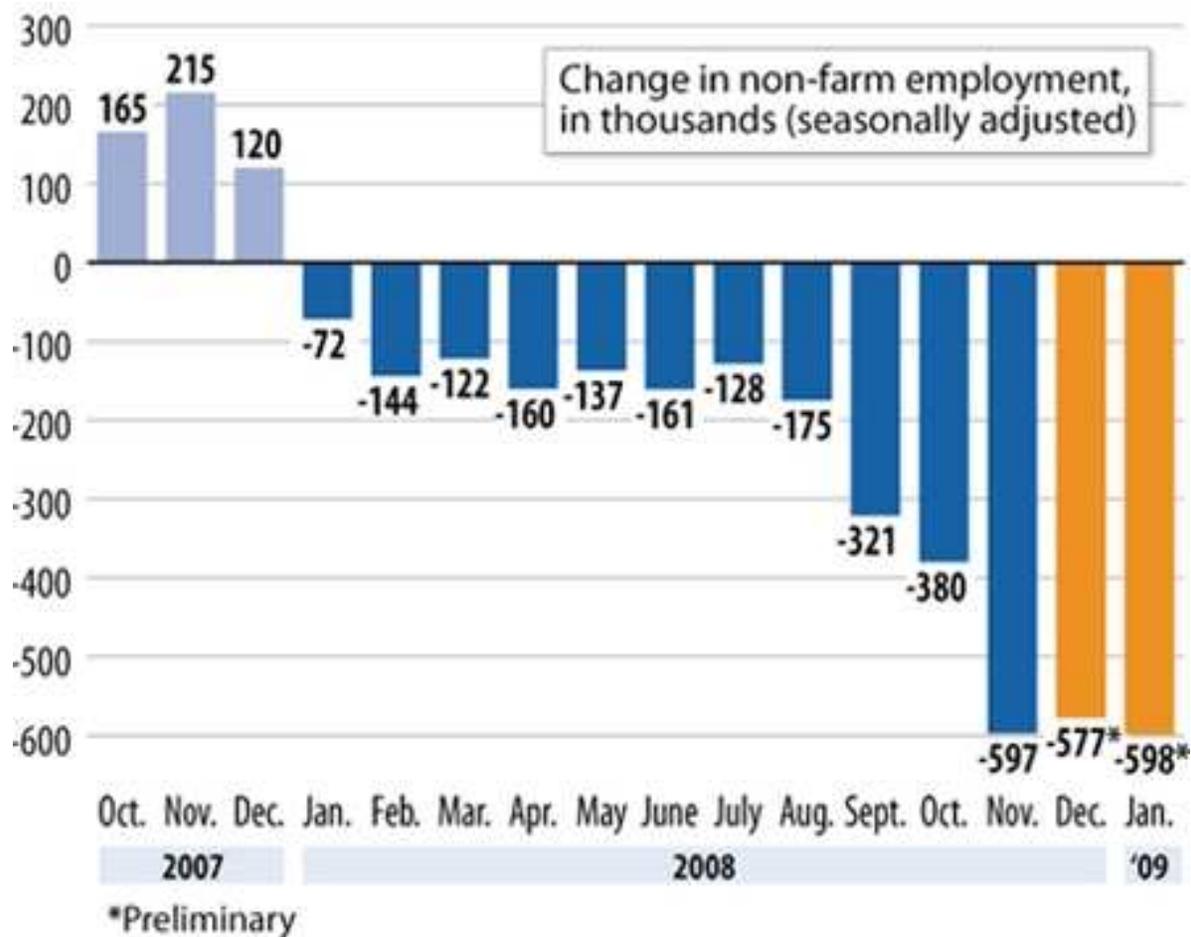


U.S. Economic Indicators

- **JOB LOSSES:** 598,000 in January. Total job loss since the recession began in December 2007 has climbed to 3.6 million, the largest 13-month job loss on record.
- **UNEMPLOYMENT & PART-TIME WORK:** 7.6% in January, the highest level in 16 years. The number of Americans looking for work climbed to 11.6 million in January – the highest number in 26 years.
- **ECONOMY IN RECESSION:** The Gross Domestic Product (GDP) fell 3.8% in the final quarter of 2008. Business investment dropped at a 19% pace, the most since 1975.
- **CONSUMER SPENDING & CONFIDENCE:** Consumer spending fell in December for a record 6th consecutive month. Consumer confidence slid to another all-time low in January.

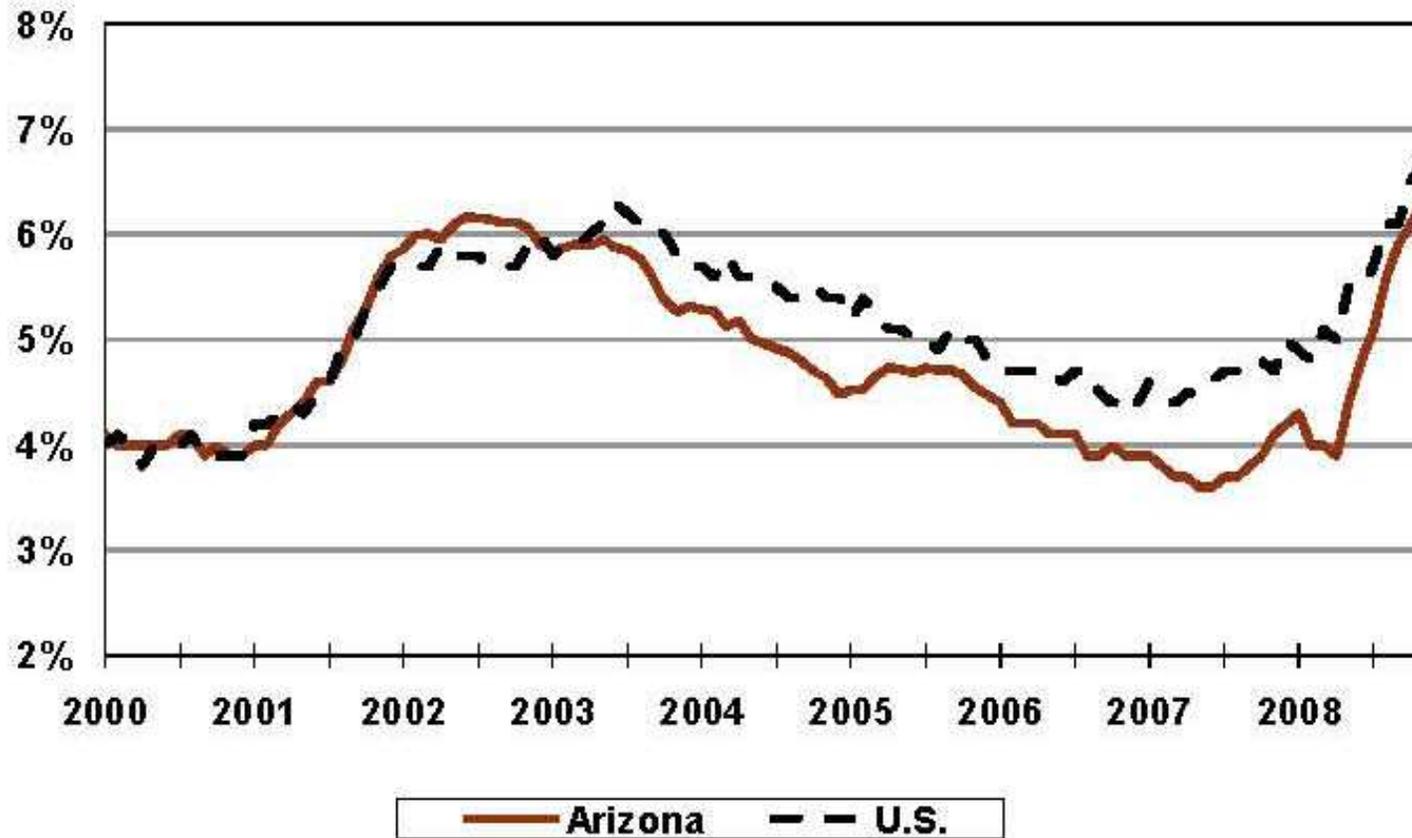


The Economic Downturn – Job Loss Accelerates

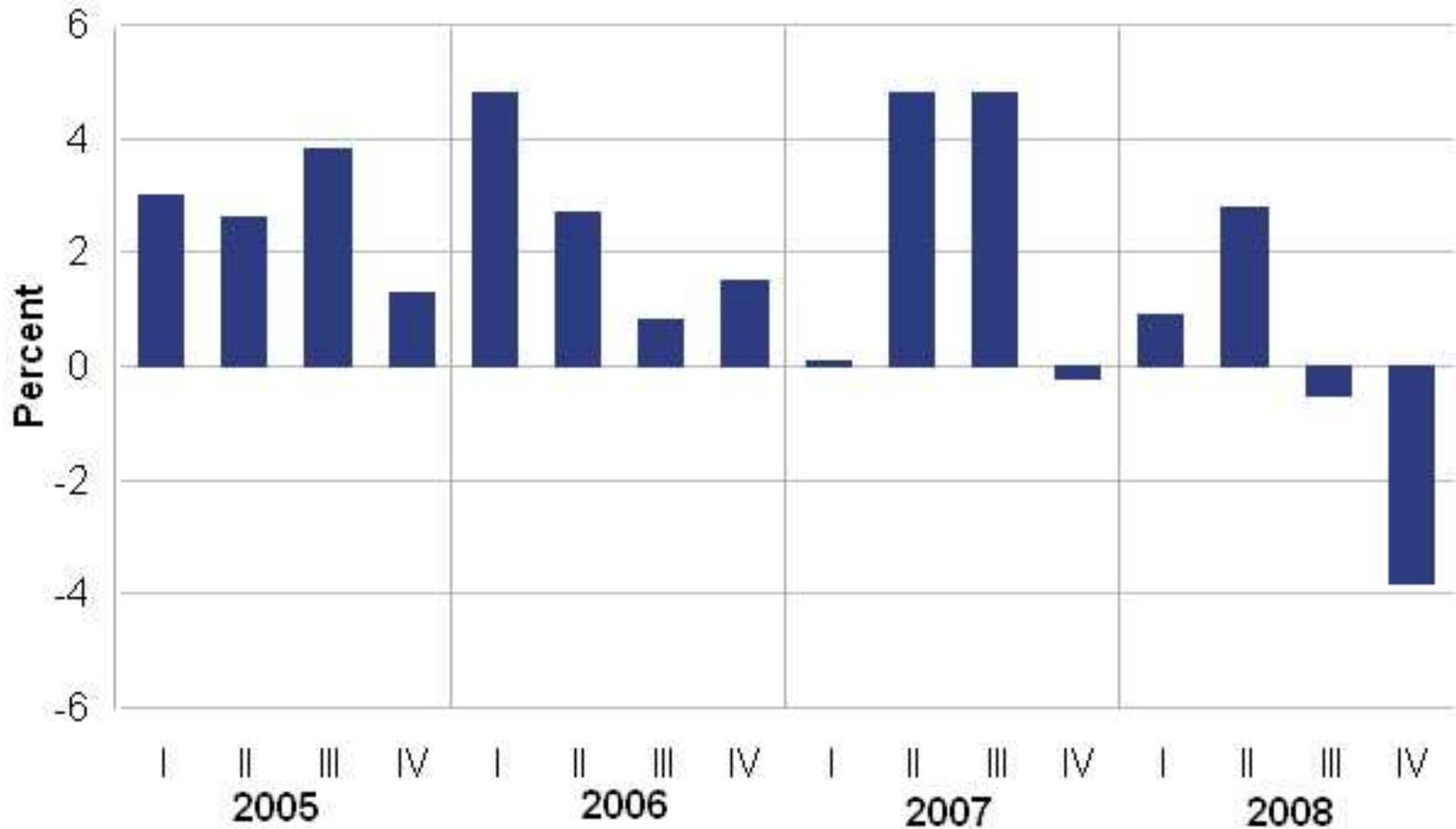


Source: Bureau of Labor Statistics

Arizona & US Seasonally Adjusted Unemployment Rates, Jan. 2000- Nov. 2008



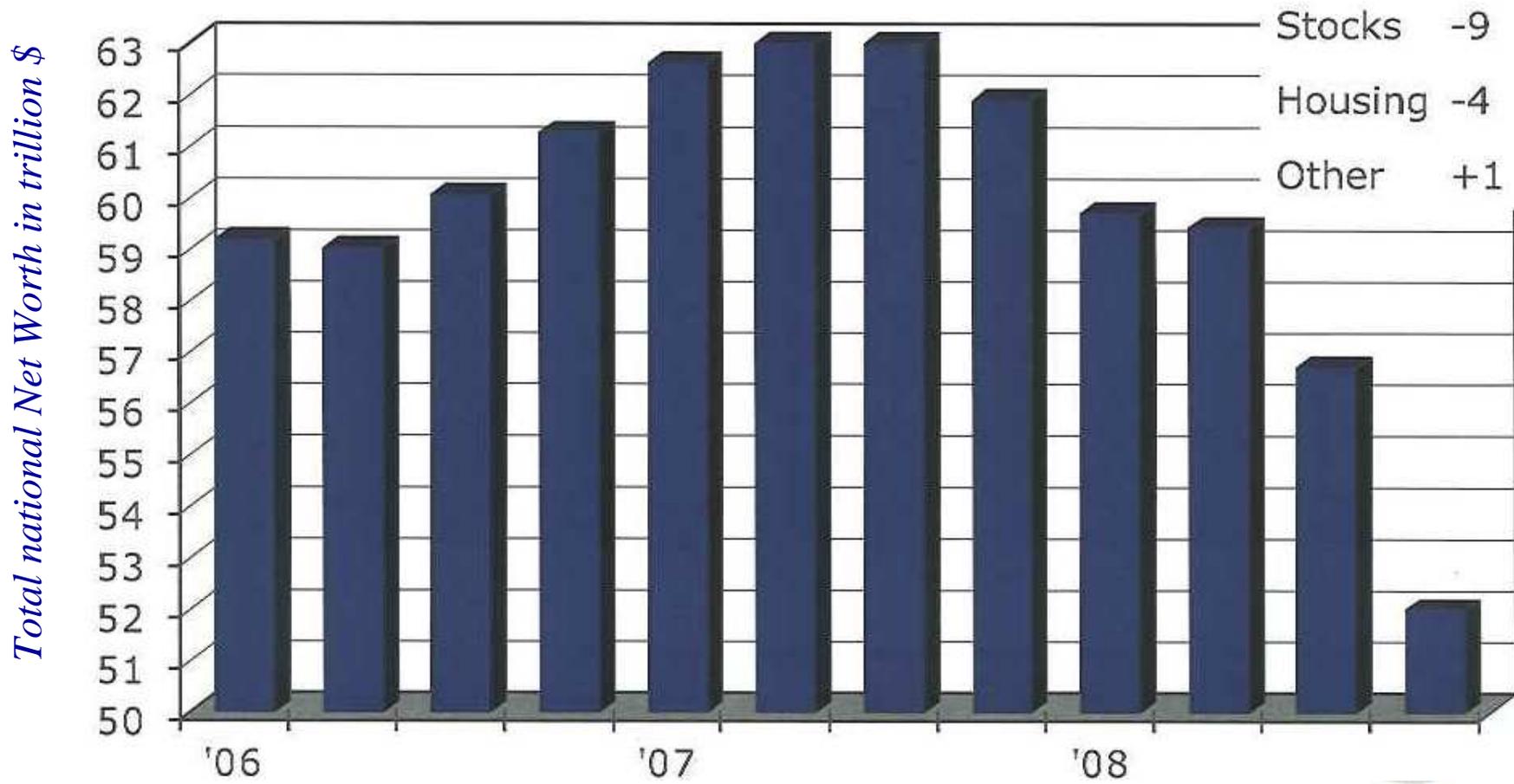
Quarterly Real GDP in Decline



Real GDP growth is measured at seasonally adjusted annual rates.

Source: U.S. Bureau of Economic Analysts

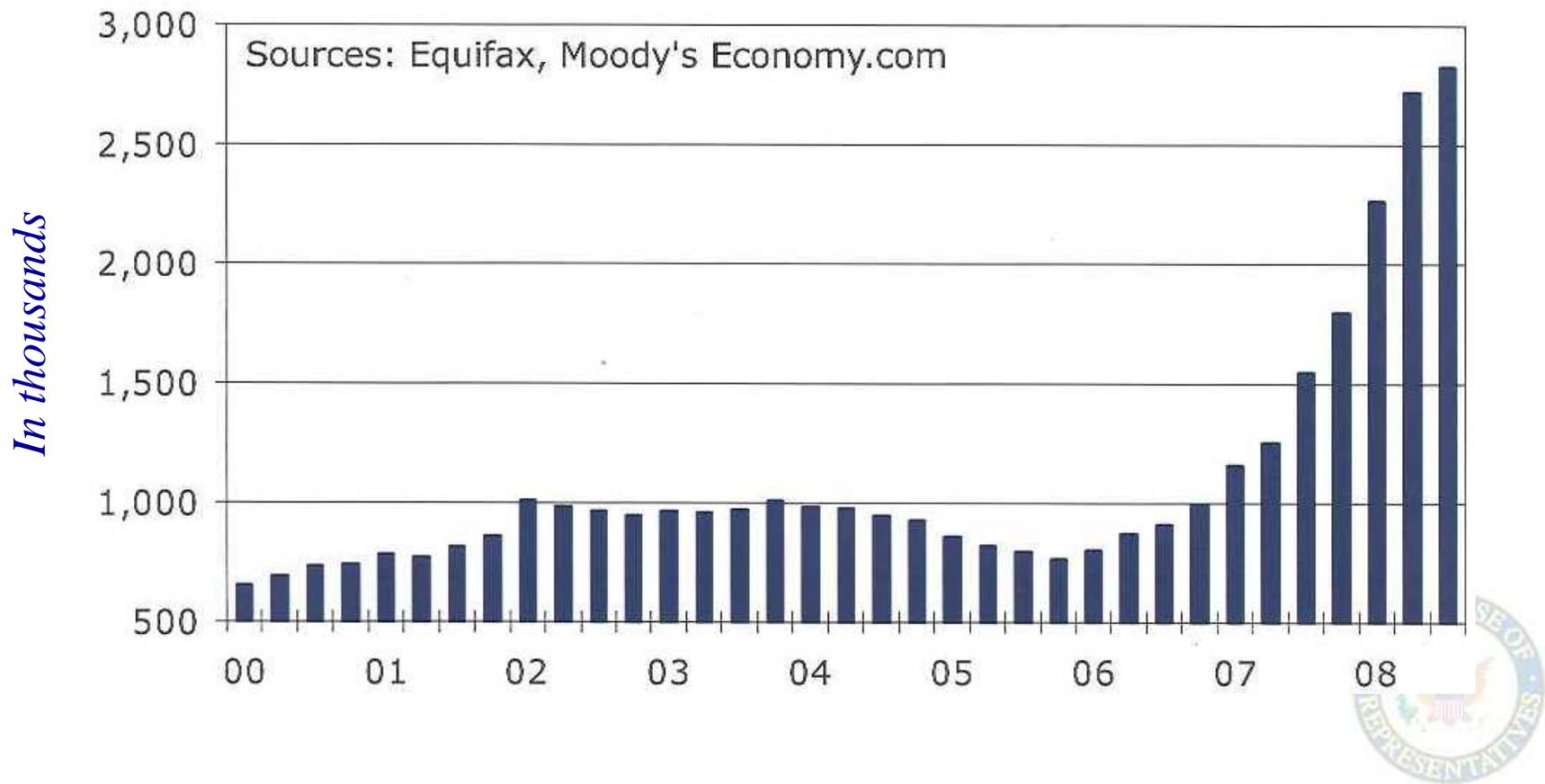
National Household Net Worth is on a Steep Decline



Source: Federal Reserve

Foreclosures continue to rise nationally

First mortgage loan defaults



Arizona - Economic Indicators

Arizona ranks third in the nation for foreclosures—after Nevada and Florida.

- 1 in every 198 homes in Arizona received a foreclosure notice in November 2008.

Since the beginning of 2008, Arizona lost 65,700 jobs - an average of 6,600 jobs per month.

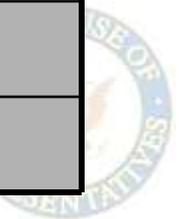
The unemployment rate in Arizona now stands at 6.1 percent, up 4.2 percent in 2008.



Arizona – Education

- **Class Size** - In 2000, the state’s average elementary class size was 24.5 students, while the U.S. average was 21.2.
- **Advanced Placement** - In 2003, Arizona ranked 35th in the number of advanced placement test takers and 32nd in test scores.
- **Teacher Backgrounds** - In 2000, Arizona placed 32nd among 37 rated states on the percentage of teachers with a major in the field being taught (47.4%).

	4 th Grade Math - AZ	4 th Grade Math – US	8 th Grade Math - AZ	8 th Grade Math - US
Below Proficient	30%	24%	39%	33%
Basic	45%	45%	41%	39%
Proficient	23%	23%	18%	22%
Advanced	2%	2%	3%	5%



American Recovery & Reinvestment Act

– Impact for ARIZONA

- Creating or saving 70,000 jobs over the next 2 years – 8,100 in District 8;
- Tax cut of up to \$800 for 2,080,000 workers and their families;
- Making 75,000 families eligible for a new \$2,500 college tax credit;
- Expanding unemployment insurance to 204,000 jobless workers; and
- Providing funding sufficient to modernize at least 193 schools in Arizona.



American Recovery & Reinvestment Act

– Impact for ARIZONA

- Education = \$1,262,861,497
- Medicaid = \$1,980,000,000
- Transportation = \$622,520,349
- Energy & Weatherization = \$12,169,447
- Justice programs = \$46,850,617



American Recovery & Reinvestment Act

the need for bold & effective action

Dr. Paul Krugman, Nobel Prize winning economist, New York Times:

“It’s hard to exaggerate how much economic trouble we’re in.”

Dr. Mark Zandi, Chief Economist and Cofounder, Moody’s Economy.com:

“The House stimulus plan will not reverse the current downturn, but it will provide a vital boost to the flagging economy. With the stimulus, there will be 3 million more jobs and the jobless rate will be more than 1.5 percentage points lower by the end of 2010 than without any fiscal stimulus. Without a stimulus, unemployment will rise well into the double digits by this time next year, and the economy will not return to full employment until 2014.”

U.S. Chamber of Commerce:

“The Chamber believes that the tax relief and spending provided in the bill will help to provide stimulus and to get Americans back to work.”

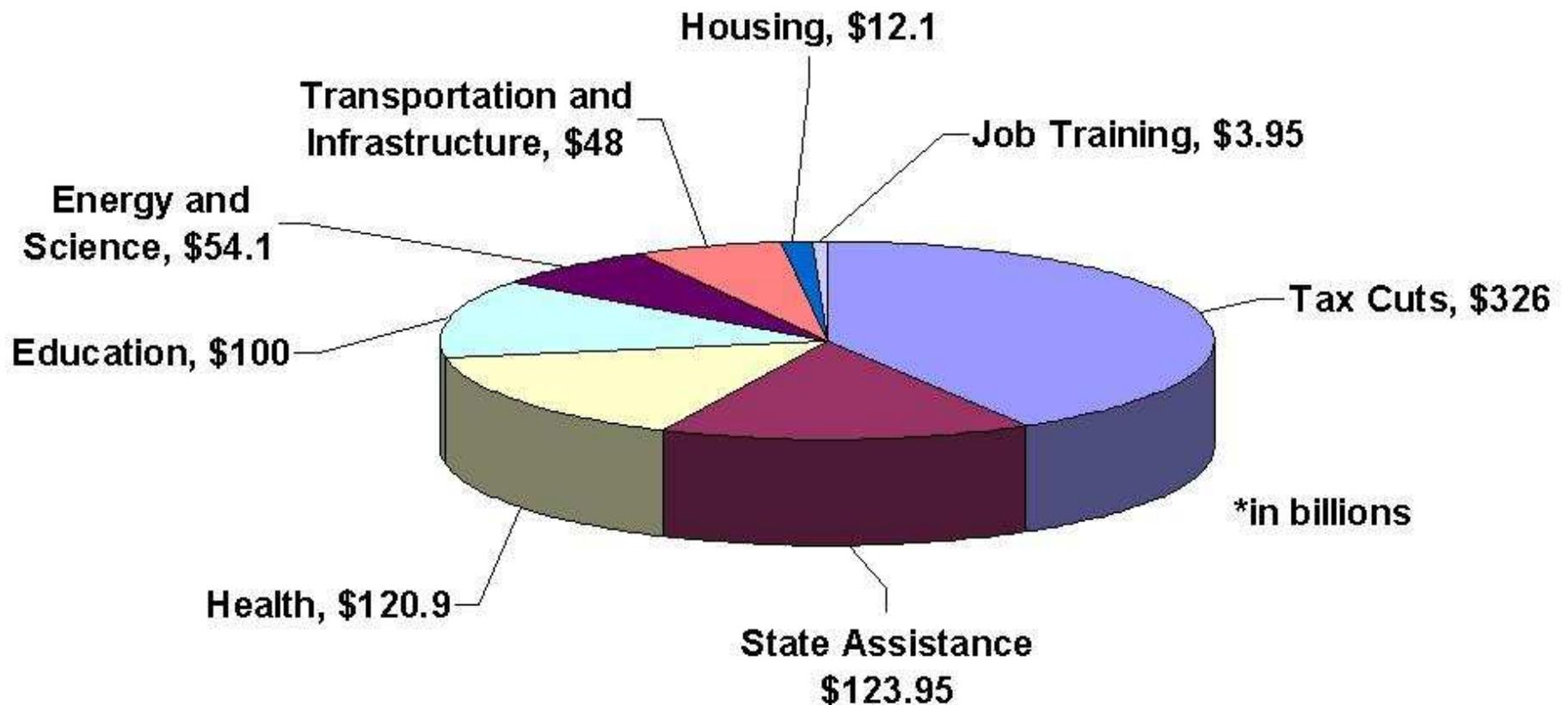


How Much is \$789 Billion?

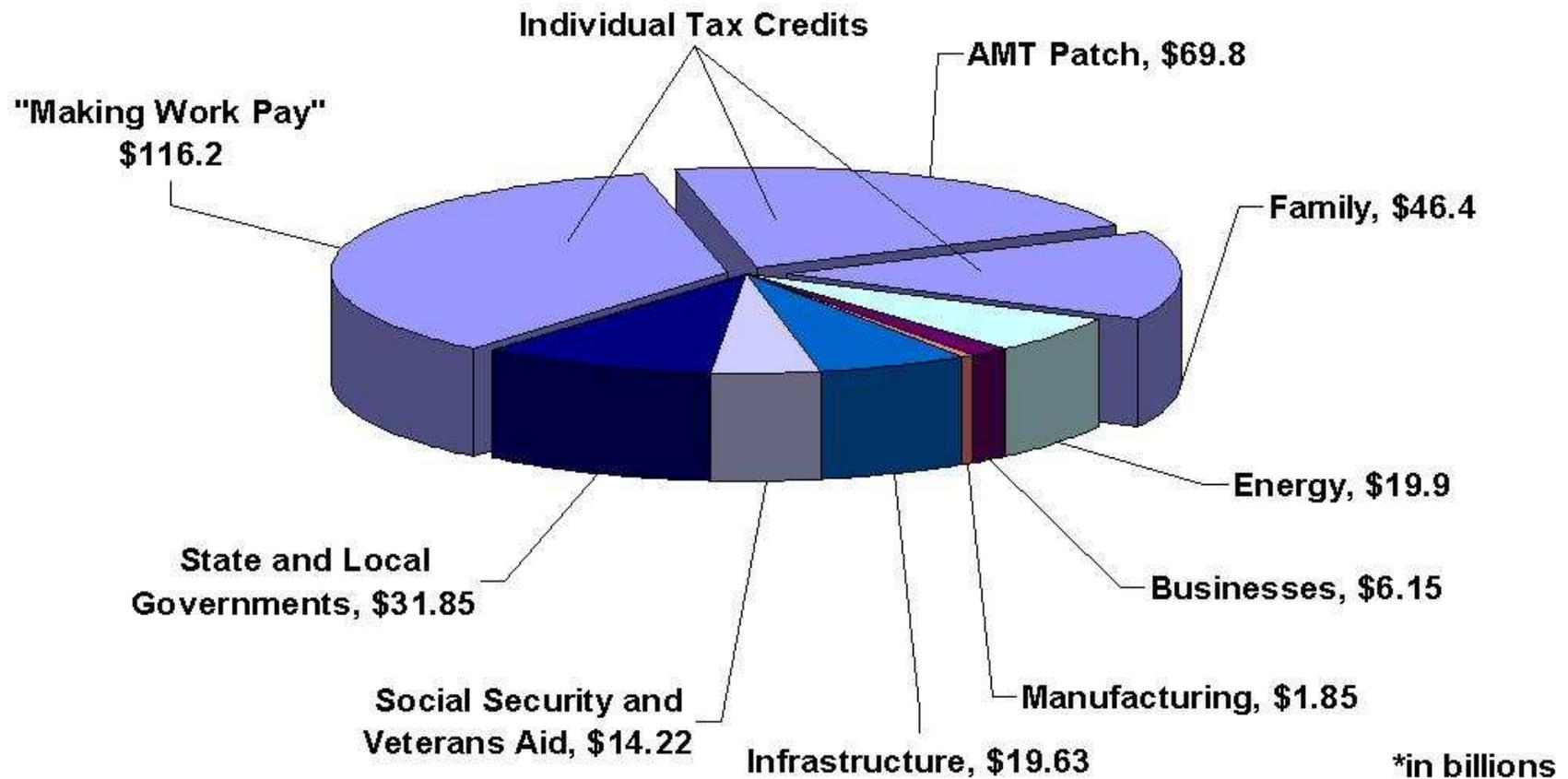
- 5.5% of the \$14.3 trillion U.S. economy (GDP)
- 27% of the \$2.979 trillion in total fiscal year 2008 federal government spending
- 39% of the \$2 trillion spent so far stabilizing the financial sector (9% of commitments, \$8.8 trillion)
- 1.3 times the cost of the Iraq war, approximately \$595 billion
- Comparison with Roosevelt's New Deals
 - 1st New Deal = 5.9% GDP, \$3.3 billion (1933)
 - 2nd New Deal = 6.7% GDP, \$4.8 billion (1935)



American Recovery & Reinvestment Act – Breakdown of Funding



Tax Provisions – \$326 Billion over 10 years



Creating Clean, Efficient American Energy by...

- Doubling renewable energy generating capacity over three years;
- Creating enough renewable energy to power 6 million American homes; and
- Establishing a new loan guarantee program to keep our transition to renewable energy on track during the economic crisis.



Energy Research & Development

➤ **Energy Efficiency & Renewable Energy (EERE):**

- \$2.5 billion in competitive grant funding for energy efficiency and renewable energy research, development, demonstration, and commercial deployment
- Nearly doubles EERE's total FY 2008 budget of \$1.8 billion

➤ **ARPA-E:**

- \$400 million for the Advanced Research Projects Agency – Energy



Energy Research & Development

- **Advanced Batteries**. \$2 billion in grant funding for domestic manufacturing facilities to develop more advanced vehicle batteries.
- **State Energy Program**: \$3.1 billion for the Energy Dept's State Energy Program. This program provides grants to states to design and carry out their own renewable energy and energy efficiency projects. Projects are administered by the state energy office.
- **Fossil Energy**. \$3.4 billion for fossil energy R&D, such as clean coal.



Energy Tax Incentives

Over \$20 billion in tax incentives for renewable energy and energy efficiency over the next 10 years:

➤ **Grants in Lieu of Tax Credits**. Establishes program to grant 30% of the cost of building new renewable energy facilities.

➤ **Manufacturing Tax Credits**. Establishes a new 30% tax credit for investments in plants or machinery to manufacture renewable energy technologies. (Provision from my **Solar Manufacturing Advancement Act, H.R. 576**)



Energy Tax Incentives - Arizona

Solana Solar Energy Generating Station

- A project of APS and Abengoa, Solana is planned for Gila Bend, AZ, about 70 miles southwest of Phoenix
- Solana would be one of the world's largest solar power plants: total capacity 280 megawatts (MW). That would power 70,000 homes and eliminate 400,000 tons of greenhouse gas emissions.
- Construction is expected to create about 1,500 construction jobs; once completed, the plant will employ 85 full-time workers
- This project is dependent upon the Investment Tax Credit (and now the Grants in Lieu of Tax Credits).



Energy Tax Incentives

- **Extension of Production Tax Credit (PTC) – 3** year extension. The PTC applies to facilities for wind, closed-loop biomass, open-loop biomass, solid waste, hydropower, geothermal, and landfill gas.
- **Investment Tax Credit in lieu of PTC -** Facilities that qualify for the PTC may now claim the 30% ITC if they prefer. This may help attract financing.
- **Repeal of Limitations on ITC -** Existing limitations on the ITC have been repealed, making it possible for all eligible projects to claim the full 30%.



Energy Tax Incentives

- **Clean Renewable Energy Bonds (CREBs).**
Authorizes \$1.6 billion in new CREBs to help finance renewable energy projects by state and local governments, public power companies, and electric coops.
- **Qualified Energy Conservation Bonds.** Authorizes \$2.4 billion in bonds to finance state and local programs to reduce greenhouse gas emissions.



Energy Tax Incentives

- **Residential Energy Property Credit** - Increases the credit for energy efficient upgrades to residential property to 30% and extends it through 2010.
- **Residential Cap Removed** - Removes the cap on the credit for residential wind, geothermal, and solar thermal property.
- **Consumer Vehicle Incentives** - Provides a minimum \$2,500 tax credit for people who purchase plug-in hybrid vehicles.



Renewable Energy Production & Energy Transmission

- **Loan Guarantees** - \$6.0 billion for the Renewable Energy and Electric Power Transmission Loan Guarantee Program.
- **Carbon Sequestration** - \$3.4 billion for research, development, and demonstration of carbon sequestration.
- **Smart Grid** - \$4.5 billion for grants to develop and deploy smart-grid technologies.
- **Power Administration Borrowing** - \$3.25 billion each (\$6.5 billion total) in increased borrowing authority for the Western Area Power Administration and the Bonneville Power Administration to fund transmission and renewable energy projects.



Science Research & Development

- **National Science Foundation (NSF) - \$3.0 billion**
- **Office of Science at the Department of Energy (OS) - \$1.6 billion**
- **National Aeronautics and Space Administration (NASA) - \$1.0 billion**
- **National Institute of Standards and Technology (NIST) - \$580 million**
- **National Oceanic & Atmospheric Administration (NOAA) - \$830 million**



Science Education

In addition to increased funding for research grants, the NSF portion of the bill contains funds for the following science education programs:

- **Noyce Scholarship Program** - \$60 million for scholarships to recruit undergraduate STEM majors and STEM professionals to become STEM teachers.
- **Professional Science Master's Program** - \$15 million for grants to create professional science master's degree programs that include linkages between institutions of higher education and industries that employ science-trained personnel.



Healthcare Infrastructure & Research

\$19 billion to accelerate adoption of **Health Information Technology** systems by doctors and hospitals:

- modernize the health care system,
- save approximately \$12 billion dollars, and
- reduce medical errors, protect privacy and improve quality.
- The Congressional Budget Office estimates that **90% of doctors and 70% of hospitals** will adopt and use certified electronic health records within the next decade.

\$10 billion for the **National Institute of Health** for research and facilities.



Getting Funding for Arizona

Federal agencies will allocate these funds as follows:

- 1. *Competitive Solicitations.*** In the coming weeks, agencies will distribute requests for proposals and convene panels to evaluate applications. Examples of agencies and programs that have or will hold such competitions include:
 - Departments of Energy, Treasury, and Defense
 - National Science Foundation and Other Science Agencies
 - Broadband program
- 2. *Tax Incentives.*** These will be claimed by individuals and businesses when they file their annual income tax.
- 3. *By Agency Plan.*** Many programs in the Act allocate funding according to public operating and spending plans. These programs include:
 - Environmental cleanup of nuclear waste sites
 - National Parks construction
 - Defense and Veterans infrastructure programs



Transparency & Oversight

The *American Recovery and Reinvestment Act* contains numerous transparency and accountability provisions to ensure that the expenditure of taxpayer dollars can be closely monitored.

- www.recovery.gov will be a dedicated site for citizens to track every penny and hold federal, state, and local officials accountable for performance;
- Quarterly Presidential reports on the results for the American economy;
- Requirement that states use the money for its intended purpose;
- Publishing an online, public notification of contracts and grants awarded, and a description of the investment funded, the purpose, and the total cost;
- A review of recovery funding by the nonpartisan Government Accountability Office; and
- No earmarks



Summary

Arizonans need to maximize our opportunities by working collaboratively and across party lines at the local, state, and federal level.

Check my website www.giffords.house.gov for up-to-date information on the American Recovery & Reinvestment Act.

