

power the life support system and science equipment. Scientists note that at full operating speed the flywheel rotor's linear velocity is two-and-one-half times the speed of sound (1,875 miles per hour). If the wheel itself were allowed to spin without meeting resistance, it would go on for more than 12 hours.

"The flywheel energy storage system represents a revolutionary step in energy storage technology," says Raymond Beach, NASA Glenn's team leader for flywheel development. He sees the flywheel as a potential long-term alternative for chemical batteries, which don't last as long and which generate waste. "The process is very efficient," he points out. "More than 85 percent of the energy put into the wheel comes out."

NASA believes that in the coming decades similar solar-powered generators could have applications on earth and on Mars. When the Mars Surveyor Lander mission reaches the Red Planet, two pilot Glenn projects—the Mars Array Technology Experiment (MATE) and the Dust Accumulation and Removal Technology (DART)—will explore the feasibility of producing oxygen propellant from the Martian atmosphere and will test whether power-generating solar cells can function amid extreme cold and notorious Martian dust storms. "Because of the dust, the cold temperatures and the varying light spectrum, the best solar cell for our 'gas station on Mars' might be one that we wouldn't consider using in our space solar arrays," says NASA Glenn Project Manager Cosmo Baraona, who is overseeing the experiments.

Solar cells designed at Glenn have already performed better than expected with the Pathfinder and Sojourner Rover, but David Scheiman, a researcher at the Ohio Aerospace Institute in Cleveland, a partner of Glenn, says it is uncertain if those cells will work over the estimated five years it will take to get a human to and from Mars.

Through its Microgravity Science Division, Glenn is NASA's star performer with microgravity experiments involving combustion and fluid physics. Aside from its history with spacecraft and jet engines, Glenn has bolstered Cleveland's reputation as a hub for biomedicine. "We are fortunate to reside in a region with some of the best medical research institutions in the country and a growing biomedical industry base," says Campbell.

At the forefront are researchers like Rafat Ansari, a groundbreaking physicist. "My personal interest is with the human eye," he says. According to Ansari, our eyes are not only windows to the soul, but also windows to the human body, reflecting the health and function of vital chemical processes. They are also places where physicians can look to better understand the risks of exposure to radiation during deep space travel to destinations like Mars. "When light passes from the cornea into the retina, it also passes through nearly every tissue type found in the body," Ansari says. "By studying those tissues, we can look for evidence of certain conditions from one's cholesterol level to the formation of cataracts to the potential for Alzheimer's disease to diabetes."

Ansari began his career with NASA 13 years ago. His fascination with eyes started when his father developed cataracts. It led him to investigate the etiology of cataracts and the risks associated with certain diseases. Astronauts can be especially vulnerable because increased exposure to radiation associated with deep space travel may accelerate the growth of cataracts and macular degeneration.

Ansari and a team of Glenn researchers are working with the federal Food and Drug Administration to develop a screening process for diabetes. Another project at the Glenn

laboratories involved development of an apparatus in partnership with the National Eye Institute, located at the National Institutes of Health in Bethesda, Md. It would have applications not only on Mars but also in rural parts of the world where there is a niche to fill with telemedicine. The patient or, in the case of space travel, the astronauts would wear a specially designed helmet with eye-examining goggles connected to special sensors monitoring the heart in real time. The apparatus could detect health abnormalities as explorers walk across the Martian surface. But long before the first human mission is sent to the fourth planet from the sun, Ansari would like to see such mobile devices used in remote locales on earth where medicine is unavailable.

In the years ahead, the facility bearing Senator Glenn's name promises to claim its own prominent place on the journey of human discovery. "This year, as we celebrate the Glenn center's 60th anniversary, all of us can look back in pride at our outstanding accomplishments that have helped propel NASA and U.S. industry to new horizons," adds Campbell. "And no matter where that next horizon is found, Glenn's pioneers and innovators will make it possible for us to travel beyond it. Ultimately, we want the public to benefit from what we do."

#### BOROUGH OF DURYEA CELEBRATES CENTENNIAL

HON. PAUL E. KANJORSKI

OF PENNSYLVANIA

IN THE HOUSE OF REPRESENTATIVES

*Wednesday, March 21, 2001*

Mr. KANJORSKI. Mr. Speaker, I rise today to pay tribute to the Borough of Duryea, Pennsylvania, which will celebrate its centennial on April 7 with a community parade and picnic held by the Duryea Centennial Committee.

Duryea was originally called Babylon because it was a veritable Babel of languages and nationalities due to the immigrants who came to work in the coal mines.

The community was also known as Marcy Township before assuming its present name. The township was formed from territory taken from Pittston, Ransom and Old Forge townships on January 19, 1880. It was named for a pioneer, the first British settler in the region, Zebulon Marcy, who emigrated from Connecticut in the spring of 1770. A census taken at the formation of Marcy Township found 1,159 inhabitants, which had increased to 2,904 by 1890. According to the 2000 census, the population of Duryea is 4,634.

The present name of the community commemorates Abram Duryea of New York, who bought coal lands in the area in 1845 and opened mines around which the town grew up. He served in the Civil War as a colonel of the Fifth New York Infantry in May, 1861, and was brevetted major-general four years later for his gallant and meritorious services.

Prior to becoming a borough, Duryea was a post-office village within Marcy Township, situated two miles north of Pittston. Duryea was incorporated as a borough on April 6, 1901. The first set of ordinances was adopted by council and approved by the burgess, whose equivalent today is the mayor, on August 23, 1901.

In 1901, John A. Burlington was the burgess, Gary M. Gray was president of the council and Charles D. Evans was borough secretary.

At that time, a Methodist church and a Catholic church were already established in the borough. The community was rich in mining and agriculture. Within the borough, there were new coal breakers, along with a rapid rise in the real estate market. The community already had postal, telegraph and telephone communication, as well as the service of three leading railroads, the Lehigh Valley, the Erie and Wyoming Valley, and the Delaware, Lackawanna and Western.

Duryea was a thriving community, boasting one baker, two blacksmiths, three carpenters, three milliners, one drugstore, two dry goods stores, two general stores, one gentleman's furnishings store, three grocery stores, a hat and cap store, four hotels, an iron fence manufactory, a meat market, a drill moving factory, two livery stables, three physicians and one undertaker.

Today, the majority of the borough is occupied by single-family residences. Some of these are company houses that were once owned by the coal companies. While there were only 400 homeowners in Duryea in 1901, today there are 2,089.

The borough is also still home to commercial enterprises, with two small businesses and three manufacturing plants, including Schott Glass Technologies, which makes products used in some of the greatest scientific ventures of our time. For example, laser glasses from the Duryea plant are helping scientists seek cleaner, cheaper sources of energy.

Present-day Duryea, led by Mayor Mark Rostkowski, is also home to six churches and six cemeteries, one parochial school, a little-league baseball field, a field for junior football and a playground.

Mr. Speaker, I am pleased to call to the attention of the House of Representatives the centennial of the Borough of Duryea, and I wish its residents well as they begin a new century for their community.

#### CELEBRATING NAT GEIER ON HIS 90TH BIRTHDAY

HON. PETER DEUTSCH

OF FLORIDA

IN THE HOUSE OF REPRESENTATIVES

*Wednesday, March 21, 2001*

Mr. DEUTSCH. Mr. Speaker, I rise to honor Mr. Nat Geier, a distinguished citizen of Sunrise, Florida who has devoted himself to improving his community over the last three decades. Through numerous citizen campaigns, Mr. Geier has been the engine of improvement in strengthening the Broward County community. This week, Nat Geier will turn ninety years old—it is an occasion which Broward County residents will celebrate with pride.

Born in Poland in 1911, Mr. Geier immigrated to America at the age of nine. He dropped out of the New York City School system at age 13 to get a job in the garment business cutting material. This young drop-out learned quickly, worked hard, and rose up in the ranks, eventually earning enough to relocate and buy a condominium in Florida. An early resident of the now well-developed areas of South Florida, Mr. Geier has always understood that homeownership is the anchor of all communities because it gives residents long-

term investment in the quality of their communities. For this reason, two decades ago, Mr. Geier set out to educate Broward residents of the importance of the "Homestead Exemption" rules which use the Florida tax code to encourage homeownership and community enhancement. Mr. Geier's efforts brought the benefits of the rules to thousands of homeowners and helped build the strong and lasting communities which exist in Broward County today.

Mr. Geier's experience as a young man convinced him that a good education is the key to a productive job and success in life. Motivated by this conviction, Mr. Geier has consistently supported the Broward Schools in their efforts to provide young residents with quality education and opportunities for success. Throughout his thirty years in South Florida, Mr. Geier has actively campaigned in support of school bond referendums as well as funding early-on for computers in classrooms. More recently, Mr. Geier initiated the Area Agency for the Aging's Seniors for Seniors Dollar Drive. This fundraiser provides thousands in funding for the Area Agency's senior citizen support programs and community events. In these and several other civic initiatives, Mr. Geier has demonstrated his devotion and care to improving the quality of life for all Broward residents. His efforts span over four decades and his tremendous impact spans across the lives of his entire community. Mr. Speaker, let me conclude by saying, "Thank you and happy birthday to Nat Geier," one of Broward County's most remarkable residents.

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#### SOUND ECONOMIC POLICY

### HON. MICHAEL G. OXLEY

OF OHIO

IN THE HOUSE OF REPRESENTATIVES

*Wednesday, March 21, 2001*

Mr. OXLEY. Mr. Speaker, I commend to my colleagues' attention the following article, "Can the U.S. Live With a Sounder, Saner Stock Market?" The author correctly points out that despite all of the recent attention on interest rates, the condition of our capital markets and the health of the U.S. economy are strongly influenced by the decisions that are made on trade policy, regulatory relief, and tax cuts. If we get those growth policies right, we will do a great service for the increasing number of Americans who are investing to improve their everyday lives and saving for their retirement.

[From the Wall Street Journal, Mar. 20, 2001]

CAN THE U.S. LIVE WITH A SOUNDER, SANER STOCK MARKET?

(By George Melloan)

Alan Greenspan has demonstrated that he can curb "irrational exuberance" in the stock markets, or so the conventional wisdom goes. Today, he presumably will try to perform a more difficult feat, arresting the

world-wide decline in equities that he has been widely accused of—or credited with—causing. The auguries for his success are not especially favorable. The markets weeks ago factored into prices the likelihood of a Federal Reserve rate target reduction, but that didn't prevent last week's steep slide.

The concept of Mr. Greenspan as a *deus ex machina* who intervenes occasionally to change the course of markets is overrated. His "irrational exuberance" speech in December 1996 rattled investors. But that may only have been because he was remarking on something that was obvious to almost everyone: Some stocks were selling at prices far in excess of their underlying values.

It certainly didn't stop the bull run, which continued another three years until its peak early last year. Probably, a series of rate-target increases in the late 1990s by the Fed acted as something of a brake on stock markets and an American economy heavily fueled by credit. But the overriding factor was that stock averages last year had reached a never-never land that even the most optimistic logic could not justify. Consumers, responding to the "wealth effect" of their paper riches, piled up debt. When stocks sank last year, household net worth declined for the first time since records have been kept. Quite likely, household balance sheets have deteriorated further this year.

Up until last week it appeared that the Dow had stabilized at around the 10500 level, despite a slowdown in economic growth and a series of warnings of lower-than-expected earnings from major corporations. But the Nasdaq, which had reflected some of the greatest price excesses, continued its downward spiral and the Dow ultimately followed, dropping below 10000. The evaporation of liquidity caused by falling prices in one or two markets ultimately affects all markets in this age of globalization, so Europe, Japan and Southeast Asia all took big losses as well. Europe, as measured by the FTSE index, was hardest hit, with a 9% decline, compared to 7.7% in the Dow.

Many investors in high-flying stocks are licking their wounds. Money runners on Wall Street have lost some of the brash self-confidence of a year ago. Brokers who for years have been assuring customers that no investment can beat equities over time have a bit less confidence in that assertion. There is a realization dawning that maybe stock values do have some link to earnings and that a stock price that might take the company 40 years to earn could be a tad high.

This new sobriety is a healthy thing. The economists who have been arguing that the U.S. was developing an asset bubble, like Japan in the 1980s, have been appeased. Their concept that there is such a thing as asset inflation, fueled by liberal credit policies, has been reinforced. Yet the oversold markets pretty much have taken care of themselves, without tempting interventions by politicians, who sometimes in the past (in the 1930s, for example) have jumped in to make things worse. Investors now know that stocks go down as well as up, a useful lesson.

The new sobriety befits equity markets that now have a different function from the one they had 10 or 15 years ago when they were mainly the province of the well-to-do. Today, some 60% of Americans have a bene-

ficial ownership in stocks. Mutual funds have replaced savings accounts as the preferred investment of small savers. Private pension funds holding the retirement money of millions of Americans are heavily invested in stocks. These new, steady, sources of funding give stock markets a greater stability than before. But they also mean that stocks play a greater role in household balance sheets, and hence in the holder's perception of whether he is getting richer or poorer.

It is for this reason that policy makers need to give attention to the macroeconomy that underlies corporate stocks. It suffered from great neglect during the latter stages of the Clinton administration, even as the signs of an economic slowdown mounted. The administration allowed the beginnings of a new round of trade opening negotiations in Seattle to be scuttled by organized labor, the Naderites and assorted zanies. Mr. Clinton made only a feeble and belated effort to get fast track legislation to speed new trade agreements. Thus years have been wasted in starting negotiations for new multilateral trade and investment pacts that invariably re-energize the global economy.

Regulatory burdens continued to pile up. The EPA was set on automatic to crank out new restrictions that impose costs and yield either no benefits, or negative consequences. The previous administration kow-towed to "environmentalist" claims of a coming "global warming" disaster, despite a large body of scientific proof that no such trend exists. More public lands, including sites rich in oil and gas, were locked up as "wilderness" areas.

The passage of federal tax cuts last year, when they would have come in time to stimulate a flagging economy, was blocked by President Clinton. Democrats this year are still resisting even the modest initial tax cut tranches proposed by George W. Bush, styling themselves as the new guardians of fiscal responsibility. In other words, the economy is not going to get any help soon from tax cuts. That vaunted federal surplus could vanish quite rapidly if the American economy goes into recession. The old saying, penny wise and pound foolish, applies here.

Despite all these forms of neglect, the U.S. still has a powerful economic base, U.S. demand kept Asia afloat after the 1997 meltdown. It has helped revive Mexico and has given Europe a market. The discovery by Americans of the marvelous communications potential of the Internet moved computers from the purely business realm into the home as a consumer product. Information technology is for real, even if it was oversold on stock markets during the dot-com rage.

Consumer confidence, as measured by a monthly University of Michigan survey, remains reasonably upbeat. Employment is high, despite prospects of some big corporate layoffs. All that has happened to the American economy so far has been a slowing of growth, not a recession. The Fed is trying to ensure adequate liquidity while at the same time tending to its fundamental job of trying to keep the dollar sound. And finally, stock markets are safer places for money than they were a year ago, which is no bad thing.