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Economics Group

Special Commentary

Mark Vitner, Senior Economist
mark.vitner@wellsfargo.com • (704) 410-3277
Charles Dougherty, Economist
charles.dougherty@wellsfargo.com • (704) 410-6542

Pennsylvania 2019 Midyear Outlook

The Keystone State Economy is Gaining Ground

Momentum is building in the Pennsylvania economy. During 2018, statewide real GDP rose 2.1%, the strongest gain in four years. The momentum appears to have carried over into 2019, with real GDP rising at a 2.9% annual rate in Q1, on par with the national average. The recent upshift is being driven by gains in construction, leisure & hospitality and professional services, which have complemented an upturn in the state's long-time industry stalwarts—energy and education & healthcare. Population growth has also improved alongside stronger GDP growth, with Pennsylvania adding 16,600 new residents, marking the largest population gain since 2012.

Momentum is building in the Pennsylvania economy.

Overall, we expect economic growth nationwide to slow somewhat in 2019, as the boost to consumer spending from last year's tax reform wears off and business investment cools further amid languishing global growth and heightened trade and geopolitical frictions. Against this backdrop, economic growth in the Keystone State will likely ease somewhat, but remain sturdy. While the ongoing trade spat with China has tapped the breaks on transportation and warehousing, consumer spending is holding up relatively well and the shift to online shopping continues to drive growth at fulfillment centers, many of which are clustering in the southeastern part of the state. Furthermore, the less cyclical education and health sectors continue to provide a healthy counterbalance to the boom and bust nature of the energy sector.

The state's labor market also appears to have the wind at its back. The unemployment rate currently sits at 3.9%, very close to the national rate, and has trended lower for the past three years. Employment growth has been moderate so far in 2019, but remains solid. Nonfarm payrolls rose 0.5% on a year-over-year basis in July, a rate slightly below the pace averaged over the past five years. With the exception of manufacturing and retail, most major industries continue to expand payrolls, and the lion's share of the state's metro areas are performing well. The clear standout in terms of job gains has been the Philadelphia metro division, which does not include Camden or Wilmington. Payrolls in Philadelphia have risen 1.9% over the year, more than twice as fast as the pace maintained in Pittsburgh, Harrisburg and Allentown, the state's other major job hubs. Meanwhile, there is a fair amount of variability among the state's smaller metros, with State College and Erie payrolls gaining speed, and Scranton, York and Johnstown continuing to lag.

Figure 1

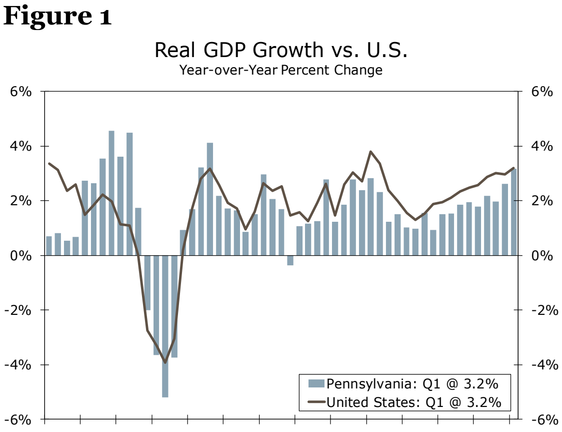
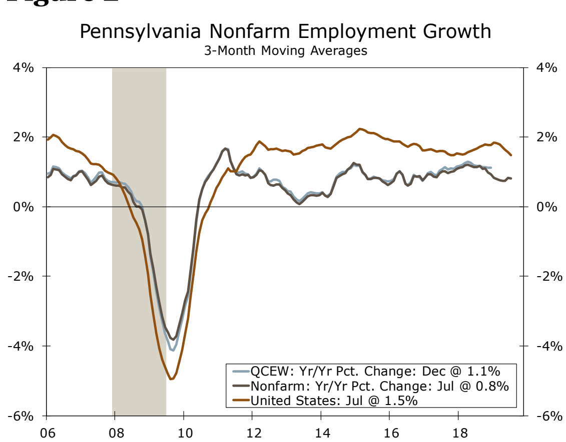


Figure 2



Source: U.S. Department of Commerce, U.S. Department of Labor and Wells Fargo Securities

Together we'll go far

Ballooning natural gas production has created a wide array of jobs.

Natural Gas Powering the Pennsylvania Economy

During the first quarter, real GDP growth in the state was led by an 18.4% year-over-year surge in the mining, oil & gas industry, which will come as welcome news as it registered a 5.9% decline throughout 2018—the first drop since 2004—alongside lower natural gas prices. Even with some quarterly swings lately, the importance of the natural gas industry to the state economy cannot be overstated. The Marcellus and Utica Shale formations, which primarily sit under Pennsylvania, Ohio, West Virginia and New York, are estimated to have the largest proven natural gas reserves in the nation. This abundance of natural gas supports a wide array of jobs in the state, many of which go beyond the exploration, extraction and refining industries, extending to other sectors such as construction, manufacturing, engineering and other professional support services.

Increased natural gas production has brought with it the need for a more robust energy infrastructure and has led to a surge in heavy and civil engineering construction jobs over the past few years. The pace of employment growth, however, has eased a bit more recently. Pennsylvania still has thousands of miles of natural gas pipelines under construction, second only to Texas. The Mariner East 2 pipeline, which will carry natural gas liquids from western Pennsylvania to a processing and export facility near Philadelphia, has faced some delays recently but is a shining example of the ongoing energy infrastructure buildout. Furthermore, the massive 400-acre Shell ethane cracker in Beaver County just outside of Pittsburgh is currently at "peak-construction" and employs roughly 6,000 construction workers. Given the sheer volume of natural gas being extracted, it would not be surprising to see other large ethane cracker plants, which convert petrochemicals to consumer plastics, sprout up in the area.

Figure 3

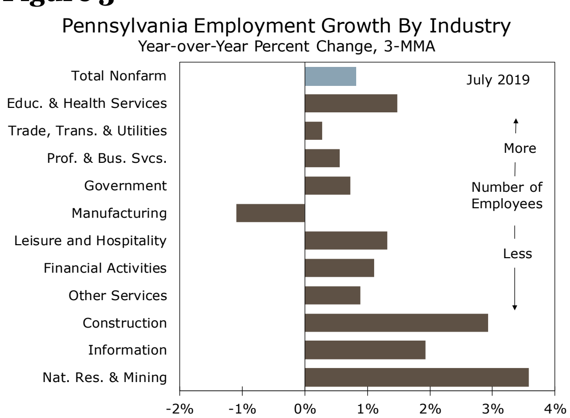
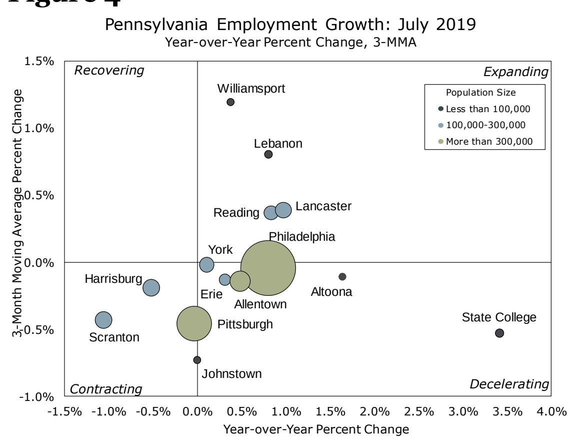


Figure 4



Source: U.S. Department of Labor and Wells Fargo Securities

Surging natural gas production only adds to the state's wealth of energy resources and has made Pennsylvania one of the nation's top electricity exporters. In 2017, Pennsylvania was the third largest coal-producing state and ranked second in the nation in electricity generation from nuclear power. That noted, Exelon recently announced the shuttering of the financially distressed Three Mile Island Nuclear Station, although four other nuclear stations throughout the state remain operational.

Alongside the energy renaissance, the state's tech sector also continues to bloom.

Alongside the energy renaissance, the state's tech sector is also blooming. The professional & technical services and information sectors posted 4.3% and 4.7% real GDP growth in Q1, respectively. Tech giants and startups alike continue to invest heavily in the state, enticed by the abundant tech talent from the 272 universities which call Pennsylvania home. Pittsburgh has certainly seen its fair share of large and small tech companies relocating in order to harvest talent from Carnegie Mellon University and the University of Pittsburgh. Once known as a steel and manufacturing powerhouse, the metro has become a center for advanced robotics and autonomous driving research. Google, Uber, Argo AI and Facebook are just a few of the firms expanding in the Steel City, leasing new office space and converting industrial properties. Over 500 Google engineers currently occupy office space in the East End in a revamped Nabisco factory, which also contains a bevy of restaurants, retail and apartments units. Facebook is following a similar tack and building a 105,000-square foot "AI lab" in the Strip District, expanding off its "Reality Labs" site in North Oakland.

Trust the Process: Philadelphia Bio-Tech in Full Blossom

Tech investment is ramping up in Philadelphia as well. Employment growth in the professional, technical & scientific services industry amounted to 5.2% year-over-year in July, making the sector one of the fastest growing in the Philadelphia metro division. The metro's tech prowess is frequently overshadowed by Northeastern peers Boston and New York City, not to mention the burgeoning tech cluster to the south in Northern Virginia. Comcast has clearly done its part to increase the metro's visibility and change this dynamic. Over the past decade, Comcast has constructed two towering skyscrapers in Center City, including the newer 60-floor Comcast Technology Center, which is the tenth tallest building in the United States and will eventually house 1,500 new tech workers. The firm is the currently the second largest private employer in the greater Philadelphia region with roughly 22,000 employees.

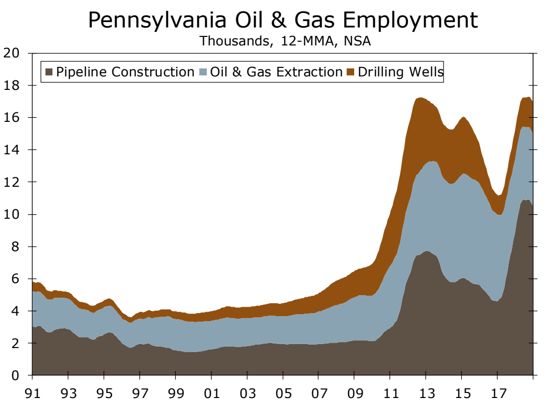
Tech investment is ramping up in Philadelphia.

The metro's growing tech scene is also readily apparent across the Schuylkill River in University City, which has seen rapid development over the past few decades and become a significant catalyst of economic growth for the entire region. Behind the area's success are several high caliber research institutions such as the University of Pennsylvania and Drexel University, which have nurtured a dense life sciences and tech ecosystem, which now appears to be in full flourish. The area has been dubbed "Cellicon Valley" in large part due to ground-breaking biotech research centered on cell and gene therapy emanating from globally renowned Penn Medicine.

The emergence of the University district also serves as an inspiring case study of the economic potency of academic-industry partnerships. SAP, whose North American headquarters is located in suburban Philadelphia, recently announced it would build on its longstanding relationship with Drexel and create the "SAP Next-Gen Lab", which will connect faculty, students and organizations to the research, technologies and methodologies driving digital transformations such as blockchain and the Internet of Things. Intel and Johnson & Johnson also join a long list of corporations which have recently established research partnerships with the University of Pennsylvania. The Intel Center for Wireless Autonomous Systems will boost research into robotics wireless communications, while the Johnson & Johnson "JLABS" at Penn's Pennovation Center will work to accelerate innovation in pharmaceuticals, medical devices and healthcare.

Academic-industry partnerships are potent.

Figure 5



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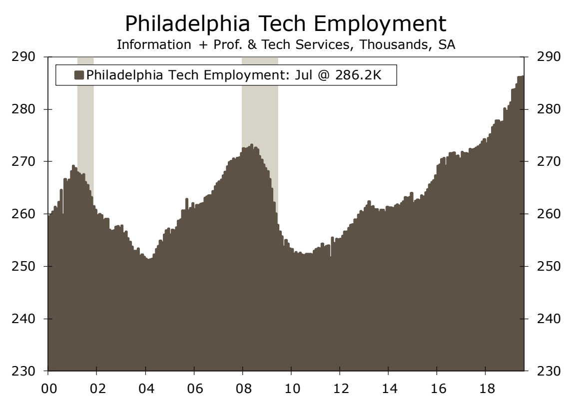


Source: U.S. Department of Labor and Wells Fargo Securities

These research partnerships have fostered an environment of innovation and entrepreneurship, which has attracted an influx of venture capital, accelerators, start-up incubators and co-working space. The recently opened 3675 Market Street further highlights the area's status as a growing innovation hub. The 14-story building is home to the Science Center and Cambridge Innovation Center and adds to the "uCity Square" campus, which boasts three million square feet of office, co-working, lab, retail and residential space. While new construction in University City has moderated more recently, activity should pick back up in coming years as several new phases of the huge

Healthcare is a major employer across the state.

Schuylkill Yards project are currently in the planning stages. The project will bring several new office buildings as well as apartment and retail space to the area just beyond 30th Street Station next to Drexel University. Spark Therapeutics, a commercial gene therapy company, has already pledged to lease space in the new development and expand its headcount by 500 jobs.

The influence of University City's healthcare, life sciences and technology cluster is spreading well beyond the city limits. Discovery Labs is developing 1.6 million square feet of collaborative lab, office and lifestyle space just west of Philadelphia in King of Prussia. The economic benefits generated by the symbiotic relationship between the sizeable cluster of universities and healthcare systems in the Philadelphia metro area are apparent throughout the state. Penn, Thomas Jefferson and Temple University and their associated healthcare systems together account for roughly 70,000 jobs and each is a top-five employer in the greater Philadelphia region. Allentown also claims the Lehigh Valley and St. Luke's University Health Networks, while the University of Pittsburgh and UPMC rank as top employers in Pittsburgh.

Figure 7

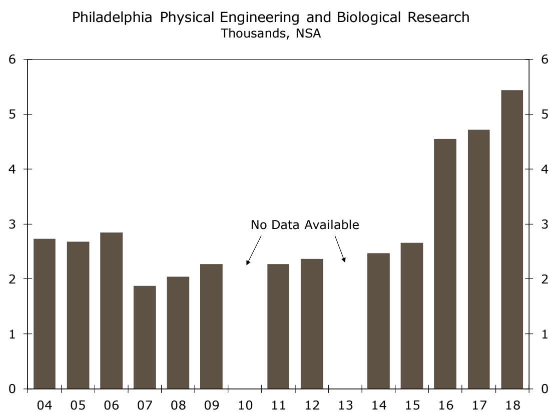
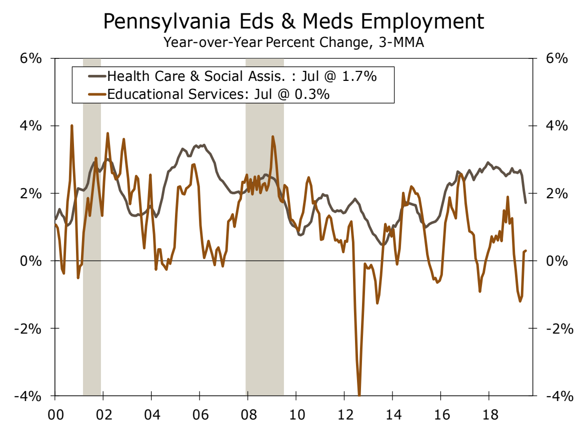


Figure 8



Source: U.S. Department of Labor and Wells Fargo Securities

Looking ahead, hiring in education & healthcare services statewide should continue at a fairly solid pace. Both the University of Pennsylvania and University of Pittsburgh are top recipients of National Institute of Health (NIH) funding and will benefit from increases in federal spending from last year's budget agreement. Educational services will, however, continue to face a number of challenges, primarily a dwindling college-bound age cohort which is significantly fewer in number relative to the recently matriculated wave of Millennials, the youngest of which are now 22 years old. Such unfavorable demographics have already led to slower tuition revenue growth and growing expenses. In addition, an improving economy may detract potential students. That said, the 2017 merger between Philadelphia University and Thomas Jefferson University offers a compelling example of some of the ways universities are dealing with these structural challenges.

Demographic trends should challenge higher ed but support healthcare.

An aging demographic will be a positive driver of demand for healthcare services, as Baby Boomers and now Gen X-ers reach an age where spending on healthcare tends to increase. The healthcare industry will still have to confront rising operating expenses, however, which have spurred consolidation and downsizing throughout the industry. Hahnemann University Hospital in Center City Philadelphia recently announced it will shut its doors in September due to financial challenges. That noted, providers have been more successful embracing cost-effective outpatient facilities as well as new technologies which can reduce hospital stays, such as specialized wearable medical devices, virtual visits and telehealth. Along those lines, more cost-reducing innovative construction methods, such as an Integrated Project Delivery (IPD) approach, which emphasizes collaboration among owner, architect and builder during design and construction, stand to aid new hospital development. Utilizing this IPD approach, construction is underway on the 1.5 million square foot Penn Medicine Pavilion. Set to be complete in 2021, the 17-story hospital in Philadelphia will include 500 private rooms, an inpatient care unit for heart and vascular patients, neurology and neurosurgery units, a cancer center and an emergency department.

Retail Pain and Industrial Gain

While overall employment growth is trending in the right direction, the Pennsylvania economy is not without weaknesses. Over the past year, the state has lost over 10,000 retail jobs, more than any other state except California. Nearly every metro in Pennsylvania registered declines, notably Pittsburgh, Allentown, Philadelphia and Montgomery County. Declines in Montgomery County are somewhat surprising, as the King of Prussia mall, which sits just west of Philadelphia, has long stood as one of the more successful malls in the United States due to its high end stores which cater to a relatively wealthy consumer base on the Main Line. And while ecommerce has ravaged many department store-anchored malls across the country, the nearby Village at Valley Forge provides a glimpse into how retail can evolve to conform to changing consumer preferences. Sitting on a redeveloped golf course, the huge mixed-use Town Center property offers an experiential cosmopolitan environment with retail, apartments, restaurants, hotels and offices.

Pennsylvania has shed over 10,000 retail jobs over the past year.

Retail's ecommerce-induced famine has created a feast for Pennsylvania's transportation & logistics industry, notably in Central Pennsylvania and the Lehigh Valley near Allentown and Bethlehem. Since 2010, no other region outside of the Inland Empire in California has seen more new warehouse and logistics construction. The Lehigh Valley I-78/I-81 corridor's primary advantages are its relatively low rents and land prices combined with a strategic line of sight to both Philadelphia and New York and the Northeast's wealthy consumer base. Rapid industrial development is clearly evident in the Allentown's labor market, as transportation & warehousing payrolls have more than doubled since 2010. Hiring in this sector has moderated more recently, which perhaps reflects the dual headwinds arising from slower global growth and intensifying trade frictions. Years of rapid development have also brought some growing pains, as infrastructure expansions have not kept pace with the convoys of trucks descending on the region. Still, the ecommerce paradigm shift which has spurred the need for robust supply chains and last-mile logistics will continue to support the region for years to come.

Transportation & warehousing has boomed.

Figure 9

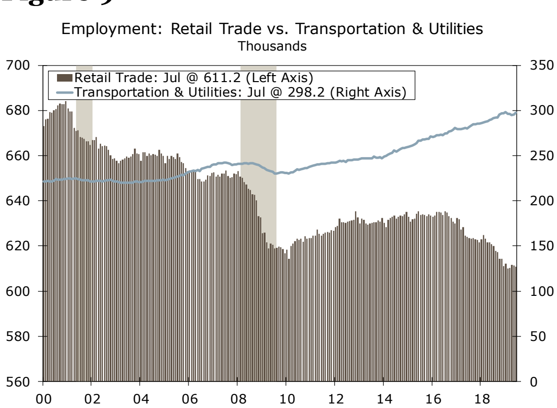
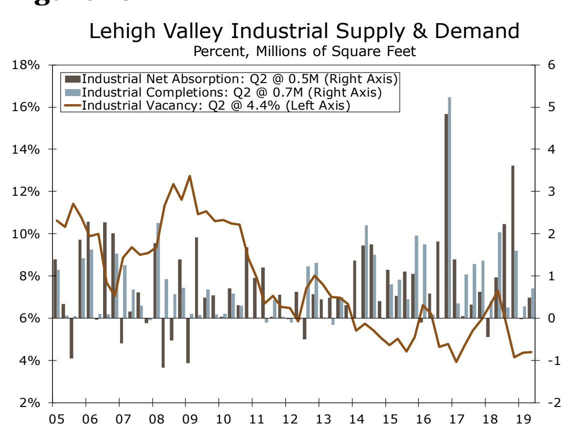


Figure 10



Source: U.S. Department of Labor, CoStar, Inc. and Wells Fargo Securities

Rising rents, land prices and traffic congestion in the Lehigh Valley have led industrial operators to areas further west into Central Pennsylvania. Perhaps no market has benefited more from the spillover than Harrisburg. Whirlpool, Ace Hardware, Kohler, Ames True Temper, FedEx and Amazon are just a few of the major industrial tenants in the area. A drop in the industrial vacancy rate alongside strengthening demand has led to nearly 3.5 million square feet of new warehouse and distribution facilities currently under construction.

The influx of industrial investment has given the Harrisburg economy a needed boost.

Overall employment growth continues to lag both the state and nation, but the influx of industrial investment has given the Harrisburg economy a needed boost. While total payrolls have been essentially flat over the past year, transportation & warehousing payrolls have posted a 2.7% gain. Hiring in the public sector, which is one of the top employers in the state capital, continues to be weak amid budget woes. State & local government payrolls have steadily declined since 2008 and now sit at a levels not seen since 1997. Employment growth in Harrisburg's education & health and professional & business services sectors has also softened this year.

Figure 11

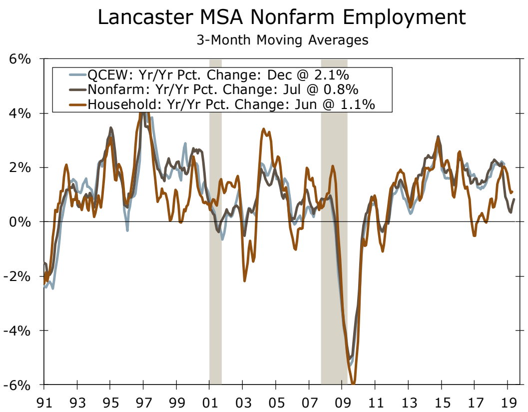
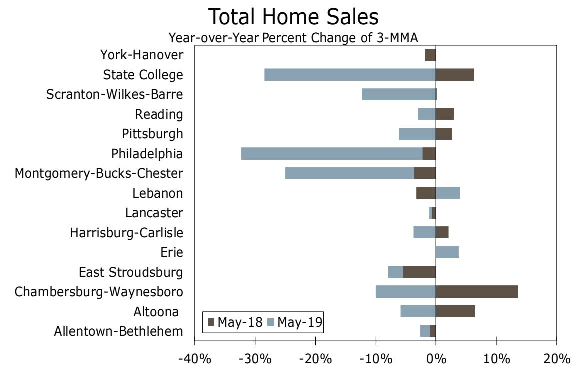


Figure 12



Source: U.S. Department of Labor, CoreLogic, Inc. and Wells Fargo Securities

Areas such as Lebanon, Reading and Lancaster, which are nestled between Harrisburg and Philadelphia, have fared slightly better. For much of the expansion Lancaster has been one of the state's fastest growing metros in terms of employment and population growth. Commutable to both the state capital and Philadelphia, it has been a major draw for residents seeking affordable housing, a vibrant food and craft brewery scene and a bucolic lifestyle. Lancaster County still maintains a significant Amish population, which contributes heavily to the area's agriculture and wholesale trade sectors.

Despite cooling off a bit, Lancaster is clearly on an upward trajectory.

Despite cooling off a bit, Lancaster is clearly on an upward trajectory. The Lancaster economy has a robust manufacturing base, which has been remarkably resilient amid ongoing trade headwinds. New Holland Agriculture and Construction calls Lancaster home, while building material manufacturer Armstrong Flooring, Turkey Hill Dairy and Dart Containers also maintain a significant presence in the area. Furthermore, Johnson & Johnson, Pfizer and GlaxoSmithKline all have production and packaging locations in Lancaster County. The metro's success is a consequence of a more diverse economic landscape as Lancaster has further expanded its education & healthcare portfolio in recent years, while a variety of hotels, bars and restaurants have opened to accommodate the influx of new businesses, residents and tourists. Lancaster is also home to a budding live events and entertainment technology cluster. Rock Lititz is a 96-acre business park which was founded by Clair Global and Tait, and consists of a rehearsal building for bands about to go on tour, a hotel and a multi-tenant building. The rapid commercial development of recent years appears set to continue. The planned Oregon Village development, a 75-acre development containing a hotel, restaurant, banquet hall, supermarket, convenience store and 550 homes, recently was approved and is set to move forward.

Home Sales Slow Amid Inventory Shortfall

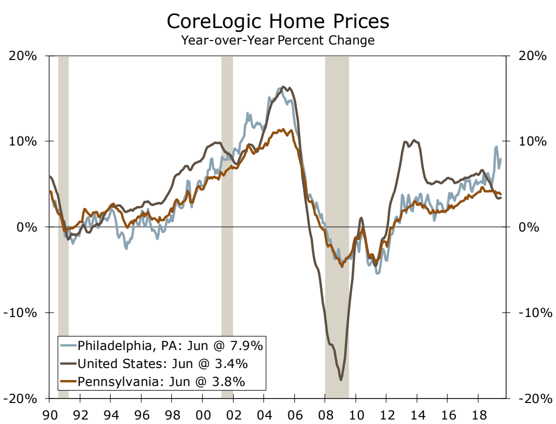
Lower mortgage rates have yet to spur a turnaround in Pennsylvania home sales. Mortgage rates recently hit 3.6%, the lowest since 2016. But even as employment growth remains solid, statewide sales of both new and existing homes have languished for much of the past year. A severe shortage of inventory on the market is the likely culprit behind the slowdown, as the number of active market listings has steadily declined on a year-over-year basis for more than four years. Homes for sale are moving quickly, an indication that demand remains robust. According to CoreLogic, single-family homes for sale remained on the market for just 52 days during June, the fewest since data began being compiled in 2007. The shortfall has led to accelerating home prices over the past few years. Statewide home price appreciation exceeded 4% throughout 2018, which, while still fairly subdued, is the quickest pace of the expansion. That said, softer home sales and stronger demand for entry-level priced homes have led to some additional moderation more recently, a pattern mirrored at the national level. Home prices advanced 3.8% year-over-year in June throughout the state, according to CoreLogic. At $170,000 the median price of a home remains relatively affordable, particularly compared to neighboring New Jersey.

An inventory shortfall and subsequent sales slowdown have been most acutely observed in the Philadelphia metro division. Even while leading the state in job growth, both home sales and median home prices recently dipped below their year-ago levels. The downtrend can be explained by a lack of supply rather than waning demand. The months' supply of homes on the market at the current sales pace, which is a measure of inventories, is extremely low at 3.6. With urban living remaining the preference for a sizable portion of Millennials, the lack of affordable supply in desirable neighborhoods is likely driving those who are not already homeowners to the surrounding suburbs where more inventory is available. Home sales in Montgomery, Bucks, Delaware and Chester County have weakened, but home price appreciation is holding fairly well, indicating that it is the lack of affordable product rather than faltering demand that is holding back sales.

Housing inventory and sales levels are low.

Adding to the state's inventory challenges, new single-family construction remains at an underwhelming pace. Through June, statewide single-family permits are running 10% below the same period last year. Builders have been faced with a number of headwinds including rising labor and material costs, but foremost is the scarcity of developable lots in desirable locations. In contrast to prior cycles, builders have yet to push development further out to the exurbs, opting instead for more commutable yet increasingly rare suburban and urban lots, which has put a ceiling on overall residential construction. Between 1980 and the onset of the housing bust in 2007, Pennsylvania issued an average 33,000 single-family building permits per year. In the time since, that number has been more than cut in half, falling to just 16,000. Multifamily building has fared somewhat better but has mostly been limited to the major job hubs of Pittsburgh and Philadelphia.

Figure 13



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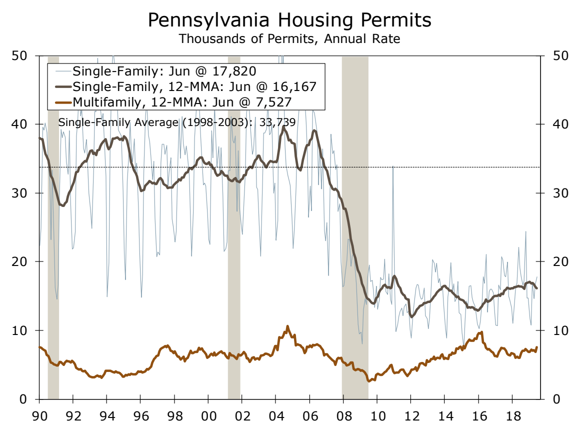

Source: CoreLogic, Inc., U.S. Department of Commerce and Wells Fargo Securities

Summary & Outlook

Pennsylvania's economy appears to be in good shape to weather the headwinds from a slowing global economy. Overall economic growth has improved this past year and is now running roughly in line with the nation. The state's largest metropolitan areas are accounting for the bulk of economic gains, particularly Philadelphia, which is riding a wave of investment in its large life sciences, higher education and technology sectors. The same three sectors are also driving growth in Pittsburgh, albeit with somewhat more modest gains. Harrisburg, Allentown and Scranton are also seeing steady gains. Demographics remain a key challenge, however, as Pennsylvania's population is aging a little ahead of the nation. Roughly 18% of Pennsylvania residents are currently age 65 and over and that proportion is expected to rise to one in five by 2025. Lower housing costs are helping to offset this drag, however, encouraging residents to relocate from neighboring states where home prices and taxes are much higher.

Pennsylvania's economy appears to be in good shape to weather the headwinds from a slowing global economy.

Pennsylvania's strong base of education, technology and life sciences should provide the state's economy some downside protection from slowing global growth. Education & healthcare typically continue to grow even in a recession. The state's technology and life sciences sectors also appear to have solid momentum that should hold up as long as the national economy avoids a recession. The state's manufacturing, transportation & warehousing and energy industries are less likely to avoid the headwinds from slower global growth, although structural shifts to online shopping and towards burning natural gas rather than coal to generate electricity will insulate these industries.

We expect economic growth to moderate in 2020.

Based on data through the first half of 2019, we expect Pennsylvania's real GDP growth to ramp up to a 2.7% pace this year and moderate to a 2.2% pace in 2020. We expect nonfarm employment to rise 0.9% both this year and next, resulting in just over 50,000 jobs added each year. While that pace is well above what is shown in the most recent monthly employment statistics, we believe job growth is being understated, particularly in rapidly growing areas such as technology and life sciences. The latest Quarterly Census of Employment and Wages suggest job growth is running about 0.3 percentage points ahead of the latest monthly figures. The state's unemployment rate, which is compiled from a separate survey, should continue to inch lower, averaging 3.9% this year and 3.8% in 2020.

Pennsylvania Economic Outlook

	Actual				Forecast	
	2015	2016	2017	2018	2019	2020
Real Gross Domestic Product by State, $ Millions	677,873	685,462	697,183	712,101	731,328	747,765
Annual Rate	2.0%	1.1%	1.7%	2.1%	2.7%	2.2%
Nominal Personal Income, $ Millions	642,623	657,165	682,534	708,862	737,925	768,918
Nominal Personal Income, Percent Change	4.0%	2.3%	3.9%	3.9%	4.1%	4.2%
Real Median Household Income, $	62,483	62,290	63,173	64,120	65,100	66,000
Population, Thousands	12,786	12,784	12,790	12,807	12,822	12,840
Change in thousands	(3)	(2)	7	17	15	18
Percent Change	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%
Nonfarm Employment, Thousands	5,835	5,883	5,941	6,006	6,058	6,112
Change in thousands	47	48	58	65	52	54
Percent Change	0.8%	0.8%	1.0%	1.1%	0.9%	0.9%
Unemployment Rate, Annual Average	5.3%	5.4%	4.9%	4.3%	3.9%	3.8%
Total Housing Permits	22,497	20,761	22,509	24,576	23,500	23,700
Single-Family Permits	13,616	14,786	16,200	17,038	16,150	16,460
Multi-Family Permits	8,881	5,975	6,309	7,538	7,350	7,240
FHFA Home Price Index, Percent Change	2.7%	3.0%	3.9%	5.0%	4.6%	4.3%

Sources: National Association of Realtors, Federal Housing Finance Authority, U.S. Department of Commerce, U.S. Department of Labor, Moody's Analytics & Wells Fargo Securities
Forecast as of: August 20, 2019

Wells Fargo Securities Economics Group

Jay H. Bryson, Ph.D.	Acting Chief Economist	(704) 410-3274	jay.bryson@wellsfargo.com
Mark Vitner	Senior Economist	(704) 410-3277	mark.vitner@wellsfargo.com
Sam Bullard	Senior Economist	(704) 410-3280	sam.bullard@wellsfargo.com
Nick Bennenbroek	Macro Strategist	(212) 214-5636	nicholas.bennenbroek@wellsfargo.com
Tim Quinlan	Senior Economist	(704) 410-3283	tim.quinlan@wellsfargo.com
Azhar Iqbal	Econometrician	(212) 214-2029	azhar.iqbal@wellsfargo.com
Sarah House	Senior Economist	(704) 410-3282	sarah.house@wellsfargo.com
Charlie Dougherty	Economist	(704) 410-6542	charles.dougherty@wellsfargo.com
Erik Nelson	Macro Strategist	(212) 214-5652	erik.f.nelson@wellsfargo.com
Michael Pugliese	Economist	(212) 214-5058	michael.d.pugliese@wellsfargo.com
Brendan McKenna	Macro Strategist	(212) 214-5637	brendan.mckenna@wellsfargo.com
Shannon Seery	Economic Analyst	(704) 410-1681	shannon.seery@wellsfargo.com
Matthew Honnold	Economic Analyst	(704) 410-3059	matthew.honnold@wellsfargo.com
Jen Licis	Economic Analyst	(704) 410-1309	jennifer.licis@wellsfargo.com
Hop Mathews	Economic Analyst	(704) 383-5312	hop.mathews@wellsfargo.com
Coren Burton	Administrative Assistant	(704) 410-6010	coren.burton@wellsfargo.com

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