

Economics Group

Special Commentary

Mark Vitner, Senior Economist
mark.vitner@wellsfargo.com • (704) 410-3277
Charlie Dougherty, Economist
charles.dougherty@wellsfargo.com • (704) 410-6542
Matthew Honnold, Economic Analyst
matthew.honnold@wellsfargo.com • (704) 410-3059

Princeton vs. Yale

Not Quite the 150th Anniversary of College Football, But Close

On November 6, 1869, the College of New Jersey—later renamed Princeton University—traveled to New Brunswick to take on Rutgers. Fast-forward 150 years, and Princeton’s game against Yale on Saturday will look quite different from that inaugural game, which more closely resembled a form of violent soccer than the modern playing style. The final score, 6-4 in favor of Rutgers, certainly looked more like a soccer outcome. Princeton celebrated their 150th anniversary of football last weekend, in a special commemorative game vs. Dartmouth in Yankee Stadium. We decided to cover them this weekend, however, given that their matchup with Yale is considered the oldest continuing football rivalry—they have faced off 141 times since their first matchup in 1873.

Princeton and Yale have played football against each other since 1873.

This game also has major implications for the Ivy League, as both teams are 7-1. Princeton’s only loss was last week in the Bronx to 8-0 Dartmouth, ending a 17-game win streak, while Yale’s only loss was also at the hands of Dartmouth. The Ivy League is one of the 13 conferences in Division I FCS, but its eight members abstain from all post-season play, shielding them from the national spotlight. The Ivy League is also unique because it offers no athletic scholarships, similar to the rule in place across all of Division III. Even though the Ivy League and other small private universities in the Northeast dominated the early years of the game, the explosive growth of college football as a business shifted the balance of power dramatically to large and often public universities with soaring athletic budgets across the South and Midwest.

From an economic standpoint, New Jersey and Connecticut, and indeed much of the Northeast, are facing some significant headwinds. They are two of the states that were hardest hit by the limitations on deductions for state & local taxes (SALT) imposed by the Tax Cuts and Jobs Act in December 2017. The change in tax law, which disproportionately hurt regions with relatively high state & local taxes by raising the effective rate that residents must pay, has only exacerbated affordability challenges and contributed to the outward flow of residents and businesses.

Figure 1

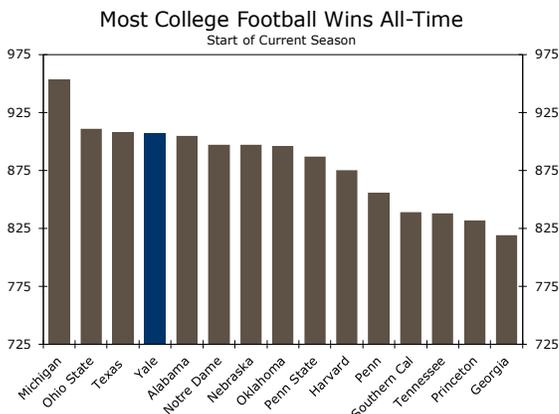
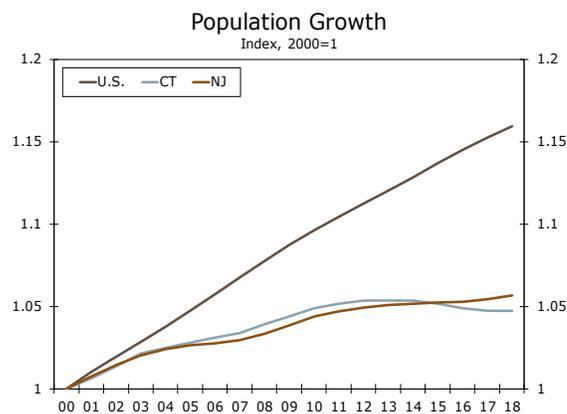


Figure 2



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

Together we'll go far



Princeton is the fourth oldest university in the country.

Princeton History & Football

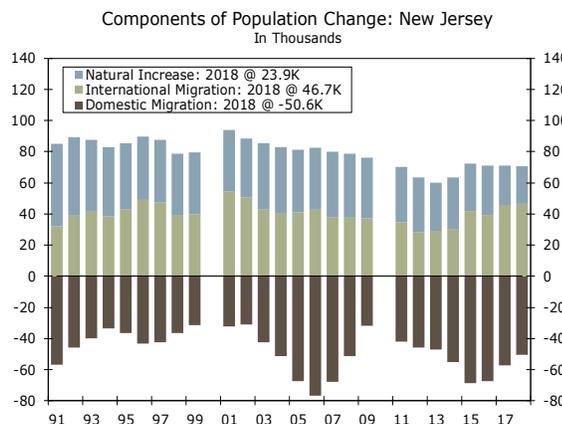
Founded in 1746, Princeton is the fourth oldest university in the country. Nassau Hall, built in 1756 and currently home to the office of the university president, traded hands between the Americans and the British during the Revolutionary War and even functioned as the U.S. Capitol during the summer of 1783. Today Princeton has 5,300 undergrads and 3,000 graduate students across 42 doctoral departments and programs. It has produced 21 Rhodes Scholars in the past decade and currently has 27 Nobel Prize winners on its faculty.

Notable Princeton alumni include Presidents James Madison and Woodrow Wilson, First Lady Michelle Obama, 12 Supreme Court Justices (including Samuel Alito, Elena Kagan and Sonia Sotomayor), eight Secretaries of States, three Secretaries of Defense, current Fed Chair Jay Powell, Paul Volcker, Jeff Bezos, Eric Schmidt, John Nash, Richard Feynman, Burton Malkiel and Greg Mankiw.

Princeton football’s early start meant they were uniquely positioned for success, winning 22 of the first 40 national championships. They won a total of 28, the most recent in 1950, which featured running back Dick Kazmaier, who went on to win the Heisman the following year. That marked the last time an Ivy League athlete won the award. Beyond the usual suspects of Yale, Harvard and Penn, Princeton of course also had a major rivalry with Rutgers, just 15 miles to the north. Despite the early Princeton dominance (they lead the series 53-17-1), as Rutgers invested in its athletics programs and ascended into the national conversation—while Princeton was mired in the constraints of no scholarships and no bowl games—the matchup began to become somewhat unequal.

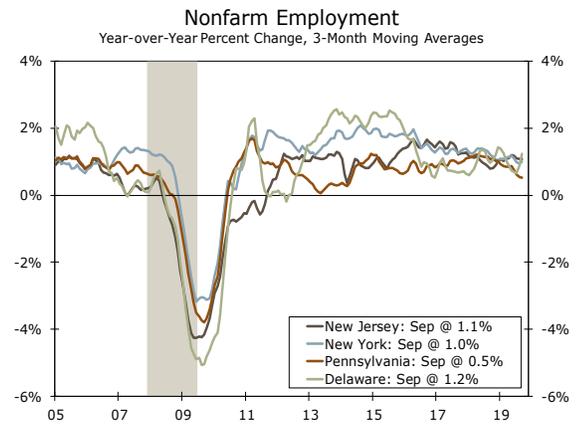
Princeton officials eventually requested an end to the series in 1980, and hopes of a renewal were quashed when a majority of programs voted to require that all teams remaining in Division I-A (now FBS) must either have average home attendance of 17,000 or stadium capacity of 30,000. The new alignment, which went into effect in 1982, pushed almost 50 teams from I-A to I-AA (now FCS), including all eight members of the Ivy League. Four of them—Penn, Princeton, Yale and Harvard—actually met the requirement, but the League opted to stay together and accept the relegation.

Figure 3



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

Figure 4



Ten New Jersey counties are part of the New York City MSA.

New Jersey Outlook

Princeton is located in Princeton, New Jersey, roughly halfway between Philadelphia and New York City. It is part of the Trenton-Princeton MSA, home to 370,000 residents, and is one of four MSAs in New Jersey along with Atlantic City-Hammonton, Ocean City and Vineland-Bridgeton. Additionally, 10 New Jersey counties are part of the New York-Newark-Jersey City MSA. The Garden State has of course long benefited from its proximity to New York City. In fact, from 1747-1756, Princeton was located across the Hudson River from Manhattan in Newark.

The economic recovery took longer to materialize in New Jersey, which faces a number of challenges, including a tenuous fiscal situation, the loss of residents through out-migration and a housing market that remains in slow gear. The most pressing issue may be demographics—a net 298,000 people have packed up and left New Jersey for other states since 2013. Natural increase (births minus deaths) added 145,000 over that time period, but the median age of 40.0 (41st oldest in the country) is not conducive to strong gains from natural increase. As a result, New Jersey has become much more dependent on international migration, which added a net 203,000 residents since 2013. Altogether, overall population has risen by 50,000 in that period, and growth has actually picked up the last two years, rising 20,000 in 2018 alone.

The economic recovery took longer to materialize in New Jersey.

New Jersey has long benefitted from an influx of businesses seeking refuge from high costs in New York City. Affordability is always relative, however, and more recently the state has been on the other end of the low-cost migration, losing firms to booming metro areas in the Sun Belt. For example, global manufacturer Honeywell relocated its headquarters to Charlotte, citing it as a “business- and family-friendly city” in the heart of the rapidly growing Southeast. Mercedes-Benz and Sealed Air also moved south a few years earlier.

New Jersey is home to a massive concentration of pharmaceutical companies—around 50% of new drug approvals in 2017 stemmed from a company with a footprint in the state—which are benefiting from rising investment in healthcare and life sciences. The state has seen some sizable successes—German biotech company Evotec is relocating to Princeton, while Celgene expanded its operations and Teva Pharmaceutical moved its U.S. headquarters to Parsippany from Pennsylvania.

New Jersey is also uniquely positioned in the middle of the densely populated and highly interconnected Washington, D.C.-Philadelphia-New York City-Boston corridor (colloquially known as the ‘Acela Corridor’), allowing it to benefit from the explosion in e-commerce and associated demand for logistics and fulfillment centers. Transportation & warehousing employment in New Jersey has surged almost 50,000 since 2014, which has helped to push the unemployment rate below the national rate to 3.1%

Transportation & warehousing and leisure & hospitality have been bright spots.

Leisure & hospitality has been another bright spot, with employment rising 5% over the past year, the equivalent of 14,000 new jobs. For years, Atlantic City casinos and the state’s race tracks struggled, but the state’s Supreme Court victory in May 2018, which overturned a federal ban on sports betting, has turned the tide. Governor Phil Murphy was the very first one in line at Monmouth Park to make a sports bet a mere three days after signing the bill that legalized it statewide. In just the first year of legality, New Jersey has taken in more than \$2.9 billion in bets (compared to \$5.2 billion in Nevada), resulting in more than \$200 million in revenue for sportsbooks. The ruling has unleashed a flood of legalizations as other states rush to join the party, but a first-mover advantage, existing casino facilities and proximity to major population centers (New Yorkers do not have to go far to make wagers at the Meadowlands, and sports betting and fantasy company DraftKings reports that its top four mobile betting locations are all just across the Hudson from Manhattan) make this a potentially durable source of growth for the state.

Yale History & Football

Yale was founded in 1701, one-upping Princeton as the third oldest university in the country, after Harvard and William & Mary. Today it has 6,000 undergrads and 7,500 graduate students. Alumni include Presidents William Howard Taft, Gerald Ford, George H.W. Bush, Bill Clinton and George W. Bush; 19 Supreme Court Justices (including Sonia Sotomayor, Samuel Alito, Clarence Thomas and Brett Kavanaugh); John Kerry; Hillary Clinton; Steven Mnuchin; William F. Buckley; Robert Moses; Samuel Morse; Eli Whitney; Reinhold Neibuhr; Meryl Streep; Stephen Schwarzman, William Boeing; Irving Fisher; George Akerlof and Paul Krugman.

At just over \$30 billion, Yale’s endowment is the second largest of a single university (and largest on a per-student basis), after Harvard. The Ivy League lays claim to five of the 10 largest endowments of a single university. The Yale endowment is notable for its record of stellar returns under the leadership of David Swensen, who pioneered the “Yale Model.” Also known more broadly

Yale's endowment model has been very influential.

as the “Endowment Model,” it argues that endowments are inherently long-term investors (with perpetual horizons) that can therefore afford to target illiquid, alternative investments that offer higher expected returns. Moreover, these institutions *must* invest in these higher-yielding asset classes in order to maintain purchasing power—after making distributions to the university’s operating budget—in order to provide a margin of excellence and maintain institutional independence. Swensen’s model has been influential across endowments and portfolio management more broadly.

Yale began playing football in 1872 and has racked up the fourth most wins all-time. Similar to Princeton, they dominated football’s early years, winning 27 national championships between 1872 and 1927. Player and coach Walter Camp, known as the “Father of Football,” was instrumental in the transition from rugby-type rules to more of what we know today, and Yale produced two of the first three Heisman Trophy winners—Larry Kelley in 1936 and Clint Frank in 1937. The team plays in the 61,000-seat Yale Bowl, a National Historic Landmark built in 1914 as the first bowl-shaped stadium, inspiring the Rose Bowl, Los Angeles Memorial Coliseum and Michigan Stadium.

Connecticut Outlook

Yale is located in New Haven, about 80 miles northeast of New York City. It is part of the New Haven-Milford MSA, one of four in Connecticut along with Bridgeport-Stamford-Norwalk, Hartford-East Hartford-Middletown and Norwich-New London. Of course, much of the state economy is heavily tied to New York City, and it is home to dozens of financial services and insurance firms. The financial sector was hit extremely hard by the recession and never fully recovered, lagging the recovery in New York City and increasingly seeing firms migrate to lower costs areas such as Dallas, Charlotte, Austin, Delaware and Columbus.

Connecticut employment growth has been weak.

Connecticut’s population has shrunk every year since 2013, with a cumulative loss of 22,000 residents. The population is falling because people are moving away—since 2013 a net 129,000 residents moved to another state—and because the people that are staying are not having many children—Connecticut has the 45th oldest population, with a median age of 41.0. The only thing keeping the population from falling further is robust international migration, which is likely due to the proximity to New York City. A total of 80,000 international residents have moved into the state since 2013, and the trend has been steadily picking up over the past 30 years.

Overall job growth has been exceptionally weak, with nonfarm payrolls rising less than 1% each year since 2011. Education & healthcare, which is the state’s largest employment sector, is a bright spot, with employment rising around 2.5% per year. Connecticut’s weak population growth and high development costs have kept residential construction in the doldrums, however, and construction employment is contracting modestly. Retaining existing high-tech manufacturing and insurance firms is key. Connecticut’s unemployment rate is in line with the nation’s at 3.6%.

Figure 5

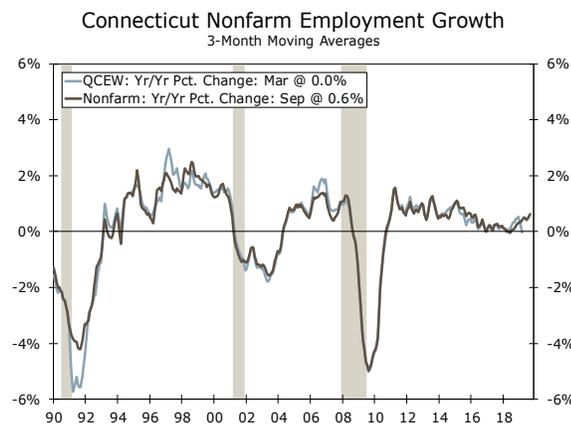
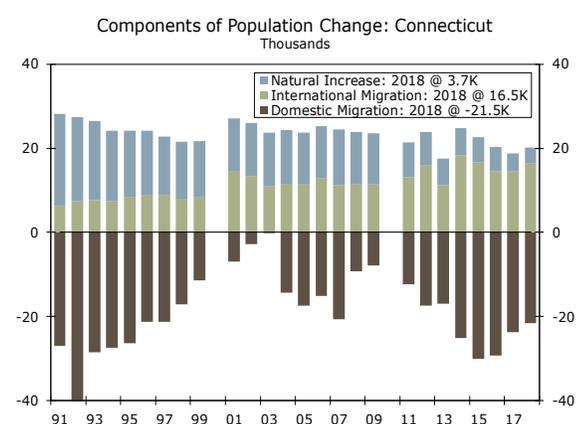


Figure 6



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

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

Wells Fargo Securities Economics Group publications are produced by Wells Fargo Securities, LLC, a U.S. broker-dealer registered with the U.S. Securities and Exchange Commission, the Financial Industry Regulatory Authority, and the Securities Investor Protection Corp. Wells Fargo Securities, LLC, distributes these publications directly and through subsidiaries including, but not limited to, Wells Fargo & Company, Wells Fargo Bank N.A., Wells Fargo Clearing Services, LLC, Wells Fargo Securities International Limited, Wells Fargo Securities Canada, Ltd., Wells Fargo Securities Asia Limited and Wells Fargo Securities (Japan) Co. Limited. Wells Fargo Securities, LLC. is registered with the Commodities Futures Trading Commission as a futures commission merchant and is a member in good standing of the National Futures Association. Wells Fargo Bank, N.A. is registered with the Commodities Futures Trading Commission as a swap dealer and is a member in good standing of the National Futures Association. Wells Fargo Securities, LLC. and Wells Fargo Bank, N.A. are generally engaged in the trading of futures and derivative products, any of which may be discussed within this publication. Wells Fargo Securities, LLC does not compensate its research analysts based on specific investment banking transactions. Wells Fargo Securities, LLC's research analysts receive compensation that is based upon and impacted by the overall profitability and revenue of the firm which includes, but is not limited to investment banking revenue. The information and opinions herein are for general information use only. Wells Fargo Securities, LLC does not guarantee their accuracy or completeness, nor does Wells Fargo Securities, LLC assume any liability for any loss that may result from the reliance by any person upon any such information or opinions. Such information and opinions are subject to change without notice, are for general information only and are not intended as an offer or solicitation with respect to the purchase or sales of any security or as personalized investment advice. Wells Fargo Securities, LLC is a separate legal entity and distinct from affiliated banks and is a wholly owned subsidiary of Wells Fargo & Company © 2019 Wells Fargo Securities, LLC.

Important Information for Non-U.S. Recipients

For recipients in the EEA, this report is distributed by Wells Fargo Securities International Limited ("WFSIL"). WFSIL is a U.K. incorporated investment firm authorized and regulated by the Financial Conduct Authority. For the purposes of Section 21 of the UK Financial Services and Markets Act 2000 ("the Act"), the content of this report has been approved by WFSIL, an authorized person under the Act. WFSIL does not deal with retail clients as defined in the Directive 2014/65/EU ("MiFID2"). The FCA rules made under the Financial Services and Markets Act 2000 for the protection of retail clients will therefore not apply, nor will the Financial Services Compensation Scheme be available. This report is not intended for, and should not be relied upon by, retail clients.

SECURITIES: NOT FDIC-INSURED/NOT BANK-GUARANTEED/MAY LOSE VALUE

WELLS
FARGO

SECURITIES