

An Economic Analysis and Overview of the Florida PACE Funding Program

By Sean Snaith, Ph.D.

Overview of the PACE Funding Program in Florida

Florida PACE is a public entity that provides homeowners with an alternative financing option for energy-efficient and hurricane-resistant home improvements.

Established under Florida law, Florida PACE oversees program administrators who work with homeowners in Florida to finance their projects through long-term, fixed-rate assessments that are added to their property tax bills.

Funding through Florida PACE may be used for specific projects that relate to either energy efficiency or wind resistant improvements for the property. As of now, the list of qualifying projects approved by Florida state statute includes any of the following:

1. Energy conservation and efficiency improvement, which is a measure to reduce consumption through conservation or a more efficient use of electricity, natural gas, propane, or other forms of energy on the property, including, but not limited to, air sealing; installation of insulation; installation of energy-efficient heating, cooling, or ventilation systems; building modifications to increase the use of daylight; replacement of windows; installation of energy controls or energy recovery systems; installation of electric vehicle charging equipment; and installation of efficient lighting equipment.
2. Renewable energy improvement, which is the installation of any system in which the electrical, mechanical, or thermal energy is produced from a method that uses one or more of the following fuels or energy sources: hydrogen, solar energy, geothermal energy, bioenergy, and wind energy.
3. Wind resistance improvement, which includes, but is not limited to:
 - a. Improving the strength of the roof deck attachment;
 - b. Creating a secondary water barrier to prevent water intrusion;

- c. Installing wind-resistant shingles;
- d. Installing gable-end bracing;
- e. Reinforcing roof-to-wall connections;
- f. Installing storm shutters; or
- g. Installing opening protections.

The Florida PACE program is a modest program, but one that has seen increasing utilization recently. From 2015 through June of 2023, the PACE program has financed an average of 2,132 projects a year. The total amount financed over that same period was \$573,922,326.

In the first six months of 2023, however, the demand for this financing has grown substantially. In this short time frame, \$166,183,940 worth of projects have been financed through Florida PACE. A combination of factors, addressed in the discussion that follows, have driven borrowers in greater numbers to utilize the PACE program and these include rising labor and materials costs, higher interest rates, an uptick in storm related damages in the state, and difficulties in the insurance market in Florida that have led to rapidly rising premiums and increased difficulty even getting insurance for many property owners, among other factors.

In the analysis that follows, we look at the PACE program in Florida and assess the role that it plays in financing improvements, some criticisms that have been levied against it, some potential changes that could improve on the existing structure and lastly the economic impact that PACE funded projects have had on the State of Florida.

Funding Alternatives for PACE Eligible Improvements

The Florida PACE Funding Agency is filling a gap by providing an alternative in the market for financing wind resistance improvements, renewable energy improvements, and energy efficiency and conservation improvements for homeowners in Florida.

In the absence of this financing option homeowners are left with few choices, if in fact they can get access to them. The options available to homeowners to pay for these improvements before the PACE program was implemented included:

- Paying for improvements with cash
- Home equity lines of credit or a home equity loan
- Financing with a credit card
- Borrowing the funds from family and/or friends
- Withdrawing money from retirement accounts.

The reality is that most of the PACE participants do not have access to these alternative methods of funding and if they do it is at terms that are not feasible or come at a significantly higher cost. Let's examine each of these alternatives in turn.

Paying for Improvements with Cash

The option of self-financing, i.e., paying with cash, is an unrealistic option for virtually all the borrowers in the PACE program. The truth of the financial situation of a significant majority of Americans is that they are living paycheck-to-paycheck and do not have the savings to pay for a small emergency expenditure let alone the expense of a roof replacement or other large improvements covered by the PACE program.

According to a recent survey by the LendingClub Corporation¹ 60% of Americans are living paycheck to paycheck. For more than two years, inflation has eroded the real wages and salaries of American workers. Wages were rising over this time frame, but the cost of living has been rising faster and the purchasing power of worker's paychecks has continued along a downward trend. Paying for the essential expenditures of food, shelter, transportation, and utilities has become increasingly difficult from one month to the next. For these 60% of households there is nothing left over at the end of the month to put into savings or into an emergency fund.

Considering this LendingClub survey it should come as no surprise that a majority of households do not have funds on hand to cover even a \$1,000 emergency expenditure. Since 2014 Bankrate.com has conducted an annual emergency savings report of Americans². When

¹ <https://ir.lendingclub.com/news/news-details/2023/60-of-Americans-Now-Living-Paycheck-to-Paycheck-Down-from-64-a-Month-Ago/default.aspx>

² <https://www.bankrate.com/banking/savings/emergency-savings-report/>

asked if they were hit with a \$1,000 expense for an emergency room visit or car repair, 57% of respondents would not be able to pay for it by using their savings. In fact, 20% of the respondents reported having no emergency saving at all.

The percentage of households comprising the 57% who don't have \$1,000 for an emergency would be significantly higher if the emergency expense was the replacement of a roof or an air conditioning unit that would be 10 to 30 times more expensive than a \$1,000 automotive repair.

In the current economic environment, the ability to self-finance, via savings, the types of projects funded by the Florida PACE is only a possibility for a small percentage of households in Florida.

Home Equity Lines of Credit or a Home Equity Loan

Tapping into home equity to pay for improvements is another method of financing these projects, but this too is not a possibility for all potential borrowers.

According to Bankrate.com³ to qualify for a home equity loan a borrower must meet several qualifications to be approved. While not every lender has the exact same requirements, generally the borrower must meet the following:

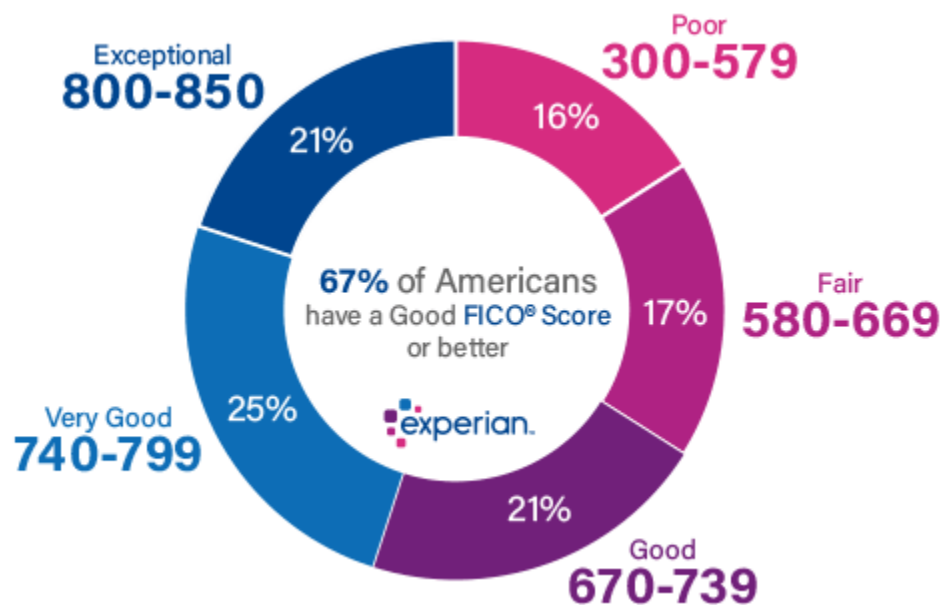
³ <https://www.bankrate.com/home-equity/home-equity-loan-bad-credit/#how-to-qualify>

- A minimum credit score of 620
- At least 15 percent to 20 percent equity in your home
- A maximum DTI ratio of 43 percent, or up to 50 percent in some cases
- On-time bill payment history
- Stable employment and income.

Because of the multiple requirements that borrowers must meet for a home equity loan it is possible to potentially find themselves falling short on one or more of these criteria.

According to Experian and shown in figure 1 below, 33% of Americans have a credit score that is “Fair” or “Poor” and many of that 33% would be precluded on that basis alone from using a home equity loan to finance these improvements.

Figure 1; Distribution of Credit Scores of Americans



A borrower's credit score is only one of the requirements to get a home equity loan and even with a sufficient credit score, a potential borrower could fall short of being approved. Cycles in the economy, different types of occupations with more volatile income streams (sales, agriculture), the willingness of financial institutions to make these types of loans and other factors can all impact the ability of a borrower to get home equity financing for these types of improvements.

Financing with a Credit Card

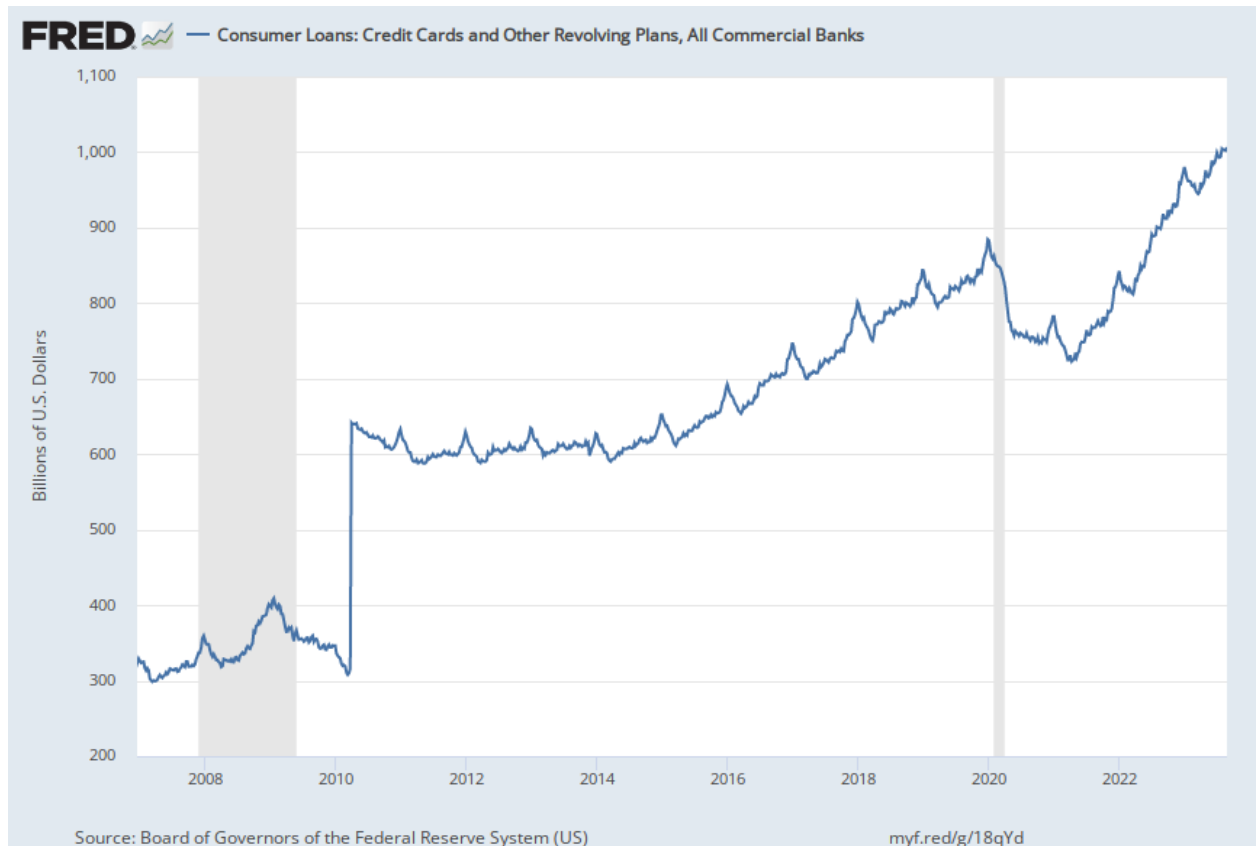
Another possible source of financing for these improvements is via the use of a credit card. This assumes the borrower has a credit limit that is sufficient to finance a project that could run into the tens of thousands of dollars. According to the website www.Wallethub.com, the median (50% of card holders have more and 50% have less) credit limit in Florida is \$5,841. The average credit limit in the state is \$14,361⁴. The fact that the average is significantly larger than the median credit limit reveals that there is a subset of credit card holders in the state who have access to large credit limits, but most Floridians have credit limits that are near or below the median of \$5,841.

⁴ <https://wallethub.com/edu/cc/average-credit-card-limit/105096>

To finance the type of improvements that PACE finances, credit card holders would need available credit sufficient to pay for the project, given these statistics most Floridians would be unable to do so.

Credit card debt in the U.S. has exceeded \$1 trillion dollars for the first time in history as households, in the face of falling real wages and salaries, are forced to use credit cards to patch the gap between monthly expenditures and income. Chart 1 shows the rapid increase in borrowing via credit card that has occurred over the past two years. Thus, the available credit to use toward the type of improvements that are financed via PACE is likely to have been significantly diminished as these sources of credit have been highly utilized.

Chart 1; U.S. Consumer Credit Card and Revolving Debt Balances



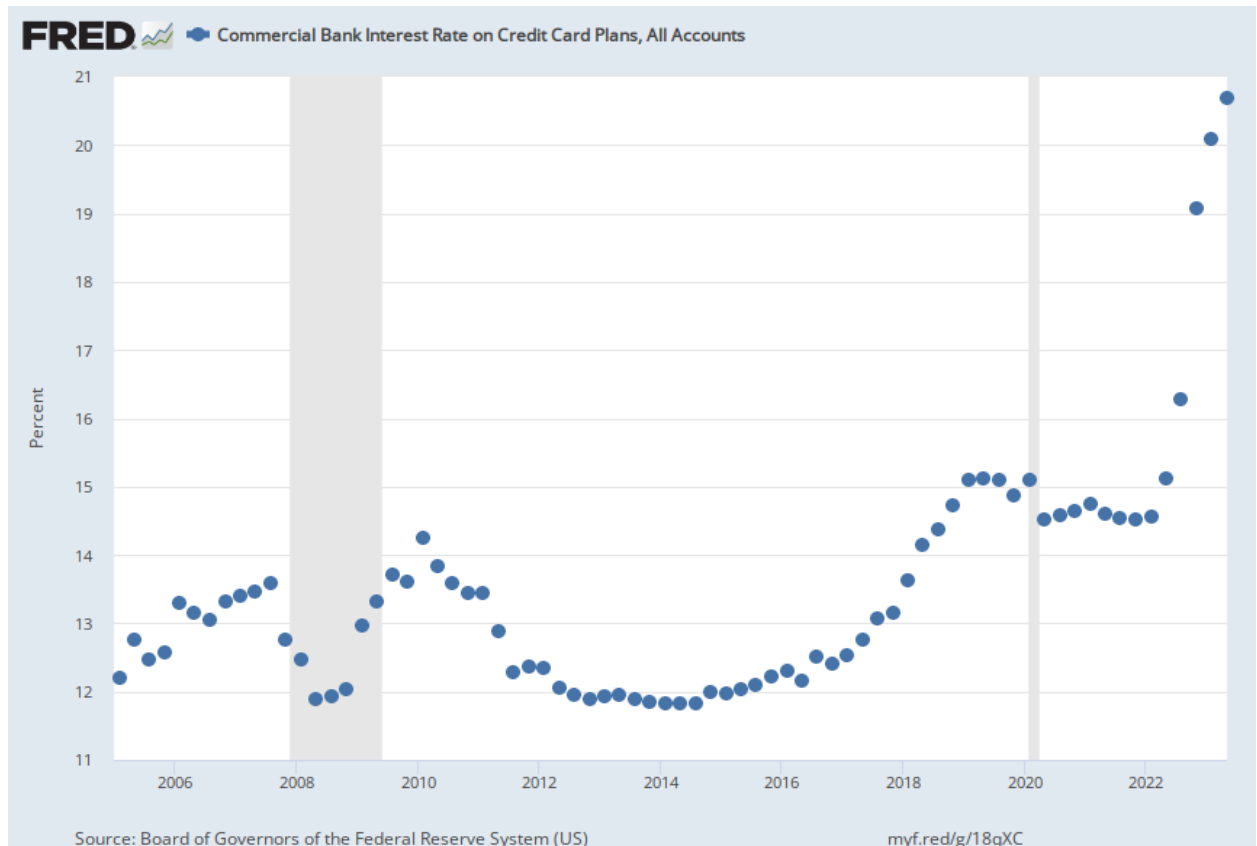
Even if a borrower had sufficient credit available on credit card(s) the financial conditions currently prevailing in the U.S. would make the financing costs the most expensive they been in at more than three decades. The recent history of credit card interest rates is shown in Chart 2 below.

As of May of 2023, the average credit card charges an average rate of 22.2% interest⁵. If borrowers are late on making credit card payments that penalty interest rate can rise to as high as 29.99%

Credit card may be suited to financing a \$1,000 emergency expense for the 57% of Americans who do not have the available funds to make the payment, but to finance large home improvements that may cost ten, twenty, thirty or more thousand dollars a credit card is an option that is fraught with financial risk and could saddle borrowers with a debt that could take decades to repay.

⁵ <https://www.federalreserve.gov/releases/g19/20230807/>

Chart 2; Interest Rates on Credit Cards



Borrowing the Money from Family or Friends

Turning to family or friends to finance the improvements that can be financed by PACE is probably the least likely and least available option to potential PACE borrowers. For all the reasons discussed in the section discussing self-financing of PACE type improvements, it is very unlikely that a potential borrower could turn to family and friends to borrow tens of thousands of dollars to finance the project.

Most Americans simply do not have this level of emergency funds available for their own needs, let alone available funds to hand over to a friend or family member, even if they were willing to do so. Large gifts may also carry tax implications that could impact the borrower or lender of this money.

If a homeowner needs a new roof or an air conditioning unit, hoping for a rich uncle to come to the rescue and provide the financing is not a practical solution to the problem.

Withdrawing or Borrowing Money from Retirement Accounts

Most financial advisors agree that you should take loans from your retirement plan only as a last resort, or if the loan will help to improve your finances. For instance, if you had large credit card balances at a high interest rate and can afford the fixed monthly payment of a retirement loan, it might make good financial sense to take a loan from your retirement plan to pay off your credit card balances⁶.

Money withdrawn from retirement accounts to pay for these improvements are no longer generating a return for the borrower's nest egg, while the borrower is paying interest on the loan that interest is coming out of the borrower's pocket and the return of the amount borrowed is most likely going to be less than if the money had remained in the retirement

⁶ <https://www.investopedia.com/articles/retirement/05/retirementloan.asp>

account. There are also tax consequences as well of taking loans from pre-tax retirement accounts as the interest that you pay on the loan will be taxed twice.

Withdrawing money from a retirement account does not require repayment of the amount borrowed, but the impacts of doing so can be significant. The IRS may charge a penalty if the borrower is younger than 59.5. The withdrawals are also subject to taxation at the taxpayer's marginal tax rate. The longer run concern is that the borrower is reducing the money that will be needed to fund their retirement years.

Lastly, this option, like many of the alternatives to PACE funding, may not be available to all borrowers who need financing. According to the most recent Survey of Consumer Finances⁷ conducted by the Federal Reserve Bank board of Governors (2019) only half of Americans reported having any saving in retirement accounts leaving the remain half having **zero** retirement savings⁸.

For those that do have savings in retirement accounts, the balances in these accounts are often very modest. The median amount of saving in these accounts for those Americans who have them is \$65,000. Older savers and high-income earners have higher amounts in these accounts, and these wealthier savers skew the mean to a much higher balance of \$255,125.

Retirement accounts are as the name indicates vehicles for savers to have income once their working years are over. Unfortunately, many do not have money in these accounts or if

⁷ <https://www.federalreserve.gov/econres/scfindex.htm>

⁸ <https://usafacts.org/data-projects/retirement-savings>

they do, the amounts are modest. Borrowing from these accounts carry other drawbacks in addition to a reduction in retirement income including tax liabilities and penalties on withdrawals.

PACE and the Insurance Market in Florida

The state of the insurance industry in Florida has reached crisis levels. Multiple companies have pulled out of the state including Farmers Insurance, Bankers Insurance, Centauri Insurance and Lexington Insurance have all withdrawn from the Florida market since last year.

The Florida Department of Financial Services website lists 14 companies that are currently in liquidation in the receivership process as of July 2023⁹. The Office of Insurance Regulation has determined that the Department of Financial Services and the Division of Rehabilitation and Liquidation department must initiate delinquency proceedings against the companies listed below:

- American Capital Assurance Corporation
- Avatar Property and Casualty Insurance Company
- FedNat Insurance Company
- Florida Specialty Insurance Company
- Guarantee Insurance Company

⁹ <https://www.pnj.com/story/money/2023/07/12/florida-insurance-crisis-farmers-insurance-home-insurance-what-to-know/70407302007/>

- Gulfstream Property and Casualty Insurance Company
- Southern Fidelity Insurance Company
- St. Johns Insurance Company, Inc.
- United Property and Casualty Insurance Company
- Weston Property & Casualty Insurance Company
- Windhaven Insurance Company.

The fallout in the insurance industry is likely still not over. After more than a decade of relative quiet during hurricane season, Florida has experienced several storms over the past six years that have caused catastrophic levels of damage. In 2017 Hurricane Irma impacted virtually all the state and caused \$59 billion in damages. In 2018 Hurricane Michael caused over \$29 billion in damages to the Florida panhandle. In 2022 Hurricane Ian hit Southwest Florida and caused damage inland up to the northeastern part of the state. Damages from this storm have not been finalized but current estimates put them more than \$100 billion. Most recently Hurricane Idalia, while it made landfall a relatively less populated portion of the state, is likely to cause damages of more than \$10 billion.

There are multiple repercussions of the tumult in Florida's insurance industry. For consumers who are still able to get insurance coverage there has been a tremendous increase in insurance premiums in the state.

From 2019 to 2022 homeowners' insurance premiums have increased by 55%.¹⁰ This year the premiums are projected to increase by a staggering 40%.¹¹ This is impacting housing market affordability for many, as these increases come on top of higher home prices and higher mortgage rates.

Another consequence of the disarray in the insurance market in Florida has been the rapid growth of the number of policies being underwritten by the state-run Citizens Insurance Company. The state's "insurer of last resort" has over 1.3 million policies the most it has ever underwritten. Projections suggest that the number of policies could rise to as high as 1.7 million by the end of the year.¹² Even if this prognostication doesn't come to fruition, this number of policies is a strain on the infrastructure of Citizens that was never intended to handle this level of insurance policies.

Fiscally, this is a risk for the state and its taxpayers if a catastrophic storm were to hit the state. Citizens should be a backstop in the insurance market in Florida it shouldn't be a major player in the insurance game, unfortunately it is one of the top insurers in the state.

While the PACE program cannot alleviate all the insurance woes in the state of Florida, by allowing homeowners to harden their homes and mitigate potential damage from storms they will have a better chance at getting insurance underwritten through the private

¹⁰ <https://www.businessinsider.com/personal-finance/homeowners-insurance-increase-florida-2022-5#How%20Much%20Is%20Homeowners%20Insurance%20in%20Florida?>

¹¹ <https://wusfnews.wusf.usf.edu/local-state/2023-04-04/florida-homeowners-to-face-a-projected-40-percent-increase-in-property-insurance-rates>

¹² <https://www.msn.com/en-us/money/realestate/citizens-property-insurance-to-hit-17m-policies-after-farmers-aaa-pull-out-of-florida/ar-AA1dZPEk>

sector. These projects can also help reduce premiums and thus lessen the financial burden on participating households.

However, PACE has proposed a Depopulation Pilot Program which aims to simultaneously advance the objectives of two government created entities: the PACE program and Citizens insurance via utilizing a needed and natural synergy between the two agencies. Below are projections of how the new program will be implemented in select counties with a high volume of Citizens insurance customers and the anticipated results of program.

Year One

- 6,000 policies a year depopulated (500 a month)
- \$160,485,000 a year (Estimated bonding amount per year)
- \$25,000 roof average x 1.0699 closing fees = \$26,747.50
- \$26,747.50 financed amount x 6,000 assessments = \$160,485,000

Year Two

- 12,000 policies a year depopulated (1,000 a month)
- \$320,970,000 a year (Estimated bonding amount per year)
- \$25,000 roof average x 1.0699 closing fees = \$26,747.50
- \$26,747.50 financed amount x 12,000 assessments = \$320,970,000

Year Three

- Dependent upon results in years one and two.

This pilot program is another way that PACE funded improvements can help alleviate the homeowner's insurance difficulties faced by many Floridians. At the same time, it would help ease the burden of the increasing number of policies that Citizens Insurance underwrites and the risks that these policies pose for the fiscal health of the government of the state of Florida and its taxpayers.

Issues Raised About the PACE Financing Program

In the early stages of the PACE program the banking industry raised concerns that PACE would take a large share of their markets, but this outcome has not come to fruition. There are several reasons that these worries did not come to pass.

Primary among these reasons is that the PACE program is providing financing to homeowners that by and large do not have any other alternatives to finance these improvements. As discussed earlier, the alternatives to using PACE to finance a roof replacement for example are often not available to these borrowers. The underwriting requirements that borrowers face using home equity (or other bank products) to finance PACE type improvements are hurdles that many potential borrowers simply cannot clear.

The underwriting requirements to be approved for PACE funding of these projects are much less onerous than those required by banks. When a property owner applies for PACE funding the requirements for approval are minimal compared to bank funding. First, the borrower must not currently be in bankruptcy proceedings nor have recently declared bankruptcy. Second, it is determined if there are any liens against the property. Third, it is determined if property taxes have been paid on time for the previous three years (or for the length of ownership if owned for fewer than three years.) Fourth, the amount of home equity that is in the home and what percentage of that equity is eligible for a PACE assessment is calculated. At this point the underwriting requirements for obtaining PACE funding are complete.

Unlike bank funding there is no analysis of a borrower's credit score, no scrutiny of employment history or income variability, no analysis of the borrower's debt to income ratio. Any of which could disqualify a borrower from being approved for bank financing.

The PACE program is a highly specific source of funding. The borrower can only use these loans for a very narrowly defined range of projects whereas borrowing against home equity from a bank can be spent for a wide variety of activities. For example, home equity loans can be used for activities such as the following:

1. Paying for educational expenses your children
2. Paying off or consolidating credit card debt
3. Vacations
4. Paying for weddings or other celebrations
5. Starting a business
6. Building home additions, upgrading kitchens and bathrooms.
7. Paying medical bills
8. Making key purchases, such as a car or a truck

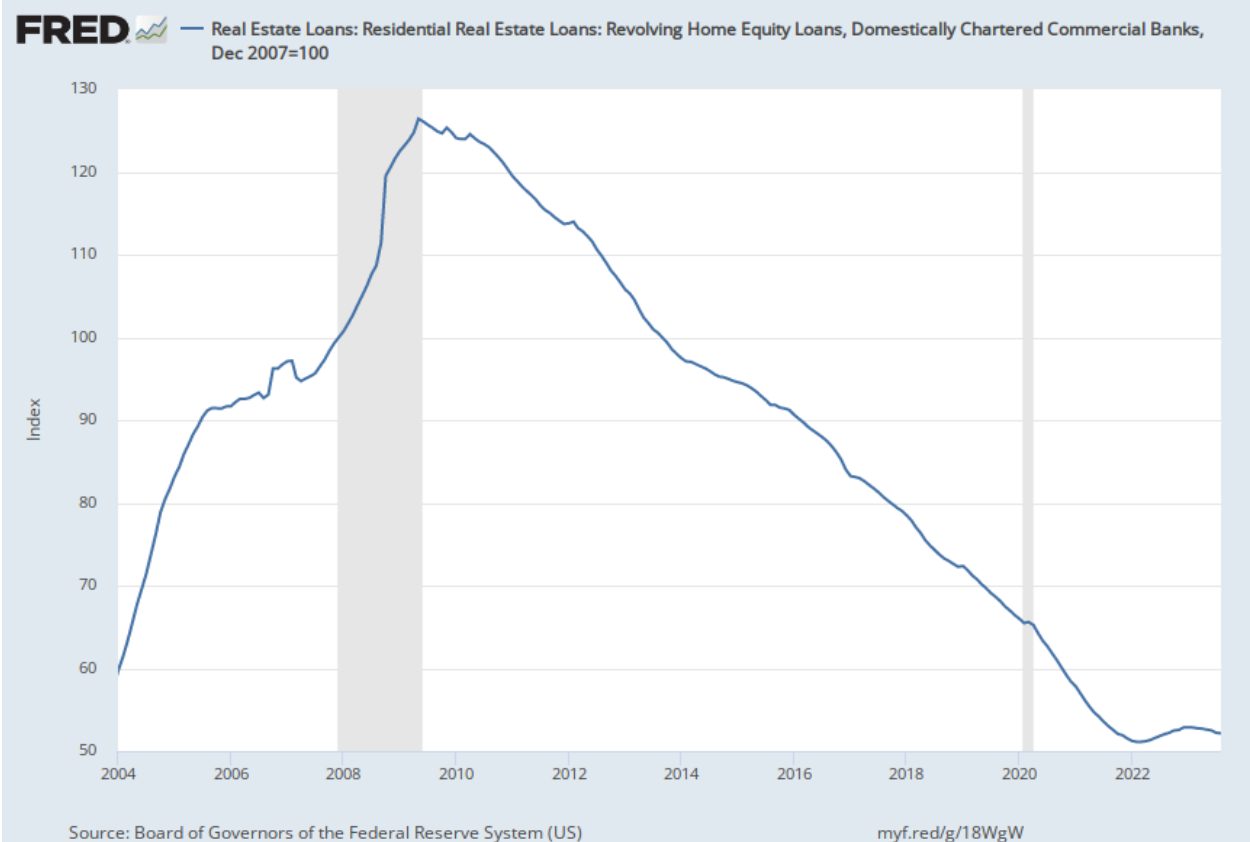
9. Funding investments
10. Set aside for an emergency fund
11. Buying a boat or recreational vehicle, etc.

PACE funding of course cannot be used for any of these activities or others outside the scope of the program and as such is not in any way competing against bank funding for these uses.

Home equity lending in the national banking system has been going through a transition and was greatly impacted during the lead up to the housing and financial crisis and in the wake of that crisis as well.

Chart 3 below displays an index of home equity lending for domestically chartered banks in the United States, the base period for this index is December 2007, which was the official start of the Great Recession (indicated by the vertical gray bar on the chart) a recession that ended in June 2009.

Chart 3; Index of Home Equity Lending for U.S. Commercial Banks



Home equity lending in the run up to the housing crisis and through the recession increased sharply across the nation. Prior to the housing crisis, home equity loans were frequently “piggy-backed” on a mortgage to help finance housing purchases as home prices were rising sharply in many parts of the country. The continued growth of home equity lending as the housing market crashed and during the recession and financial crisis was likely partially driven by homeowners who still had equity tapping into that source of funds to counter the effects of that severe recession.

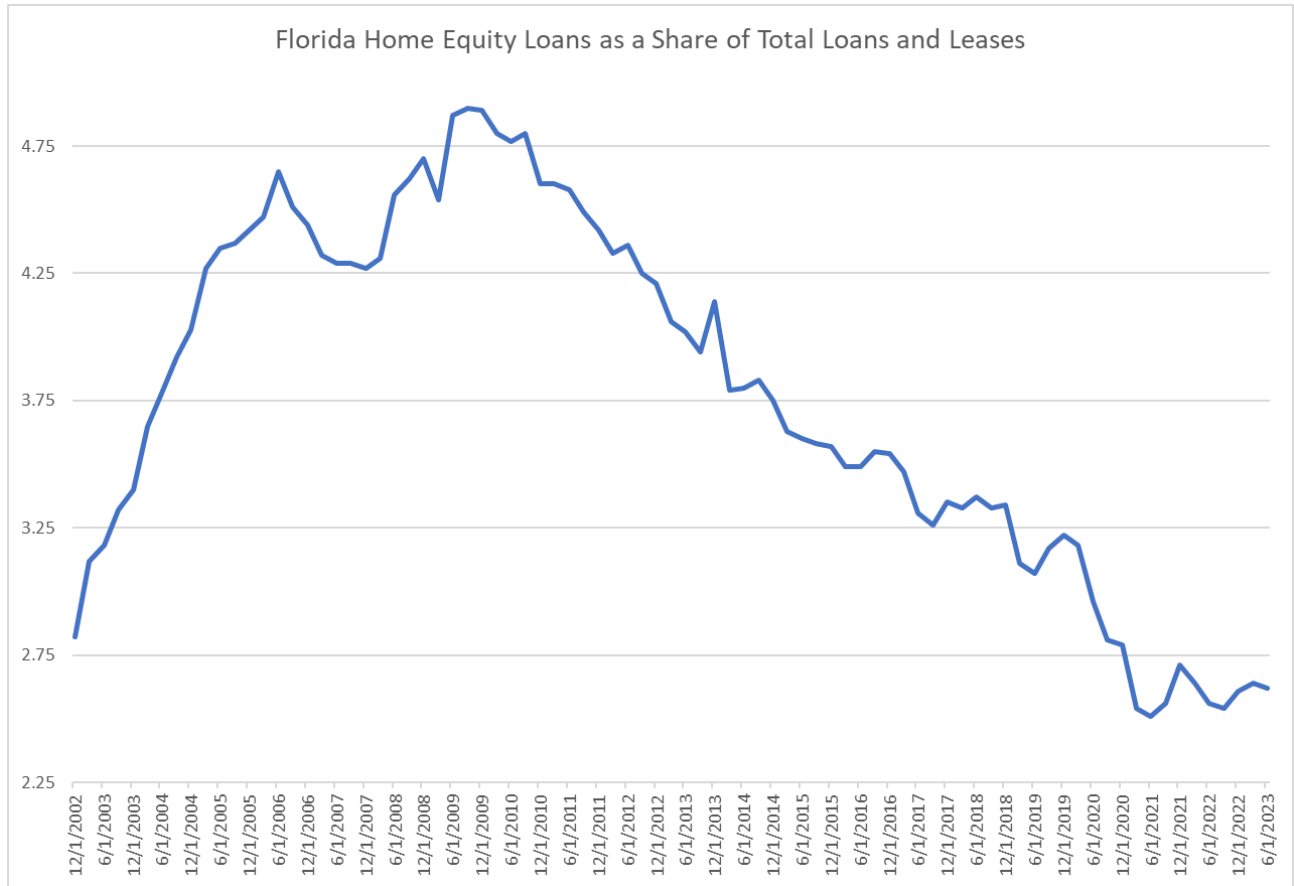
In 2010, the landscape for the entire banking industry changed dramatically with the passage of the Dodd-Frank financial regulation law. This complex and massive piece of legislation had an immediate and long-lasting impact of home equity lending, putting it on a downward trend for over a decade that was likely joined by a tightening in lending standards for surviving banks in the wake of the crisis that threaten their very existence.

The same phenomenon can be seen for home equity lending by banks in Florida. Chart 4 below presents the home equity loans share of total loans and leases for insured commercial banks in Florida. The data is taken from the Federal Financial Institutions Examination Council which provides publicly available Reports of Condition and Income (Call Reports) and Uniform Bank Performance Reports (UBPRs) for most FDIC-insured institutions¹³.

The PACE program from its modest beginnings in 2011 is not likely to have been a contributor to the downward trend of home equity loans that can be seen in Florida as they mirrored the same trends observed in the national home equity market.

¹³ <https://cdr.ffiec.gov/public/ManageFacsimiles.aspx>

Chart 4; Home Equity Share of Total Loans and Leases for Insured Commercial Banks in Florida



Another issue that has been raised about the PACE program revolves around the attribution of problems that borrowers might have with contactors who are carrying out the project to the PACE financing program. The blaming of the contractor's execution of the project on PACE is both misplaced and wrong. The PACE program is a method of financing these projects it does not have an oversight role for the projects that they finance.

While it is certainly an unfortunate occurrence when a borrower hires an unscrupulous, careless, or sloppy contractor, to try somehow to shift the blame to the PACE program is simply wrong. The PACE program has no oversight role to supervise projects they fund and should bear no responsibility for contractors who do not do a job properly. If someone borrowed money to pay from a bank for an expensive automotive repair, and the mechanic did a shoddy or incomplete job, nobody would point a finger or try to blame the bank for making the loan.

The same holds true for the PACE program. That is not to say there isn't any form of checks and balances in the PACE program. Contractors must be enrolled in the PACE program that requires submission of their state license and proof of insurance. They must also complete an online training program about PACE with the Financial Service Providers (FSP) for PACE so that the contractors understand how the program works. The contractor is not paid until the homeowner speaks with the FSP and then signs a competition certificate that authorizes payment to their contractor. Lastly, many of the projects have 3rd party verification that confirms the project is completed and matches the specifications of the contractor's quote.

Fortunately, PACE receives very few complaints related to contractor performance. Even so, the oversight and regulation of contractors is a function of local and state governments who have the role of mitigating the number of bad faith companies in their region. This simply is not the function of PACE which is strictly a financing program for these improvements.

Another effort to alter the PACE program seeks to add additional layers of approval to PACE assessments. Currently the legislation governing PACE allows only the primary lender on

the property to consent and only in cases where the proposed financing of the property is greater than 20% of the just value of the property. However, there are currently efforts to add others to this chain of consent including banks, realtors, and homeowners' associations and even cities and counties. While this type of consent for commercial project financing is common, expanding the chain of approval for residential projects is ill-advised.

Adding these additional layers of consent to the PACE financing program would ensure that the projects that borrowers are seeking to finance would be delayed for weeks if not more. Anyone who has had to wait for a homeowner's association approval to undertake a project of any type knows that delays and frustration are features of any request. Adding others to this chain of approval would guarantee delays and other problems for borrowers seeking PACE funding.

It is one thing to have to wait weeks or months for approval from a homeowners association to put a fence around your yard or to make landscaping changes, but if your roof has failed or an air conditioning system has stopped working and can't be repaired, having to navigate a labyrinth of approvals, if a homeowner can successfully do so puts potential PACE borrowers in a difficult and unnecessary position.

One of the benefits of PACE financing is the speed with which a borrower can get approved for funding and thus make the needed repairs in an expeditious fashion. Adding any additional layers to the process of getting this approval would unambiguously and negatively impact the borrower seeking the funds. At worst, any added step in the process might lead to the borrower having their request for funding denied and at best these additional steps would

delay the approval for what could be a significant length of time leaving the homeowner to suffer at the hands of an expanded underwriting bureaucracy.

The PACE program has also been critiqued as contributing to bankruptcy for some homeowners, but this blame is fundamentally misplaced. Debt of any form can be a factor in bankruptcy proceedings, but the root cause of most bankruptcies can be traced back to three common reasons. According to the American Bankruptcy Institute,¹⁴ the top three causes of bankruptcy are: job loss, medical issues, and divorce.

Job loss is the most common reason for filing bankruptcy. This is why bankruptcies rise during and after recessions as layoffs and the unemployment rate start to rise during (and for a period, after) economic downturns. The Great Recession resulted in a large surge of bankruptcies due in large part to the unemployment rate that rose nationally to 10% in October 2009 and 10.9% in Florida in April 2010. Even for households with emergency savings the length of that recession proved to be too much for many American families.

Major chronic medical issues or catastrophic injuries or illnesses are another major driver of bankruptcy filings. While the Affordable Care Act was lauded by many as a solution to the complex and often frustrating world of health insurance, the reality is that health insurance remains a source of frustration and challenge faced by nearly everyone. Major and/or unexpected medical expenses can happen to anyone and often result in people being swamped by insurmountable debt that leaves bankruptcy as the only way out for many.

¹⁴ <https://www.abi.org/>

Divorce or separation are both tumultuous and usually very costly events in any person's life. What was once a two-income household can be transformed into a two single-income households, legal fees and other related expenses can quickly mount, and depending how income, assets and debt are allocated during the dispensation process, one or both partners may find themselves saddled with large debt burden that could very quickly become unmanageable and lead to bankruptcy proceedings.

While job loss, medical issues and divorce are the major causes, bankruptcy can result for a variety of other reasons as well, profligate spending, failed business ventures or investments that turn sour, variable interest rate debts or as we saw during the housing crisis exotic mortgages that included balloon payments, reverse amortization, and other gimmicks that resulted in large jumps in the debt service burden for those mortgage holders.

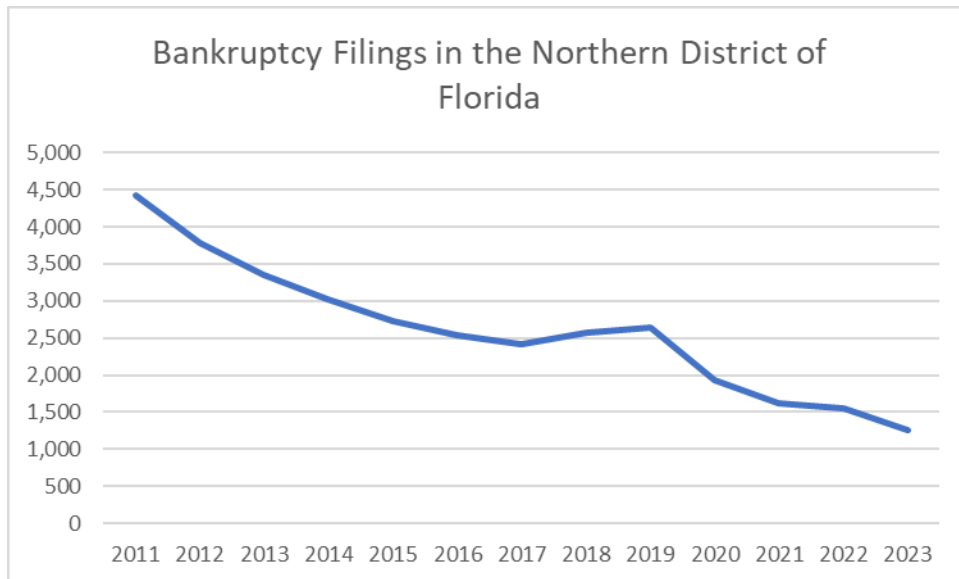
Bankruptcy filings are clearly a complex and multi-faceted phenomenon. Nonetheless, we can examine the number of bankruptcy filings in the state of Florida to see how the levels of filings might have coincided with the start and continuation of the PACE program.

Charts 5, 6, and 7 below display the number of bankruptcies filed in the Northern, Middle and Southern Districts of the U.S. Bankruptcy Courts in Florida from 2011 through the latest available data for 2023. A quick perusal of these charts quickly reveals that over the course of the PACE financing program in the state of Florida, the number of bankruptcies filed has been on a steady downward trend.

The partial data for 2023 may be showing a flattening of this downward trend, which may be attributed to the rise in both credit card usage and interest rates charged on credit card balances as was displayed in Chart 1 and 2.

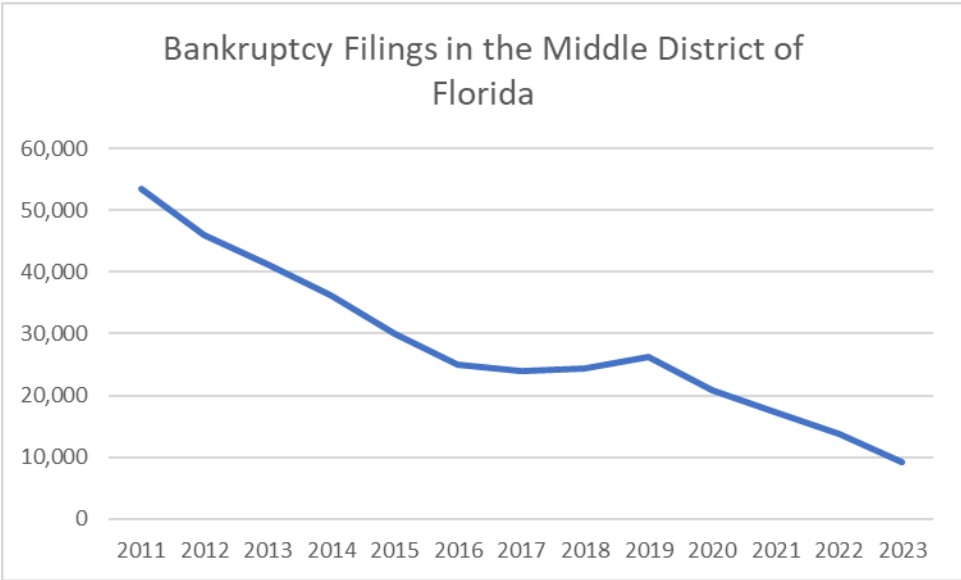
Any data analyst worth their salt is familiar with the warning that “correlation does not imply causation,” because two data series that move in the same direction at the same time is simply not definitive proof that one caused the other or vice versa. In this instance claims that the growth PACE program is leading to higher numbers of bankruptcies lacks even the correlation part of this statistical fallacy, as bankruptcies have trended in the opposite direction as PACE financed projects. Yet none of those suggesting PACE lending is driving bankruptcy filings would look at this data and make the reverse claim that the rise in PACE funded projects has been a driver of the decline in bankruptcy filings in Florida.

Chart 5; Bankruptcy Filings in the Northern District of Florida



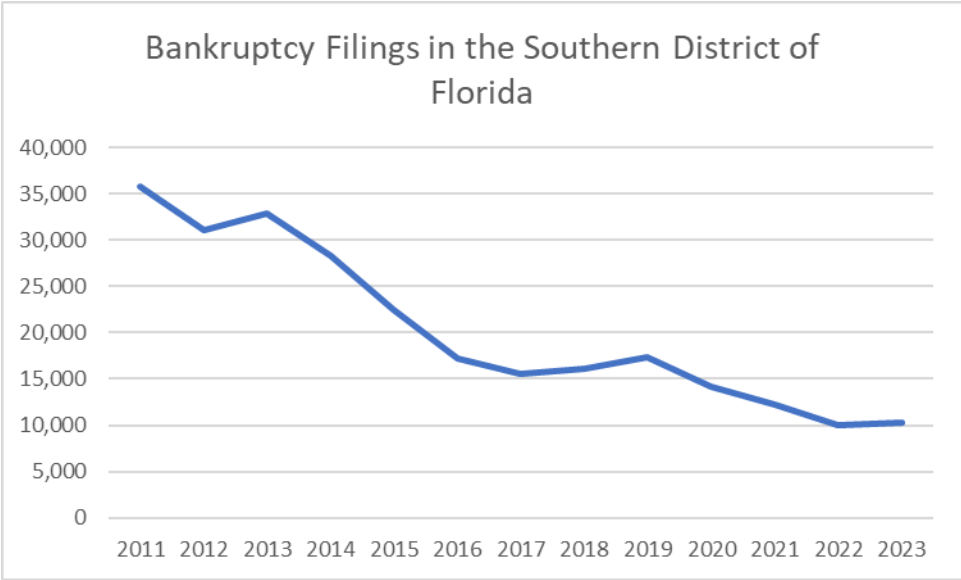
*2023 data includes filings through August 2023

Chart 6; Bankruptcy Filings in the Middle District of Florida



*2023 data includes filings through July 2023

Chart 7; Bankruptcy Filings in the Southern District of Florida



*2023 data includes filings through August 2023

Performance of PACE Assessments Versus Other Financial Instruments

Any form of borrowing inherently comes with some risk of default. The borrower may not be able for any number of reasons, some of which have been discussed in the section looking at bankruptcy, to meet the terms of paying the debt according to the those set out at origination of the loan. In this regard a PACE assessment is no different than any other form of debt.

Not all debt is equal in terms of default rates as many borrowers experienced during the housing crisis at the heart of the 2008-2009 recession. Many borrowers had exotic mortgages that had built into the loans terms which led to significant changes to the burden of servicing these mortgages. This may have been as simple a variable mortgage rate or as exotic as reverse amortization or the inclusion of balloon payments built into the loan. The change in the payment over time put many of these borrowers into default.

Credit card debt with a variable interest rate can also lead to unexpected and large changes to debt service for consumers as many have been experiencing over the past year as interest rates on credit card debt have been soaring. Any debt that has the possibility of variable interest rates or other forms of variable payments creates uncertainty surrounding the borrower's ability to continue to service the debt as the payment fluctuates and raises the likelihood of default. PACE assessments and other fixed payment loans do not carry that type of risk related to changing payments over time that can leave borrowers in a bind.

Delinquency and default rates on debt are subject to influence from economic cycles and during economic slowdowns and/or recessions these rates tend to rise, but looking at the delinquency rates across different types of borrowing reveals that PACE loans are not out of lines with other types of borrowing, even though the underwriting requirements for other types of loans can be more stringent.

Table 1 below compares the delinquency rates of a variety of borrowing instruments for 2022. Florida PACE loans do not stand out from these other types of lending when it comes to rates of delinquency even when not accounting for the difference in lenient qualifying standards.

Table 1; U.S. Loan Delinquency Rates by Type, 2022

Loan Type		Credit Card Loans	Single Family Residential Mortgages	Consumer Loans	Auto Loans	Student Loans	Florida PACE Assessment
2022		2.25%	1.92%	2.10%	3.88%	2.30% ¹⁵	2.03%

Sources: Board of Governors Federal Reserve Bank, Federal Reserve Bank of New York, U.S. Department of Education, Florida PACE

The fact that Florida PACE assessments are paid back via property assessments, does distinguish these assessments from other types of borrowing. This lowers the risk to lenders and results in lower borrowing costs for homeowners. When we compare PACE delinquencies

¹⁵ Student loan default rates prior to COVID era forbearance were 10.1% in 2019.

to delinquencies on other types of property assessments the data reveals that there is not a higher risk associated with PACE assessments, to the contrary the default rates are much lower.

Table 2 below shows the percentage of parcels for a sample of Florida Counties that were subject to tax certificate sales that were due to assessments unrelated to any PACE assessment as well as the statewide percentage of tax certificate sales that did result from PACE delinquencies. This is perhaps a better “apples-to-apples” comparison than looking across more diverse loan types.

Table 2; Tax Certificate Sales Due to Non-PACE Assessments and PACE Assessments

2022

	Total Parcels	Parcels With Non-PACE Tax Certificate Sale	Delinquency Rate
Broward	754,746	19,023	2.52%
Brevard	340,437	12,009	3.53%
Charlotte	212,881	11,941	5.61%
Miami	917,732	26,430	2.88%
Clay	97,139	3,034	3.12%
Volusia	303,656	19,527	6.43%
Leon	111,018	3,863	3.48%
	PACE Assessments	PACE Tax Certificate Sale	Delinquency Rate
Florida PACE	8019	163	2.03%

Source: Florida Department of Revenue, Counties, Florida PACE

Delinquencies related to other property assessment occur in these counties at a higher rate than PACE specific delinquencies in some cases at a rate that is two to three times higher. Looking at the delinquency data in Tables 1 and 2, there is nothing to suggest that there is a greater risk associated with Florida PACE funded assessments. In fact, many other types of loans and other types of property assessments carry a higher risk of default than do PACE assessments.

Potential Improvements to the Existing PACE Program

The PACE program has continued to evolve since its inception will continue do so as it goes forward. In Florida conditions on the ground, the recent incidence of significant hurricanes (after a ten plus year streak of no major hurricanes hitting the U.S. shores) and the difficulties of the insurance market have skewed the program toward storm hardening of properties and away from the environmental benefits of PACE improvements, there are two potential additions of project categories that could be added under the PACE program.

The damage from hurricanes and other storms is not always wind related. Water intrusion can be just as destructive to property and projects related to mitigating this risk to homeowners would be as useful as hardening a property against wind damage. This seems a natural extension of the current PACE program and would be beneficial to homeowners in both protecting their property as well as increasing the chances of getting homeowners insurance at a lower premium if not allow the home to be underwritten by the private sector in the first place.

In areas where storm surge is a risk or flooding from lakes or rivers is a risk, these projects could include the physical raising of the property a project that would come a very high cost. They might also include drainage systems to carry water away from the property. Drain

systems, pump systems, catch basins gutters and downspouts can all be useful in mitigating risk and potential damage from flooding. The range of costs to undertake these projects can vary widely and allowing homeowners the option of financing via PACE would be a useful and natural extension of the program.

Another possible extension of the program, though not related to hardening but still an improvement related to another essential system for the homeowner would be adding septic and sewage systems to the list of improvements eligible under PACE. The replacement of a septic system that has failed can be a major cost that some homeowners cannot finance via other methods. And as Florida's population and economy continue to expand, some homeowners may not be allowed to replace a failed septic system and may be required or chose to connect into a municipal sewage system. This conversion cost falls on the homeowner and can come with a price tag that runs well into the tens of thousands of dollars.

Adding flood mitigation and septic projects to list of potential improvements that could be funded by the PACE program in Florida would be a benefit to those homeowners that turn to pace for other projects that are currently approved.

Tax Collector and Property Appraiser Fees Associated with Adding PACE Projects to Tax Rolls

The Florida statutes that govern the Florida PACE program allow Tax Collectors and Property Appraisers to charge the property owner the actual costs of putting the annual assessment on the tax rolls. These costs are not to exceed two percent of the annual assessment for each of the agencies. There is a wide variation in how different counties charge the homeowner for this service which suggests that actual costs may not be the determining factor on how much PACE borrowers are being charged.

While it is reasonable to assume that there is some variation in the costs these agencies face across the 67 counties in Florida, the differences between what the agencies charge (or do not charge) suggests that there is some disconnect between actual costs and the fees that are being charged to PACE borrowers.

The perusal of the costs being charged to borrowers across counties does not reveal any clear relationship between fees being charged and actual cost differentials across counties. The primary driver of actual cost differentials presumably would be differing labor costs between counties. But even that distinction does not explain the variation in what is being charged.

Some counties simply default to the 2% cap for these charges while others charge significantly less. Some counties put a cap on the total amount of the charges being passed on to borrowers while others do not. The dollar amount being added to the assessments has no correlation to the cost of doing so and capping amounts charged is sensible. Some counties charge a fee for both the Tax Collector and Property Appraiser, while others charge for only one of these agencies (the Tax Collector.)

Broward County is a county with among the highest cost of living in the state and coincident with that has one of the highest annual average wages in the state, yet the Tax Collector in the county charges a fee of 0.11% on PACE assessments and the Property Appraiser charges nothing. At the same time other lower cost counties, with lower wages and costs of living, charge a maximum 2.0% for the Tax Collector and often an additional assessment for the property appraiser.

Another variation regarding fees charged to PACE borrowers across counties is that some will cap the amount that they charge to add the assessments to tax rolls instead of applying a straight percentage regardless of the amount the borrower is financing. This also seems like a sensible policy as the difference in costs between adding a \$500 assessment or a \$5,000 assessment are negligible.

There is clearly a disconnect between the actual costs of implementing a PACE assessment and what borrowers are charging. While there are costs of administration of PACE assessments, there is room to streamline these fees across counties in the state as they are

borne by borrowers who by and large turn to PACE for funding because they do not have the financial wherewithal to find funding for these improvements elsewhere.

The solution to this issue may lay at the state level by amending the statutes governing PACE assessments to create some parity across counties when it comes to the charging of these fees to borrowers and doing in a manner that reflects the true and actual costs of processing these assessments.

Economic Impact Analysis of the Florida PACE Program

The economic impacts of qualifying improvements on the entire state of Florida are substantial and will extend well beyond the expenditures directly funding by PACE lending as the project is being carried out.

Economic impact modeling is a technique that allows us to trace the PACE funded spending as it flows through the economy and measure the cumulative effects of that spending. Estimates of the economic impact reported below are made using IMPLAN, a widely used and accepted software program for conducting such economic impact analyses.

The total economic impact of the PACE program is comprised of three components and the total economic impact is the sum of these three components. The three pieces of the total impact are the direct impact, the indirect impact, and the induced impact.

The direct impacts are the expenditures applied to the input-output model for impact analysis. These are the series of expenditures made possible by PACE financed improvements. Applying these expenditures to the IMPLAN model will then reveal how the state's economies respond to these initial changes in spending.

The indirect impact is the impact of PACE funded contractors buying goods and services from other local industries as part of the funded project spending. This cycle of spending works its way through the supply chain until all expenditures leak from the regional economy, either via imports or by payments to value added. These indirect impacts are calculated by applying direct impacts to the model which calculates the inter-industry transactions.

The induced impact is the response by an economy to the direct impact that occurs through spending of income received by components of value added. Labor income, both employee compensation and proprietor income, remains in the regional economy. This money is recirculated through household spending triggering additional economic activity in the region.

Thus, distilled, the economic impact analysis of PACE funded projects produces three components:

1. The direct effect, employment, and expenditures from the final demand changes in the activity being examined.

2. The indirect changes, the employment and expenditures triggered in related industries by the direct activity; and
3. The induced effects, the impacts on all local industries that are caused by household spending out of the income generated for employees in the direct and indirect effects on final demand.

A common metaphor used to describe this economic impact analysis is the throwing of a stone into a pond.

The pond represents the regional economy being examined and the stone represents the source of the change in final demand. The big splash as the stone hits the water is the direct effect of the economic activity, while the larger waves that ripple out from the area where the stone made its initial splashdown represent the indirect effects and the induced effects are the smaller ripples that spread across the pond further and further away from the initial splash.

The initial splash plus all the ripples on the pond represent the total economic impact of the activity being examined. The stone in this metaphor is the spending associated with projects funded by the PACE program and the splash and ripples are the indirect and induced spending that spread because of these projects being funded and implemented.

Table 3; The Economic Impact of PACE Funded Projects in Florida

State of Florida				
Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	2,767	151,135,451	272,634,399	609,584,369
Indirect Effect	1,721	92,446,737	167,964,777	315,717,415
Induced Effect	1,513	74,135,011	138,653,103	244,876,709
Total Effect	6,001	317,717,199	579,252,279	1,170,178,494

Table 4; PACE Funded Projects’ Employment Impact in Florida: Top 10 Sectors

Sector Description	Employment
Maintenance and repair construction of residential and nonresidential structures	2,786
Retail - Building material and garden equipment and supplies stores	510
Other real estate	167
Full-service restaurants	109
Employment services	84
Limited-service restaurants	78
Truck transportation	76
Hospitals	72
Retail - General merchandise stores	63
Warehousing and storage	58

Table 5; PACE Funded Projects' Output Impact in Florida: Top 10 Sectors

Sector Description	Output
Maintenance and repair construction of residential and nonresidential structures	\$1,681,141,007
Retail - Building material and garden equipment and supplies stores	\$63,282,551
Other real estate	\$31,003,688
Owner-occupied dwellings	\$27,372,921
Wholesale - Other durable goods merchant wholesalers	\$14,651,552
Hospitals	\$13,382,678
Ready-mix concrete manufacturing	\$12,710,739
Insurance carriers, except direct life	\$11,784,223
Truck transportation	\$10,963,346
Architectural, engineering, and related services	\$9,520,095

Table 6; PACE Funded Projects' State & Local Tax Impact in Florida

State of Florida					
Description	Employee Compensation	Tax on Production and Imports	Households	Corporations	Total
Dividends				\$174,760	
Social Ins Tax- Employee Contribution	\$27,887				
Social Ins Tax- Employer Contribution	\$42,660				
Tax on Production and Imports: Sales Tax		\$21,640,274			
Tax on Production and Imports: Property Tax		\$14,745,682			
Tax on Production and Imports: Motor Vehicle License		\$300,791			
Tax on Production and Imports: Severance Tax		\$17,463			
Tax on Production and Imports: Other Taxes		\$2,879,398			
Tax on Production and Imports: S/L Non Taxes		\$1,605,904			
Corporate Profits Tax				\$1,386,633	
Personal Tax: Non Taxes (Fines- Fees)					
Personal Tax: Motor Vehicle License			\$1,005,967		
Personal Tax: Property Taxes			\$253,889		
Personal Tax: Other Tax (Fish/Hunt)			\$68,145		
Total State and Local Tax	\$70,547	\$41,189,511	\$1,344,707	\$1,561,393	\$44,166,158

Conclusions

The Florida PACE funding program has in a relatively short time come to be an essential program to a small, but recently a rapidly growing group, of Florida property owners. The program provides funding for many essential property improvements when, for most borrowers, funding simply is not available from alternative sources. The structure of the program allows borrower to finance these projects very rapidly and with borrowing conditions that are far less stringent than those of other financial instruments. The speed with which the approval and underrating process happens for PACE funding means that property-owners are not waiting for longer periods to start projects that are essential to protecting their property.

The PACE program has been well received by those borrowers who need it and has high rates of customer satisfaction. As is the case with any new program concerns were raised as the program got underway and along the way some have been critical of the program. We examined these issues and many of the initial concerns have proven to be unfounded and most of the subsequent concerns conflated the PACE funding program with the contractors who carry out the improvements or made spurious claims that PACE financing carried some higher risk than other financial instruments.

The recent changes in the economic, financial and insurance markets have sent borrowers flocking to the PACE program as a last resort to provide essential funding for improvements that are needed to keep insurance for their properties or to help mitigate significant jumps in insurance premiums that many across the state have been facing.

In the future the utilization of PACE financing will continue to reflect external conditions such as these and the overall availability of credit from other financing sources and it will continue to be an important backstop for borrowers who otherwise would be denied access to credit.

The PACE program is currently functioning as expected, but like any policy there are some changes that could be made to state statutes that could improve the utility of the program to Florida borrowers as well as provide benefits to the State of Florida.

The proposed pilot program enjoining Florida PACE with Citizens Insurance could reap dual benefits of reducing the number of policies that Citizens is faced with underwriting and allow more property owners to find coverage in the private sector after funding property improvements that improve insurability of the property.

Expanding the list of qualifying improvements under the PACE program to include projects that work to mitigate water intrusion in addition to other storm-hardening improvements would benefit PACE borrowers since this is a source of significant damage to properties from tropical or other types of storms. Septic replacement or septic to sewer projects is another potential set of projects that could be added to list of PACE allowed improvements as these projects are a necessity for homeowners but can be expensive to fund via other methods.

Lastly, revisiting how Tax Collectors and Property appraisers charge property owners for adding PACE assessments to the tax rolls is another area that could be improved upon from the exiting legislation. Homeowners, according to state statutes, are supposed to be assessed the

actual cost of adding the assessment to the property up to a maximum of 2% of the assessed amount. In practice how these charges are applied vary significantly between counties and in ways that are not purely driven by cost differentials. A movement to a uniform and possibly flat fee across counties that is not dependent on the size of the assessment might be a better approach for borrowers who must pay these fees.