A look at small business lending in Allegheny County

Part III.
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Carnegie Mellon University
Heinz College
Center for Economic Development
Introduction

The national press and local newspapers typically report the damage from the Great Recession of 2008 with statistics and stories the average adult can readily relate to: lost jobs, lost homes, and lost retirement savings. The recession’s impact on the nation’s small businesses and their owners seems to receive less frequent and less probing coverage, at least outside of specialized or academic publications. Of course, not everyone is a small business owner. But given that by some estimates small businesses employ half the private workforce and have generated over half of net new jobs, the fate of such firms should concern us all.

This series of reports is about loans, or “debt capital” in the parlance, a very necessary ingredient to the continued success of a small firm. Many small businesses and owners do not have good access to private equity outside their own pockets or those of their friends, family, or close associates. Thus they continue to be dependent on traditional debt capital from banks (along with other forms of business finance) to maintain cash flow over normal business cycles, to fund the development of new products and processes in order to stay competitive, and to seize opportunities and grow. When debt capital dries up, some businesses fail and others miss out on opportunities to grow. In the end, people miss out on jobs that might have been retained or created.

Because the welfare of small businesses matters to the economy, and because small businesses are still reliant on traditional debt capital, this report examines trends in bank lending to small businesses in Allegheny County and its peers during and since the recession.

The analysis was conducted on seven years of data, from 2007 to 2013, for Allegheny County and fifteen other “urban county areas” areas, all selected from the benchmark regions used by Pittsburgh Today (http://pittsburghtoday.org/).

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<th>Core City</th>
<th>Counties and independent cities included in the “urban county area”</th>
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<td>Pittsburgh, PA</td>
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<td>Richmond, VA</td>
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Scope

As noted in Part I., conducting a comprehensive assessment of economic, demographic, small business, or banking industry trends and how they might have influenced lending in each area was not within the scope of effort available for this report. Instead the series offers:

- a quick, dirty, and very aggregate analysis of a limited number of economic indicators for each urban county area, including population, employment, unemployment, and employment in the finance and banking sectors (covered in Part I);


2 For more on why these areas were selected, see “Small Business Lending in Allegheny County: Part I”, Center for Economic Development, Carnegie Mellon University, April 2015, pp. 2-3. Link: http://heinz.cmu.edu/center-for-economic-development/ced-pubs-projects/download.aspx?id=6735.
an assessment of patterns and trends in the number, amount, and recipients (by firm size) of small business loans in each area based on data collected under the Community Reinvestment Act (CRA), (Parts II and III); and

a brief and high level look at patterns and trends in business establishments by size in each area, with a focus on smaller businesses, including non-employers, ex: sole proprietors (Part IV).

Most figures presented are annual (or annualized), and for the time period from 2007 to 2013. Most percentage figures are presented in or rounded to the nearest percent or tenth of a percent. In the text, urban county areas will be referred to by their central cities for easier reading. Although this series purposely sticks with relatively aggregated data, more detailed investigations may follow depending on public interest and the time available to the Center for continued research.

The Story So Far...

Part I. of the series attempted to provide some context for loan trends, and compared Pittsburgh to its peers by population, employment, unemployment, and banking presence. The good news is that Pittsburgh did not lose as many jobs as most of its peers during the recession, and it ended the 2007-2013 period with more employment than it started with, with significant growth in its banking sector and an unemployment rate below the national average. The not so good news is that its estimated population remained flat, and its unemployment rate, while still under the national rate, slipped against its peers by 2013.3

“As for its peers, Charlotte remains a top peer competitor to Pittsburgh in the banking business. The numbers suggest that Pittsburgh had yet to overtake Charlotte in banking employment, and Charlotte’s population and overall employment growth between 2007 and 2013 outpaced our own. However from 2007-2013 Pittsburgh’s banking industry enjoyed a larger increase, and it ended 2013 with a lower unemployment rate. Like Pittsburgh, St. Louis and Cincinnati experienced little population growth, but notched significant gains in banking employment. As of 2013 however, neither St. Louis nor Cincinnati had managed to recover the employment levels they enjoyed before the recession, while Pittsburgh did and (again) enjoyed a lower unemployment rate than both. Philadelphia, like Pittsburgh, also did relatively well during the worst of the recession and it enjoyed stronger population growth. However it also suffered a large drop in banking employment, and a ballooning unemployment rate relative to its peers.

Perhaps the peer to be most envious of is Minneapolis. It enjoyed a trifecta of above average population growth, employment growth, and banking growth, while ending 2013 with the only unemployment rate out of the group under 5%. On the other end of the stick are Cleveland and Detroit, suffering large population and general employment losses, and even stiffer banking employment losses over the study period.”4

3 “Small Business Lending in Allegheny County: Part I” pp. 4-6.
4 Ibid. p 4.
Part II of the series examined the distribution and trends of bank loan originations reported under the CRA, including smaller and larger loans. This time there was bad news, good news, and “mysterious” news.

“The bad news is actually for everyone. If Wall Street stocks have “recovered” from the events of 2008-2009, loans for small businesses on Main Street have not. Nationwide the number of small business loans dropped by 66% from 2007 to 2009. The value of these loans also fell, by 43%. While by 2012 the Dow Jones Industrial Average recovered what it had lost during the recession, by one measure in 2013 the nations’ banks still only disbursed less than half the number of small business loans they did in 2007.

The good news is that small business lending in Pittsburgh fared well compared to its peers. (It) did not avoid the carnage: by 2013 we received only 41% of the small business loans we had in 2007. But since we “lost less” than many our peers, by 2013 Pittsburgh passed Cleveland, Baltimore, and Detroit, moving up in rank from sixth to third place for number of loans behind St. Louis and Minneapolis.

When one looks at the value of the loans disbursed, and not just their numbers, the news gets better. In 2007 St. Louis, Minneapolis, and Detroit held the top three ranks for the total value of loans received; Pittsburgh ranked sixth behind Charlotte and Baltimore. Like loan numbers, loan values dropped during the recession, but not as hard - especially in Pittsburgh. As a result by 2013 Pittsburgh moved from sixth to second in total loan value, passing Baltimore, Charlotte, Detroit, and Minneapolis, with St. Louis still in first place.”

“The not so good news is that Pittsburgh’s total loan values mostly declined from 2007-2012, ticking up noticeably only in 2013. If Pittsburgh did not fall as hard, neither did it show signs of steady or sustained year to year growth in loan value, at least for the period examined.”

“The mysterious news is that average loan values for Pittsburgh appear to be outliers compared to those of its peers. For example, the average value per “larger loan” for Pittsburgh was slightly but consistently smaller than almost every peer for every year examined. Despite the fact that larger Pittsburgh loans were slightly smaller than their peers, the volume and total value of them did not fall as hard, enabling Pittsburgh to move from 7th place to 2nd place for total value of larger loans between 2007 and 2013, trailing only St. Louis. Meanwhile the average value per “smaller loan” (under $100K) was substantially higher than any of its peers. As a result of this advantage in loan volume, Pittsburgh moved up from 3rd place to 1st place in smaller loan values between 2007 to 2013, passing Minneapolis in the process.”

The fourth report for the series will examine patterns and trends in small business establishments at a high level. The series will conclude with key findings and suggestions for further research. Comments and suggestions from local policymakers, practitioners, and academics interested in this space are very welcome and should be sent to glagana@andrew.cmu.edu.

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5 In our first report we stated that loans and loans by firm size would both be addressed in Part II. However we now plan to cover the analysis of loans by firm size to Part III, while the analysis of patterns and trends in firm size will now be covered in Part IV.
Results in Brief

How did we compare against our peers this time? Pittsburgh once again moved up in rank on loans to smaller firms for both volume and value. It also moved up in rank for the value, but not volume of loans to larger firms.

**Pittsburgh fared well compared to its peers in loan volume and value to smaller firms**

Between 2007 and 2010 the number of loans to businesses with $1M in revenue or less across all sixteen areas fell by 64%. However by 2013, **Pittsburgh moved up in rank from 5th to 3rd place for loan volume to smaller businesses** behind Minneapolis and St. Louis, passing Baltimore and Detroit in the process. Pittsburgh also moved up from 5th to 2nd place for the total dollar value associated with these loans, behind only St. Louis, and passing Detroit, Minneapolis, and Charlotte in the process. In both cases Pittsburgh moved up in rank mainly because it did not fall as hard as its peers during the worst of the Great Recession.

**Pittsburgh did not perform as well on loan volume to larger firms, but did better on loan value**

Pittsburgh went into 2007 ranked sixth for loan volume to larger firms, and six years later it was still sixth. While it did not gain on its peers in number of loans to larger firms, it actually moved up in rank for the value of those loans, moving from 7th to 3rd place from 2007 to 2013, passing Detroit, Baltimore, Charlotte, and Cincinnati in the process and still behind Minneapolis and St. Louis. Again the primary reason for the gain in rank was that Pittsburgh’s total loan values did not fall as hard as its peers.

**Loans were still “down” for smaller and larger businesses alike in all areas**

Pittsburgh did well compared to its peers because we made more lemonade out of the lemons the economy handed to us. Stepping back and looking at trends for all sixteen areas combined, the volumes of loans for larger and smaller firms both took steep tumbles from 2007 to 2010, with the former down 64% and the latter down 68%. Neither trend has yet to recover: by 2013 loans to smaller businesses were back to only 52% of their 2007 volume, while loans to larger firms seemed stuck at 35%. The story is a little bit more encouraging if you consider the total value of loan volumes instead. From 2007 to 2010, total nominal loan values for smaller firms did not drop as hard as loan volume at 42%, and only by 29% for larger firms. By 2013 total loan values for larger firms were back up to 80% of where they started in 2007. The total value of loans for smaller businesses still lagged behind at 60%. In the end, only one urban area actually improved up on its level of loans or dollars over 2007 for the entire period: Columbus. It saw an increase in total loan value to larger firms from 2010 on.
Data, Definitions, and Approach

This analysis presents trends in the number and value (in dollars) of loans to “smaller businesses” reported under Community Reinvestment Act (CRA) guidelines for fifteen urban county areas including Allegheny County PA.

This report assesses small business loans by size of recipient firm. The data is limited to loans reported by banks to regulators under the CRA. The dataset represents a very significant portion of, if not the totality of small business lending in the United States. Ideally one would like to have fine information on the organizational size of loan recipients, along with other information such as size of loan, etc. Unfortunately the data available under the CRA for examining firm size is very aggregate and crude. In fact, firm size is reported under the CRA in just two “buckets”: those that are received by businesses with one million ($1M) or less in annual revenues, and those that are received by firms with annual revenues of more than $1M. Loans to businesses with $1M in revenues or less can be thought of a “small business loans to smaller businesses.” This report focuses on such loans. Cross tabulation of firm size vs. loan size was not possible either given the data available for this report.

The analysis is limited to bar and line charts of magnitudes, means, and proportions. The data used is both annualized and aggregated, and we did not attempt more sophisticated statistical techniques. Our primary intent is descriptive, and for the most part we avoid interpreting, theorizing, or hypothesizing about the results. As always, interesting findings raised questions that we will highlight at the end of this series as opportunities for further research.

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6 See Part II of this series for an account of the caveats and limitations associated with CRA data on small business loans.
The chart below shows the total number of loans per year for all sixteen areas combined, with separate bars for loans to businesses with $1M in annual revenues or less vs. those with more than $1M. Most loans usually go to larger firms. In 2007 loans to smaller businesses comprised a small but substantial share of all loans: 37%. From there loans to smaller and larger businesses both dropped through 2010, with the hardest year to year drop occurring between 2008 and 2009. By 2010 loans to businesses with $1M or less in revenues had dropped by 68% and stood at 32% of 2007 levels while loans to larger businesses stood at 36%. After 2010 loans to smaller businesses seemed to recover at a steadier pace than loans for larger firms. By 2013 loans to smaller businesses were back to 52% of 2007 levels, while loans to larger firms seemed to be stuck at 35%.
**Trends in the volume of loans to smaller businesses**

The chart below shows the number of loans to smaller businesses for each urban area from 2007 to 2013, sorted by 2013 levels. Every area saw large drops, most hit bottom in 2010, and most saw loans bump up by 2011. After 2011 some places saw small but steady year to year increases, while others saw little change. Because it did not fall as hard as some of its peers, **Pittsburgh moved up in rank for number of loans to smaller businesses from 5th place in 2007 to 3rd by 2013**, passing Detroit and Baltimore in the process, but still behind Minneapolis and St. Louis.
The chart below shows the drop off for each area as a percent change per year against original 2007 baseline levels. It again illustrates that every area experienced a steep decline between 2007 and 2009, although the extent they bottomed out varied. For example by 2010 Minneapolis had experienced a 50% reduction in loans to smaller businesses from 2007 levels, while Boston, Baltimore, and Detroit suffered sharper drops of more than 75%.

In terms of “recovery back to baseline”, both Minneapolis and Denver seemed to do better than the rest of their peers for the entire period. Pittsburgh also did relatively well from 2008 through 2011, a period which includes the worst years of the recession. However by 2013 it fell back to the middle of the pack. But most areas saw either flat or very modest relative growth between 2011 and 2013 (even Minneapolis fell back to earth). As of 2013 Charlotte and Denver held slight leads over their peers, having gained back about 56 and 58 percent (respectively) of the number of loans they received in 2007. Pittsburgh had reclaimed 52%. Only Detroit seemed to be doing noticeably worse than the nation as a whole at 41%. 

![Percent change in number of loans to smaller businesses vs. 2007 levels](image)
**Trends in the volume of loans for larger businesses**

Pittsburgh did not “perform” quite as well on the number of loans to larger businesses (more than $1M in annual revenues). It started and finished the period in sixth place behind St. Louis, Minneapolis, Columbus, Detroit, and Cleveland. During the period the rankings of other places at the top shuffled a bit: Detroit, Cleveland, and Baltimore dropped ranks, while St. Louis, Minneapolis, and especially Columbus moved up.
Here again is the information in relative terms – the percent change in larger loan volumes from 2007 baselines. From Pittsburgh’s perspective, there’s not much to see here. Our drop in loan volume relative to where we began in 2007 was “average” compared to our peers, about 63% by 2010 (in a range of 57 to 72%). We did not drop as hard as the nation as a whole, nor as hard as places like Baltimore, Philadelphia, or Detroit; but places Columbus, Milwaukee, and Minneapolis did noticeably better. As of 2013 the volume of loans was still way down for everyone, and Pittsburgh still had only 35% of the volume of large loans it began with in 2007.
Trends in the total value of loans for smaller businesses

The next chart shows the total value of loans by firm size across all areas. When compared to the figures in the previous chart on loan numbers two takeaways emerge: (1) loan values did not fall as hard as loan numbers for either category of loan, and (2) loan values dropped more steeply on loans for smaller firms than for larger firms. While the number of loans to smaller businesses fell 67% from 2007 through 2010, loan values for the same fell by only 42%. Meanwhile loans for larger businesses fell 64% during the same period, whereas loan values for the same fell by only 29%. Since 2010 loan values have inched slowly back for both categories, with loan values to smaller firms continuing to lag behind. By 2013 total loan values to larger firms were back up to 80% of where they started in 2007. On the other hand 2013 loan values to smaller firms had yet to recover, comprising only 60% of 2007 levels in nominal dollars. This is actually the opposite of where things stood for loan volumes in 2013, again 35% and 52% of 2007 levels for larger and smaller firms respectively.

Total value of loans in millions of nominal dollars, all areas combined by size of business 2007 - 2013

- Value of loans to businesses with less than $1M in revenues
- Value of loans to businesses with $1M or more
How did the value of loans to smaller firms trend by area? The chart below shows total loan values by area from 2007 through 2013, sorted by 2013 figures; values are nominal and in millions of dollars. In 2007 St. Louis received more loan dollars to smaller businesses than any of its peers, followed closely by Charlotte, Minneapolis, Detroit, with Pittsburgh in fifth place. As of 2013 this rank order was the same, except that **Pittsburgh moved up from fifth to second place in total loan value to smaller businesses**. We moved up in rank mainly because we did not fall as hard as other peers through 2010.
The next chart shows the same area trends in a different way, as the percentage change from a baseline of 2007, this time in real (2007) dollars. The data is noisy, but the main takeaway is that (once again) during the worst years of the recession Pittsburgh did not drop as hard as most of its peers. In fact in terms of “recovery from baseline”, it did better than any peer during the worst years of the recession. After 2010 its recovery rate was eventually (if in some cases temporarily) exceeded by Minneapolis, Boston, Richmond, Indianapolis, and especially Milwaukee. By 2013 however, only Milwaukee and Boston were closer to their original 2007 total loan value levels for larger firms than Pittsburgh.
As for the total value of larger loans, Pittsburgh once again did better than many of its peers. Pittsburgh moved up from 7th place for larger loan values in 2007 to 3rd place in 2013, passing Detroit, Baltimore, Charlotte, and Cincinnati in the process. Columbus also made an impressive move in rank from ninth to fourth place in this period. St. Louis and Minneapolis held on to first and second place respectively. One noticeable difference between areas here is that some appeared to experience deep troughs in 2009 or 2010, while others did not. The next graph illustrates this more clearly.

![Graph showing total value of loans to larger businesses in millions of nominal dollars, 2007-2013.](image)
The chart below shows the trends above as a percentage change from a baseline of 2007, again in real (2007) dollars. It shows that only Columbus actually saw an increase in total loan values after 2007, an advantage it maintained through 2013. Again Pittsburgh fared relatively well compared to its peers, dropping only 14% by 2010, and as of by 2013 by 18% compared to 2007 levels, meaning it held on to 82% of the loan value it started with in 2007. Only Indianapolis and again Columbus fared better in “loan value recovery” for loans to larger firms.

Separately, the chart also highlights the troughs mentioned earlier. It shows that Columbus, Cleveland, and Detroit dipped first in 2009, while Richmond, Cincinnati, Boston, Baltimore and Charlotte dropped (relatively) harder in 2010. These five actually saw larger relative drops in loans to larger firms than the nation as a whole in 2010, but since then all have exceeded the national recovery rate except for Baltimore.
Trends in average loans values

Trends in loan numbers and values drive average loan values. The next chart shows average loan values for smaller and larger firms. Both types of loans started the period with an average figure of just under $30K per loan, but the two trends diverge after 2008. Thereafter loans to larger firms generally increased in average value, while the average value of loans to smaller businesses declined after 2010. As of 2013 the two measures were over $30K apart.

To recap, the number of loans for smaller businesses did not fall as hard as the number of loans for larger businesses, but the reverse was true for loan values. As a result by 2013 average loan values for smaller firms were significantly outpaced by larger firms, and not much higher than where they started in 2007. The larger average value for loans to larger firms is not necessarily “good news”, when one considers what drove it (a steeper decline in volume than value).
And finally here are a couple more noisy charts showing real dollars per loan to smaller and larger businesses by area. Average values surged for most areas between 2009 and 2010. The average value of Pittsburgh's loans to smaller businesses started the period in the middle of the pack, but by 2013 it had the 3rd highest average loan values behind Indianapolis and Milwaukee. All things considered this could be relatively good news as its loan volume did relatively well too. Charlotte, Indianapolis, and Richmond all appeared to experience large spikes in average value during the worst years of the recession. Denver and Minnesota had a smoother ride than most; they avoided extreme peaks and troughs and seemed to enjoy steady if low average values.
Here is a similar chart for loans to larger businesses. Average loan values for larger firms in Pittsburgh were relatively high compared to most if not all of their peers. Pittsburgh started near the middle of the pack in 2007, but by 2013 it exhibited the fourth highest average loan value for larger firms, below Indianapolis, Cincinnati, and Milwaukee, but above the rest of the pack.

Note that these values are roughly comparable to averages for loans for smaller businesses. This is due in part to the fact that larger firms do not exclusively take out larger loans, but also take out loans comparable in size to smaller firms, which drives the averages between the two closer.
Next Steps

The fourth report of this series will move on from examining trends in small business loans to trends in small businesses. It will provide a brief and high level look at patterns and trends in small business establishments including non-employers (ex: sole proprietors). How did Pittsburgh fare in small business employment growth (or decline) compared to its peers during and after the recession, and to what extent do trends in small business loans align (or not) with such growth? Tune in to www.cmu.edu/ced later this summer to find out.

About this Report

This report was prepared by the Center for Economic Development. Andrea Zimmer and Greg Lagana conducted the data analysis, and Greg Lagana authored the final report. Its conclusions and opinions are the CED’s alone. This report does not represent the conclusions, views, or official positions of Carnegie Mellon University or any of its corporate officers.

About the CED

The School of Public Policy and Management at the Heinz College at Carnegie Mellon University exists to improve the ability of public, non-profit and private organizations to address the most difficult challenges facing society. Established in 1968, Heinz takes a broad interdisciplinary approach that combines systems analysis, quantitative analysis, and information technology to address policy questions.

The Center for Economic Development at the College exists to help local institutions address challenges in the Pittsburgh region, and the Commonwealth of Pennsylvania. Since its inception under the College in 1987, the Center has also followed an interdisciplinary approach to help the region and state confront problems and opportunities in economic, workforce, and community development. Through objective research and technical tools, the Center helps clients manage change through policy, strategy, and programming. Our toolkit includes economic, demographic, geographic, and institutional data analysis, economic and statistical modeling, survey design and analysis, performance measurement, and program design and evaluation.

Since 2008, with the assistance of its twelve EDO partners and eight C-level Executive Fellows, the CED has also provided a steady pipeline of academic, extracurricular, and experiential learning opportunities for master’s students interested in economic development in the U.S. context.

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