# PUERTO RICO
## SMALL BUSINESS
### SECTOR TRENDS

Evidence from the 2018 New York Fed Survey

# CONTENTS

Kausar Hamdani, SVP and Senior Advisor

Claire Kramer Mills, AVP

Javier Silva, Associate Director

Jessica Battisto, Sr. Analyst

Scott Lieberman, Sr. Analyst

# PREFACE

The Federal Reserve Bank of New York conducts an annual survey of Puerto Rico small businesses[1] to provide stakeholders, including business leaders and policymakers, with relevant and timely information on this important economic sector. The 2018 survey was fielded from March through May 2018 and asked firms to report on their business experiences in 2017, including the impacts of hurricanes Irma and Maria. This report describes firms that are currently operating on the island. We acknowledge that we are not fully capturing the voices of businesses that have closed, whether temporarily or permanently.

The 2018 survey marks the third round of the survey. We thank our local partners who help field the survey; without their efforts this survey would not be possible. We also thank the small businesses of Puerto Rico that participate and share their experiences. The survey systematically collects their individual stories and transforms what would otherwise be anecdotal evidence into a database documenting and dimensioning the small business sector of Puerto Rico.

This report has three new features in addition to the topline results on how the sector fared in 2017.

First, each year we ask questions on a topic of special interest. For the 2018 survey, we asked about hurricane-related losses and a special section presents that data. More detailed results on firms that self-identified as having incurred a loss directly from the hurricanes are presented in a separate report, *Puerto Rico Small Businesses and the 2017 Hurricanes*.

Second, we have added three *Behind the Numbers* sections, which are 'deep dives' within a topic. We examine micro data to examine themes that might otherwise be digressions from the main narrative. This report's *Behind the Numbers* sections focus on heterogeneity among firms within the sector.

Third, three years of survey data allow us to initiate a Sector Trends section where the current data are placed and analyzed within a longer perspective. It is intended that future surveys will contribute new data points that, over time, will provide a rich resource for business leaders, policymakers, and researchers to use to support data-informed policies and solutions for growth and revitalization in Puerto Rico.

**Kausar Hamdani, PhD** | SVP and Senior Advisor
**Claire Kramer Mills, PhD** | AVP
**Javier Silva** | Associate Director
**Jessica Battisto** | Senior Analyst

*The views presented here are those of the authors and do not necessarily reflect the position of the Federal Reserve Bank of New York or the Federal Reserve System.*

---

1    Small businesses have fewer than 500 paid full- or part-time employees.

# EXECUTIVE SUMMARY

2017 was a challenging year for the Puerto Rico small business sector,[1] which represents 99.7% of all business establishments on the island.[2] Falling revenues and rising operating costs squeezed firm profits, and two major hurricanes adversely affected most of the sector and the island at large.

While a majority of hurricane-affected firms had some form of insurance, few were fully covered and few sought other types of financing to address hurricane-related losses. As a result, few firms fully covered their hurricane-related losses through insurance claims and financing applications. Most firms experienced a funding shortfall and demand for more financing continues into 2018 (see *Puerto Rico Small Businesses and the 2017 Hurricanes*).

There were positive notes, too. First, credit availability increased significantly in 2017. Even though demand for credit remained weak for the second year in a row, credit approvals for applicants increased significantly in 2017 relative to the previous year. If a firm applied for credit, it was more likely to have received funding, and often the full amount asked for in 2017.

An increased prevalence of debt aversion among firms may be contributing to the weak demand for credit. Also, the sector's size composition shifted towards more micro-revenue firms with annual revenues of $50,000 or less. These firms may be driving the strong demand for small dollar loans, even as small as $10,000 or less. This size firm may also benefit from financial education and management services to help repair weak credit scores, fill gaps in credit histories, and learn how to collect and present appropriate documentation needed for successful credit applications.

Second, while Hurricanes Maria and Irma affected most of the sector, whether directly with storm damage or indirectly with hurricane-related losses in the aftermath, most respondents resumed operations even if they had closed temporarily. Only a few firms indicated they closed permanently, though these results are subject to survivor bias.[3] Closures, whether temporary or permanent, were most often attributed to a lack of power, water, or transportation. However, structural damage to the business and lack of customers were also mentioned frequently and may have longer-term impacts on the sector. Waiting for funds from pending insurance claims and loan applications are challenges and sometimes even reasons for firm closures.

Lastly, there is optimism in the sector's outlook toward the future. Firms are pursuing new opportunities and making entrepreneurial changes. A majority of firms plan to update their business by offering new or different goods or services in the coming year. Restructuring business processes and expanding the business outside Puerto Rico were also common strategies that businesses plan to pursue in 2018.

---

1    Small businesses have fewer than 500 paid full- or part-time employees.
2    Bureau of Labor Statistics Quarterly Census of Employment and Wages, 2017Q1.
3    Survivor bias exists because the experiences of firms that went out of business are not systematically included in the survey. As a consequence, the results may not be representative of the sector's full experience and most likely understate the adverse impact of the hurricanes on the sector, though it is unclear by how much.

## Sector Profile

### The share of micro-revenue firms in the sector increased in 2017.

Micro-revenue firms comprise the majority of the sector. Most of these firms have annual revenues of $50,000 or less. The share of  micro-revenue firms increased significantly in 2017 relative to 2016, possibly related to hurricane-related losses.

### Annual revenues decreased in 2017 for a majority of firms.

54% of firms reported a decrease in annual revenues in 2017 relative to 2016. The distribution of revenue change magnitudes was similar to last year's survey results. Also, on net, more firms reported decreases than increases or no change for the second year in a row.

### Operating expenses increased for a majority of firms in 2017.

For the second year in a row, a majority of firms reported increased expenses.

### Profitability remained under pressure for firms in 2017.

After having declined in 2016 relative to 2015, the share of profitable firms remained relatively stable in 2017. On net, more firms reported losses than profits in 2016 and 2017, as compared to the reverse in 2015.

## Credit Demand

### Demand for credit remained low in 2017.

Demand for credit declined in 2016, and remained low in 2017. In 2015, 55% of all firms applied for credit; in 2016 and 2017, this share was significantly lower at around 30% of all firms. The downward shift in credit demand is seen across the spectrum of firms.

A contributor to weak credit demand in 2017 was an increase in the share of debt averse firms. While debt aversion has been the most frequently cited reason not to apply for credit over the last three years, it became significantly more important in 2017.

Discouraged borrowers cite financial obstacles; opportunities persist for credit repair services for firms in 2017.

Commercial banks continue to be the most frequently mentioned credit source. Government entities gained importance in 2017, most likely reflecting funding for hurricane recovery.

### Credit demand is primarily for small-dollar loans.

81% of applicant firms applied for loans of $100,000 or less; 32% of applicants applied for loans of $10,001 to $25,000; and 23% of applicants asked for loans of $10,000 or less. Meeting operating expenses was the top-ranked reason to apply for credit in all three years of the survey.

## Credit Availability

### Credit approvals increased significantly in 2017.

While application rates were down in 2017, credit approvals increased. Increased availability was reflected in three ways: First, the share of firms that received funding, full or partial, was the highest in the past three years. Second, the share of applicants who received full funding reached a three-year high in 2017. Lastly, there was a decline in the share of those who were denied funding.

Reasons for credit shortfalls and firm responses were little changed in 2017 from previous survey years.The most frequently cited financial barriers continue to be weak credit scores, weak credit histories, and/or a lack of necessary documentation. A notable change in 2017 was that more entrepreneurs downsized their business in the face of a funding shortfall than used personal funds or turned to alternative lenders than they might have done in the past.

## Behind the Numbers: Differences Among Firms Within the Sector.

Larger firms (by employment or annual revenues) and more financially successful firms (were profitable or broke even) are more active and successful in the credit markets. These firms apply for credit and receive full or partial funding more often than other small businesses. When these firms do not apply for credit, it is most often because they have sufficient funding.

In 2016, there was a significant decline in the demand for credit compared to the previous year, which was seen across the spectrum of firms in the sector; however, some types of firms exhibited larger declines than others. This decline in demand persisted into 2017, but was accompanied by sharply more credit availability for the larger and more profitable firms. As a consequence, differences emerged in funding success among firms, as noted previously.

Debt aversion is the top-ranked reason not to apply for credit. In 2017, it increased to 42% of non-applicant firms, which was higher than 38% and 36% for 2015 and 2016, respectively. While debt aversion rates were similar among firms in 2015 and 2016, the 2017 increase was concentrated among the smaller employment (10 employees or less) firms and more recently established (5 years or less) firms.

Firms with debt outstanding did not have lower approval rates than their peers. Having a bank in the mix of institutions applied to for credit was more often associated with an improvement in approval rates from 2016 to 2017.

## Significant Differences

In this report, dotted lines indicate where changes in data values are significantly different based on ninety-five percent credibility intervals. Only selective changes of interest are so indicated. See About the Data for more information on credibility intervals.

## Background from the U.S. Bureau of Labor Statistics

Each New York Fed survey provides a snapshot of the sector at a specific point in time. It is useful to contextualize the survey by placing it within the longer-term trends that have been underway in the sector over the past decade.

- The total number of small business establishments in Puerto Rico has declined over the past decade. During the New York Fed survey periods of the last three years, the number of firms has remained relatively unchanged at about 44,000 firms.

- The overall level of small business employment has declined over the past decade. During the New York Fed survey periods (2015 to 2017), average small business employment declined by 1.2%.

- 75% of the sector consists of firms with fewer than 10 full- or part-time employees. However, given the practice of 'informal' employment, this value may differ in practice. As a result, the survey analytics use annual revenues to refer to firm size.

## NUMBER OF SMALL FIRM ESTABLISHMENTS
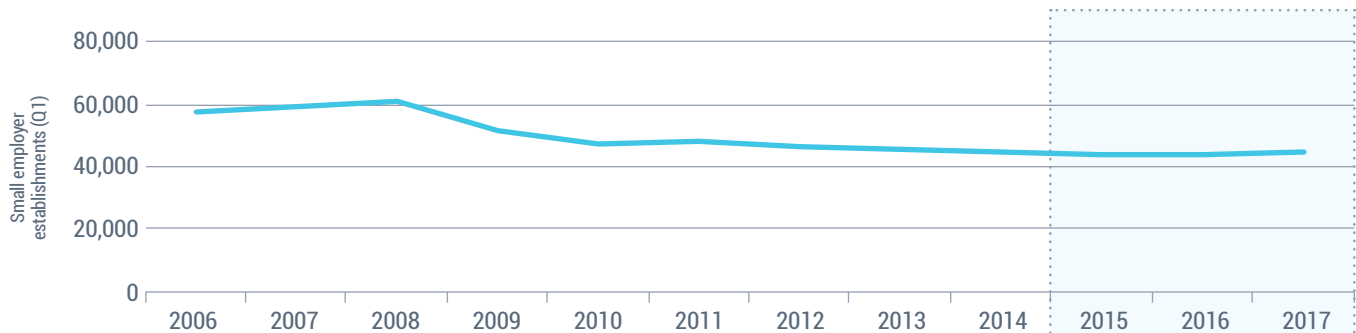


## SMALL FIRM EMPLOYMENT
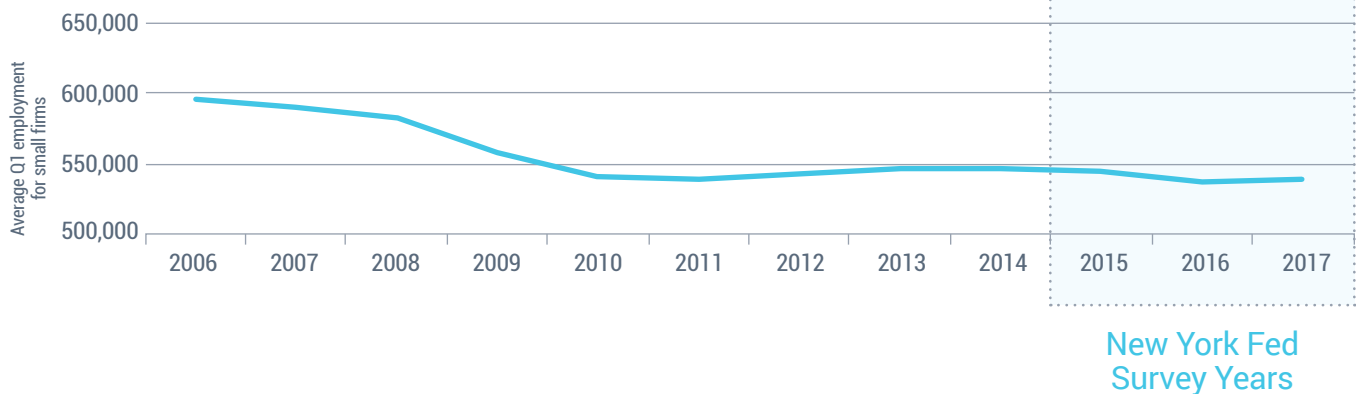


New York Fed
Survey Years

Data source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages. Employment data calculated as the average employment for the first three months of the given year.
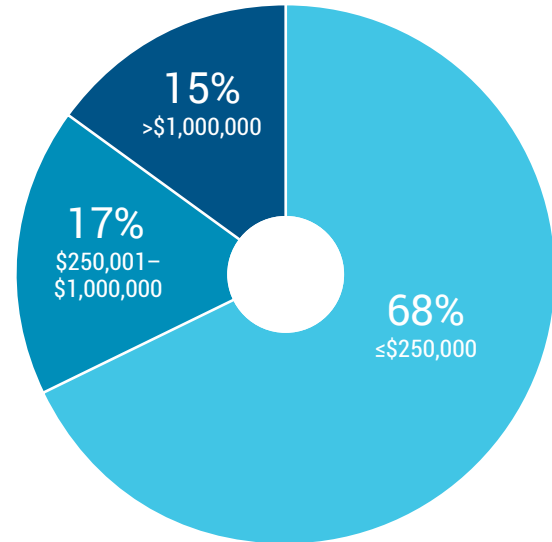
## The share of micro-revenue firms increased in 2017.

**68%** of firms in the sector have annual revenues of $250,000 or less. This segment, referred to as micro-revenue firms, comprise the majority of firms in the sector. Their increased share may reflect the impact of the hurricanes, which reduced the revenues of most firms. (See *Puerto Rico Small Businesses and the 2017 Hurricanes*).

**ANNUAL REVENUES, 2017**
N=403



- 15% >$1,000,000
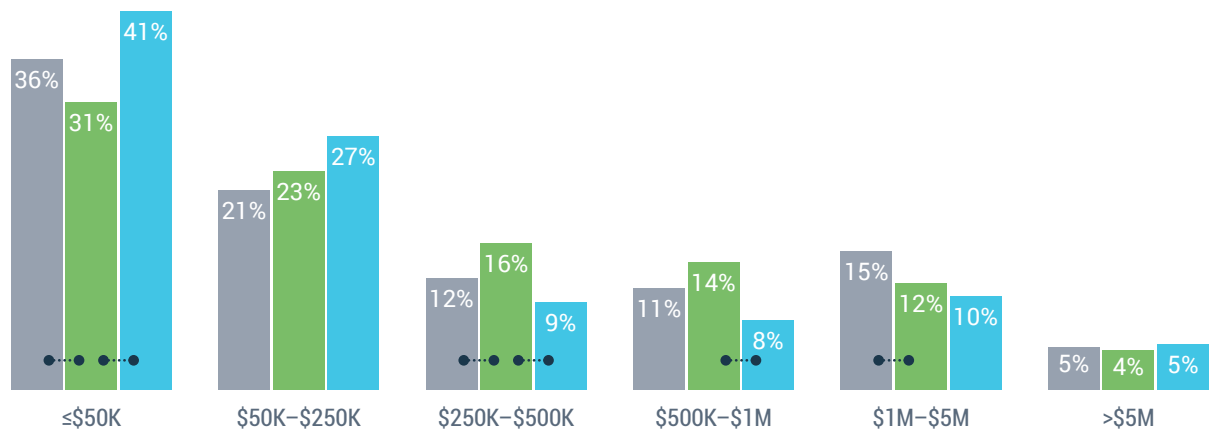- 17% $250,001–$1,000,000
- 68% ≤$250,000

**Sector Trends, 2015–2017**

Micro-revenue firms comprise the majority of the sector. Most of these firms have annual revenues of $50,000 or less. The share of these small micro-revenue firms increased significantly in 2017 relative to 2016, possibly related to hurricane-related losses.

**ANNUAL REVENUES, 2015–2017**

Legend: 2015 (N=726), 2016 (N=534), 2017 (N=403)



| Category | 2015 | 2016 | 2017 |
|---|---|---|---|
| ≤$50K | 36% | 31% | 41% |
| $50K–$250K | 21% | 23% | 27% |
| $250K–$500K | 12% | 16% | 9% |
| $500K–$1M | 11% | 14% | 8% |
| $1M–$5M | 15% | 12% | 10% |
| >$5M | 5% | 4% | 5% |

*Categories have been simplified for readability. Actual categories are: ≤$50K, $50,001–$250K, $250,001–$500K, $500,001–$1M, $1,000,001–$5M, >$1M.*

●····● *Significant at 95% credibility interval.*

# CHANGE IN ANNUAL REVENUES

**Annual revenues decreased in 2017 for a majority of firms.**

**54%** of firms reported a decrease in annual revenues in 2017 relative to 2016. The distribution of revenue change by magnitude was similar to the 2016 survey results.
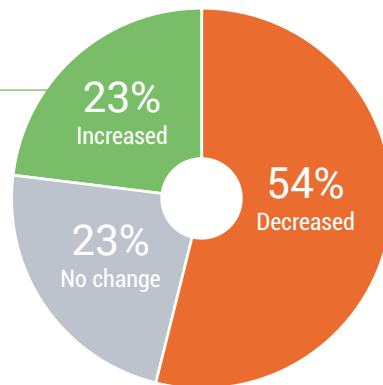
**MAGNITUDE OF REVENUE INCREASE, 2017**
N=92

| | |
|---|---|
| 4% | Increased >30% |
| 6% | Increased 11%–30% |
| 13% | Increased <11% |

**REVENUE CHANGE, 2017**
N=404

- 23% Increased
- 23% No change
- 54% Decreased

**MAGNITUDE OF REVENUE DECREASE, 2017**
N=221

| | |
|---|---|
| 18% | Decreased >30% |
| 23% | Decreased 11%–30% |
| 13% | Decreased <11% |
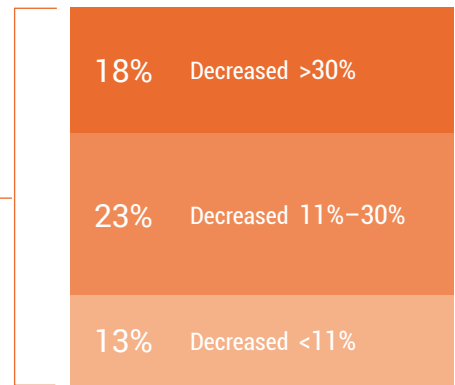
**Sector Trends, 2015–2017**

A pattern across survey years is that a majority of firms report decreased annual revenues. On net, more firms report decreases than increases or no change.

**REVENUE CHANGE, 2015–2017**

| Year | Decreased | No Change | Increased |
|---|---|---|---|
| 2017 (N=404) | 54% | 23% | 23% |
| 2016 (N=533) | 53% | 21% | 26% |
| 2015 (N=657) | 56% | 18% | 26% |

■ Decreased  ■ No Change  ■ Increased

## Operating expenses increased for a majority of firms in 2017.

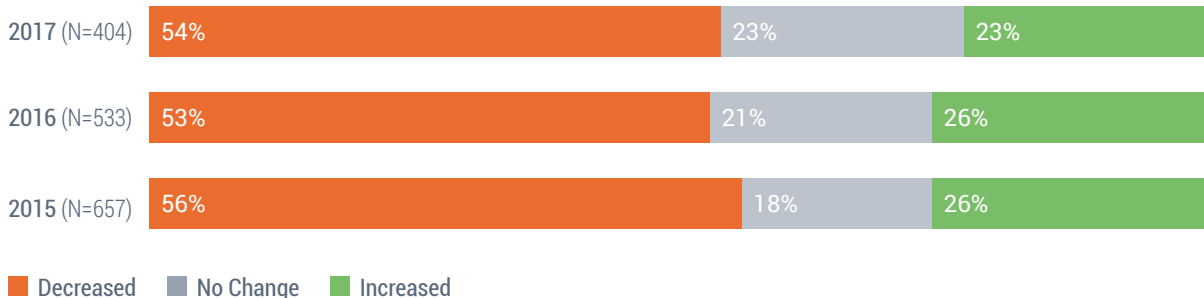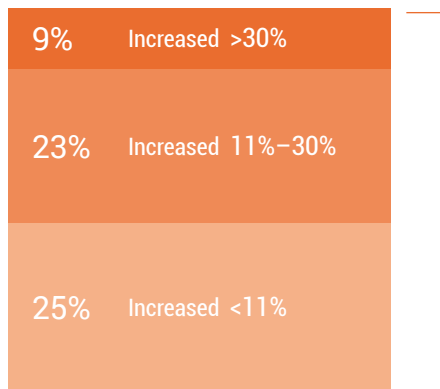For the second year in a row, expenses increased for a majority of firms. However, about one in six firms reported decreased expenses during 2017.

### MAGNITUDE OF EXPENSES INCREASE, 2017
N=225

| | |
|---|---|
| 9% | Increased >30% |
| 23% | Increased 11%–30% |
| 25% | Increased <11% |

### EXPENSES CHANGE, 2017
N=403

16% Decreased

57% Increased

27% No change
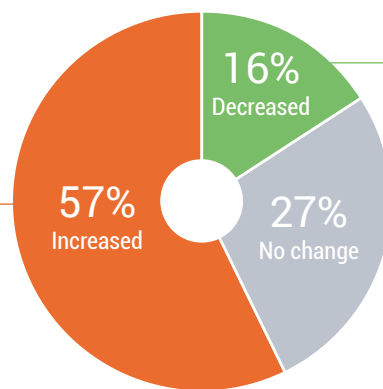
### MAGNITUDE OF EXPENSES DECREASE, 2017
N=67

| | |
|---|---|
| 3% | Decreased >30% |
| 5% | Decreased 11%–30% |
| 8% | Decreased <11% |

**Sector Trends, 2016–2017**

More firms reported increased, rather than decreased, expenses over the past two years of the survey when this question was asked.

### EXPENSES CHANGE, 2016–2017

| | Decreased | No Change | Increased |
|---|---|---|---|
| 2017 (N=403) | 16% | 27% | 57% |
| 2016 (N=526) | 22% | 24% | 54% |

■ Decreased  ■ No Change  ■ Increased

# PROFITS AND LOSSES

## Profitability was under pressure for firms in 2017.

**33%** of firms reported being profitable in 2017 and 41% reported a loss. On net, a larger percentage of firms reported losses than reported profits.
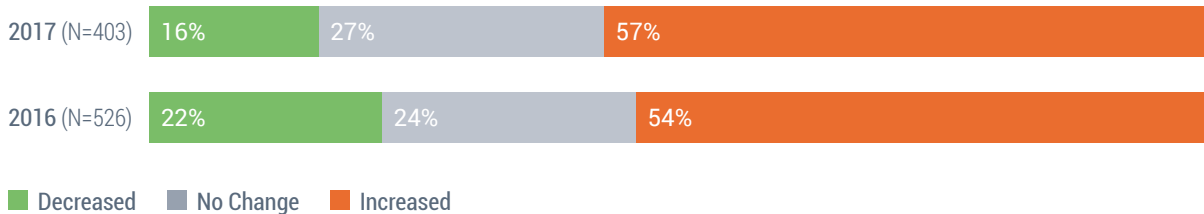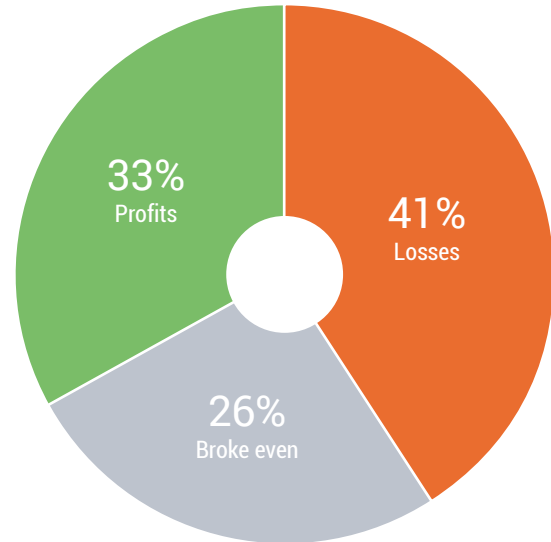
In 2017, firms that were profitable or broke even, compared to firms with losses, were more likely to have been in business for more than ten years, employ ten or more workers, and generate more than $50K in annual revenues.

### PROFITABILITY, 2017
N=376



- 33% Profits
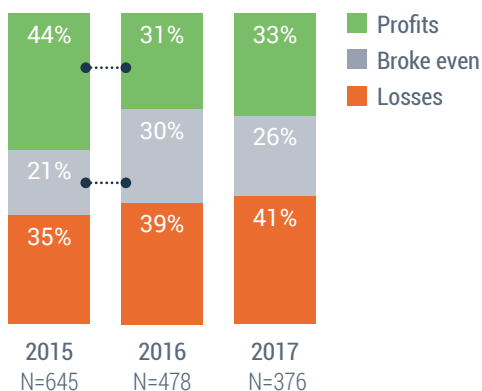- 41% Losses
- 26% Broke even

**Sector Trends, 2015–2017**

The share of profitable firms remained relatively stable in 2017 after having declined in 2016 relative to 2015.

Profits versus losses: The sector went from having, on net, more firms with profits rather than losses to the reverse outcome in 2016 and 2017.

In other words, in 2015, the share of firms with profits exceeded the share of firms with losses by 9 percentage points. In contrast, in 2016 and 2017 the situation had flipped, with the share with losses exceeding those with profits by 8 percentage points.

### PROFITABILITY, 2015–2017



Legend:
- Profits
- Broke even
- Losses

| | 2015 N=645 | 2016 N=478 | 2017 N=376 |
|---|---|---|---|
| Profits | 44% | 31% | 33% |
| Broke even | 21% | 30% | 26% |
| Losses | 35% | 39% | 41% |

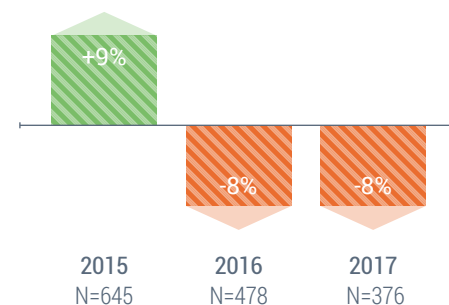●┈┈● *Significant at 95% credibility interval.*

### NET PERCENT PROFITABLE, 2015–2017
(Share with profits minus share with losses)



| 2015 N=645 | 2016 N=478 | 2017 N=376 |
|---|---|---|
| +9% | -8% | -8% |

# HURRICANE-RELATED FINANCIAL IMPACTS

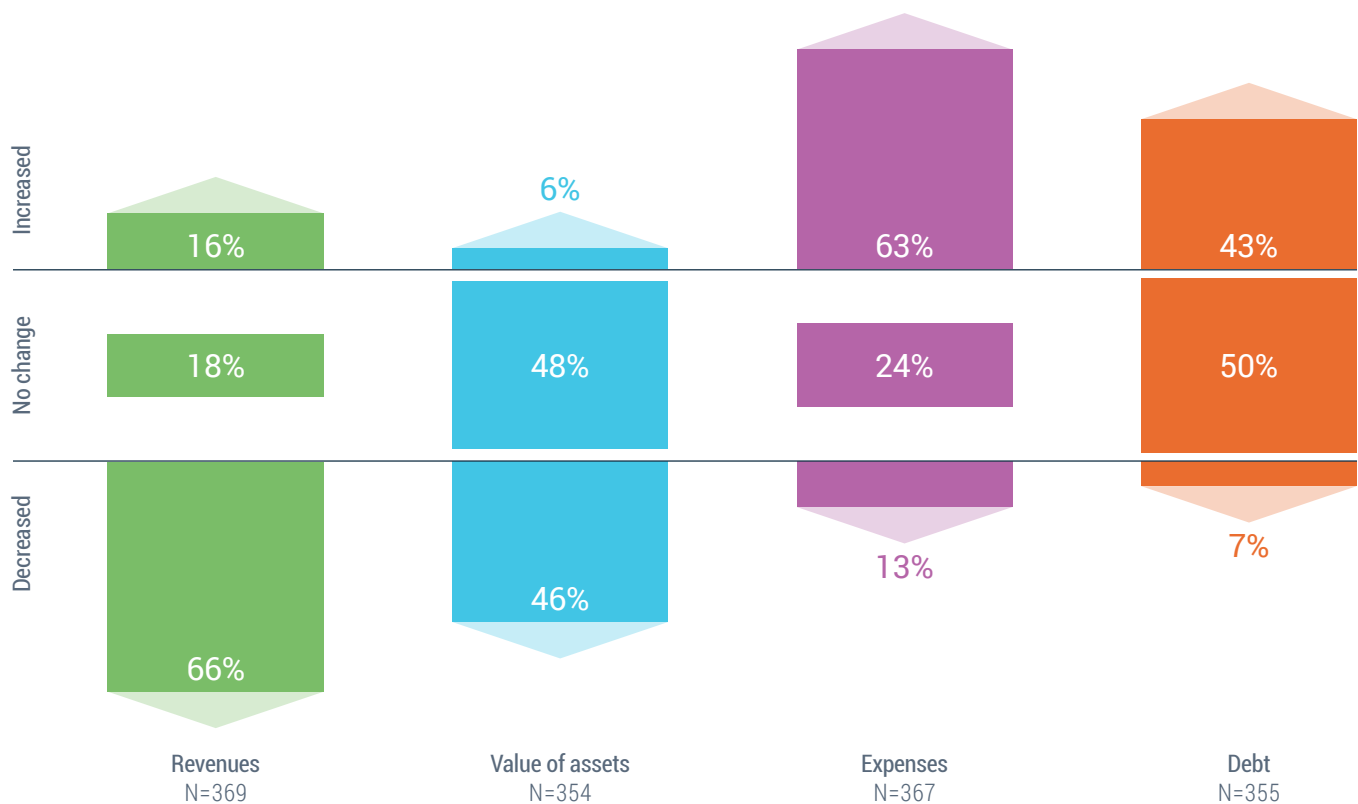**The 2017 hurricanes decreased revenues and increased expenses for a majority of firms.**

**66%** of firms reported decreased annual revenues due to the hurricanes. However, 16% of firms saw a positive impact on revenues.

**63%** of firms reported increased expenses because of the hurricanes while 13% of firms saw decreased expenses.

**46%** of firms reported decreased property and asset values while 48% saw no change in the value of their assets.

**43%** of firms took on debt due to the hurricanes.

## FINANCIAL IMPACTS ON THE SECTOR DUE TO 2017 HURRICANES[1]



| | Increased | No change | Decreased |
|---|---|---|---|
| **Revenues** N=369 | 16% | 18% | 66% |
| **Value of assets** N=354 | 6% | 48% | 46% |
| **Expenses** N=367 | 63% | 24% | 13% |
| **Debt** N=355 | 43% | 50% | 7% |

1     A similar chart is also shown in *Puerto Rico Small Businesses and the 2017 Hurricanes*, where the data are presented for firms with hurricane-related losses. The percentages and sample sizes differ in this chart because they reflect all respondent firms.
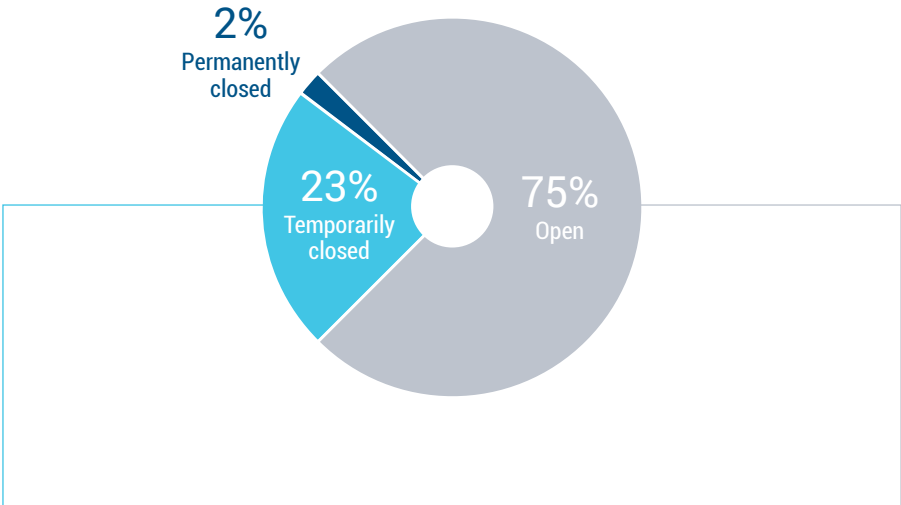
# HURRICANE-RELATED FIRM CLOSURES

## Most respondents resumed operations; most closures were temporary.

**75%** of firms that were open or only temporarily closed in 2017 were very confident that they would remain open in 2018.

### OPERATING STATUS, 2017
N=398

**2%**
Permanently closed

**23%**
Temporarily closed

**75%**
Open

### REASONS FOR CLOSURE,[1] 2017
(% of firms temporarily or permanently closed), N=101

| | |
|---|---|
| Lack of power, water, or transportation | 66% |
| Lack of customers | 37% |
| Structural damage to business | 33% |
| Waiting for financing | 25% |
| Lack of employees | 9% |
| Lack of suppliers | 5% |
| Other | 15% |
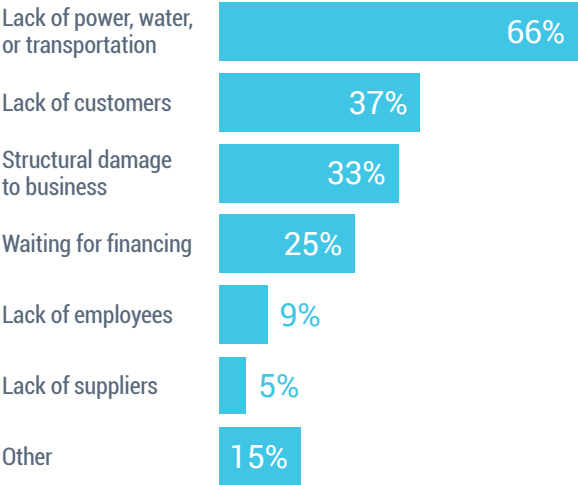
### CONTINUED OPERATIONS IN 2018
(% of firms open or temporarily closed), N=388

| | |
|---|---|
| Very likely | 75% |
| Somewhat likely | 19% |
| Somewhat unlikely | 3% |
| Very unlikely | 3% |
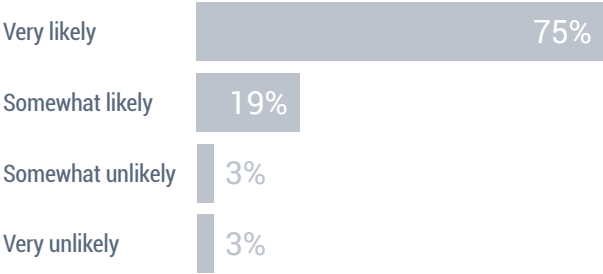
1   Respondents could select multiple options.

## DEMAND FOR CREDIT, 2017
N=407

**Demand for credit continues to be low in 2017.**

Nearly one-third of firms applied for credit in 2017.

70% Did not apply
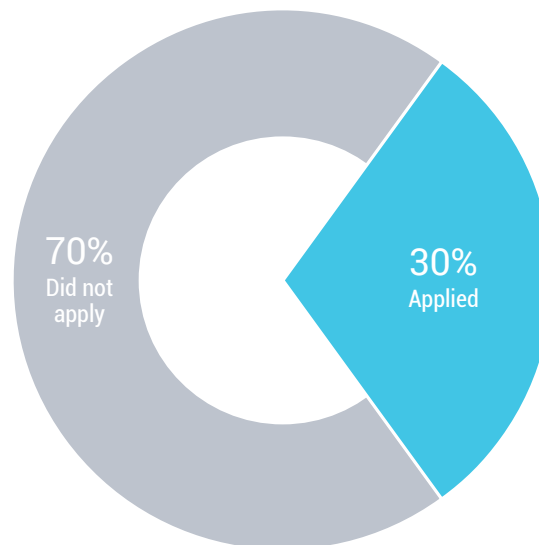
30% Applied

**Sector Trends, 2015–2017**

Demand for credit declined in 2016, and remained at the lower level in 2017. In 2015, 55% of all firms applied for credit; in 2016 and 2017, this share was significantly lower at around 30% of all firms.

The downward shift in credit demand is seen across the spectrum of firms. All firms, whether grouped by employment size, annual revenue, age of firm, or profitability status, show a similar pattern of decline in credit demand.

## DEMAND FOR CREDIT, 2015–2017
(Share of firms that applied for credit)
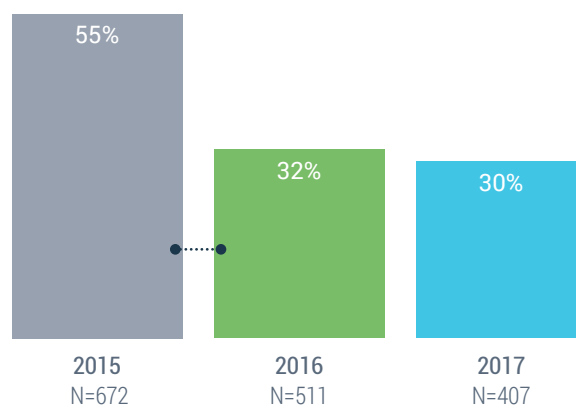
55%  
32%  
30%

| 2015 | 2016 | 2017 |
|------|------|------|
| N=672 | N=511 | N=407 |

●····● *Significant at 95% credibility interval.*

## Demand for credit

This *Behind the Numbers* section examines credit demand among firms grouped by employment size, annual revenues, age of firm, profitability status, and indebtedness. Two patterns are suggested by the data in the table.

First, for any given year, demand for credit is generally higher among larger employment firms (10 to 499 employees) than smaller employment firms. Credit demand was also higher in 2017 for firms that had debt outstanding when compared to firms with no debt outstanding; this question was introduced this year.

Second, the downward shift in credit demand that occurred in 2016 and persisted into 2017 is seen across the spectrum of firms. Depending on the type of firm, credit demand declined by about one-third to one-half from 2015 to 2016.

| Type of Firm | Demand for Credit | | |
| --- | --- | --- | --- |
| | 2015 | 2016 | 2017 |
| Small Business Sector (N=407-672) | 55% | 32% | 30% |
| Fewer than 10 employees (N=312−453) | 52% | 29% | 28% |
| 10 to 499 employees (N=95−219) | 65% | 41% | 36% |
| $50,000 or less in annual revenue (N=125−209) | 53% | 23% | 28% |
| More than $50,000 in annual revenue (N=244−455) | 58% | 37% | 31% |
| 0-5 years in business (N=116−219) | 55% | 24% | 32% |
| 6+ years in business (N=281−453) | 56% | 36% | 29% |
| Profitable or broke even (N=223−420) | 55% | 35% | 31% |
| Losses (N=153−215) | 57% | 31% | 29% |
| Has debt outstanding (N=259) | – | – | 41% |
| No debt outstanding (N=141) | – | – | 11% |

●····● *Significant at 95% credibility interval.*
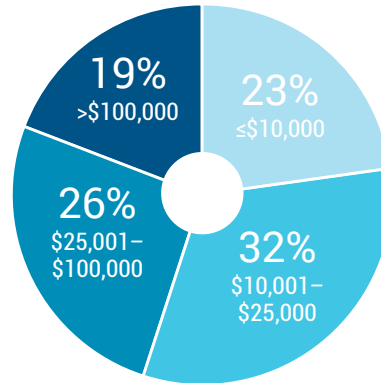
# AMOUNT AND SOURCES OF CREDIT

## Credit demand is primarily for small-dollar loans.

**81%** of applicants applied for loans of $100,000 or less.

**32%** of applicants applied for a loan of $10,001−$25,000.

**23%** of applicants applied for a loan of $10,000 or less.

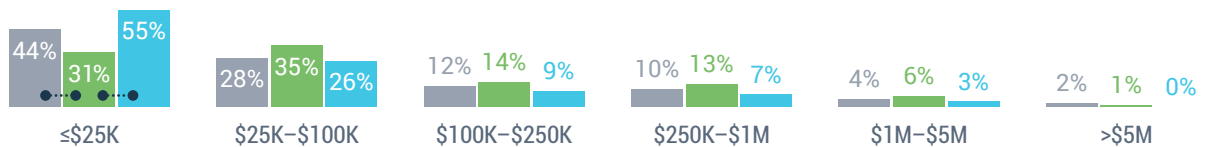### AMOUNT OF CREDIT APPLIED FOR, 2017
(% of applicants), N=121

- 19% >$100,000
- 23% ≤$10,000
- 32% $10,001−$25,000
- 26% $25,001−$100,000

Demand for credit is most frequently for loans of $100,000 or less. However, there were compositional shifts within this group. Demand for micro loans ($25,000 or less) declined in 2016, but then rebounded strongly in 2017, when 55% of all applicants sought such loans.

### AMOUNT OF CREDIT APPLIED FOR, 2015−2017 (% of applicants)

■ 2015 (N=370)  ■ 2016 (N=183)  ■ 2017 (N=121)

| | ≤$25K | $25K−$100K | $100K−$250K | $250K−$1M | $1M−$5M | >$5M |
|---|---|---|---|---|---|---|
| 2015 | 44% | 28% | 12% | 10% | 4% | 2% |
| 2016 | 31% | 35% | 14% | 13% | 6% | 1% |
| 2017 | 55% | 26% | 9% | 7% | 3% | 0% |

*Categories have been simplified for readability. Actual categories are: ≤$25K, $25,001−$100K, $100,001−$250K, $250,001−$1M, $1,000,001−$5M, >$1M.*

Commercial banks were the most frequently mentioned credit source in 2016 and 2017. Government entities gained importance in 2017 (29% in 2017 versus 12% in 2016), most likely reflecting funding for hurricane recovery.

### SOURCES APPLIED TO,[1] 2016−2017
(% of applicants)

■ 2016 (N=183)  ■ 2017 (N=119)
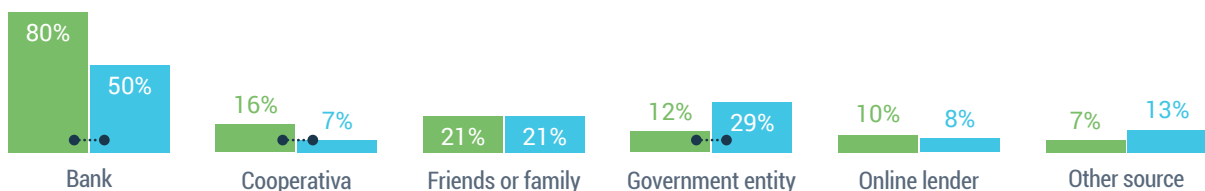
| | Bank | Cooperativa | Friends or family | Government entity | Online lender | Other source |
|---|---|---|---|---|---|---|
| 2016 | 80% | 16% | 21% | 12% | 10% | 7% |
| 2017 | 50% | 7% | 21% | 29% | 8% | 13% |

●···● *Significant at 95% credibility interval.*

1    Respondents could select multiple options.

**Meeting operating expenses was the top-ranked reason to apply in 2017.**

**39%** of firms top-ranked meeting operating expenses as the reason they applied for credit in 2017. Making hurricane-related repairs was also an important reason to apply in 2017, and ranked second to meeting operating expenses.

Credit to start a new business was cited by 10% of all firms in 2017, which is higher than in 2016. Meanwhile, applications for the purpose of expanding an existing business declined significantly.

## PRIMARY REASON TO APPLY, 2017

(% of applicants), N=121

| | |
|---|---|
| Meet operating expenses | 39% |
| Repair hurricane-related damages | 22% |
| Expand business | 18% |
| Refinance or pay down debt | 10% |
| Start a new business | 10% |
| Other | 1% |

**Sector Trends, 2015–2017**

Meeting operating expenses is the top-ranked reason to apply in all three years of the survey. Making hurricane-related repairs was combined with the Other category to make a time-consistent comparison in the chart below.

### PRIMARY REASON TO APPLY, 2015–2017 (% of applicants)
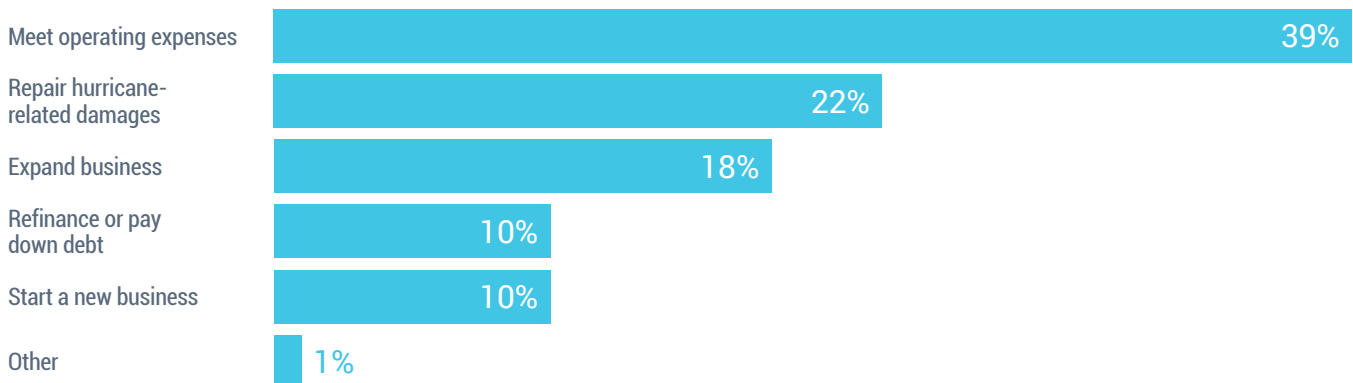
■ 2015 (N=371)  ■ 2016 (N=183)  ■ 2017 (N=121)

| | Meet operating expenses | Expand business | Refinance or pay down debt | Start a new business | Other |
|---|---|---|---|---|---|
| 2015 | 41% | 32% | 11% | 8% | 8% |
| 2016 | 47% | 32% | 13% | 4% | 4% |
| 2017 | 39% | 18% | 10% | 10% | 23% |
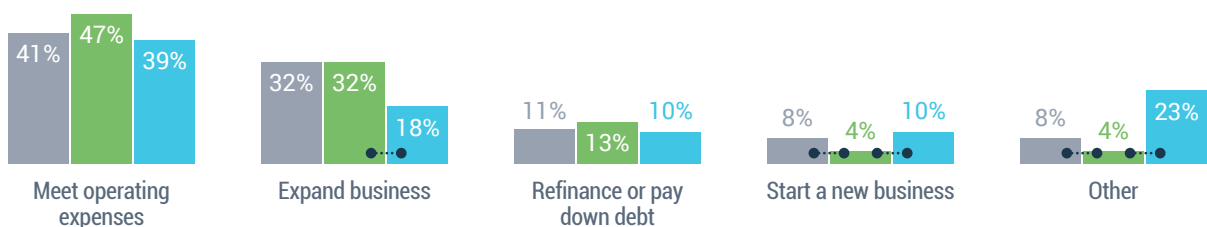
●···● Significant at 95% credibility interval.

## Credit approvals increased in 2017.

While application rates were down in 2017, credit approval rates increased significantly for firms that applied. 53% of all applicants received full funding, while an additional 22% received partial funding. These were the highest funding levels in the past three years.

### FUNDING RECEIVED, 2017
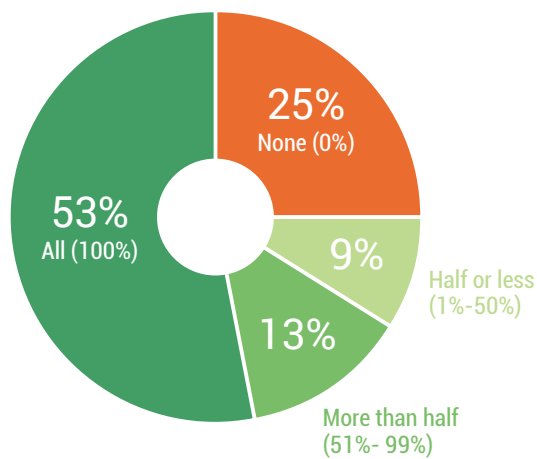(% of applicants), N=118



- 25% None (0%)
- 9% Half or less (1%-50%)
- 13% More than half (51%- 99%)
- 53% All (100%)

### CREDIT APPROVALS, 2015–2017
(Share receiving at least some funding) (% of applicants)



- 2015 N=370 — 67%
- 2016 N=182 — 60%
- 2017 N=118 — 75%
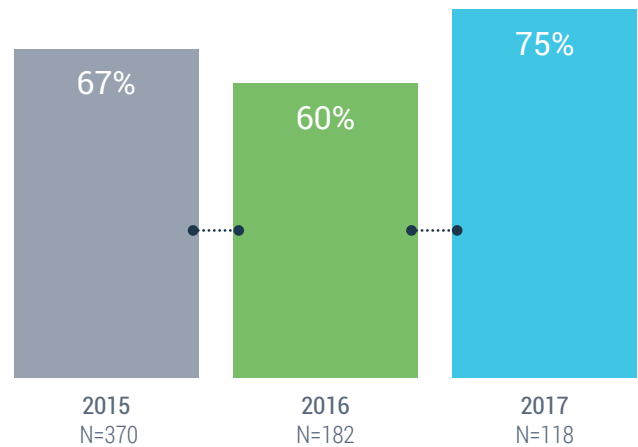
**Sector Trends, 2015–2017**

The share of applicants who received full funding reached a three-year high in 2017. Moreover, the improvement was accompanied by a decline in the share of those who were denied funding.

### FUNDING RECEIVED, 2015–2017
(% of applicants)
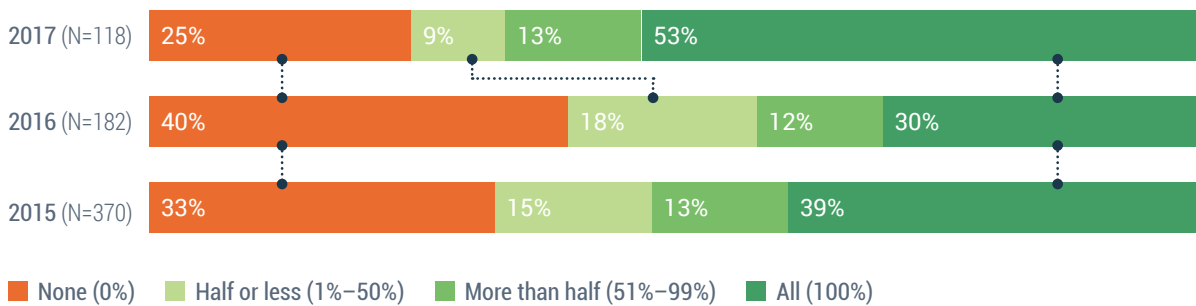


| Year | None (0%) | Half or less (1%–50%) | More than half (51%–99%) | All (100%) |
|------|-----------|-----------------------|--------------------------|------------|
| 2017 (N=118) | 25% | 9% | 13% | 53% |
| 2016 (N=182) | 40% | 18% | 12% | 30% |
| 2015 (N=370) | 33% | 15% | 13% | 39% |

- None (0%)
- Half or less (1%−50%)
- More than half (51%−99%)
- All (100%)

•••• Significant at 95% credibility interval.

## Successful Applicants

This *Behind the Numbers* section examines credit approvals among firms grouped by employment size, annual revenues, age of firm, profitability status, indebtedness, and credit source. Three patterns are suggested by the data in the table.

First, for any given year, approval rates (fully or partially funded) are higher for larger employment firms (10 to 499 employees) and firms that were profitable or broke even. Having debt outstanding did not result in significantly different approval rates.

Second, a downward shift in credit approvals occurred in 2016, but then reversed in 2017 for the larger firms (measured by both employment and annual revenues) and firms that were profitable or broke even.

Lastly, including a bank in the mix of lenders was associated with a higher approval rate in 2017 compared to 2016. However, firms that included a bank in the mix of lenders applied to in 2017 had a similar approval rate to firms that applied to non-bank lenders in 2017.

| Type of Applicant Firm | Share that was Approved | | |
|---|---|---|---|
| | 2015 | 2016 | 2017 |
| Small Business Sector (N=118–370) | 67% | 60% | 75% |
| Fewer than 10 employees (N=84–229) | 63% | 61% | 67% |
| 10 to 499 employees (N=34–141) | 77% | 59% | 92% |
| $50,000 or less in annual revenue (N=29–107) | 61% | 63% | 66% |
| More than $50,000 in annual revenue (N=74–263) | 70% | 59% | 79% |
| 0-5 years in business (N=30–116) | 64% | 64% | 72% |
| 6+ years in business (N=82–254) | 69% | 59% | 76% |
| Profitable or broke even (N=67–230) | 74% | 59% | 84% |
| Losses (N=43–123) | 58% | 60% | 60% |
| Has debt outstanding (N=102) | – | – | 79% |
| Applied only to bank (N=46–104) | – | 59% | 78% |
| Included a bank in the mix of lenders applied to[1] (N=59-150) | – | 58% | 76% |
| Applied only to non-bank lender(s) (N=32-57) | – | 72% | 74% |

●···● *Significant at 95% credibility interval.*

1  Applied to a bank alone or in combination with other types of lenders. Our survey data cannot provide approval rates for a given lender. Respondents can select multiple sources to which they applied, but the question on credit approvals is not combined with the lender(s) to which they applied. Therefore, we cannot say with certainty whether firms that applied to more than one source were approved at a specific source.
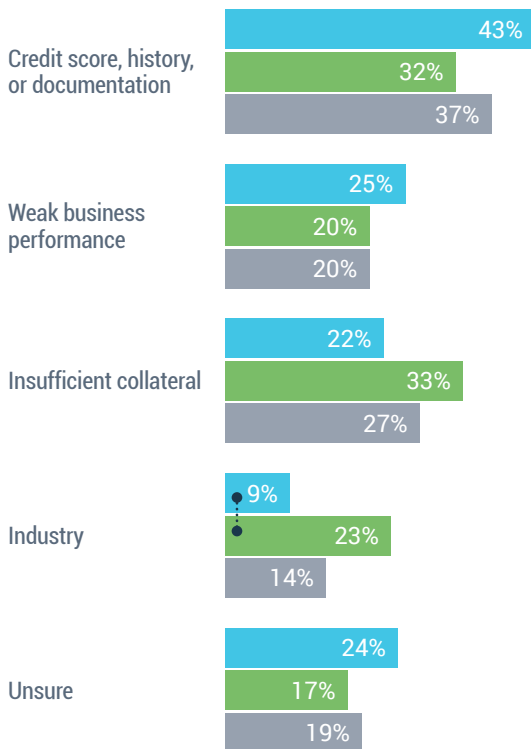
# FUNDING SHORTFALLS

## Reasons for and impacts of funding shortfalls were little changed in 2017 from previous survey years.

The patterns are little changed over the past three years. One notable exception for 2017 is that entrepreneurs more often downsized their business in the face of funding shortfalls than used personal funds or turned to alternative lenders as they might have done in the past.
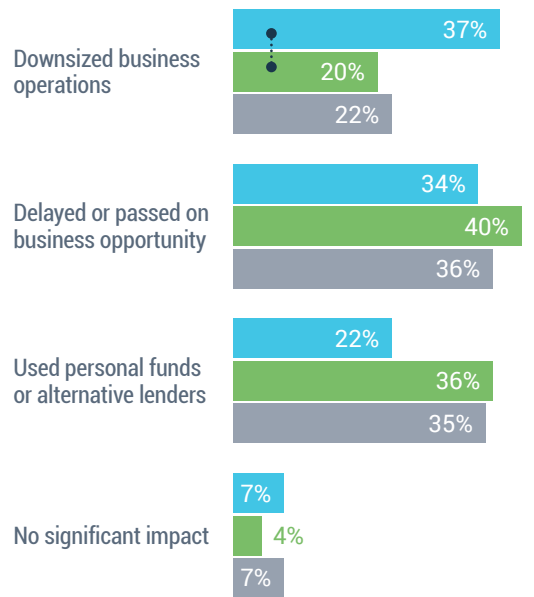
**Sector Trends, 2015–2017**

### REASONS FOR FUNDING SHORTFALL,[1] 2015–2017
(% of applicants with funding shortfall)

**Credit score, history, or documentation**
- 2017: 43%
- 2016: 32%
- 2015: 37%

**Weak business performance**
- 2017: 25%
- 2016: 20%
- 2015: 20%

**Insufficient collateral**
- 2017: 22%
- 2016: 33%
- 2015: 27%

**Industry**
- 2017: 9%
- 2016: 23%
- 2015: 14%

**Unsure**
- 2017: 24%
- 2016: 17%
- 2015: 19%

### PRIMARY IMPACT OF FUNDING SHORTFALL, 2015–2017
(% of applicants with funding shortfall)

**Downsized business operations**
- 2017: 37%
- 2016: 20%
- 2015: 22%

**Delayed or passed on business opportunity**
- 2017: 34%
- 2016: 40%
- 2015: 36%

**Used personal funds or alternative lenders**
- 2017: 22%
- 2016: 36%
- 2015: 35%

**No significant impact**
- 2017: 7%
- 2016: 4%
- 2015: 7%

■ 2015 (N=217)  ■ 2016 (N=116)  ■ 2017 (N=56)
■ 2015 (N=221)  ■ 2016 (N=116)  ■ 2017 (N=57)

●⋯● *Significant at 95% credibility interval.*

1  Respondents could select multiple options.

## Non-applicant firms were the majority in 2017.

**70%** of small firms did not apply for credit in 2017. This percentage was little changed from 68% in 2016, but considerably higher than 45% in 2015.

The major factor driving the weakness in credit demand in 2017 was an increase in the share of debt averse firms.

Credit sufficiency, while down a little in 2017, was very comparable to earlier survey years.

### SHARE OF FIRMS THAT DID NOT APPLY FOR CREDIT, 2015–2017

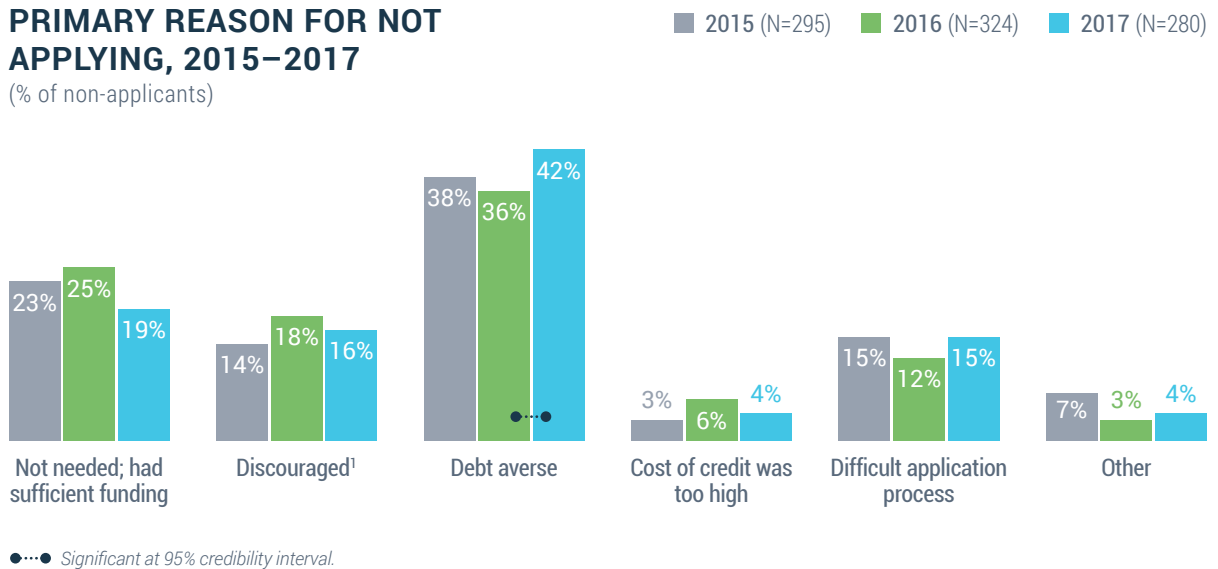| | | |
|---|---|---|
| 45% | 68% | 70% |
| 2015 N=672 | 2016 N=511 | 2017 N=407 |
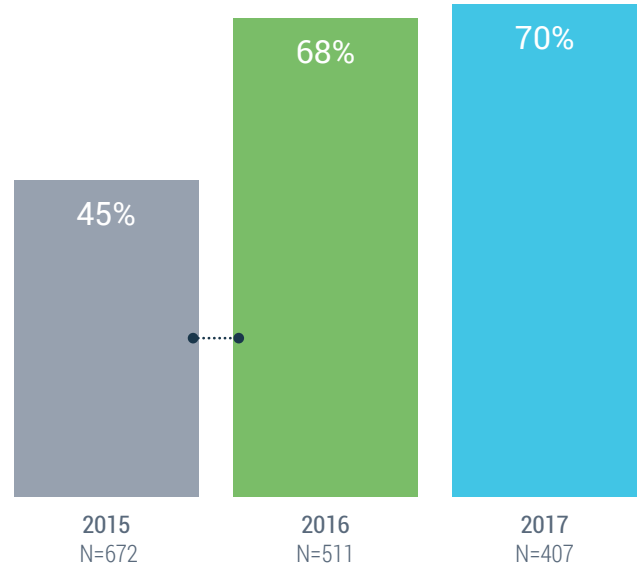
**Sector Trends, 2015–2017**

Debt aversion has been the most frequently cited reason not to apply for credit by survey respondents over the last three years. This factor became significantly more important in 2017.

### PRIMARY REASON FOR NOT APPLYING, 2015–2017
(% of non-applicants)

■ 2015 (N=295)  ■ 2016 (N=324)  ■ 2017 (N=280)

| | Not needed; had sufficient funding | Discouraged¹ | Debt averse | Cost of credit was too high | Difficult application process | Other |
|---|---|---|---|---|---|---|
| 2015 | 23% | 14% | 38% | 3% | 15% | 7% |
| 2016 | 25% | 18% | 36% | 6% | 12% | 3% |
| 2017 | 19% | 16% | 42% | 4% | 15% | 4% |

●···● *Significant at 95% credibility interval.*

---

1    Discouraged firms are those that did not apply because they believed they would be turned down.

## Debt Aversion Among Non-Applicants

This *Behind the Numbers* section examines debt aversion among non-applicant firms grouped by employment size, annual revenues, age of firm, profitability status, and indebtedness.

Debt aversion is the most frequently cited reason for not applying for credit. A little over one-third of non-applicants top-ranked this reason in 2015 and 2016.

In 2017, 42% of non-applicants were debt averse, a significant increase from the year prior. This increase was concentrated among the smaller employment firms (fewer than 10 employees) and more recently established firms (5 years or less). As a result, the difference in debt aversion became more striking between the smaller, younger firms and the larger, more established firms. Revenue size, profitability, and indebtedness were not statistically distinguishing traits.

**SHARE OF DEBT AVERSE NON-APPLICANTS, 2015–2017**

(% of non-applicants)
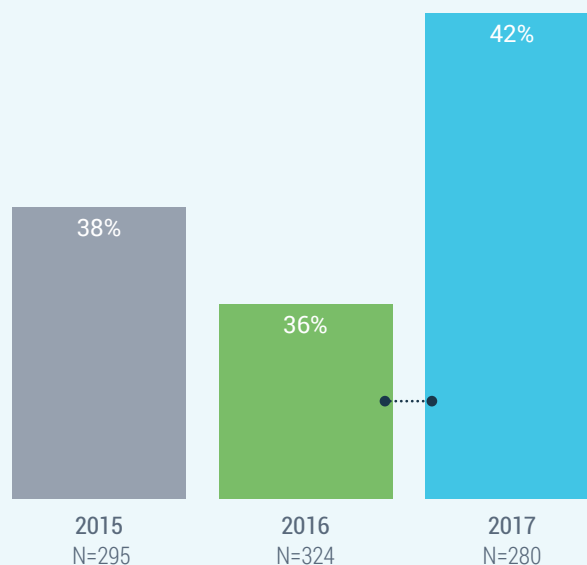


| | 2015 N=295 | 2016 N=324 | 2017 N=280 |
|---|---|---|---|
| | 38% | 36% | 42% |

| Type of Non-Applicant Firm | Share that was Debt Averse | | |
|---|---|---|---|
| | **2015** | **2016** | **2017** |
| **Small Business Sector** (N=280–324) | **38%** | **36%** | **42%** |
| Fewer than 10 employees (N=220–236) | 38% | 36% | 46% |
| *10 to 499 employees (N=60–88)* | 39% | 34% | 29% |
| $50,000 or less in annual revenue (N=94–111) | 34% | 37% | 48% |
| *More than $50,000 in annual revenue (N=166–228)* | 38% | 35% | 38% |
| 0-5 years in business (N=85–99) | 36% | 31% | 49% |
| *6+ years in business (N=194–239)* | 39% | 39% | 39% |
| Profitable or broke even (N=151–185) | 36% | 36% | 41% |
| *Losses (N=92–119)* | 40% | 36% | 42% |
| Has debt outstanding (N=154) | – | – | 39% |
| *No outstanding debt (N=125)* | – | – | 45% |

●···● *Significant at 95% credibility interval.*

## Credit Sufficiency Among Non-Applicants

This *Behind the Numbers* section examines credit sufficiency among non-applicant firms grouped by employment size, annual revenues, age of firm, and profitability status.
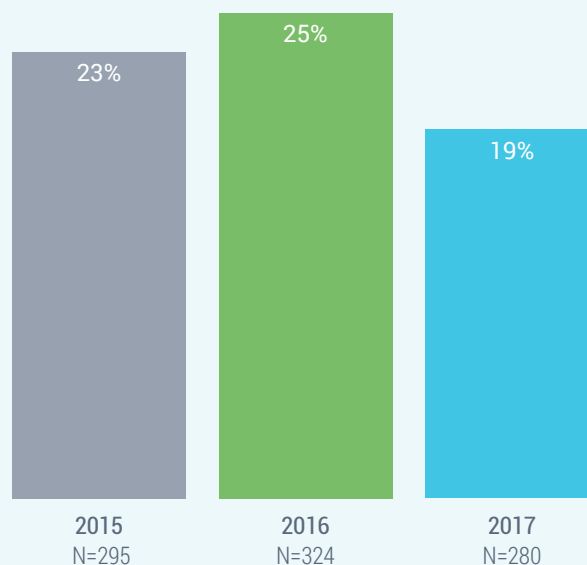
Credit sufficiency is the second-most frequently cited reason not to apply for credit. About one-quarter of non-applicants top-ranked this reason in 2015 and 2016. While the share dropped slightly in 2017, this drop was not a significant difference from the previous years.

The micro data suggest that, for any given year, funding sufficiency is more likely to be cited by larger firms (measured by employment or annual revenues) and firms that were profitable or broke even.

In addition, the challenges of 2017 seemed to have reduced the prevalence of funding self-sufficiency among the smaller employment (fewer than 10 employees) and younger (5 years in business or less) firms.

## SHARE OF NON-APPLICANTS WITH SUFFICIENT FUNDING, 2015–2017
(% of non-applicants)

| Year | Share |
|------|-------|
| 2015 N=295 | 23% |
| 2016 N=324 | 25% |
| 2017 N=280 | 19% |

| Type of Non-Applicant Firm | Share with Sufficient Funding | | |
|---|---|---|---|
| | 2015 | 2016 | 2017 |
| Small Business Sector (N=280–324) | 23% | 25% | 19% |
| Fewer than 10 employees (N=220–236) | 19% | 21% | 13% |
| 10 to 499 employees (N=60–88) | 38% | 39% | 40% |
| $50,000 or less in annual revenue (N=94–111) | 17% | 19% | 8% |
| More than $50,000 in annual revenue (N=166–228) | 27% | 28% | 28% |
| 0-5 years in business (N=85–99) | 19% | 21% | 9% |
| 6+ years in business (N=194–239) | 25% | 27% | 24% |
| Profitable or broke even (N=151–185) | 31% | 33% | 29% |
| Losses (N=92–119) | 8% | 14% | 8% |

●···● Significant at 95% credibility interval.

## An opportunity for credit repair services.

**16%** of non-applicants in 2017 did not apply for credit because they believed they would be turned down.

58% of the discouraged borrowers cited a financial barrier such as a weak credit score, a weak credit history, or a lack of necessary documentation. Another 14% cited insufficient collateral as their primary reason.

### DISCOURAGED BORROWERS,[1] 2015−2017
(% of non-applicants)

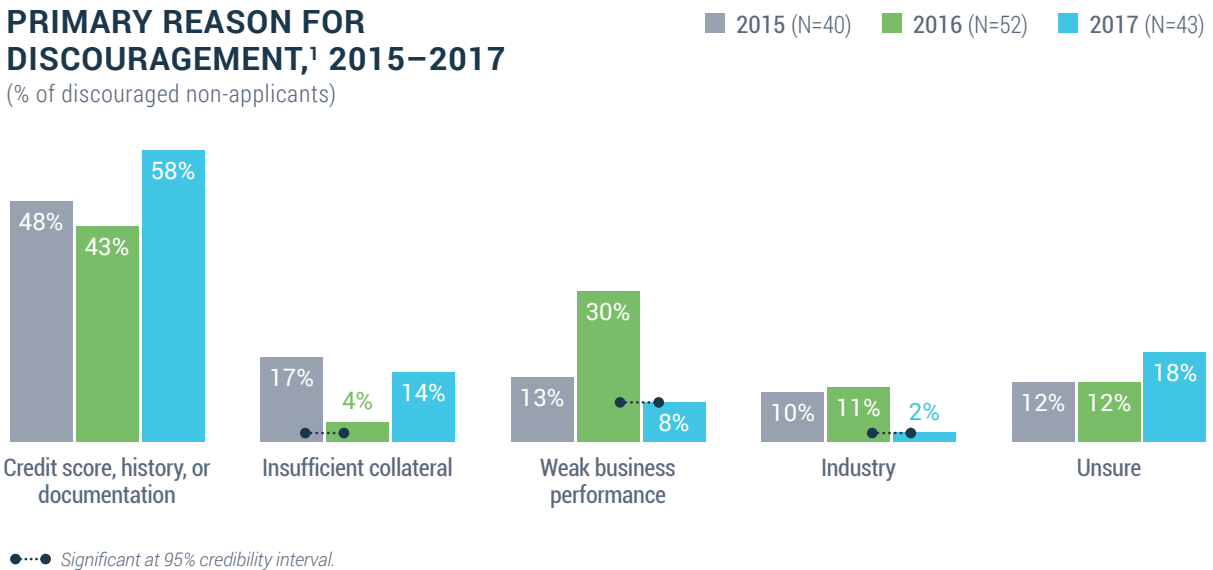| | | |
|---|---|---|
| 14% | 18% | 16% |
| 2015 | 2016 | 2017 |
| N=295 | N=324 | N=280 |
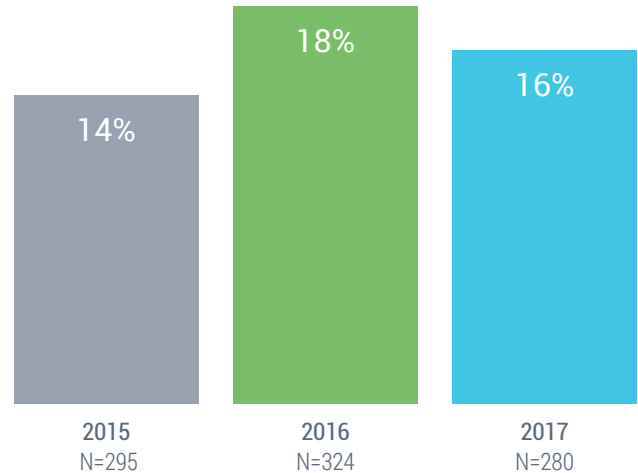
**Sector Trends, 2015−2017**

The share of discouraged borrowers is little changed over the three years of survey data. Financial barriers that result in discouraged borrowers continue to be top-ranked outcomes. This ranking and share has not changed substantially over the previous survey years.

However, 2017 saw a decline in importance of the type of industry and business performance as reasons for discouragement compared to the previous year.

### PRIMARY REASON FOR DISCOURAGEMENT,[1] 2015−2017
(% of discouraged non-applicants)

■ 2015 (N=40)　■ 2016 (N=52)　■ 2017 (N=43)

| | Credit score, history, or documentation | Insufficient collateral | Weak business performance | Industry | Unsure |
|---|---|---|---|---|---|
| 2015 | 48% | 17% | 13% | 10% | 12% |
| 2016 | 43% | 4% | 30% | 11% | 12% |
| 2017 | 58% | 14% | 8% | 2% | 18% |

●····● *Significant at 95% credibility interval.*

---

1　Discouraged firms are those that did not apply because they believed they would be turned down.
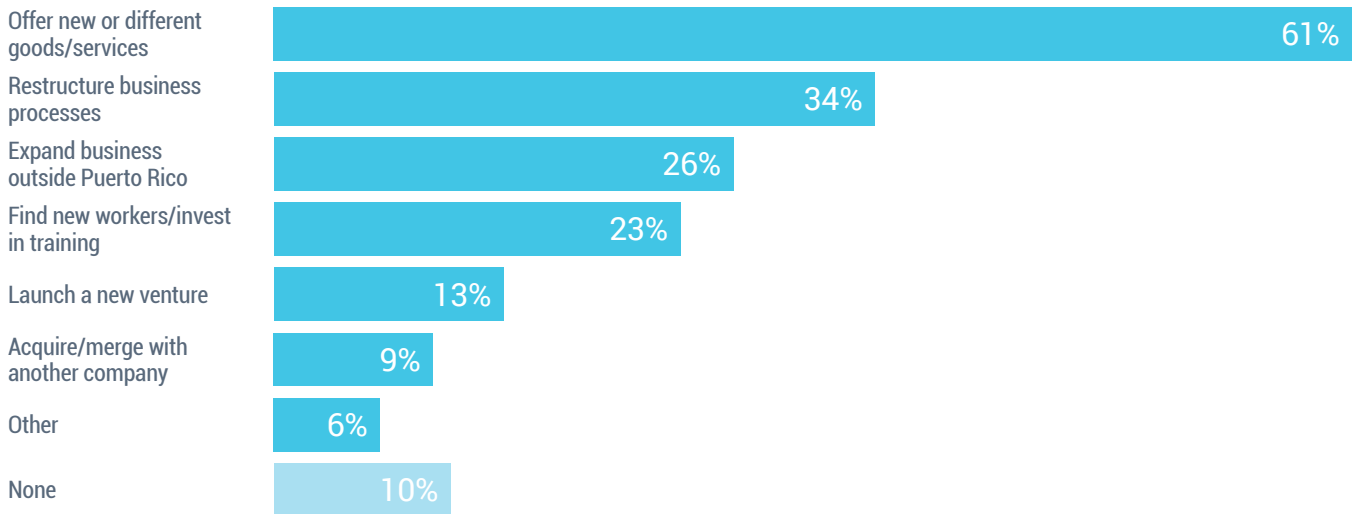
## Firms are pursuing new opportunities.

A majority of firms plan to update their business by offering new or different goods or services in the coming year. Restructuring business processes and expanding the business outside Puerto Rico were the next most common responses.

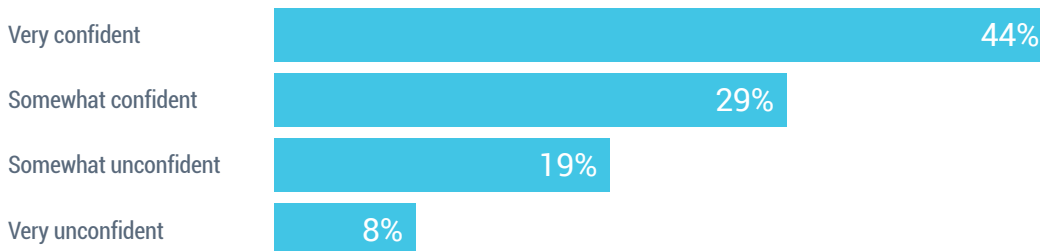Firm confidence as reflected in the ability to make debt payments was also positive for 73% of firms.

## OPPORTUNITIES BEING ACTIVELY PURSUED FOR 2018[1]
N=385

| | |
|---|---|
| Offer new or different goods/services | 61% |
| Restructure business processes | 34% |
| Expand business outside Puerto Rico | 26% |
| Find new workers/invest in training | 23% |
| Launch a new venture | 13% |
| Acquire/merge with another company | 9% |
| Other | 6% |
| None | 10% |

## CONFIDENCE MAKING DEBT PAYMENTS IN 2018
(% of firms with debt outstanding), N=257

| | |
|---|---|
| Very confident | 44% |
| Somewhat confident | 29% |
| Somewhat unconfident | 19% |
| Very unconfident | 8% |

1    Respondents could select multiple options.

# ACKNOWLEDGMENTS

## Overview

The Puerto Rico Small Business Survey (PRSBS) is an annual survey of firms in Puerto Rico with fewer than 500 employees. The survey is designed to provide new and timely data that will fill knowledge gaps, most likely on the formal economy, given our distribution process. Respondents are asked to report information about their business performance and financing needs and choices. The survey is administered online and generally takes respondents less than 10 minutes to complete. The PRSBS is not a random sample, so the data are weighted to reflect the small business population in Puerto Rico. Still, results should be analyzed with awareness of potential biases that are associated with convenience samples. For detailed information about the weighting methodology, please see the About the Data section.

The unique aspect of the Puerto Rico Small Business Survey is that it is a volunteer effort. The New York Fed fields the survey and undertakes the data analysis. But local organizations—our network of distribution partners—circulate the survey to their membership and encourage members to participate by filling out the questionnaire. Without them, this survey would not be possible. See Acknowledgments for a list of our 2018 partners.

## SURVEY PROCESS

**JAN–FEB**

**Design Survey**

Questionnaire updated from 2017 survey

Local distribution partners recruit respondents

**MAR–MAY**

**Field Survey**

New York Fed fields survey

Partners ask member firms to participate

**JUN–AUG**

**Data Analysis**

New York Fed analyzes responses

Results vetted with stakeholders

**SEPT**

**Final Report**
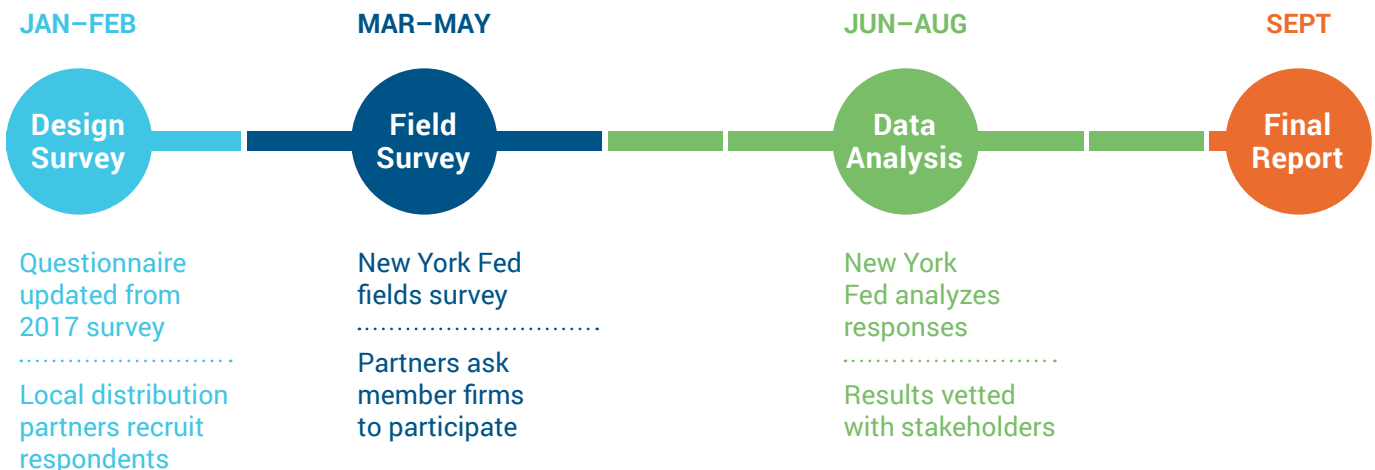
## Architecture of Survey Questions

The survey questionnaire focused on three broad areas: information about the respondents; demand for credit; and a special topics section addressing the impacts of the 2017 hurricanes. See the 2018 Survey Questionnaire for specific questions.

### About the Sector

Year established?

Location of headquarters?

Industry?

Age of primary financial decision maker?

Number of paid employees in 2017? In 2018?

Change in number of full-time employees 2016–2017?

Annual revenues?

Change in revenues 2016–2017?

By how much?

Profit/break-even/loss?

Change in operating expenses 2016–2017? By how much?

Outstanding debt?

Confidence in making debt payments?

### Demand for Credit

Did your business apply to borrow money?

### No: Non-Applicant

Why not apply?

If discouraged, why?

### Yes: Applicant

Amount applied for?

Credit source?

Why apply?

Were you approved?

### 100% Funded

### 0%–99%% Funded

Reasons for financing shortfall?

Most important business impact?

### Special Topics: Hurricane Effects

Operating status? If closed, why? Likeliness of continued operation in 2018?

Losses from Hurricane Irma and/or Maria?

How did hurricanes change your business' total revenues? Operating expenses? Value of assets/property? Debt?

Types of insurance held? Losses covered by insurance?

Applied for financing to address hurricane-related losses? Which sources? Financing received?

Financing still needed to restore operations?

Two biggest challenges? Opportunities being actively pursued for 2018?

The Puerto Rico Small Business Survey (PRSBS) is modeled after the Federal Reserve Banks' Small Business Credit Survey for the U.S. mainland,[1] and is customized to address local issues and interests in the Commonwealth. See About the Survey for details.

## Data Collection

The survey is a voluntary collaboration that results in a convenience sample of business establishments with fewer than 500 employees. The New York Fed fields the survey and undertakes the data analysis. Puerto Rican organizations—our network of distribution partners (see Acknowledgments for the list)—distribute the survey to their members and ask them to participate. The New York Fed may also contact businesses directly through publicly available email lists. The survey is conducted online and the number of responses varies according to the number of firms that receive and complete a particular question. 407 firms responded to the survey, which was fielded between March 2018 and May 2018.

## Data Weighting

To control for biases and to ensure the survey closely matches the distribution of the small business population in Puerto Rico, we weight the survey responses on four dimensions: industry, employment size, age of firm, and geographic location of establishments. As with all surveys, there may remain some degree of selection, recall, and non-response bias. Moreover, the 2018 survey results are likely subject to survivor bias to a greater extent, since the experiences of firms that went out of business following the 2017 hurricanes are not systematically included in the survey. As a result, the results likely understate the adverse impact of the hurricanes on the sector, though it is unclear by how much. Instead, these results should be interpreted to reflect the experiences of firms currently operating in Puerto Rico.

The Federal Reserve Bank of New York collaborated with the National Opinion Research Center (NORC), a nationally recognized survey organization, to create the weighting methodology. For the 2018 survey, the weighting data for industry and geography come from the US Census Bureau's County Business Patterns (CBP) Series, 2016. The CBP excludes most government employees, railroad employees, and self-employed persons. Weighting data for employment size come from the Bureau of Labor Statistics' Quarterly Census of Employment and Wages (QCEW), 2017Q1, and data for firm age come from the Bureau of Labor Statistics' Business Employment Dynamics (BED), 2017Q1.[2] Because age of small firms (fewer than 500 employees) data are not currently available, the BED data used for weighting represent all private sector establishments in Puerto Rico. Although not optimal, we do not anticipate a deleterious effect from including the large firms, as we estimate they account for 0.3% of all Puerto Rican private sector establishments.[3] All other weighting variables are specific to the small firm population in Puerto Rico.

1  See www.fedsmallbusiness.org/survey.
2  All survey years use the same data sources for weighting variables. All efforts are made to use weighting data from the same year in which respondents were asked to reflect. However, when this data is not available, we use the most recently published data. For example, because the 2017 CBP is not yet available, the 2018 survey data (reflecting on 2017 business information) use industry and geography data from the 2016 CBP for weighting.
3  Using data from the Bureau of Labor Statistics' QCEW, we estimate the share of large firms (500+ employees) was 0.31% in 2015, 0.34% in 2016, and 0.32% in 2017.

In order to provide the most accurate time-series comparisons, we have applied a time-consistent weighting approach to the data from previous surveys. For the 2017 survey data (reflecting on 2016 business information) presented in the 2017 Puerto Rico Small Business Survey Report, the weighting data for industry and geography were based on 2015 CBP data. Because 2016 CBP data are now available, we have updated our weighting scheme to more closely reflect the time in which respondents were asked to reflect. We provide new estimates of the 2017 survey data where time-series comparisons are possible and appropriate. The weighting scheme for the 2016 survey data (reflecting on 2015 business information) was updated in 2017 (reflected in the 2017 report)[4] and did not change again this year.

Data for both survey years are weighted using the following categories:

- For the industry weights, respondents are sorted into one of three general categories: Agriculture, Manufacturing, and Trades (NAICS: 11, 23, 31-33, 42, 44-45); Services (NAICS: 51, 52, 53, 54, 55, 61, 62, 71, 72); and Other.

- For the employment size weights, respondents were asked to provide the number of full- and part-time employees, and are sorted into one of three size categories: Fewer than 10, 10 to 49, and 50 to 499 full- and part-time employees.

- For the age weights, respondents were asked to provide the year their business was established, and are sorted into one of three age categories: 0 to 5 years, 6 to 10 years, and 11 or more years.

- For the geographic location weights, respondents were asked to provide a business ZIP code, and are sorted into one of two categories: the greater North Central Metro area, defined as the San Juan municipio and the 22 surrounding municipios (Aguas Buenas, Barranquitas, Bayamón, Caguas, Canóvanas, Carolina, Cataño, Cayey, Cidra, Comerío, Corozal, Dorado, Guaynabo, Gurabo, Loíza, Naranjito, San Juan, San Lorenzo, Toa Alta, Toa Baja, Trujillo Alto, Vega Baja, Vega Alta); and the Rest of Puerto Rico, or the 55 Puerto Rican municipios not included in the North Central Metro area.

As population totals are not consistent across the four weighting dimensions, counts by employment size, age of firm, and geographic location are calibrated to the count by industry. The following charts show how the 2018 survey responses compare, before and after the adjustments.
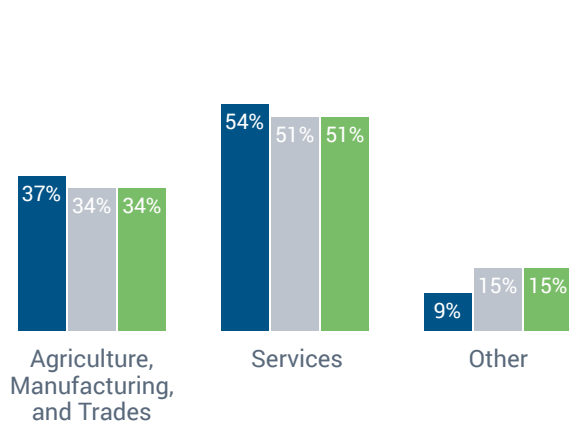
---

4    See the About the Data section of the 2017 Puerto Rico Small Business Report at https://www.newyorkfed.org/medialibrary/media/outreach-and-education/puerto-rico/PR_SmallBusinessSurvey_2017_FINAL.pdf.

# ABOUT THE DATA (CONTINUED)

## WEIGHT-ADJUSTED 2017 DATA
N=407

### INDUSTRY

| | Raw | Census | Adjusted |
|---|---|---|---|
| Agriculture, Manufacturing, and Trades | 37% | 34% | 34% |
| Services | 54% | 51% | 51% |
| Other | 9% | 15% | 15% |

### NUMBER OF EMPLOYEES

| | Raw | Census | Adjusted |
|---|---|---|---|
| <10 | 77% | 75% | 75% |
| 10−49 | 18% | 20% | 20% |
| >49 | 5% | 5% | 5% |

### YEARS IN BUSINESS

| | Raw | Census | Adjusted |
|---|---|---|---|
| 0−5 years | 31% | 34% | 34% |
| 6−10 years | 17% | 16% | 16% |
| 11+ years | 52% | 50% | 50% |

### GEOGRAPHIC LOCATION

| | Raw | Census | Adjusted |
|---|---|---|---|
| North Central Metro | 65% | 60% | 60% |
| Rest of Puerto Rico | 35% | 40% | 40% |
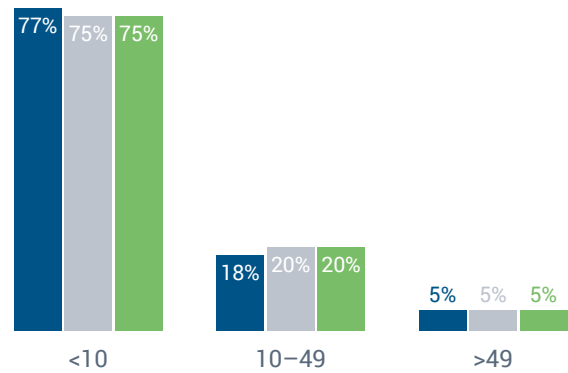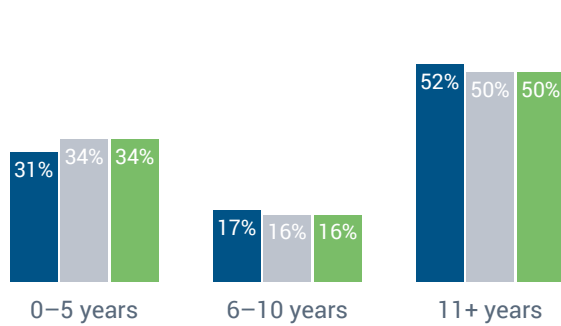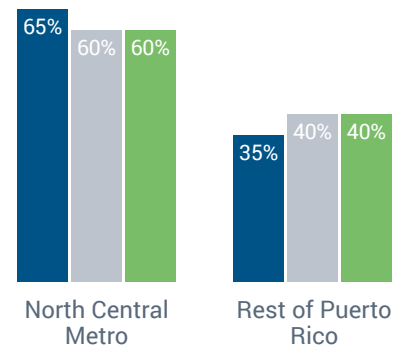
Legend: Raw Survey Responses, Census, Adjusted Survey Responses

Puerto Rico Small Business Sector Trends: Evidence from the 2018 New York Fed Survey — 30

## Credibility Intervals & Significance

The analysis in this report is aided by the use of credibility intervals. Where there are large differences in estimates between survey years, we perform additional checks on the data to determine whether the difference appears significant. The results of these tests help guide our analysis and help us decide what ultimately is included in the report. In order to determine whether a difference is significant, we develop credibility intervals using a balanced half-sample approach.[5] Because this survey does not come from a probability-based sample, the credibility intervals we develop should be interpreted as model-based measures of deviation from the true national population values.[6]

## Data Presentation & Definitions

The data in this report are presented as whole numbers, rounded based on the first decimal place. For example, a value of 5.49% would be reported as 5%, whereas a value of 5.51% would be reported as 6%. As a result, the rounded values will, in some cases, not sum exactly to 100%. When this occurs, we scale up or down the number with a decimal place nearest to 0.5 so that the shares of each answer choice sum to 100%. For example, respondents may be distributed within one variable as follows: 15.49% select Option A, 30.21% select Option B, and 54.30% select Option C. The sum of the rounded whole numbers is 99%, even though the actual percentages sum to 100%. In this case, 15.49% would be scaled up to 16% (instead of rounded down to 15%) be-

cause its decimal place is the closest to 0.5. When respondents are asked to select all options that apply, such an adjustment is not made.

**Micro-revenue firm:** A firm with $250,000 or less in annual revenues.

**Number of employees:** The sum of full-time employees plus part-time employees.

**Change in operating expenses:** The increase, decrease, or lack thereof in a firm's operating expenses in the year in question relative to the prior year.

**Revenue change:** The increase, decrease, or lack thereof in a firm's revenue in the year in question relative to the prior year.

**Applicant:** A firm that applied for any type of credit in the year in question.

**Credit approvals:** The share of applicants that received at least some of the credit applied for.

**Non-applicant:** A firm that did not apply for any type of credit in the year in question.

**Discouraged borrower:** A firm that did not apply for any type of credit in the year in question because the prospective applicant did not think the application would be approved.

**Firm with hurricane losses:** A firm that reported losses from Hurricanes Irma and/or Maria.

---

5    Wolter (2007). "Introduction to Variance Estimation."
6    AAPOR (2013). "Task Force on Non-probability Sampling."

# SURVEY QUESTIONNAIRE

The Puerto Rico Small Business Survey asks about your firm's business conditions and financing experiences **in 2017**, as well as business impacts suffered from Hurricanes Irma and Maria. The questions are best answered by the **business owner or a key decision maker**. The survey takes approximately 10 minutes to complete.

The survey is conducted by the Federal Reserve Bank of New York, working in collaboration with local business and civic groups. Your survey responses will be anonymous. The answers you provide will be combined with other responses to this survey and used to support research on Puerto Rican small businesses. This anonymous survey data may be shared with third parties for research purposes.

By taking this survey, you agree to these uses.

---

### Section 1: General Questions about Your Business

We would like to start with some general questions about your business, sales, and employees as of December 31, 2017. Please include the impact of the hurricanes in your answers to the best of your ability. There will also be special section on hurricane damages later in the survey.

**1. Which ZIP code is your headquarters located in?** _____

**2. In what year was your business established?** _____

**3. Which of the following BEST describes your business's primary activity?**

    a. Retail trade
    b. Healthcare and social services
    c. Accommodation and food services (for example: hotels and restaurants)
    d. Wholesale trade
    e. Construction
    f. Manufacturing
    g. All other industries
    h. Unsure

*Ask if "Which of the following BEST describes your business' primary activity?" All other industries or Unsure is selected:*

**4. Do any of the following best describe your business activities?**

    a. Real estate & rental
    b. Agriculture, forestry, hunting, fishing
    c. Arts, entertainment, and recreation
    d. Information services (for example: publishing, video, telecommunications, data processing)
    e. Professional services (for example: legal, accounting, engineering, finance and insurance)
    f. Business operations (for example: facilities support & landscaping, security, employment services, waste collection & disposal)
    g. All other

**5. Regardless of your answer to the previous question, please describe what your business does in your own words (for example: barbershop, law firm, insurance agency, construction, etc.):**

[                                                                          ]

*Continued...*

Survey was fielded exclusively in Spanish.

6.  **How old is the primary decision maker of the business?**

    a.  Under 25
    b.  25-35
    c.  36-45
    d.  46-55
    e.  56-65
    f.  Over 65

7.  **As of December 31, 2017, was your business operating?**

    a.  Yes
    b.  No, business was temporarily closed
    c.  No, business was permanently closed

*Ask if "As of December 31, 2017, was your business operating?" Temporarily closed or Permanently closed is selected:*

8.  **Why was your business closed?** *Check all that apply.*

    a.  Structural damage to business
    b.  Lack of power, water, or transportation
    c.  Lack of employees
    d.  Lack of suppliers
    e.  Lack of customers
    f.  Waiting for financing
    g.  Other. Please specify: _____

*Ask if "As of December 31, 2017, was your business operating?" Yes or Temporarily closed is selected:*

9.  **How likely is your business to continue operating for the rest of 2018?**

    a.  Very likely
    b.  Somewhat likely
    c.  Somewhat unlikely
    d.  Very unlikely

10. **As of December 31, 2017, how many people did your business employ, including owners?**

| Type of employees | Number of employees |
|---|---|
| Owners | |
| Non-owner full-time employees (30+ hours per week) | |
| Non-owner part-time employees (less than 30 hours per week) | |
| Unsure. Please explain:_____ | |

11. **As of today (2018), how many people does your business currently employ, including owners?**

| Type of employees | Number of employees |
|---|---|
| Owners | |
| Non-owner full-time employees (30+ hours per week) | |
| Non-owner part-time employees (less than 30 hours per week) | |
| Unsure. Please explain:_____ | |

*Continued...*

Survey was fielded exclusively in Spanish.

## Section 2: Firm Performance in 2017

Now, we would like to ask you some specific questions about your business' experiences in 2017 and how they compare to previous years. Please include the impact of the hurricanes, if any, in your answers.

12. **In 2017, approximately what were your business' total revenues?**
    a. $50,000 or less
    b. $50,001-$250,000
    c. $250,001-$500,000
    d. $500,001-$1,000,000
    e. $1,000,001-$5,000,000
    f. More than $5,000,000

13. **From 2016 to 2017, how did your revenues change?**
    a. Increased
    b. No change
    c. Decreased

*Ask if "From 2016 to 2017, how did your revenues change?" Increased or Decreased is selected:*

14. **From 2016 to 2017, by how much did your revenues increase/decrease?**
    a. Less than 6%
    b. 6%-10%
    c. 11%-20%
    d. 21%-30%
    e. More than 30%

15. **From 2016 to 2017, how did your operating expenses change?**
    a. Increased
    b. No change
    c. Decreased

*Ask if "From 2016 to 2017, how did your operating expenses change?" Increased or Decreased is selected:*

16. **From 2016 to 2017, by how much did your operating expenses increase/decrease?**
    a. Less than 6%
    b. 6%-10%
    c. 11%-20%
    d. 21%-30%
    e. More than 30%

17. **From 2016 to 2017, how did the number of non-owner full-time employees change?**
    a. Increased
    b. No change
    c. Decreased

*Continued...*

Survey was fielded exclusively in Spanish.

18. From 2016 to 2017, did your business make a profit or have a loss?
    a. Profits
    b. Broke even
    c. Losses
    d. Unsure or decline to answer

## Section 3: Firm Credit Needs in 2017

Businesses often need credit to cover expenses or to make investments. We would like to ask you about your experiences with credit in 2017. Even if you did not apply for any credit, please answer all of the questions.

19. In 2017, did your business APPLY to borrow money?
    a. Yes
    b. No

*If "In 2017, did your business APPLY to borrow money?" No is selected, go to Section 5.*

20. In 2017, from which of the following sources did your business apply for credit? *Check all that apply.*
    a. Bank
    b. Credit union (Cooperativa)
    c. Government entity
    d. Online lender (for example: Kiva, 1st Global Capital, One Park Financial)
    e. Friends and/or family
    f. CDFI (community development financial institution)
    g. Other (for example: title loan, pawnshop). Please specify:_____

21. In 2017, how much TOTAL financing, from all sources, did your firm APPLY for?
    a. $10,000 or less
    b. $10,001-$25,000
    c. $25,001-$100,000
    d. $100,001-$250,000
    e. $250,001-$1,000,000
    f. $1,000,001-$5,000,000
    g. More than $5,000,000

22. Of the total dollar amount of financing that your firm applied for, what percentage was approved in 2017?
    a. All (100%)
    b. More than half (51%-99%)
    c. Half or less than half (1%-50%)
    d. None (0%)

23. What was the PRIMARY PURPOSE for your firm seeking credit in 2017?
    a. Meet operating expenses (including hurricane disruption)
    b. Expand business (for example: new products or services, new location, upgrade equipment, etc.)
    c. Refinance or pay down debt
    d. Start a new business
    e. Repair hurricane damage
    f. Other. Please specify:_____

*Continued...*

Survey was fielded exclusively in Spanish.

*If "Of the total dollar amount of financing that your firm applied for, what percentage was approved in 2017?"*
*More than half, Half or less than half, or None is selected, go to Section 4. If All is selected, go to Section 6.*

## Section 4: Less than 100% of Credit Approved

24. As of December 31, 2017, what was the MOST important business impact, if any, of not receiving the full amount of financing for which your business applied?

    a. Downsized business operations (for example: cut staff, reduced products and services, reduced commercial space, etc.)
    b. Delayed or passed on a business opportunity (for example: new products or services, new location, purchase of equipment)
    c. Funded business from personal sources, friends and/or family, pawnshops, high cost lenders, etc.
    d. No significant impact

25. As of December 31, 2017, what were the MOST likely reasons your business did not receive 100% of the financing applied for? *Check all that apply.*

    a. Low credit score
    b. Insufficient credit history
    c. Insufficient collateral
    d. Inadequate documentation
    e. Type of industry
    f. Weak business performance (for example: uneven cash flow, poor revenue)
    g. Unsure

*Go to Section 6.*

## Section 5: Firms that Did Not Apply for Credit in 2017

26. What was the PRIMARY reason your business DID NOT apply for credit in 2017?

    a. Not needed; had sufficient funding
    b. Did not think application would be approved
    c. Did not want to accrue debt
    d. Credit cost was too high
    e. Loan search/application process was too difficult or confusing
    f. Other. Please specify:_____

*Ask if "What was the PRIMARY reason your business DID NOT apply for credit in 2017?" Did not think application would be approved is selected:*

27. What is the most likely reason that your credit application would not be approved?

    a. Low credit score
    b. Insufficient credit history
    c. Insufficient collateral
    d. Inadequate documentation
    e. Type of industry
    f. Weak business performance (for example: uneven cash flow, poor revenue)
    g. Unsure

*Continued...*

Survey was fielded exclusively in Spanish.

## Section 6: Existing Debt

28. **Does your business currently have debt outstanding (for example: loans, credit card balances, trade credits)?**

   a. Yes
   b. No

*Ask if "Does your business currently have debt?" Yes is selected:*

29. **How confident are you that your business can make scheduled payments on this debt in 2018?**

   a. Very confident
   b. Somewhat confident
   c. Somewhat unconfident
   d. Very unconfident
   e. N/A

## Section 7: Special Topics

We would now like to ask you about the effects of Hurricanes Irma and/or Maria on your business. Please respond based on the current status of your business in 2018.

30. **Did your business suffer any hurricane-related losses as a result of Hurricanes Irma and/or Maria?**

   a. Yes
   b. No

31. **How did the hurricanes change the following for your business in 2018 so far?**

| | Decreased | No Change | Increased |
|---|---|---|---|
| Total revenues | ○ | ○ | ○ |
| Operating expenses | ○ | ○ | ○ |
| Value of assets/property | ○ | ○ | ○ |
| Debt | ○ | ○ | ○ |

*If "Did your business suffer any hurricane-related losses as a result of Hurricanes Irma and/or Maria?" No is selected, go to "Which opportunities, if any, is your business actively pursuing for 2018?"*

32. **What are your TWO biggest business challenges so far, as a result of the hurricanes?**
   *Check no more than two challenges.*

   a. Collecting on accounts receivable
   b. Finding or retaining qualified workers and/or managers
   c. Complying with government regulations
   d. Accessing credit for your business
   e. Dealing with supply chain interruption
   f. Dealing with limited electricity
   g. Finding or retaining customers
   h. Other. Please specify:_____

*Continued...*

Survey was fielded exclusively in Spanish.

**33. Which types of insurance, if any, did your business have to help cover hurricane-related costs?**
   *Check all that apply.*

    a.  Property insurance
    b.  Flood insurance
    c.  Wind insurance
    d.  Business disruption insurance
    e.  Other. Please specify:_____
    f.  No insurance

*Ask if "Which types of insurance did your business have to help cover hurricane-related costs?"*
*No insurance is not selected:*

**34. Were your business' losses covered by insurance?**

    a.  Yes, fully covered
    b.  Yes, partially covered
    c.  No, not covered
    d.  Claim(s) pending
    e.  Did not file a claim

**35. Has your business applied for financing, other than insurance, to address the hurricane-related losses?**

    a.  Yes
    b.  No

*Ask if "Has your business applied for financing to address the hurricane-related losses?" Yes is selected:*

**36. From which sources did your business seek financing to address the hurricane-related losses?**
   *Check all that apply.*

    a.  Bank
    b.  Credit union (Cooperativa)
    c.  Government entity (including FEMA, SBA)
    d.  Online lender (for example: Kiva, 1st Global Capital, One Park Financial)
    e.  Friends and/or family
    f.  Personal savings
    g.  CDFI
    h.  Other. Please specify:_____

*Ask if "Has your business applied for financing to address the hurricane related losses?" Yes is selected:*

**37. How much of the financing requested to address hurricane-related losses did your business receive?**

    a.  All (100%)
    b.  Most (51%-99%)
    c.  Some (1%-50%)
    d.  None (0%)
    e.  Pending

*Continued...*

Survey was fielded exclusively in Spanish.

*Ask if "Has your business applied for financing to address the hurricane related losses?" Yes is selected:*

**38. How much financing does your business still need to restore operations?**

    a. $1,000 or less
    b. $1,001-$5,000
    c. $5,001-$10,000
    d. $10,001-$50,000
    e. $50,001-$100,000
    f. $100,001-$250,000
    g. More than $250,000
    h. None

**39. Which opportunities, if any, is your business actively pursuing for 2018?** *Check all that apply.*

    a. Offer new or different goods/services
    b. Acquire/merge with another company
    c. Find new workers/invest in training
    d. Launch a new venture
    e. Restructure business process (including new technology, payment systems)
    f. Expand business outside Puerto Rico
    g. Other. Please specify:_____
    h. None

**40. We understand there are lingering effects to business operations from the hurricanes. Please describe how your business has adapted to post-storm conditions and describe any changes you have made to your business, as well as any remaining challenges:**

**41. Business name:_____**

**42. Email address (used only for survey-related purposes):_____**

*On behalf of the Federal Reserve Bank of New York, thank you for taking this survey. Please visit the New York Fed website at nyfed.org/puertorico to see how we are using the information.*

Survey was fielded exclusively in Spanish.