Access to Capital and Credit for Entrepreneurs and Small Businesses in Appalachia

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Authors: Next Street Financial, LLC

Appalachian Regional Commission

next street

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- Joelle Scillia

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1. Executive Summary

Across Appalachia, small businesses and entrepreneurs have become a driving force of economic and cultural vitality, with well over two million small businesses calling Appalachia home. Encompassing portions of Alabama, Georgia, Kentucky, Maryland, Mississippi, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, and all of West Virginia, the Appalachian Region (the Region) is home to over 26 million people and comprises 8% of the total population in the United States. The varied natural landscape of the Appalachian Region is mirrored in the many different types of communities and the vast entrepreneurial landscape.

Capital and credit are the fuel that drives the formation, growth, and sustainability of small businesses and entrepreneurs. However, small businesses are frequently perceived as riskier investments and have difficulty obtaining capital, impeding their success and, in many cases, their survival. Barriers to accessing capital for small businesses in Appalachia can take many forms: large differences in total capital supply and demand, gaps in the type and size of products offered, limited sources of capital, lack of physical access to banks – particularly in rural areas and communities with low population densities – and inconsistent sourcing pipelines from other financial institutions throughout the Region.

This study reviews the landscape of small businesses and entrepreneurs in Appalachia, outlines the available capital supply, and calculates the demand for such capital. The research in this report also considers the monumental impact and lasting effects of the COVID-19 pandemic. Based on the existing supply and capital sources, the research then points to core addressable needs across Appalachia and proposes solutions to reduce barriers and improve capital flow to small businesses and entrepreneurs.

To chart a course forward, stakeholders in the Region must collaborate to create environments that support Appalachia's continued economic development through small business growth and support efforts. Policymakers, Federal, State, and community leaders, entrepreneur support organizations, and investors must all consider adjusting the structures supplying capital to Appalachian small businesses and entrepreneurs.

KEY FINDINGS FROM THIS STUDY:

1. Small businesses and entrepreneurs play a critical role in Appalachia's economy and prospects for continued development.

- In 2020, Appalachian small businesses comprised over 99% of all businesses in the Region. **Over 1.8 million businesses operated as nonemployer firms (businesses with no paid employees), and nearly 400,000 Appalachian small businesses were microbusinesses (firms with fewer than ten paid employees).**
- Small businesses in Appalachia tend to be **nonemployer firms** (mirroring the national statistics, with 77% both in Appalachia and the United States as a whole) that are **White** (88% White-owned in Appalachia, versus 80.5% nationally) **and male-owned** (80.8% male-owned versus 74% nationally).
- **Main Street businesses in sectors such as Retail, Leisure, and Hospitality employ nearly half of Appalachia's workforce** and are vital to the Region's community identity. Additionally, emerging potential in High-Growth and Supplier small businesses[1] hold promise for rural communities to tap into national trends in infrastructure and clean energy.
- **Appalachia experienced a record number of new business starts,** with over 305,000 new business applications in 2021; this represents an increase of over 27% compared to 2020 and an increase of 57% from 2019.

2. Capital demand outpaces available capital supply.

- From 2017 to 2022, demand for small business capital in Appalachia ranged from $117.1 billion to $127.1 billion annually. **Appalachian small businesses faced an annual average financial shortfall of unmet demand of approximately $70 billion during the period analyzed, ranging from $56 billion in 2019 to $79 billion in 2021.**
- Before the COVID-19 pandemic in 2020, the primary goal for most small businesses was to secure financing for expansion and sales growth. T**he pandemic and the ensuing economic constraints have since positioned small businesses to pivot toward covering operational costs to ensure business continuity.** This focus has largely remained in place through 2022, exacerbated by continued macroeconomic conditions.

3. Existing capital is concentrated among banks.

- **Banks provided the most capital in the aggregate supply,** lending on average 97.1% annually of total dollar amounts to small businesses, and 99.6% annually of the total number of loans and equity deals (2017 to 2021), significantly outnumbering other capital providers such as credit unions and Community Development Financial Institutions (CDFIs).
- **Venture capital and other forms of private equity investments in small businesses are uncommon across the Region.** Appalachia holds a small share of the national venture capital landscape, ranging from 0.4% to 1.3% of the total equity funding dollars in the United States, with a corresponding 1.4% to 1.6% of the total deals nationwide from 2017 to 2022.

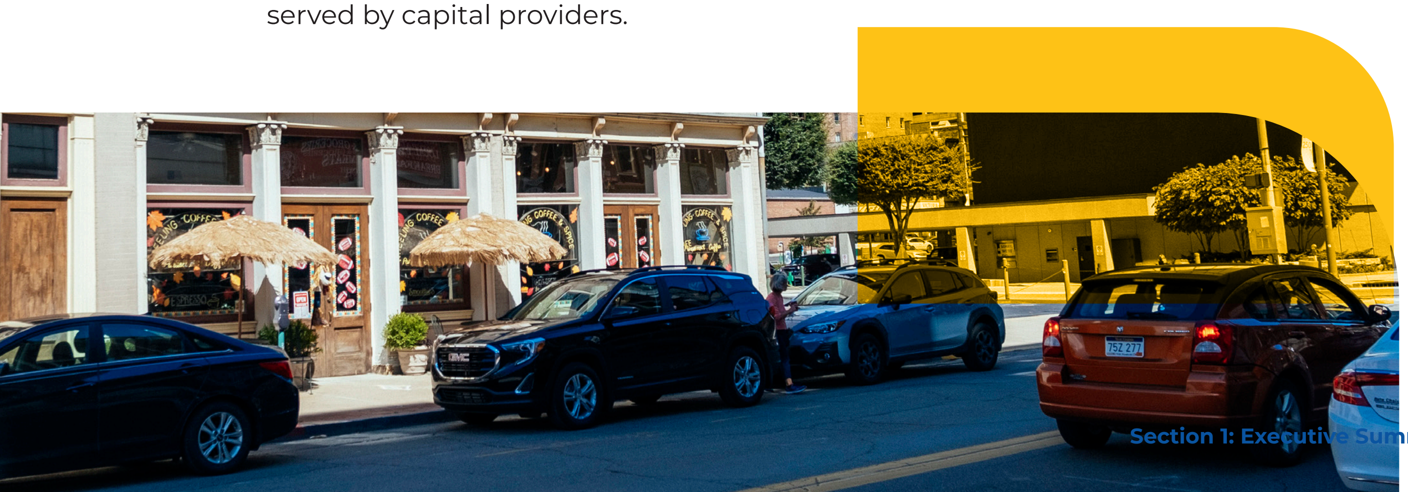
1 Note: High-Growth and Supplier business are defined in Section 3.1, Figure 3.1.6: Small Business Segmentation by Industry.

4. Geographical constraints and bank consolidation hinder capital access.

- **Small business capital supply is generally concentrated in population-dense and metro and metro-adjacent areas** (following historic investment and underinvestment patterns in rural areas). State-level business density comparisons demonstrate how geographic location plays a crucial role in shaping the small business landscape; proximity to metro areas is a particularly defining aspect, as the business density of Appalachian large metro counties aligns with the national average (106 small businesses per 1,000 people). In contrast, rural areas fall below the national average.
- Entrepreneurs face geographical barriers to the physical locations of capital providers stemming from this concentration and bank consolidation. **Across both Appalachia and the entire United States, the number of bank branches declined from 2015 to 2022. In Appalachia specifically, there has been a 2.3% annual decrease in the number of bank branches over the course of those seven years, with a reduction in branch numbers across every geographic division within the Region.**
- Geographic barriers are exacerbated by the challenge of broadband internet access across the Region (well documented in other studies), particularly in areas already not well-served by capital providers.

5. Small business owners and entrepreneurs currently strive to meet outmoded requirements to access capital. There is also a mismatch between small businesses' needs and the loan sizes provided in the market.

- Small businesses and other Appalachian stakeholders report that **credit requirements and underwriting standards, such as required collateral, create challenging barriers for small businesses to access loan capital.**
- The annual growth rate in the number of loans deployed to Appalachian small businesses from 2019 to 2022 slightly lagged that of the total dollar supply, driven by an increase in average loan size over time. From 2020 to 2021, in Appalachia and nationally, the total dollar amount of capital supply decreased while the total number of loans increased due to the Paycheck Protection Program (PPP). **The most prevalent loan sizes are not always meeting the needs of Appalachian small businesses; gaps in funding between $100,000 and $250,000, and microloans under $50,000 (particularly under $10,000), emerge.**



6. **Capital access is also hindered by a lack of connection and awareness between real estate investors, community development initiatives, and small businesses stakeholders.**

- Appalachian entrepreneurs can leverage the Region's unique natural assets and historic main streets, but information asymmetry between small businesses, other stakeholders, developers, credit unions, CDFIs, and other lenders, **leads to unmet capital demand without the right mix of products.**
- While efforts are ongoing to attract investment through public-private partnerships, **those working to attract venture capital and angel investment for small businesses do not always have clear pathways and available value propositions** aligning with risk and return requirements.

7. **Emerging growth potential in the climate, infrastructure, and advanced manufacturing industries indicates a need for specifically targeted products to support these types of businesses.**

- **In 2021, the Appalachian Region saw the highest level of new business establishments in the past decade, in particular within the Manufacturing and Construction sectors.**
- **The growth of these sectors have the potential for rural communities to tap into national infrastructure and clean energy trends.** Yet, venture capital and private equity are not common for Appalachian small businesses and the research demonstrates capital demand outpaces debt supply overall, limiting growth opportunities in these sectors.

8. **Appalachia's unique regional dynamics merit intentional place-based approaches to capital programs and capital provider capacity-building. Yet, innovative policy, product, and resource allocation decisions require robust data collection and information-sharing across geographies.**

- A challenge for this research study itself is that **data on small businesses and entrepreneurs, especially at the community level, is not often publicly available.** For Appalachia to continue to design programs and track progress, increasing data collection efforts beyond the aggregate level will be critical.

Based on these findings, the study points to a **proposed set of policy and programmatic recommendations.** These recommendations are evaluated within the complete capital flow to small businesses, encompassing funding pools, capitalization, product development, the capital marketplace, and underwriting operations.

ACTION NEEDED	POLICY AND PROGRAMMATIC RECOMMENDATIONS
Start at the Source *Increase lenders' ability to access and structure capital for small business lending*	• Provide large pools of institutional capital to support the balance sheets of smaller Appalachian financial institutions. • Create a facility for financial institutions to access capital markets and direct resources at scale. • Expand the resources available for the USDA's Rural Business Investment Company (RBIC) licensing program. • Take a place-based approach to capital formation with carve-outs.
Provide Innovative Products *Consider loan size and credit needs, and plan for emerging new and innovative industries with new and innovative products*	• Create loan capital products to address gaps in the market for loan size and product design. • Encourage the design and funding of coordinated programs and investment products specifically addressing supply-chain financing for emerging industries.
Mobilize the Marketplace *Address existing channels and create new channels to ensure connections*	• Create direct and intentional connections between physical community development efforts, investors, and small businesses. • Encourage the design and funding of coordinated programs specifically addressing contractor and supplier development for emerging industries. • Coordinate the attraction of impact investors, venture capital, and other investors to the Region and support them in making informed decisions and understanding regional developments. • Support the implementation of an online capital marketplace.
Open the Door for Operations *Couple capacity-building with capital for efficient operations and local involvement*	• Provide unrestricted capacity-building resources to local lenders, community development institutions, and chambers of commerce, such as innovation grants and operating resources. • Support ecosystem information-sharing and increased data collection on entrepreneur capital needs, access, and supply. • Expand and sustainably support the infrastructure for ecosystem coordination across state lines. • Support place-based initiatives for investors to invest in their own communities.

The Appalachian Region has the potential to leverage the resilience and entrepreneurial spirit of its small businesses and entrepreneurs. However, this potential is impeded by a gap between capital supply and demand, geographic constraints, and information asymmetry. To unlock the full economic and cultural vitality of Appalachia's small business economy, it is imperative that stakeholders come together and take strategic action.

2. Introduction and Project Context

APPALACHIA

Across Appalachia, the entrepreneurial spirit runs deep in the contours of the Region's mountainous terrain, as small businesses have become a driving force of its economic and cultural vitality.

Over two million small businesses span the 423 counties in 13 states making up the Appalachian Region. New small businesses have formed at a rate higher in Appalachia than in the United States as a whole,[2] as Appalachians start new enterprises that benefit from the Region's natural beauty, historic downtown areas, and emerging industries. In communities such as Thomas and Davis in Tucker County, West Virginia,[3] Appalachians transitioning from extraction industries have sought to reinvent themselves through entrepreneurship as their new pathway to success. Other communities, like Shamokin in Northumberland County, Pennsylvania, have prioritized local businesses and investments to drive their revitalization efforts.[4]

Encompassing portions of Alabama, Georgia, Kentucky, Maryland, Mississippi, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, and all of West Virginia, the Region is home to over 26 million people and comprises 8% of the total population in the United States, as of 2021. While many counties in Appalachia are economically distressed, the Region's poverty rate has decreased from nearly 31% in 1960 to 14.5% over the 2017 to 2021 period.[5] Further, the number of high-poverty counties in the Region (those with poverty rates greater than one and a half times the national average) has decreased over the same period.

2 "United States Census Bureau Business Formation Statistics." Washington, D.C., 2017 – 2022.
3 Anthony F. Pipa, "Protecting Community Integrity during a Creative Transformation in West Virginia," Brookings, April 17, 2023, https://www.brookings.edu/articles/protecting-community-integrity-during-a-creative-transformation-in-west-virginia/.
4 Anthony F. Pipa, "Transforming Coal Country in Shamokin, Pennsylvania," Brookings, April 17, 2023, https://www.brookings.edu/articles/transforming-coal-country-in-shamokin-pennsylvania/.
5 Note: Accordingly, the ARC designates as "distressed areas," those census tracts in at-risk and transitional counties that have a median family income no greater than 67 percent of the U.S. average and a poverty rate 150 percent of the U.S. average or greater.

Despite this progress, nearly one-fifth of Appalachia's counties continue to face high poverty rates, low incomes, and high unemployment rates, hindering economic prosperity.[6] Several efforts are underway to spur the Region's economic development and expand the prospects for growth. These efforts include capacity-building programs for organizations serving rural communities, investments in rural broadband, Main Street initiatives to redevelop Appalachia's historic downtown areas, and new industrial programs in climate and advanced manufacturing.

Closely tied to these development efforts are programs and initiatives to support Appalachian small businesses and entrepreneurs. Entrepreneurial ecosystems and small businesses create jobs, build individual and community wealth, and foster community identity. Across the United States, small businesses employ nearly half of the national workforce and have created approximately two-thirds of net new jobs between 2005 and 2019.[7] In local communities, small businesses serve as a critical means of inclusive growth, as $68 of every $100 spent at a local business stays in the community where they reside.[8]

COVID-19 PANDEMIC:

The COVID-19 pandemic has profoundly impacted the small business sector in Appalachia and across the United States. Since 2020, the pandemic has transformed the small business landscape as businesses fought for survival after confronting the health effects of the devastating COVID-19 virus, stay-at-home orders, remote work adjustments, and shifting consumer behaviors. In the face of these challenges, small businesses have demonstrated resiliency and adapted by embracing new business models, integrating digital technologies, and seeking innovative funding sources. Meanwhile, government interventions like the Paycheck Protection Program offered small businesses emergency relief.

In October 2021, the Appalachian Regional Commission (ARC or the Commission, for short) released a strategic plan with an ambitious vision for Appalachia to become "a Region of great opportunity that will achieve socioeconomic parity with the nation." Under this strategic plan, ARC highlighted **Building Appalachian Businesses** as one of its key investment objectives to "strengthen and diversify the Region's economy through inclusive economic development strategies and investments in entrepreneurship and business development." Informing the strategy, Appalachian residents elevated entrepreneurship and small business development as a critical means of employment and economic mobility, emphasizing the importance of incubating and developing local ideas and enterprises originating inside the Region's borders.

Through small business, Appalachians can address the Region's economic challenges and foster inclusive development. To spur this development, the Region must create more available and efficient access to capital, fueling Appalachia's small businesses and entrepreneurs with the financing they need to grow and thrive.

6 "Appalachia Envisioned: A New Era of Opportunity," ARC Strategic Plan Fiscal Years 2022-2026, October 2021, https://www.arc.gov/wp-content/uploads/2021/09/ARC-Strategic-Plan-FY-2022-2026.pdf, 14.
7 "2022 Small Business Profiles for the States, Territories, and Nation," SBA's Office of Advocacy, July 31, 2022, https://advocacy.sba.gov/2022/08/31/2022-small-business-profiles-for-the-states-territories-and-nation/.
8 Maddie Shepherd, "Local Shopping Statistics: Facts on Buying Local," Fundera Ledger, January 23, 2023, https://www.fundera.com/resources/local-shopping-statistics, 1.

In Appalachia, the public health and economic crisis introduced distinctive challenges, reshaping economic activity, causing small business closures, and disrupting the regional workforce. The Region's historical reliance on industries like coal mining, manufacturing, and tourism rendered it particularly susceptible to the pandemic's economic shocks. As demand waned, supply chains faltered, financial resources dwindled, and numerous small businesses grappled to survive. Scarce capital access and limited broadband connectivity further hindered adaptability in rural areas.

National and local initiatives have played pivotal roles in aiding regional small businesses during the pandemic. The United States government invested an unprecedented $1 trillion in small business funding in 2020 in response to the COVID-19 pandemic emergency, and since then, has dedicated $100 billion per year to small businesses – double the annual average pre-pandemic. Locally, programs like EmPOWERing Mountain Food Systems helped Appalachian food businesses to pivot under pandemic constraints.[9] ARC-supported initiatives also distributed emergency capital, provided capacity-building funds to community lenders, expanded broadband access, and equipped small and medium-sized manufacturers to shift toward producing Personal Protective Equipment (PPE).

Looking forward, the COVID-19 pandemic will have long-lasting impacts on communities and small businesses across Appalachia. The pandemic has exacerbated regional socioeconomic disparities and vulnerabilities as Appalachians continue to deal with the health-related, social, and economic impacts for years to come. For local small businesses, uncertainties persist concerning the long-term recovery and regional growth prospects. Collaborative efforts among policymakers, business leaders, and community organizations remain crucial to sustain small businesses and bolster economic resilience amid ongoing challenges.

2.1 Problem Statement

For small businesses and entrepreneurs, capital is often described as the fuel that powers enterprises to start, sustain, and grow their operations. However, small businesses are often perceived as inherently riskier investments and have difficulty gaining access to credit and other forms of capital, inhibiting their sustainability and growth.

In 2020 and 2021, the pandemic upended traditional avenues to access small business capital as businesses and financial institutions in Appalachia responded to the unprecedented demand for emergency relief. On a national level in 2022, financial institutions serving small businesses returned to pre-pandemic practices, exposing the historical inequities magnified by the pandemic. At the time of this report, commercial bank loan approval rates are down by over 50% from pre-pandemic levels nationwide, while nearly half of banks report stricter loan standards for small businesses.[10]

In early 2023, ARC commissioned Next Street to publish a comprehensive study examining access to capital and credit for small businesses in Appalachia, focusing on the context of the COVID-19 pandemic. This report aims to serve as an update for a similar study released in 2013, which focused on capital access in the aftermath of the 2007-2010 financial crisis. The problem statement for this study is multifaceted: **What are the small business and entrepreneurial capital needs that remain underserved? What voids within the landscape constitute untapped potential for capital and credit access? What underlying assets and opportunities can Appalachia harness to expand capital access for local small businesses and entrepreneurs?**

This research explores the entrepreneurial and small business capital landscape of Appalachia, studying the Region's capital supply, identifying

9 "Empowering North Carolina's Farmers and Small Businesses," Appalachian Regional Commission, https://www.arc.gov/investment/empowering-north-carolinas-farmers-and-small-businesses/.
10 "Availability of Credit to Small Businesses." Board of Governors of the Federal Reserve System, October 2022, https://www.federalreserve.gov/publications/2022-october-availability-of-credit-to-small-businesses.htm.; Ruth Simon, "Banks Raise Roadblocks to Small Business Loans," The Wall Street Journal, June 1, 2023, https://www.wsj.com/articles/new-borrowing-hurdles-leave-small-businesses-in-limbo-89cf1ea3, 6.

associated barriers and avenues to capital access, and assessing the marketplace between capital supply and demand for Appalachian small businesses. The findings from this study inform proposed solutions for addressing gaps and unmet capital needs for small businesses and entrepreneurs that align with ARC's strategy for Appalachia's success.

Rooted in rigorous analysis and community voices, the research and solutions present policymakers, local financial institutions, and other stakeholders in the entrepreneurial capital ecosystem with a foundation to act to expand access to capital and credit for small businesses and entrepreneurs across Appalachia.

2.2 Research Approach

This study encompasses both primary and secondary research via quantitative and qualitative research techniques and leverages publicly accessible and proprietary datasets. These sources were employed to construct a comprehensive perspective on the supply and demand of capital and credit for small businesses and entrepreneurs in Appalachia (see Appendix for a detailed list of sources). For each accessible dataset, analysis covers annual data from 2015 onwards, whenever available. Numerous datasets also encompass data beyond 2020 to examine the impacts of the COVID-19 pandemic, while others did not have more recent data. Moreover, the research in this report spanned across the Appalachian Region and its subregions while comparing trends nationwide.

Furthermore, Next Street conducted 24 stakeholder interviews with capital providers and ecosystem leaders within Appalachia. This process aimed to gather real-time insights regarding ongoing programs, the needs of small businesses and institutions, and practical insights from on-the-ground experiences. Next Street also reviewed 39 documents, encompassing nationwide best practices, academic deliberations, and contemporary news coverage. This comprehensive literature review served as the foundation to inform the overarching landscape analysis and the ensuing recommendations. Lastly, a steering committee of ten local stakeholders representing thought leaders, business support organizations, and capital providers provided input and feedback to organize the solutions roadmap tailored to the Region's requirements.

DEFINING "SMALL BUSINESS"

Our methodology in this report streamlines the United States Small Business Administration's (SBA) size standards for defining a "small business," focusing on businesses with fewer than 500 employees due to data availability. This definition aligns with how small businesses are defined in a broader context,

further broken down and outlined in the table below:

Figure 2.2.1: Defining Small Business

Nonemployer	Microbusiness	Small / Emerging Enterprise	Mid-sized / Growing Enterprise
0 employees	**1-9 employees**	**10-49 employees**	**50-499 employees**
Businesses that operate without any employees other than the owner	Businesses with a single owner or partnership with initial customer base and legal structure	Businesses that reach stable operations with growing customer base and revenue streams Growth varies by sector, ownership, and leadership ambitions	Maturing businesses with corporate governance and structures and moderate to high growth trajectory

Source: United States Small Business Administration (SBA), Table of Small Business Size Standards, 2022.

The SBA's standards differ by industry, considering employee count and revenue thresholds. For instance, some sectors define small business as those establishments with fewer than 500 employees, while others use revenue thresholds. These industry-specific standards are dynamic, determined by the North American Industry Classification System (NAICS) code, and affect eligibility for SBA programs, contracts, loans, and assistance.

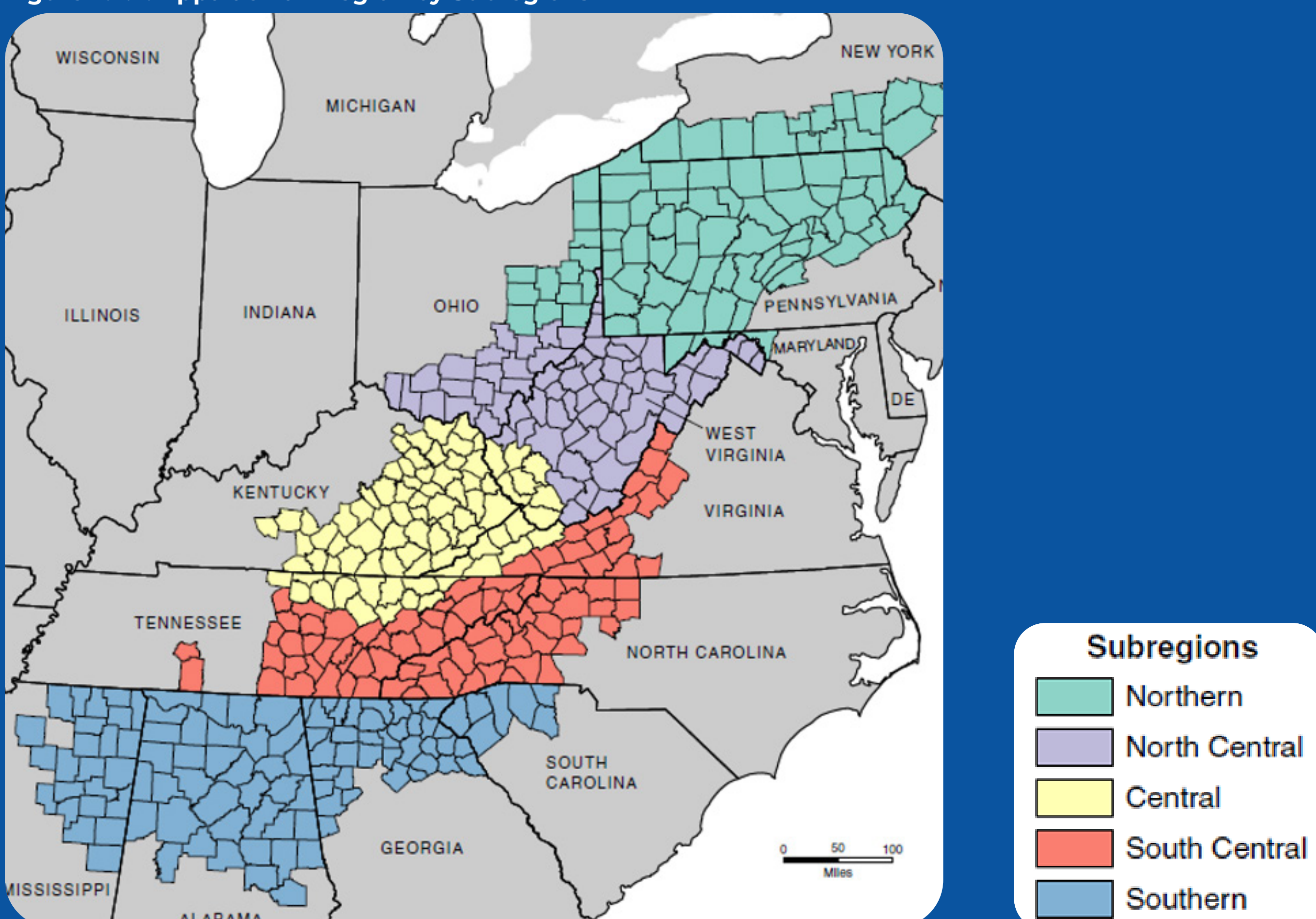
DEFINING GEOGRAPHIC FOCUS

SUBREGIONS

The research in this study is often segmented by the five subregions making up Appalachia. These subregions and their corresponding states are listed below.

1. **Northern Appalachia:** Maryland, New York, Northeast Ohio, Pennsylvania
2. **North Central Appalachia:** Southeast Ohio, Central and Northern West Virginia
3. **Central Appalachia:** Eastern Kentucky, Eastern Tennessee, Southwest Virginia, Southern West Virginia
4. **South Central Appalachia:** Western North Carolina, Southwest Virginia, Eastern Tennessee
5. **Southern Appalachia:** Alabama, Georgia, Mississippi, South Carolina

Figure 2.2.2: Appalachian Region by Subregions



Source: Appalachian Regional Commission, Subregions in Appalachia, November 2021.

COUNTY TYPES – RURAL-URBAN DESIGNATION

Another important data segmentation in Appalachia involves examining trends across urban and rural counties. The county types used in this research are listed below.

1. **Large Metros:** Population 1 million and greater
2. **Small Metros:** Population less than 1 million
3. **Nonmetro (1):** Adjacent to Large Metros
4. **Nonmetro (2):** Adjacent to Small Metros
5. **Rural:** Nonmetro, not adjacent to Metros

COUNTY ECONOMIC STATUS

ARC uses an index-based county economic classification system to identify and monitor the economic status of Appalachian counties. The system involves the creation of a national index of county economic status through a comparison of each county's averages for three economic indicators—three-year average unemployment rate, per capita market income, and poverty rate—with national averages. The resulting values are summed and averaged to create a composite index value for each county. Each county in the nation is then ranked based on its composite index value, with higher values indicating higher levels of distress.

Figure 2.2.3: Defining County Economic Statuses

Source: Appalachian Regional Commission, Economic Status Designation.

DEFINING "ENTREPRENEURSHIP ECOSYSTEM"

This report defines an "entrepreneurship ecosystem" as a system of interdependent actors and relations directly or indirectly supporting the creation, sustenance, and growth of new and existing ventures in a city or region. Key elements of a strong ecosystem, as defined by the Kauffman Foundation and drawing from Next Street's experiences across the United States, include expertise that can help businesses grow, knowledge and resources to help small businesses, champions and conveners, access points and stories that help understand how to interact with the ecosystem, and robust social capital. Critical elements required to make an ecosystem inclusive include conversations about entrenched inequities across a diverse network of key actors, systems that are designed to change beliefs, values, and priorities and alter power structures, and processes for decision-making that result in more equitable outcomes and access to opportunity for underserved groups.

DATA LIMITATIONS

During the data analysis phase of research, Next Street took a meticulous approach by thoroughly addressing the nuances and constraints inherent in the available datasets.

KEY LIMITATIONS IN NEXT STREET'S DATA EXPLORATION:

Data Availability and Coverage

The collection and analysis of data within the Appalachian Region is predominantly carried out at the county level rather than at the state, Metropolitan Statistical Area (MSA), or regional levels. Given potential disparities between data from various states or counties, this approach can hinder the holistic comprehension of the entire Region, rendering direct comparisons challenging. Additionally, instances arose where Federal Information Processing System (FIPS) county data could not be extracted from existing dataset fields. Specific data sources also lacked tailored information for the Appalachian context, leading to gaps in capturing the Region's economic and demographic dynamics. Moreover, specific crucial data points were challenging to disaggregate by county, limiting the granularity of the analysis.

Data Frequency and Timeliness

Challenges emerged in sourcing the most recent years of data, as some datasets were not yet disseminated. Discrepancies in the years covered by different datasets occasionally impacted comparative assessments.

Data Interpretation

In certain instances, the absence of precise definitions compelled us to make informed assumptions about fields in the datasets.

Please see the Appendix for additional detail on analysis and dataset limitations.

GROWTH RATES

Unless otherwise specified, all growth percentages in the report, including all charts and tables, are Compound Annual Growth Rates (noted as "CAGR") in order to smooth out the volatile nature of year-by-year growth rates. These are also referred to as "annualized" growth rates, or "compounded annually."

3. Capital Demand in Appalachia

3.1 Small Business Landscape

Small businesses require lending and investment capital to start a business, grow a business, and maintain operations. This study highlights the gap between this demand for capital and credit, and the available capital supply, and poses solutions to close that gap in Appalachia. While small businesses across the United States experience common barriers to accessing capital supply regardless of geography and industry (many of which came to light during the COVID-19 pandemic), it is important to understand the needs of small businesses within the Appalachian Region and its states in order to design policies addressing specific gaps and build from what is effective. A characterization of the overall Appalachian small business landscape follows:

- In 2020, Appalachia was home to more than two million small businesses, comprising over 99% of all businesses in the Region[11]. **Over 1.8 million businesses operated as nonemployer firms, and nearly 400,000 were microbusinesses with fewer than ten employees.** The number of both employer and nonemployer small businesses **grew modestly from 2015 to 2020, with a recent record number of new businesses in 2021.**
- Small businesses in Appalachia **tend to be nonemployer firms, mirroring the national statistics, with 77% both in Appalachia and nationally.**
- **Appalachian small businesses also are more likely to be White-owned (88% White-owned in Appalachia, versus 80.5% nationally) and male-owned (80.8% male-owned versus 74% nationally).**
- 83% of small businesses in Appalachia have **been in business for over ten years**.
- **Business Support & Consumer Services and Retail establishments** are the most represented small business industries in Appalachia.

11 Note: This figure mirrors the makeup of small businesses in the overall business landscape nationwide.

This section examines Appalachian small business types and ownership statistics, industry and business growth trends, and density across the Region to set the foundation for analyzing capital supply and capital access.

SMALL BUSINESS DEMOGRAPHICS

The breakdown of Appalachia's population compared to small business ownership characteristics is shown in Figure 3.1.1. The Region's population is 79.8% White, but this population disproportionately owns 88.0% of the Region's small businesses, reflecting an overrepresentation that is mirrored on a national scale. In contrast, Black and Latino(a) communities in Appalachia are underrepresented in business ownership, with ownership rates of 7.0% and 2.7%, despite constituting 10.2% and 5.8% of the population, respectively. However, Appalachia boasts higher rates of Black business ownership among its Black population compared to the broader United States, indicating a potential area of strength within the Region. Separately, while Asian business owners have a higher percentage of small business ownership than their representation in the Appalachian population, they still fall behind the national average for Asian small business ownership, which is nearly three times higher.

Figure 3.1.1: Appalachian Population and Small Business Ownership Characteristics[12]

	Appalachia Population (%)	U.S. Population (%)	Appalachia Small Business Ownership (%)	U.S. Small Business Ownership (%)
Race / Ethnicity				
White	79.8%	75.5%	88.0%	80.5%
Black/African American	10.2%	13.6%	7.0%	2.4%
Latino(a)	5.8%	19.1%	2.7%	4.2%
Asian	1.5%	6.3%	3.8%	10.9%
Other (American Indian/ Pacific Islander)	1.5%	1.6%	0.3%	0.8%
Gender				
Male	55.4%	49.6%	80.8%	74.0%
Female	44.6%	50.4%	19.2%	26.0%
Other Demographics				
Veteran Status	6.4%	6.2%	6.0%	5.8%

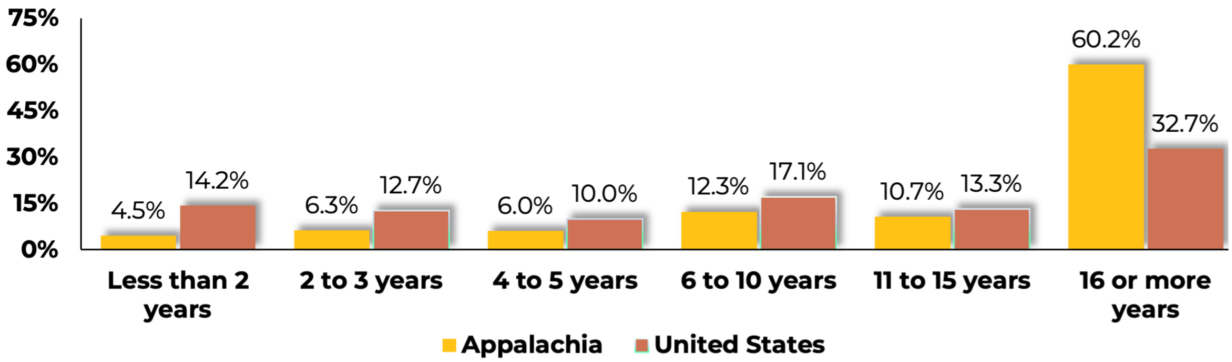
Source: United States Census Bureau, Annual Business Survey, 2020; United States Census Bureau, Nonemployer Statistics, 2020; United States Census Bureau, Annual Community Survey, 2020.

Furthermore, there is a gender imbalance in small business ownership across the Region. Men, representing 55.4% of Appalachia's population, own a disproportionate 80.8% of small businesses; owners identifying as women, 44.6% of the population, own just 19.2% of small businesses. Nationally, women own 26% of small businesses across the United States.

12 Note: Although only state and MSA-level demographic data were available, a specialized methodology was utilized to refine the statistics for Appalachian small businesses. In this approach, MSA-level data not pertaining to the Appalachian Region were systematically removed from the overall state-level figures. This adjustment was made to provide a more accurate portrayal of the demographic composition of small businesses within the Appalachian Region.

Existing small businesses across the Region have historically exhibited resilience[13] as 83.2% of small businesses in Appalachia in 2020 had a longevity of 10 years or more, compared to 63.0% in the broader United States. 60.2% of Appalachian small businesses in 2020 were 16 or more years old, compared to 32.7% across the United States. But while these enduring businesses provide stability and present modest consistent growth, this trend of mature businesses also indicates a legacy challenge for new businesses to start and stay in business. This also highlights the need for business owners, business support organizations, and policymakers to consider the importance of succession planning for these long-term small businesses.

Figure 3.1.2: Longevity of Business Ownership, 2020



Source: United States Census Bureau, County Business Patterns, 2015 - 2020; United States Census Bureau, Nonemployer Statistics, 2015 - 2020.

SMALL BUSINESS GROWTH

Figure 3.1.3 reveals a promising outlook for small business growth in Appalachia from 2015 to 2020, showing annualized increases for both employer and nonemployer firms. Nonemployer firms in Appalachia exhibited an annualized growth rate of 1.7% during this period, compared to the national rate of 2.2%. While the Region's annualized growth rate slightly trailed the national figure, the consistent progress in entrepreneurial activity within the Region is evident.

The percentage of small businesses with employees ("employer firms") and nonemployer firms in Appalachia mirror the national makeup proportionally. Employer firms are a smaller percentage of total businesses in Appalachia (23.1%), but the number of employer firms grew modestly over the same period of 2015 to 2020 by 0.3% compounded annually.[14] However, as expected, employer firms generally have larger revenues than nonemployer firms. Across the United States, a little over 3% of nonemployer firms reported revenues of $1 million or more in 2020, compared to 35% of employer firms.[15]

13 Special Report on Inflation and Supply Chain Shocks on Small Business," U.S. Chamber of Commerce, March 3, 2022, https://www.uschamber.com/small-business/special-report-on-inflation-and-supply-chain-shocks-on-small-business.

14 Note: The makeup of employer businesses in the United States is 22.75%.

15 Small Business Credit Survey: 2021 Report on Nonemployer Firms, accessed May 9, 2023, https://www.fedsmallbusiness.org/-/media/project/smallbizcredittenant/fedsmallbusinesssite/fedsmallbusiness/files/2021/2021-sbcs-nonemployer-firms-report.pdf?sc_lang=en&hash=B812147AF0461693D0AC5419EA78291F, 3.

Figure 3.1.3: Small Business and Population Comparisons, CAGR 2015 – 2020

2020 Snapshot[16]				
Appalachian Businesses	**1.8 million** Total nonemployer firms	**+1.7%** 5-year annualized growth for nonemployer firms (2015-2020)	**545,000** Total employer firms (fewer than 500 employees)	**+0.3%** 5-year annualized growth for employer firms (2015-2020)
United States Businesses	**27.2 million** Total nonemployer firms	**+2.2%** 5-year annualized growth for nonemployer firms (2015-2020)	**8 million** Total employer firms (fewer than 500 employees)	**+0.8%** 5-year annualized growth for employer firms (2015-2020)

Appalachian Businesses	**United States Businesses**
26 million Population in Appalachia	**331.5 million** Population in United States
+0.5% 5-year population annualized growth rate (2015 – 2020)	**+0.7%** 5-year population annualized growth rate (2015 – 2020)
9.0% Small business ownership rate in Appalachia (ownership by population)	**10.6%** Small business ownership rate in the United States (ownership by population)

Source: United States Census Bureau, American Community Survey, 2015 – 2020; United States Census Bureau, County Business Patterns, 2015 - 2020; United States Census Bureau, Nonemployer Statistics, 2015 – 2020.

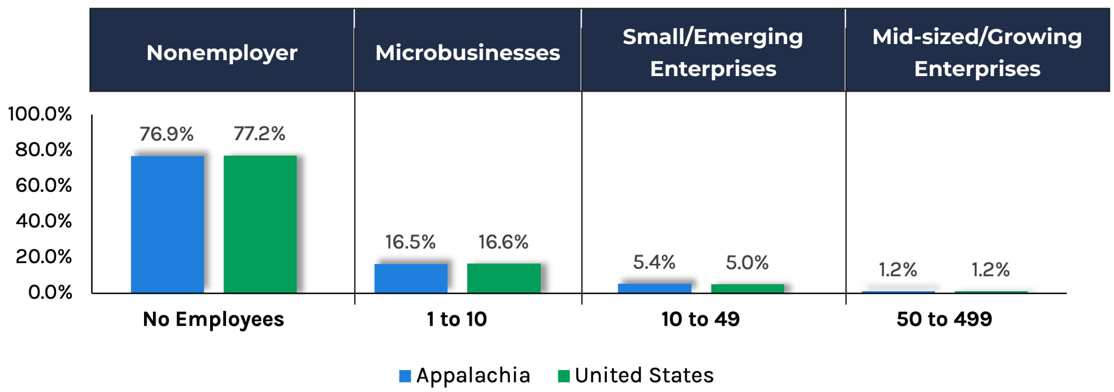
During the same five-year period, Appalachia experienced an annualized population growth rate of 0.5%, slightly lagging the national rate of 0.7%. In 2020, Appalachia's 9.0% small business ownership rate (defined as ownership by population) highlights the pivotal role small businesses play in both the Region and the national economy as primary drivers of economic activity. However, the ownership rate lags the national average of 10.6%, highlighting the need for continued small business support in the Region.

The percentages of both nonemployer and employer firms in Appalachia align with the national makeup across the United States. Nonemployer firms, at 76.9% of all small businesses in Appalachia, often operate on a smaller scale and include industries like Professional Services & Real Estate, Non-manufacturing Goods Production, and Business Support & Consumer Services require minimal workforce and startup capital. Amidst economic challenges, many individuals have started nonemployer businesses to supplement their incomes, a trend further fueled by the growing gig economy. As shown below in Figure 3.1.4, a large majority of businesses in both Appalachia and the United States are nonemployer firms.

16 Note: 2020 numbers are used because that is the latest data available for Nonemployer Statistics data; County Business Patterns does have 2021 data that is included in the Appendix.

In the broader United States, nonemployer firms reported revenue declines between 2019 and 2020, often resorting to personal funds to address financial challenges. Nearly 81% of these firms faced some form of financial challenge in the year leading up to the publication of the Federal Reserve's Small Business Credit Survey in 2021. This emphasizes the need for strategies to bolster their growth, including enhanced access to capital, business training, mentorship programs, and a supportive entrepreneurial environment.[17] Larger employer small businesses across the United States have recently struggled with growth due to economic conditions. A striking 92% of small business owners nationwide have grappled with rising costs in recent years. This includes increased expenses for essential supplies and services, with 26% reporting cost hikes of up to 20%. According to a Business.org survey, as many as 42% of small business owners reduced the number of employees on their teams in 2022.[18] Even within the category of Mid-sized / Growing enterprises 60% of the businesses have fewer than 100 employees, though this category includes businesses with up to 499 employees.

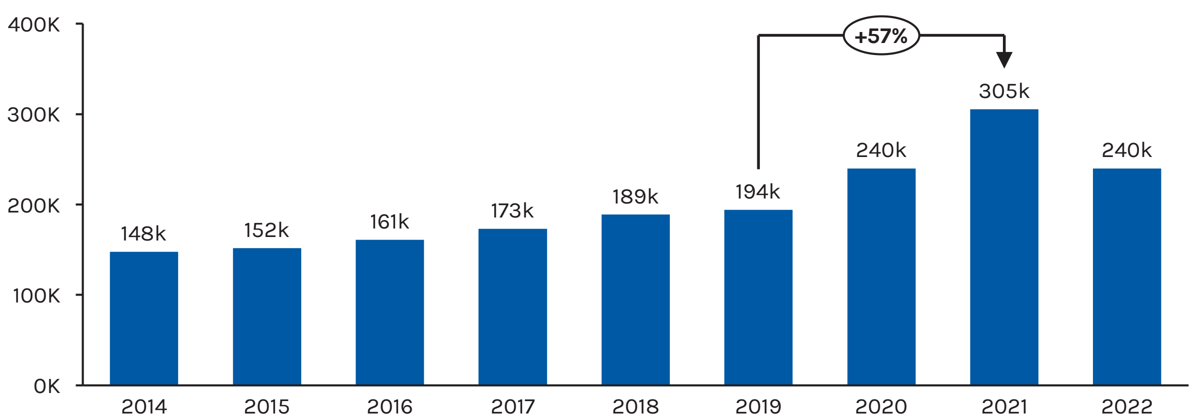
Figure 3.1.4: Small Business Size by Number of Employees, 2020[19]



Source: United States Census Bureau, County Business Patterns, 2015 - 2020; United States Census Bureau, Nonemployer Statistics, 2015 - 2020.

Appalachia has recently experienced a record number of new business starts, with over 305,000 new business applications in 2021, as shown in Figure 3.1.5. These new businesses will continue to require investment and access to credit as they contribute to the Region's economic growth.

Figure 3.1.5: New Business Applications in Appalachia, 2014 – 2022, CAGR 2019 to 2020



Source: United States Census Bureau, Business Formation Statistics, 2014 – 2022.

17 "Small Business Credit Survey: 2021 Report on Employer Firms," Small Business Credit Survey Publications, July 6, 2021, https://www.fedsmallbusiness.org/survey/2021/report-on-employer-firms.
18 Trevor Wheelwright, "The Effects of Inflation on US Small Businesses," Business.org, December 13, 2023, https://www.business.org/finance/accounting/effects-of-inflation-on-small-businesses
19 2020 is the latest year for both employer and nonemployer United States Census data.

INDUSTRY TRENDS

To examine industry dynamics, Appalachia's small businesses can be segmented into three business type categories outlined in Figure 3.1.6: Main Street, High-Growth, and Supplier businesses. This classification serves as a valuable tool for policymakers to design specialized supports that cater to each small business category's industry requirements and growth characteristics. This framework also identifies nonemployer businesses as a unique category due to their specific challenges. For purposes of this study, we consider the segmentation categories by industry rather than by size.

Figure 3.1.6: Small Business Segmentation by Industry

	Main Street Businesses	High-Growth Businesses	Supplier Businesses
Business Characteristics	• Local businesses serving consumers and other local businesses • Low-to-moderate scale potential • Community-based operations in place	• Fast-growing, often innovation-driven businesses • High-margin, high-scale potential	• Suppliers to government (B2G) or other businesses (B2B) in traded sectors • Moderate-to-high scale potential • Can have local supplier facilities
Representative industries	• Retail • Leisure & Hospitality • Healthcare & Education	• Business Support & Consumer Services • Finance & Insurance • Professional Services & Real Estate	• Manufacturing • Mining • Construction • Nonmanufacturing Goods Production

Source: Karen G Mills, "The 4 Types of Small Businesses, and Why Each One Matters," Harvard Business Review, December 6, 2017, https://hbr.org/2015/04/the-4-types-of-small-businesses-and-why-each-one-matters.

Main Street businesses in sectors such as Retail, Leisure, and Hospitality employ nearly half of Appalachia's workforce and are vital to the Region's community identity. Before 2020, Main Street business employment grew by a steady rate of 1.2% compounded annually from 2017 to 2020. During the pandemic, Main Street businesses were among the hardest hit, particularly those with physical operations. Nevertheless, home, and local service businesses in Appalachia largely weathered the pandemic after the height of the crisis, recovering to pre-pandemic business activity according to Yelp business closures data.[20]

Figure 3.1.7: Industry Groupings in Appalachia

	# of Firms* (2020)	Firm CAGR (2017-20)	Employment (in 2020)	Employment CAGR (2014-18)
All Industry Groupings	**2.3M firms**	**1.7%**	**8.1M workers**	**1.1%**
Business Support & Consumer Services	507k	-1.9%	807k workers	1.9%
Retail	474k	0.9%	1.2M workers	0.2%
Professional Services & Real Estate	315k	2.4%	759k workers	1.4%
Healthcare & Education	266k	1.7%	1.5M workers	1.7%
Leisure & Hospitality	248k	1.0%	985k workers	2.3%
Construction	231k	1.0%	418k workers	2.8%
Nonmanufacturing Goods Production	169k	8.8%	734k workers	1.0%
Finance & Insurance	77k	0.3%	314 workers	0.1%
Manufacturing	53k	0.6%	1.3M workers	1.3%
Mining	7k	-8.2%	55k workers	-8.9%

Business segments: Main Street Supplier High-Growth

Source: Longitudinal Employer-Household Dynamics, Quarterly Workforce Indicators, 2014 – 2018; United States Census Bureau, County Business Patterns, 2017 – 2020; United States Census Bureau, Nonemployer Statistics, 2017 – 2020.

Meanwhile, Supplier businesses, employing nearly a third of Appalachia's workforce, have faced varying trends before and during the pandemic. From 2014 to 2018, Mining businesses dropped an annualized 8.9% in employment, while Construction firms saw annualized increases in their workforces of 2.8% – the highest across all industries groupings. Further, from 2017 through 2020 the number of Mining business establishments also declined, while the Construction industry led business establishment growth. Concurrently, other Supplier sectors like Manufacturing had low establishment and employment growth. Moving forward, regional Supplier industries are expected to have accelerated growth due to significant federal investments in infrastructure and agricultural and industrial development, spurred by the Bipartisan Infrastructure Law and the Inflation Reduction Act.[21]

High-Growth businesses make up nearly half of the number of small businesses in Appalachia and registered the highest employment growth among different business types from 2014 to 2018. Concentrated in sectors like Professional Services, Real Estate and Finance, these businesses were generally more resilient to pandemic disruptions compared to Main Street and Supplier firms. However, these High-Growth businesses, as with all other small business segments, face looming challenges such as potential economic downturns, rising interest rates, and lingering COVID-19 pandemic-related workforce issues that could inhibit future growth.

20"Yelp: Local Economic Impact Report," Yelp Economic Average, accessed May 19, 2023, https://www.yelpeconomicaverage.com/business-closures-update-sep-2020.
21 Read more about the Biden Administration's Industrial Policy, https://www.whitehouse.gov/briefing-room/statements-releases/2022/02/24/the-biden-harris-plan-to-revitalize-american-manufacturing-and-secure-critical-supply-chains-in-2022.

SMALL BUSINESS DENSITY IN APPALACHIA

State-level growth statistics for the total number of small businesses largely mirror population concentration throughout the Region, and between Appalachian and non-Appalachian portions of the states. For instance, as shown in Table 3.1.8, the strongest five-year annualized growth is observed in Appalachian Georgia. However, Appalachian Alabama displays a stronger annualized growth rate than the non-Appalachian portion of the state, indicating continued potential for the Region to build on its growth trajectory and consider targeted solutions to further support capital access to the growing small business population.

Figure 3.1.8: Total Number of Small Businesses in Appalachia, CAGR 2015 - 2020[22]

Total Number of Small Business Establishments	2015	2016	2017	2018	2019	2020	CAGR (2015-2020)
United States	**32,001,772**	**32,575,396**	**33,563,720**	**34,392,270**	**35,058,619**	**35,148,794**	**1.9%**
Appalachian Region	**2,212,809**	**2,233,929**	**2,275,474**	**2,308,355**	**2,346,392**	**2,363,544**	**1.3%**
Subregions							
Northern Appalachia	**660,674**	**664,527**	**670,780**	**672,071**	**672,944**	**660,583**	**0.0%**
North Central Appalachia	**181,976**	**180,572**	**181,630**	**180,872**	**180,321**	**177,381**	**-0.5%**
Central Appalachia	**137,892**	**137,342**	**136,964**	**136,891**	**136,646**	**136,208**	**-0.3%**
South Central Appalachia	**458,887**	**464,121**	**473,108**	**480,238**	**488,064**	**493,835**	**1.5%**
Southern Appalachia	**773,380**	**787,367**	**812,992**	**838,283**	**868,417**	**895,537**	**3.0%**
County Types							
Large Metros (pop. 1M+)	**594,510**	**606,270**	**623,600**	**641,633**	**660,440**	**671,264**	**2.5%**
Small Metros (pop. <1M)	**909,817**	**919,662**	**937,253**	**949,873**	**965,223**	**973,867**	**1.4%**
Nonmetro, Adj. to Large Metros	**185,109**	**185,230**	**187,832**	**188,977**	**190,835**	**190,344**	**0.6%**
Nonmetro, Adj. to Small Metros	**315,436**	**315,119**	**317,518**	**318,028**	**319,538**	**319,379**	**0.3%**
Rural (nonmetro, not adj. to metro)	**207,937**	**207,648**	**209,271**	**209,844**	**210,356**	**208,690**	**0.1%**
County Economic Status							
Distressed	**111,828**	**110,242**	**109,793**	**109,117**	**108,698**	**106,711**	**-0.9%**
At-Risk	**308,353**	**307,759**	**310,847**	**311,429**	**313,747**	**313,108**	**0.3%**
Transitional	**1,564,551**	**1,581,134**	**1,610,925**	**1,635,852**	**1,661,453**	**1,673,872**	**1.4%**
Competitive	**149,882**	**154,013**	**159,155**	**163,901**	**170,211**	**175,301**	**3.1%**
Attainment	**78,195**	**80,781**	**84,754**	**88,056**	**92,283**	**94,552**	**3.9%**
Alabama	**419,855**	**423,824**	**429,609**	**435,881**	**444,982**	**450,520**	**1.4%**
Appalachian Alabama	266,854	270,470	274,267	279,305	285,239	288,524	*1.6%*
Non-Appalachian Alabama	153,001	153,354	155,342	156,576	159,743	161,996	*1.2%*
Georgia	**1,094,156**	**1,104,834**	**1,146,937**	**1,189,827**	**1,237,547**	**1,278,779**	**3.2%**
Appalachian Georgia	341,616	348,812	365,200	381,202	399,277	417,387	*4.1%*
Non-Appalachian Georgia	752,540	756,022	781,737	808,625	838,270	861,392	*2.7%*
Kentucky	**371,963**	**376,323**	**381,468**	**385,844**	**389,656**	**388,673**	**0.9%**
Appalachian Kentucky	91,306	90,790	90,492	90,745	90,930	89,972	*-0.3%*
Non-Appalachian Kentucky	280,657	285,533	290,976	295,099	298,726	298,701	*1.3%*

22 For further geographic breakdown of employer and nonemployer firms in Appalachia, please see Figures A6 and A7 in the Appendix.

Total Number of Small Business Establishments	2015	2016	2017	2018	2019	2020	CAGR (2015-2020)
Maryland	**611,891**	**625,148**	**635,716**	**649,284**	**665,865**	**670,965**	**1.9%**
Appalachian Maryland	19,701	19,779	19,986	20,068	20,247	20,310	*0.6%*
Non-Appalachian Maryland	592,190	605,369	615,730	629,216	645,618	650,655	*1.9%*
Mississippi	**270,164**	**273,167**	**278,282**	**280,805**	**286,618**	**282,412**	**0.9%**
Appalachian Mississippi	54,021	54,194	54,830	55,414	56,474	56,028	*0.7%*
Non-Appalachian Mississippi	216,143	218,973	223,452	225,391	230,144	226,384	*0.9%*
New York	**2,223,745**	**2,250,106**	**2,296,035**	**2,348,924**	**2,351,479**	**2,290,752**	**0.6%**
Appalachian New York	80,326	79,874	80,656	80,521	79,935	77,305	*-0.8%*
Non-Appalachian New York	2,143,419	2,170,232	2,215,379	2,268,403	2,271,544	2,213,447	*0.7%*
North Carolina	**944,629**	**968,885**	**992,614**	**1,021,408**	**1,052,653**	**1,066,960**	**2.5%**
Appalachian North Carolina	194,501	197,157	201,092	203,899	207,571	207,769	*1.3%*
Non-Appalachian North Carolina	750,128	771,728	791,522	817,509	845,082	859,191	*2.8%*
Ohio	**1,013,582**	**1,019,490**	**1,037,104**	**1,052,437**	**1,066,805**	**1,058,769**	**0.9%**
Appalachian Ohio	159,652	158,795	160,823	160,909	161,792	160,023	*0.1%*
Non-Appalachian Ohio	853,930	860,695	876,281	891,528	905,013	898,746	*1.0%*
Pennsylvania	**1,109,890**	**1,131,674**	**1,149,710**	**1,165,298**	**1,173,698**	**1,156,400**	**0.8%**
Appalachian Pennsylvania	467,108	471,446	475,205	476,349	477,289	468,195	*0.1%*
Non-Appalachian Pennsylvania	642,782	660,228	674,505	688,949	696,409	688,205	*1.4%*
South Carolina	**432,609**	**444,849**	**459,785**	**473,353**	**491,673**	**507,520**	**3.3%**
Appalachian South Carolina	110,889	113,891	118,695	122,362	127,427	133,598	*3.8%*
Non-Appalachian South Carolina	321,720	330,958	341,090	350,991	364,246	373,922	*3.1%*
Tennessee	**628,071**	**642,881**	**660,820**	**677,024**	**694,063**	**706,007**	**2.4%**
Appalachian Tennessee	248,555	250,886	256,088	260,475	264,897	270,725	*1.7%*
Non-Appalachian Tennessee	379,516	391,995	404,732	416,549	429,166	435,282	*2.8%*
Virginia	**772,015**	**795,220**	**817,639**	**834,035**	**846,414**	**868,946**	**2.4%**
Appalachian Virginia	53,525	53,952	53,741	53,470	53,108	53,794	*0.1%*
Non-Appalachian Virginia	718,490	741,268	763,898	780,565	793,306	815,152	*2.6%*
West Virginia (entire state)	**124,755**	**123,883**	**124,399**	**123,636**	**122,206**	**119,914**	**-0.80%**

Source: United States Census Bureau, County Business Patterns, 2015 - 2020; United States Census Bureau, Nonemployer Statistics, 2015 - 2020.

While the distribution of small businesses in Appalachia's Subregions, states, and counties generally aligns with the Region's population, considering business density provides additional context to assess the small business landscape and allows consideration of other factors outside of only population concentration. **Appalachia's small business density, at 90 small businesses per 1,000 people, indicates untapped potential for small business development, as the national average is measured at 106 small business per 1,000 people.**

Figure 3.1.9: Number of Small Businesses per 1,000 People in Appalachia and the United States, 2020

Small Businesses per Population	Number of Small Business Establishments	Population[23]	Number of Small Businesses per 1,000 people
United States	**35,148,794**	**331,893,745**	**106**
Appalachian Region	**2,363,544**	**26,289,466**	**90**
Subregions			
Northern Appalachia	**660,583**	**8,050,226**	**82**
North Central Appalachia	**177,381**	**2,490,303**	**71**
Central Appalachia	**136,208**	**1,855,209**	**73**
South Central Appalachia	**493,835**	**5,243,331**	**94**
Southern Appalachia	**895,537**	**8,650,397**	**104**
County Types			
Large Metros (pop. 1 million +)	**671,264**	**6,312,684**	**106**
Small Metros (pop. <1 million)	**973,867**	**11,269,895**	**86**
Nonmetro, Adjacent to Large Metros	**190,344**	**2,308,850**	**82**
Nonmetro, Adjacent to Small Metros	**319,379**	**3,931,782**	**81**
Rural (nonmetro, not adj. to a metro)	**208,690**	**2,466,255**	**85**
Alabama	**450,520**	**5,039,877**	**89**
Appalachian Alabama	288,524	3,248,852	89
Non-Appalachian Alabama	161,996	1,791,025	90
Georgia	**1,278,779**	**10,799,566**	**118**
Appalachian Georgia	417,387	3,421,148	122
Non-Appalachian Georgia	861,392	7,378,418	117
Kentucky	**388,673**	**4,509,394**	**86**
Appalachian Kentucky	89,972	1,164,198	77
Non-Appalachian Kentucky	298,701	3,345,196	89
Maryland	**670,965**	**6,165,129**	**109**
Appalachian Maryland	20,310	251,368	81
Non-Appalachian Maryland	650,655	5,913,761	110
Mississippi	**282,412**	**2,949,965**	**96**
Appalachian Mississippi	56,028	609,291	92
Non-Appalachian Mississippi	226,384	2,340,674	97
New York	**2,290,752**	**19,835,913**	**115**
Appalachian New York	77,305	1,018,678	76
Non-Appalachian New York	2,213,447	18,817,235	118
North Carolina	**1,066,960**	**10,551,162**	**101**
Appalachian North Carolina	207,769	2,036,231	102
Non-Appalachian North Carolina	859,191	8,514,931	101
Ohio	**1,058,769**	**11,780,017**	**90**
Appalachian Ohio	160,023	1,978,242	81
Non-Appalachian Ohio	898,746	9,801,775	92

23 Note: Data is up to July 1, 2021.

Small Businesses per Population	Number of Small Business Establishments	Population	Number of Small Businesses per 1,000 people
Pennsylvania	**1,156,400**	**12,964,056**	**89**
Appalachian Pennsylvania	468,195	5,683,546	82
Non-Appalachian Pennsylvania	688,205	7,280,510	95
South Carolina	**507,520**	**5,190,705**	**98**
Appalachian South Carolina	133,598	1,371,106	97
Non-Appalachian South Carolina	373,922	3,819,599	98
Tennessee	**706,007**	**6,975,218**	**101**
Appalachian Tennessee	270,725	2,991,772	90
Non-Appalachian Tennessee	435,282	3,983,446	109
Virginia	**868,946**	**8,642,274**	**101**
Appalachian Virginia	53,794	732,075	73
Non-Appalachian Virginia	815,152	7,910,199	103
West Virginia (entire state)	**119,914**	**1,782,959**	**67**

Source: United States Census Bureau, Vintage Population Estimates, 2020 – 2021.

State-level analysis reveals additional nuance in the landscape. For instance, Appalachian Georgia demonstrates a small business density of 122 per 1,000 people, surpassing the national average. West Virginia, with a density of 67 small businesses per 1,000 people, reflects the challenges of small business growth in rural areas. The state-level density comparisons alongside county types demonstrate how geographic location plays a crucial role in shaping the small business landscape. For example, business density of Appalachian Large Metro counties aligns with the national average (106 small businesses per 1,000 people). Ease of access to metro areas that traditionally contain trade ports, investment and business networks, large customer bases, and capital resources are all likely correlated with this outcome. Indeed, seven out of the thirteen Appalachian states showed over a 10% discrepancy between their state's respective Appalachian and non-Appalachian portions. Appalachian New York and Maryland, for example, had 55% and 36% fewer small businesses per 1,000 people, respectively. This aligns with the geographic locations of major metro areas (e.g., New York City, Washington D.C and Baltimore sprawl) outside of the Appalachian portions of the states. Counties and states with fewer small businesses per 1,000 people, including specific portions of Ohio, Pennsylvania, and West Virginia, present opportunities for entrepreneurship development and the implementation of place-based business support initiatives to grow the number of businesses located in those states, and to ensure capital provision.

COVID-19 and the Small Business Landscape in Appalachia

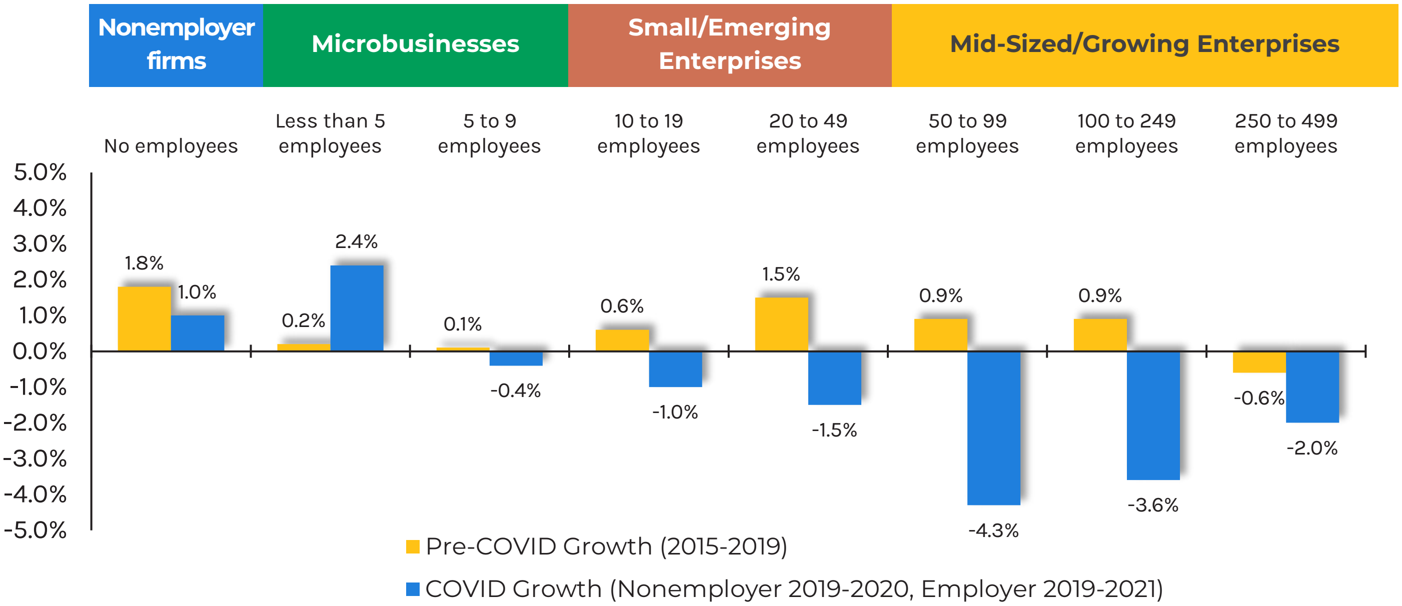
During the COVID-19 pandemic, the virus and the public health measures adopted to reduce the spread of the virus, including the emergency stay-at-home orders across the Region, devastated small businesses across Appalachia. Before the pandemic, Appalachia's small business sector grew by 1.3% compounded annually from 2015 to 2020.[24] The pandemic reversed this course, as many small businesses were forced to temporarily close or reduce operations in 2020 and 2021, resulting in some incurring significant revenue losses and others unable to withstand the impact of the economic crisis.

The Region's small business sector has since rebounded, as the number of businesses open and small business revenue returned to pre-pandemic levels in all Appalachian states by February 2022.[25] These rebounds coincided with access to COVID-19 vaccines and other public health measures that equipped communities and businesses to reopen their doors safely, as well as robust targeted relief efforts for small businesses (as outlined in Sections 4.6.3 and 4.7).

As noted in Figure 3.1.5, record business formation statistics help to paint a vivid portrait of how the pandemic has impacted Appalachia's small business economies, particularly in rural communities. Research indicates that rural areas adopted less stringent social distancing and economic restrictions compared to urban regions, thereby facilitating an easier environment for emerging entrepreneurs to start businesses and attract customers.[26] Despite the allure of rural tranquility during the pandemic, Appalachian cities like Asheville and Pittsburgh also drew interest as attractive, yet less hectic, urban options for young professionals.

24 "United States Census Bureau County Business Patterns." Washington, D.C., 2015 – 2020; "United States Census Bureau Nonemployer Statistics." Washington, D.C., 2015 – 2020.
25 Opportunity Insights Economic Tracker, accessed on August 31, 2023, https://www.tracktherecovery.org/.
26 Sarah A. Low, Mallory L. Rahe, and Andrew J. Van Leuven, "Has Covid-19 Made Rural Areas More Attractive Places to Live? Survey Evidence from Northwest Missouri," Regional Science Policy & Practice, June 15, 2022, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9348122/, 14.

Figure 3.1.10: Changes in Appalachian Businesses by Employment Size, CAGR 2015 - 2020



Source: Longitudinal Employer-Household Dynamics Quarterly Workforce Indicators (2014 – 2018); United States Census Bureau County Business Patterns (2017 – 2021)

The pandemic's impact on small businesses in the Appalachian Region has resulted in a nuanced transformation of the distribution of establishment types. Prior to the pandemic, Appalachian small businesses displayed a wide array of growth patterns, particularly favoring smaller businesses, with notable exceptions in the case of Mid-Sized/Growing enterprises. Figure 3.1.10 illustrates the resilience of smaller-sized businesses. Sole proprietorships and businesses with fewer than five employees exhibited consistent annualized growth rates throughout the pandemic.

Conversely, larger small businesses faced substantial challenges during the pandemic. Businesses with five or more employees experienced negative annualized growth rates between 2019 and 2021. The most substantial declines were observed among businesses with Mid-sized/Growing enterprises, employing 50 to 499 individuals. These findings reflect the ongoing challenges faced by businesses in the mid-size range as they navigated the post-pandemic economic landscape, and struggled to grow and move into the larger-sized categories.

3.2 Small Business Capital Demand

The two million-plus small businesses in Appalachia continuously seek capital to fuel their operations and meet growth objectives. However, the ability to access existing capital to meet demands can vary significantly for small business owners. **The analysis conducted in this report reveals that the demand for capital among small businesses in Appalachia has consistently exceeded the available capital supply**, echoing a historical and current trend seen across the United States. Before 2020, the primary goal for most small businesses was to secure financing for expansion and sales growth. The pandemic and the ensuing economic crisis have since positioned many small businesses to pivot toward covering operational costs to ensure business continuity. [27] This focus largely remained in place through 2022, exacerbated by factors like inflation, tight labor market conditions, and rising interest rates.

Outside of emergency capital during the pandemic (during which time stakeholders interviewed for this study noted significant demand for grant-like capital and recovery assistance), small businesses in Appalachia and across the country generally seek term loans and lines of credit to fulfill their financing needs. Smaller and early-stage businesses also often utilize higher-interest solutions like personal credit cards and consumer loans. For most businesses in Appalachia, venture capital and private equity investments are not primary sources of funding.

Sole proprietors and nonemployer firms surveyed by the Federal Reserve were more than twice as likely to use personal loans (16%) compared to firms with employees (7%), highlighting the need for new, transparent credit options to support businesses in their early growth stages. Further, nonemployer firms preferred business loans over lines of credit as they look to establish relationships with banks and other traditional financial institutions. Over time, small employer firms shift toward seeking lines of credit for the term flexibility and to avoid overleveraging firm balance sheets. As businesses progress toward the middle market (medium-sized enterprises with over fifty employees) they tend to diversify their financing preferences and expand to other capital products like leases, venture and private equity investments, and trade credit.

This study outlines the following key points on Appalachian small business capital demand:

- Over the past five years, from 2017 to 2022, **annualized demand for capital in Appalachia ranged from $117 billion to $127 billion**.
- **Businesses seeking financing in Appalachia trended upward from 2017 to 2021,** followed by a slight decline in 2022 as businesses emerged from the height of the pandemic.

27 "Federal Reserve Bank Small Business Credit Survey: Report on Employer Firms." Cleveland, OH, 2015-2021.; "Federal Reserve Bank Small Business Credit Survey: Report on Nonemployer Firms." Cleveland, OH, 2015-2021.

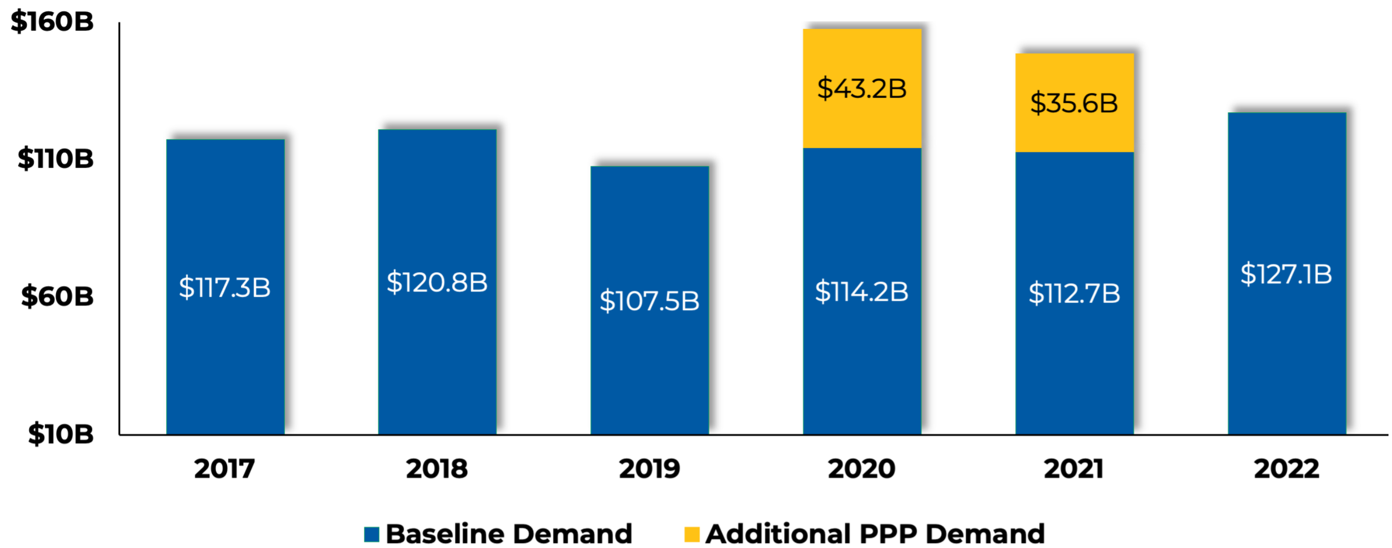
3.2.1 Market Size

To estimate the demand for small business capital in Appalachia, a representative model was developed utilizing data sourced from the United States Census Bureau's County Business Patterns and Nonemployer Statistics surveys.[28] The model employs employee count and industry classifications to define the business landscape of Appalachia. Incorporating adjusted national averages from the Federal Reserve's Small Business Credit Surveys, the model estimates the capital financing application rates and dollar amounts sought per business for the Region.[29] Three critical variables influence the calculation of capital demand: the proportion of businesses seeking funding, the average amount of funding requested, and the total number of businesses in the Region.

National data from 2017 to 2021 suggests stable financing application rates, while the average amount of funding requested per business displayed no discernible pattern. Consequently, the growth in the Region's total number of businesses is the most reliable indicator of rising capital demand, and growth in total number of businesses is expected to be the primary driver for increased capital demand going forward.

Through this methodology, further outlined in the Appendix, Figure 3.2.1.1 illustrates the estimated capital demand in Appalachia from 2017 to 2022. Overall, businesses seeking financing in Appalachia trended upward from 2017 to 2021, followed by a slight decline in 2022 as businesses emerged from the height of the pandemic. Capital demand notably dipped in 2019, likely attributable to a modest rise in nationwide interest rates and higher corporate savings resulting from the 2017 Tax Cuts and Jobs Act.

Figure 3.2.1.1: Small Business Capital Demand in Appalachia, Baseline and Paycheck Protection Program (PPP) Demand, 2017 – 2022



Source: United States Census Bureau, County Business Patterns, 2015 – 2020; United States Census Bureau, Nonemployer Statistics, 2015 – 2020; Federal Reserve Bank of Cleveland, Small Business Credit Survey: Report on Employer Firms, 2015 – 2021; Federal Reserve Bank of Cleveland, Small Business Credit Survey: Report on Nonemployer Firms, Cleveland, 2015 – 2021.

28 "United States Census Bureau County Business Patterns." Washington, D.C., 2015 – 2020 and "United States Census Bureau Nonemployer Statistics." Washington, D.C., 2015 – 2020
29" Small Business Credit Survey: Report on Employer Firms."; "Small Business Credit Survey: Report on Nonemployer Firms."

In 2020, the COVID-19 pandemic triggered a significant surge in demand as businesses sought emergency capital, elevating the estimated demand to $157 billion in 2020 – a nearly 50% increase from the previous year. Demand for the Federal emergency response Paycheck Protection Program (PPP) forgivable loans alone in Appalachia accounted for $43.2 billion and $35.6 billion in 2020 and 2021 respectively (further detail on this loan program can be found in section 4.6.3).

The modeled surge in capital demand for 2022 is primarily driven by an increasing number of businesses and a shifting industrial focus towards nonmanufacturing supplier sectors. Capital demand in these sectors increased from $24 billion in 2018 to nearly $38 billion in 2021, excluding pandemic-related relief from PPP. This trend is expected to continue as historic Federal funding and related private investments spur infrastructure and supplier development initiatives. In 2021, Nonmanufacturing Goods Production firms were 28% more likely to seek funding and requested 20% more capital than their counterparts. In contrast, Business Support & Consumer Services firms were only slightly more likely to apply but asked for 33% less in financing compared to the average across industries.

3.2.2 Market Dynamics Impacting Demand

EMERGENCY CAPITAL DEMAND

Small business capital demand in 2020 and 2021 surged as businesses sought emergency capital through programs like the Paycheck Protection Program (PPP) to navigate through the COVID-19 pandemic. Based on small business surveys from the Federal Reserve, the percent of firms applying for capital specifically to meet operating expenses increased by 37% from 2019 to 2020. Entrepreneurs also were 16% more likely to say finding funds to start a business was very challenging during the pandemic.[30] The inflow of emergency assistance programs was critical to keep businesses operational and shaped demand trends, as shown in Figure 3.2.2.1, which highlights the strong program application rates during the pandemic.

Figure 3.2.2.1: United States Small Business Application Rates for COVID-19 Emergency Capital Programs, 2020 - 2021

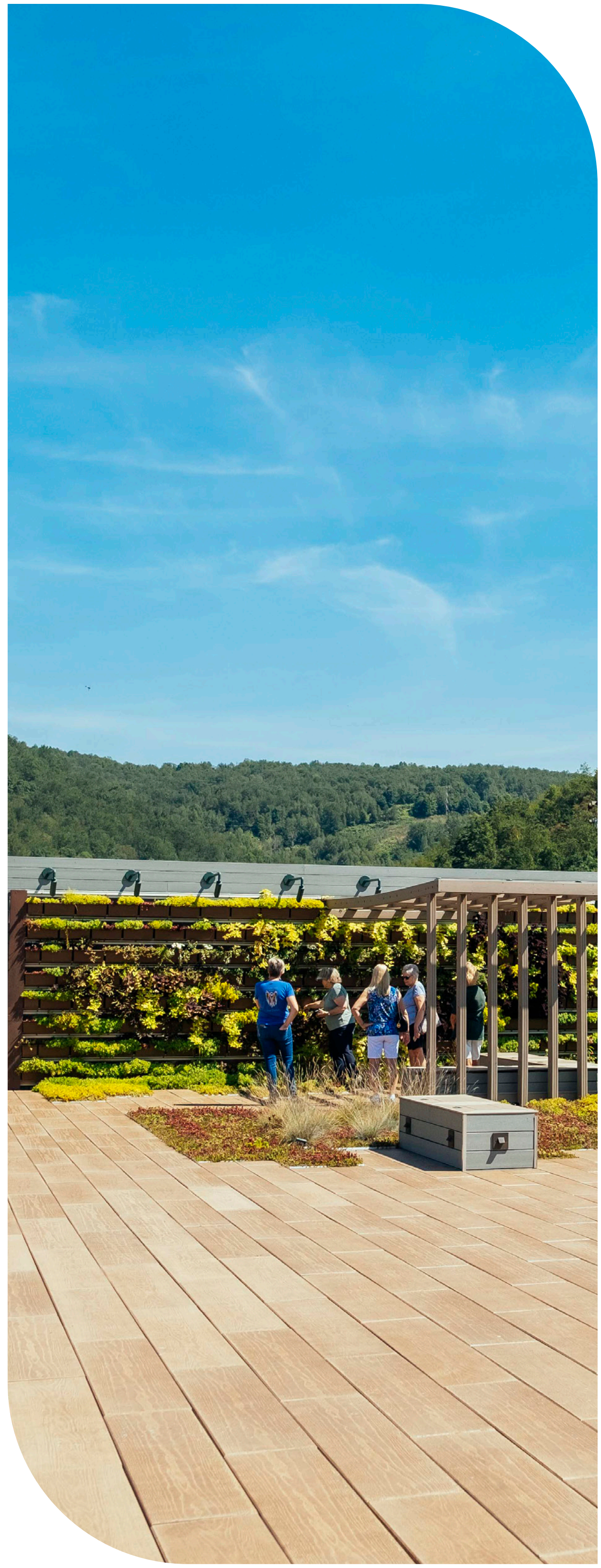
	Employer Firms		Nonemployer Firms	
Application Rates	**2020**	**2021**	**2020**	**2021**
Payment Protection Program (PPP) Loans	37%	47%	34%	28%
Economic Injury Disaster Loans (EIDL)	47%	48%	36%	-
Grant from State/Local Government Funds	28%	33%	20%	-

Source: Federal Reserve, Small Business Credit Survey, 2020 – 2021.

30 Looze, J., and S. Desai. "How Has COVID Changed Conditions for Entrepreneurship." kauffman.org, November 2020. https://www.kauffman.org/wp-content/uploads/2020/11/How-has-COVID-19-Changed-Challenges-for-Entrepreneurs-November-2020.pdf.

In Appalachia and across the country, the impact of the COVID-19 pandemic was especially acute among businesses owned by Black, Indigenous, and People of Color (BIPOC), women, and other historically underserved communities. Nationally, BIPOC- and women-owned businesses were concentrated in industries hardest hit by the pandemic and faced larger cash balance and revenue declines than White- and male-owned firms.[31] As a result, BIPOC- and women-owned employer firms were more likely to seek capital to meet operating expenses for business survival and sustainability.[32] The resulting impact of the pandemic amplified challenges these historically underserved businesses face to sustain and grow and stifled wealth-building among the Region's BIPOC and women entrepreneurs who, on average, have lower personal and family wealth profiles. For example, in a survey conducted by Mountain Bizworks in 2023 [33], 59% of BIPOC-owned businesses in Western North Carolina indicated a need for additional financing, compared to 39% of all business owners surveyed.[34]

Additionally, businesses with high credit risk, defined as having a personal credit score below 620, struggled with disproportionate challenges during the pandemic. Nationally, 83% of companies surveyed by the Federal Reserve with high credit risk sought capital for operational expenses for business survival in 2021. This contrasts figures among low- and medium-risk businesses, of which 60% and 69% sought operating capital for business continuity, respectively.[35] This challenge is particularly salient in Appalachia, where 31% of rural residents are categorized as being high credit risk, exceeding the national average of 25%. In Appalachia's Persistent Poverty Counties (PPCs), 37% of entrepreneurs fall into the high-risk category.[36]



31 "Small Business Financial Outcomes During the Onset of COVID-19," JPMorgan Chase & Co., June 202AD, https://www.jpmorganchase.com/institute/research/small-business/small-business-financial-outcomes-during-the-onset-of-covid-19#finding-4.
32 "Federal Reserve Bank of Cleveland Small Business Credit Survey: Report on Employer Firms." Cleveland, OH, 2015-2021.; "Federal Reserve Bank of Cleveland Small Business Credit Survey: Report on Nonemployer Firms." Cleveland, OH, 2015-2021.
33 Note: The survey participant count is 419 entrepreneurs.
34 "2023 Local Business Impact Survey: Insights from 400+ WNC Small Businesses," July 27, 2023. https://www.mountainbizworks.org/2023/07/27/2023-local-business-impact-survey/.n
35 Note: Counties in which the poverty rate is 20% or greater.
36 "Consumer Finances in Rural Appalachia." Consumer Financial Protection Bureau, September 1, 2022. https://www.consumerfinance.gov/data-research/research-reports/consumer-finances-in-rural-appalachia/.

4. Capital Supply in Appalachia

Appalachian entrepreneurs, driven by their unique personal and business objectives, navigate a complex regional financial system to access capital needed to sustain and grow their businesses. Across Appalachia, the spectrum of capital sources ranges from banks and local community lending programs to grants from regional and national funders. Additionally, online lending platforms may offer alternative avenues for Appalachian entrepreneurs and small businesses to access capital. Appalachian business owners also rely on personal and informal sources of capital, including capital from friends and family and through community co-operatives.

To assess existing gaps and focus areas necessary to improve access to capital, this section first outlines a comprehensive review of Appalachia's small business capital supply landscape, focusing on the contributions of those with a physical regional presence, such as banks and other institutions insured by the Federal Deposit Insured Corporation (FDIC), community development financial institutions (CDFIs), credit unions, and equity investors. The research examines overall capital availability in the Region, with a targeted look at where capital flows have been concentrated by geography, business stage, and entrepreneur characteristics. This research also focuses on the supply and types of capital products in economically distressed and historically underserved communities.

4.1 Historical Supply of Capital

This study used data from primary funding avenues for small businesses in Appalachia, including FDIC-insured banks, CDFIs, credit unions, and venture capital investors, to determine the aggregate capital supply in the Region from 2017 to 2021.[37] Where possible, data from 2015 and 2016 is also included:

- **Banks provide the most capital in the aggregate supply**, lending an average of 97.1% of total dollar amounts to small businesses annually, and an average of 99.6% of the total number of loans and equity deals annually (2017 to 2021).
- From 2017 to 2021, **the overall capital supply for small businesses in both Appalachia and the United States as a whole experienced annualized growth rates of 11.3% and 15.2%**, respectively.
- **Prior to the onset of the COVID-19 pandemic, the capital supply in the Region saw annualized growth of 5.2% from 2017 to 2019.** However, this rate surged to 17.7% during the pandemic years from 2019 to 2021, reaching a peak of $86.4 billion in total capital supply to the Region in 2020.
- **From 2020 to 2021 the total dollar amount of capital supply decreased, while the total number of loans increased in both Appalachia and the United States.** This discrepancy is likely attributable to emergency pandemic-related capital programs, as PPP loans increased the overall number of loans being deployed, but tended to be smaller dollar amounts.
- **In 2020, the average loan amount for small businesses in Appalachia slightly surpassed the national average,** standing at $61,845, compared to $61,349 nationwide.
- However, both **the total supply dollar amount per small business and the total number of loans per 10,000 small businesses in Appalachia lagged national figures.**
- Venture capital and private equity investments are not widespread in Appalachia.

37 Note: Bank information from 2022 not available.

AGGREGATE SMALL BUSINESS CAPITAL SUPPLY

This study used data from primary funding avenues for small businesses in Appalachia, including FDIC-insured banks, CDFIs, credit unions, and venture capital investors, to determine the aggregate capital supply in the Region from 2017 to 2021.[38] Where possible, data from 2015 and 2016 is also included.

In aggregate, the supply of capital in Appalachia consistently represents around 4% of the total small business capital supply; this is true for both dollar amount and the number of loans and equity deals across the United States.

From 2020 to 2021 the total dollar amount of capital supply decreased, while the total number of loans increased in both Appalachia and the United States. This discrepancy is likely attributable to emergency pandemic-related capital programs, as Paycheck Protection Program (PPP) loans increased the overall number of loans being deployed, but tended to be smaller dollar amounts.

Figure 4.1.1: Total Capital Supply to Small Businesses in Appalachia in Dollar Amounts, 2017 – 2021

Total Aggregate Supply in Appalachia (in billions of $)	2017	2018	2019	2020	2021
United States	**$1,007**	**$1,118**	**$1,158**	**$1,974**	**$1,773**
Appalachian Region	**$45.4**	**$48.3**	**$50.2**	**$86.4**	**$69.6**
Appalachia as a % of U.S.	**4.50%**	**4.30%**	**4.30%**	**4.40%**	**3.90%**
Subregions					
Northern Appalachia	**$15.4**	**$15.0**	**$15.4**	**$28.2**	**$22.2**
North Central Appalachia	**$3.2**	**$3.7**	**$3.7**	**$6.3**	**$4.8**
Central Appalachia	**$1.5**	**$1.6**	**$1.9**	**$2.8**	**$2.3**
South Central Appalachia	**$9.3**	**$10.1**	**$10.5**	**$18.2**	**$14.9**
Southern Appalachia	**$16.0**	**$17.9**	**$18.7**	**$30.9**	**$25.3**
County Types					
Large Metros (pop. 1 million +)	**$14.0**	**$14.6**	**$16.1**	**$27.1**	**$21.7**
Small Metros (pop. <1 million)	**$20.7**	**$22.1**	**$22.8**	**$39.4**	**$31.8**
Nonmetro, Adj. to Large Metros	**$2.7**	**$3.0**	**$2.9**	**$5.2**	**$4.3**
Nonmetro, Ad. to Small Metros	**$4.8**	**$5.3**	**$5.2**	**$8.9**	**$7.3**
Rural (nonmetro, not adj. to metro)	**$3.1**	**$3.3**	**$3.3**	**$5.8**	**$4.6**
County Economic Status					
Distressed	**$1.2**	**$1.2**	**$1.3**	**$2.3**	**$1.8**
At-Risk	**$4.8**	**$5.1**	**$5.3**	**$9.4**	**$7.2**
Transitional	**$33.8**	**$35.7**	**$37.0**	**$64.0**	**$52.1**
Competitive	**$3.5**	**$4.0**	**$4.2**	**$6.9**	**$5.7**
Attainment	**$2.1**	**$2.2**	**$2.3**	**$3.7**	**$2.8**
Alabama	**$10.3**	**$11.7**	**$12.0**	**$19.2**	**$16.2**
Appalachian Alabama	$6.3	$7.2	$7.5	$11.8	$9.5
Non-Appalachian Alabama	$4.0	$4.5	$4.6	$7.4	$6.8
Georgia	**$21.6**	**$22.8**	**$24.5**	**$41.1**	**$35.6**
Appalachian Georgia	$6.3	$6.8	$7.3	$12.1	$9.9
Non-Appalachian Georgia	$15.2	$15.9	$17.2	$29.1	$25.7

38 Note: Bank information from 2022 not available.

Total Aggregate Supply in Appalachia (in billions of $)	2017	2018	2019	2020	2021
Kentucky	**$7.7**	**$7.9**	**$8.3**	**$13.4**	**$10.9**
Appalachian Kentucky	$.9	$1.0	$1.3	$1.8	$1.5
Non-Appalachian Kentucky	$6.7	$6.8	$7.0	$11.6	$9.4
Maryland	**$12.2**	**$13.4**	**$13.4**	**$26.3**	**$20.9**
Appalachian Maryland	$0.4	$0.5	$0.4	$0.8	$0.7
Non-Appalachian Maryland	$11.7	$13.0	$12.9	$25.4	$20.2
Mississippi	**$5.8**	**$6.5**	**$6.7**	**$11.9**	**$9.4**
Appalachian Mississippi	$1.1	$1.1	$1.2	$2.1	$1.6
Non-Appalachian Mississippi	$4.7	$5.3	$5.5	$9.8	$7.8
New York	**$55.8**	**$60.0**	**$70.8**	**$107.9**	**$118.1**
Appalachian New York	$1.5	$1.5	$1.4	$2.5	$2.1
Non-Appalachian New York	$54.3	$58.5	$69.4	$105.4	$116.0
North Carolina	**$22.2**	**$24.8**	**$24.2**	**$44.1**	**$36.8**
Appalachian North Carolina	$3.8	$4.1	$3.9	$7.6	$6.2
Non-Appalachian North Carolina	$18.4	$20.7	$20.3	$36.5	$30.6
Ohio	**$23.5**	**$24.6**	**$24.0**	**$44.4**	**$34.6**
Appalachian Ohio	$2.5	$2.7	$2.6	$5.2	$3.8
Non-Appalachian Ohio	$21.0	$21.9	$21.3	$39.2	$30.8
Pennsylvania	**$28.8**	**$29.3**	**$31.6**	**$55.8**	**$46.1**
Appalachian Pennsylvania	$11.8	$11.3	$11.8	$21.3	$16.8
Non-Appalachian Pennsylvania	$17.0	$18.0	$19.9	$34.5	$29.2
South Carolina	**$9.3**	**$10.3**	**$10.7**	**$17.6**	**$15.2**
Appalachian South Carolina	$2.3	$2.8	$2.8	$5.1	$4.4
Non-Appalachian South Carolina	$7.0	$7.5	$7.8	$12.5	$10.8
Tennessee	**$13.7**	**$14.6**	**$15.5**	**$26.0**	**$22.2**
Appalachian Tennessee	$5.0	$5.5	$6.0	$9.7	$8.1
Non-Appalachian Tennessee	$8.7	$9.1	$9.5	$16.3	$14.2
Virginia	**$16.8**	**$18.0**	**$18.3**	**$32.9**	**$26.4**
Appalachian Virginia	$0.9	$1.0	$1.1	$1.7	$1.3
Non-Appalachian Virginia	$15.9	$17.0	$17.2	$31.2	$25.1
West Virginia (entire state)	**$2.5**	**$2.9**	**$2.9**	**$4.8**	**$3.7**

Source: CDFI Fund, Data Releases, 2017 – 2021; National Credit Union Administration, Call Report Quarterly Data, 2017 – 2021; Small Business Administration, PPP FOIA, 2017 – 2021; Foundation Maps, Foundation Giving in Appalachia Region, 2017 – 2021.

Figure 4.1.2: Total Capital Supply to Small Businesses in Appalachia by Number of Loans and Equity Deals, 2017 – 2021

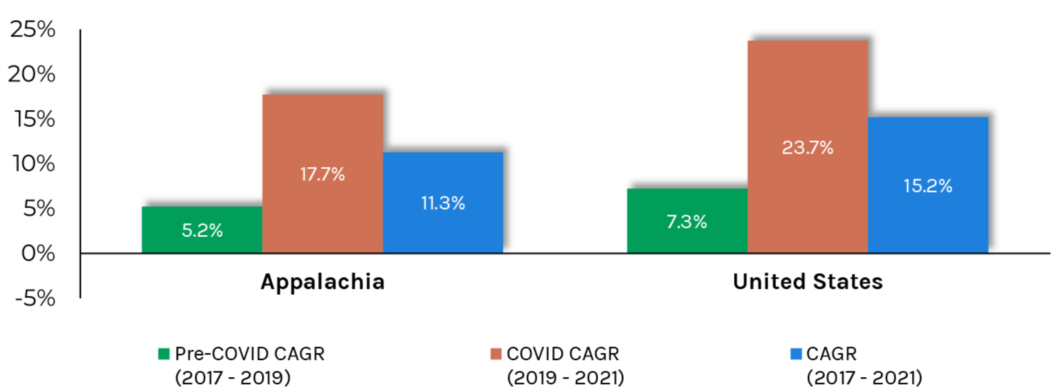
Total Number of Loans and Deals	2017	2018	2019	2020	2021
United States	**24,535,329**	**26,847,252**	**28,937,830**	**32,178,197**	**36,145,485**
Appalachian Region	**1,067,872**	**1,126,762**	**1,198,541**	**1,397,702**	**1,542,889**
Appalachia as a % of U.S.	**4.4%**	**4.2%**	**4.1%**	**4.3%**	**4.3%**
Subregions					
Northern Appalachia	**350,586**	**351,213**	**365,362**	**430,790**	**450,978**
North Central Appalachia	**74,415**	**83,280**	**88,737**	**98,497**	**103,579**
Central Appalachia	**43,997**	**46,628**	**51,364**	**54,573**	**70,489**
South Central Appalachia	**204,790**	**220,722**	**238,359**	**281,549**	**305,322**
Southern Appalachia	**394,084**	**424,919**	**454,719**	**532,293**	**612,521**
County Types					
Large Metros (pop. 1 million +)	**348,579**	**365,460**	**386,012**	**449,182**	**511,559**
Small Metros (pop. <1 million)	**446,712**	**471,589**	**505,897**	**595,855**	**633,873**
Nonmetro, Adj. to Large Metros	**72,217**	**75,979**	**80,153**	**91,359**	**101,262**
Nonmetro, Adj. to Small Metros	**122,720**	**132,817**	**139,982**	**157,306**	**177,549**
Rural (nonmetro, not adj. to metro)	**77,940**	**81,254**	**86,975**	**104,965**	**116,866**
County Economic Status					
Distressed	**35,234**	**37,320**	**40,370**	**46,417**	**54,177**
At-Risk	**120,500**	**126,427**	**134,282**	**154,818**	**169,777**
Transitional	**777,449**	**817,996**	**867,624**	**1,018,249**	**1,124,089**
Competitive	**80,024**	**86,733**	**93,967**	**107,579**	**118,376**
Attainment	**54,665**	**58,286**	**62,298**	**70,639**	**76,470**
Alabama	**200,901**	**214,358**	**225,985**	**281,424**	**301,464**
Appalachian Alabama	122,604	130,882	137,541	168,894	178,146
Non-Appalachian Alabama	78,297	83,476	88,444	112,530	123,318
Georgia	**593,743**	**641,558**	**686,350**	**792,631**	**993,640**
Appalachian Georgia	190,843	208,160	225,377	249,152	308,402
Non-Appalachian Georgia	402,900	433,398	460,973	543,479	685,238
Kentucky	**170,269**	**180,718**	**193,386**	**203,578**	**234,274**
Appalachian Kentucky	29,374	30,481	34,203	34,907	47,395
Non-Appalachian Kentucky	140,895	150,237	159,183	168,671	186,879
Maryland	**345,656**	**374,319**	**394,361**	**439,112**	**504,771**
Appalachian Maryland	10,340	11,093	12,236	14,000	16,878
Non-Appalachian Maryland	335,316	363,226	382,125	425,112	487,893
Mississippi	**115,843**	**118,167**	**130,576**	**203,016**	**209,335**
Appalachian Mississippi	21,391	21,855	23,146	35,400	36,080
Non-Appalachian Mississippi	94,452	96,312	107,430	167,616	173,255
New York	**1,435,731**	**1,542,148**	**1,689,426**	**1,791,759**	**1,985,569**
Appalachian New York	36,377	36,438	39,063	42,487	47,544
Non-Appalachian New York	1,399,354	1,505,710	1,650,363	1,749,272	1,938,025

Total Number of Loans and Deals	2017	2018	2019	2020	2021
North Carolina	**512,489**	**559,121**	**602,080**	**709,488**	**792,846**
Appalachian North Carolina	95,198	100,947	107,380	127,243	135,626
Non-Appalachian North Carolina	417,291	458,174	494,700	582,245	657,220
Ohio	**497,056**	**535,688**	**555,609**	**638,745**	**681,420**
Appalachian Ohio	65,071	69,553	72,436	80,995	83,944
Non-Appalachian Ohio	431,985	466,135	483,173	557,750	597,476
Pennsylvania	**642,931**	**662,613**	**700,220**	**835,931**	**888,809**
Appalachian Pennsylvania	262,960	260,397	269,489	324,324	335,788
Non-Appalachian Pennsylvania	379,971	402,216	430,731	511,607	553,021
South Carolina	**226,764**	**245,030**	**263,601**	**305,580**	**354,281**
Appalachian South Carolina	59,201	64,280	68,844	80,729	91,226
Non-Appalachian South Carolina	167,563	180,750	194,757	224,851	263,055
Tennessee	**271,880**	**292,893**	**319,128**	**394,674**	**439,116**
Appalachian Tennessee	99,289	107,664	119,193	140,432	156,915
Non-Appalachian Tennessee	172,591	185,229	199,935	254,242	282,201
Virginia	**442,405**	**479,805**	**507,698**	**545,716**	**614,514**
Appalachian Virginia	21,874	25,187	25,742	29,932	32,117
Non-Appalachian Virginia	420,531	454,618	481,956	515,784	582,397
West Virginia (entire state)	**53,305**	**60,083**	**64,080**	**71,089**	**74,161**

Source: CDFI Fund, Data Releases, 2017 – 2021; National Credit Union Administration, Call Report Quarterly Data, 2017-2021; Small Business Administration, PPP FOIA, 2017 – 2021.

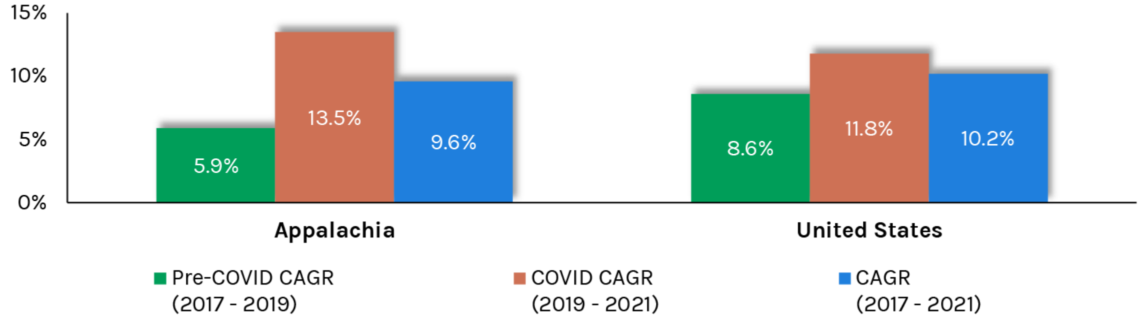
The total capital supply for small businesses in both Appalachia and the United States as a whole grew at annualized rates of 11.3% and 15.2%, respectively, from 2017 to 2021. Prior to the onset of the COVID-19 pandemic, the capital supply in the Region saw annualized growth of 5.2% from 2017 to 2019. However, this rate surged to 17.7% during the pandemic years from 2019 to 2021, reaching a peak of $86.4 billion in total capital supply to the Region in 2020.

Figure 4.1.3: Annual Growth Rates in Total Supply Dollar Amounts to Small Businesses, CAGR 2017 – 2021



Source: CDFI Fund, Data Releases, 2017 – 2021; National Credit Union Administration, Call Report Quarterly Data, 2017 – 2021; Small Business Administration, PPP FOIA, 2017 – 2021; Foundation Maps, Foundation Giving in Appalachia Region, 2017 – 2021.
Note: Appalachian Region defined by any FIP code with a subregion.

Figure 4.1.4: Annual Growth Rates in Total Supply of Number of Loans and Equity Deals to Small Businesses, CAGR 2017 – 2021



Source: Source: CDFI Fund Data Releases, 2017 – 2021; National Credit Union Administration, Call Report Quarterly Data, 2017 – 2021; Small Business Administration, PPP FOIA, 2017 – 2021.

Banks provide the most capital in the aggregate supply, lending an average of 97.1% of total dollar amounts to small businesses annually, and an average of 99.6% of the total number of loans and equity deals annually (2017 to 2021). Venture capital and private equity investments are not common sources of funding in Appalachia.

Figure 4.1.5: Small Business Capital Dollar Amount Supply by Source in Appalachia, 2017 – 2021

Source	2017		2018		2019		2020		2021	
	$ (in millions)	%	$ (in millions)	%	$ (in millions)	%	$ (in millions)	%	$ (in millions)	%
Banks	$44,243	*97.6%*	$47,285	*97.9%*	$47,916	*95.4%*	$84,462	*97.7%*	$67,292	*96.7%*
Venture Capital	$900	*2.0%*	$690	*1.4%*	$1,888	*3.8%*	$1,166	*1.3%*	$1,529	*2.2%*
CDFIs	$106	*0.2%*	$210	*0.4%*	$268	*0.5%*	$622	*0.7%*	$537	*0.8%*
Credit Unions	$104	*0.2%*	$103	*0.2%*	$146	*0.3%*	$191	*0.2%*	$250	*0.4%*
Total	**$45,353**		**$48,288**		**$50,218**		**$86,441**		**$69,608**	

Source: CDFI Fund Data Releases, 2017 – 2021; National Credit Union Administration, Call Report Quarterly Data, 2017 – 2021; Small Business Administration, PPP FOIA, 2017 – 2021.

Figure 4.1.6: Number of Loans and Deals by Source in Appalachia, 2017 – 2021

Source	2017		2018		2019		2020		2021	
	#	%	#	%	#	%	#	%	#	%
Banks	1,065,405	99.8%	1,124,027	99.8%	1,195,467	99.7%	1,390,196	99.5%	1,533,933	99.4%
CDFI	1,296	0.1%	1,388	0.1%	1,580	0.1%	5,781	0.4%	6,956	0.5%
Credit Union	1,006	0.1%	1,170	0.1%	1,302	0.1%	1,507	0.1%	1,780	0.1%
Venture Capital	165	0.0%	177	0.0%	192	0.0%	218	0.0%	220	0.0%
Total	**1,067,872**		**1,126,762**		**1,198,541**		**1,397,702**		**1,542,889**	

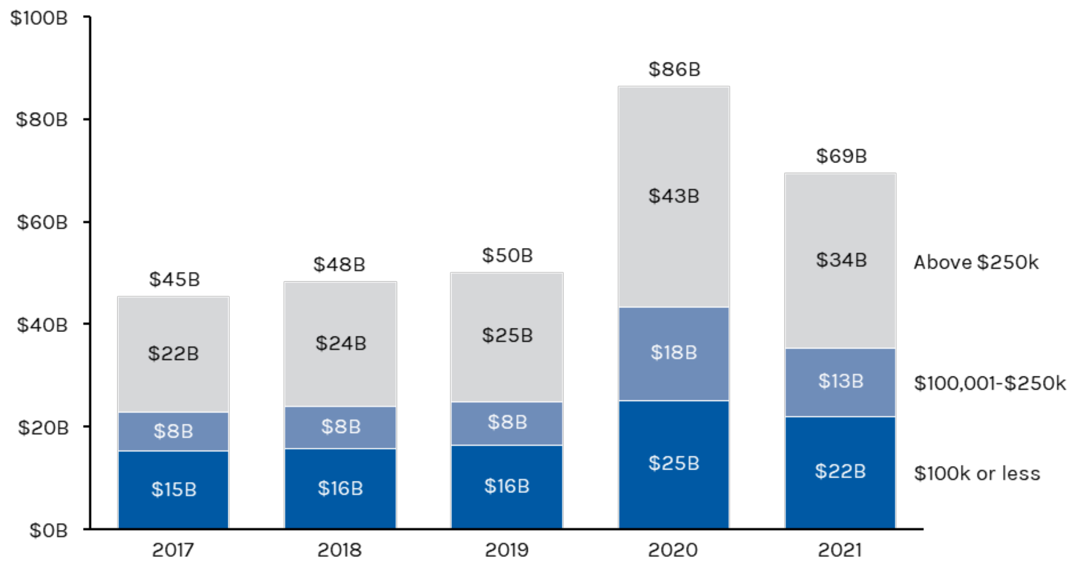
Source: CDFI Fund Data Releases, 2017 – 2021; National Credit Union Administration, Call Report Quarterly Data, 2017 – 2021; Small Business Administration, PPP FOIA, 2017 – 2021.

LOAN SIZE

A shift in capital supply is evident in Appalachia and the broader United States from 2020 to 2021. The total dollar amount of capital supply decreased, while the total number of loans increased. This discrepancy is likely attributable to emergency pandemic-related capital programs, largely the Paycheck Protection Program (PPP). While PPP loans were still being deployed in 2021, increasing the overall number of loans being deployed, the loan sizes were much smaller. In 2020, the average PPP loan size was $101,000, which decreased by more than half in 2021 at $41,560. Additionally, the average size of PPP loans deployed by community development financial institutions and credit unions with less than $10 billion in assets, which are a significant part of Appalachia's financial infrastructure, were even smaller ($21,254 and $33,869 respectively in 2021).[39]

Figure 4.1.8 shows the size distribution of the total capital supply. Loans above $250,000 held the largest total dollar amount between 2017 and 2021, but an average of 90.8% of small business loans were less than or equal to $100,000.

Figure 4.1.7: Distribution of Small Business Lending in Appalachia, 2021



Source: CDFI Fund, Data Releases, 2017 – 2021; National Credit Union Administration, Call Report Quarterly Data, 2017 – 2021; Small Business Administration, PPP FOIA, 2017 – 2021.

State-level analysis reveals additional nuance to the aggregate capital supply across Appalachia. **In 2020, the average loan amount for small businesses in Appalachia slightly surpassed the national average at $61,845, compared to $61,349 nationwide.** However, **both the total dollar amount per small business and the total number of loans per 10,000 small businesses in Appalachia lagged national averages that year**. This divergence underscores that, on average, small businesses in Appalachia received less capital and fewer loans compared to their counterparts in other regions across the country.

Moreover, the data highlights variations in capital supply and loan allocation across different geographic and economic segments within Appalachia. Urbanized, competitive, and affluent areas generally reported higher levels of funding and a greater number of loans, which starkly contrasts their rural, distressed, and disadvantaged counterparts. This disparity further reveals the complex economic fabric of the Region, with its unique challenges and opportunities that require targeted approaches to increase capital access and small business development.

39 Paycheck Protection Program." U.S. Small Business Administration. Accessed July 12, 2023. https://www.sba.gov/funding-programs/loans/covid-19-relief-options/paycheck-protection-program.

Figure 4.1.8: Average Loan Amounts and Total Dollar Amounts per Small Business, 2020

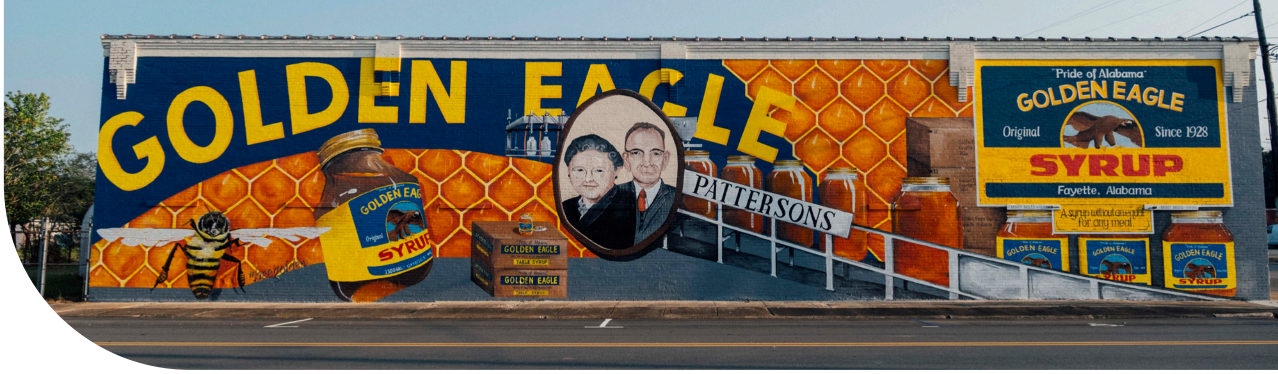
	Total Dollar Amount (in $ billions)	Total Number of Loans	Average Loan Amount	Total Dollar Amount per SMB	Total Number of Loans per 10,000 SMB
United States	**$1,974**	**32,178,197**	**$61,349**	**$56,164**	**9,155**
Appalachian Region	**$86.4**	**1,397,702**	**$61,845**	**$36,573**	**5,914**
Subregions					-
Northern Appalachia	**$28.2**	**430,790**	**$65,369**	**$42,630**	**6,521**
North Central Appalachia	**$6.3**	**98,497**	**$64,205**	**$35,652**	**5,553**
Central Appalachia	**$2.8**	**54,573**	**$51,494**	**$20,631**	**4,007**
South Central Appalachia	**$18.2**	**281,549**	**$64,668**	**$36,869**	**5,701**
Southern Appalachia	**$30.9**	**532,293**	**$58,125**	**$34,549**	**5,944**
County Types					**-**
Large Metros (pop. 1 million +)	**$27.1**	**449,182**	**$60,424**	**$40,433**	**6,692**
Small Metros (pop. <1 million)	**$39.4**	**595,855**	**$66,171**	**$40,486**	**6,118**
Nonmetro, Adjacent to Large Metros	**$5.2**	**91,359**	**$57,029**	**$27,372**	**4,800**
Nonmetro, Adjacent to Small Metros	**$8.9**	**157,306**	**$56,452**	**$27,805**	**4,925**
Rural (nonmetro, not adj. to a metro)	**$5.8**	**104,965**	**$55,079**	**$27,703**	**5,030**
County Economic Status					**-**
Distressed	**$2.3**	**46,417**	**$50,104**	**$21,794**	**4,350**
At-Risk	**$9.4**	**154,818**	**$61,018**	**$30,171**	**4,945**
Transitional	**$64.0**	**1,018,249**	**$62,869**	**$38,244**	**6,083**
Competitive	**$6.9**	**107,579**	**$64,169**	**$39,380**	**6,137**
Attainment	**$3.7**	**70,639**	**$53,080**	**$39,656**	**7,471**
Alabama	**$19.2**	**281,424**	**$68,176**	**$42,587**	**6,247**
Appalachian Alabama	$11.8	168,894	$69,795	$40,856	5,854
Non-Appalachian Alabama	$7.4	112,530	$65,746	$45,670	6,946
Georgia	**$41.1**	**792,631**	**$51,893**	**$32,165**	**6,198**
Appalachian Georgia	$12.1	249,152	$48,470	$28,933	5,969
Non-Appalachian Georgia	$29.1	543,479	$53,462	$33,731	6,309
Kentucky	**$13.4**	**203,578**	**$65,963**	**$34,550**	**5,238**
Appalachian Kentucky	$1.8	34,907	$51,155	$19,847	3,880
Non-Appalachian Kentucky	$11.6	168,671	$69,027	$38,979	5,647
Maryland	**$26.3**	**439,112**	**$59,877**	**$39,186**	**6,544**
Appalachian Maryland	$.8	14,000	$60,268	$41,544	6,893
Non-Appalachian Maryland	$25.4	425,112	$59,864	$39,113	6,534
Mississippi	**$11.9**	**203,016**	**$58,648**	**$42,160**	**7,189**
Appalachian Mississippi	$2.1	35,400	$59,984	$37,899	6,318
Non-Appalachian Mississippi	$9.8	167,616	$58,366	$43,214	7,404
New York	**$107.9**	**1,791,759**	**$60,227**	**$47,108**	**7,822**
Appalachian New York	$2.5	42,487	$59,594	$32,753	5,496
Non-Appalachian New York	$105.4	1,749,272	$60,243	$47,609	7,903

	Total Dollar Amount (in $ billions)	Total Number of Loans	Average Loan Amount	Total Dollar Amount per SMB	Total Number of Loans per 10,000 SMB
North Carolina	**$44.1**	**709,488**	**$62,195**	**$41,357**	**6,650**
Appalachian North Carolina	$7.6	127,243	$59,826	$36,639	6,124
Non-Appalachian North Carolina	$36.5	582,245	$62,713	$42,498	6,777
Ohio	**$44.4**	**638,745**	**$69,531**	**$41,947**	**6,033**
Appalachian Ohio	$5.2	80,995	$64,643	$32,719	5,061
Non-Appalachian Ohio	$39.2	557,750	$70,241	$43,590	6,206
Pennsylvania	**$55.8**	**835,931**	**$66,719**	**$48,230**	**7,229**
Appalachian Pennsylvania	$21.3	324,324	$65,695	$45,508	6,927
Non-Appalachian Pennsylvania	$34.5	511,607	$67,369	$50,081	7,434
South Carolina	**$17.6**	**305,580**	**$57,753**	**$34,773**	**6,021**
Appalachian South Carolina	$5.1	80,729	$63,326	$38,266	6,043
Non-Appalachian South Carolina	$12.5	224,851	$55,752	$33,525	6,013
Tennessee	**$26.0**	**394,674**	**$65,815**	**$36,792**	**5,590**
Appalachian Tennessee	$9.7	140,432	$68,985	$35,784	5,187
Non-Appalachian Tennessee	$16.3	254,242	$64,064	$37,419	5,841
Virginia	**$32.9**	**545,716**	**$60,287**	**$37,861**	**6,280**
Appalachian Virginia	$1.7	29,932	$57,967	$32,254	5,564
Non-Appalachian Virginia	$31.2	515,784	$60,421	$38,231	6,327
West Virginia (entire state)	**$4.8**	**71,089**	**$67,000**	**$39,720**	**5,928**

Source: CDFI Fund, Data Releases, 2017 – 2021; National Credit Union Administration, Call Report Quarterly Data, 2017 – 2021; Small Business Administration, PPP FOIA, 2017 – 2021.

The positive correlation between the total dollar amount per small business and the total number of loans per 10,000 small businesses in Appalachia signifies that counties with a higher capital supply per small business also exhibit greater loan frequency per small business. While the trend generally follows a positive and linear pattern, there are exceptions where higher capital supply does not necessarily translate into greater loan frequency, and vice versa. For instance, Appalachian Georgia had a lower dollar amount per small business than Appalachian Alabama but reported a higher number of loans per 10,000 small businesses. This highlights the intricacies of funding dynamics within the Region and the need for nuanced approaches to address the diverse needs of small businesses.

In the Appalachian portions of these states, the average loan amount for small businesses was slightly lower than the national average, and even lower than the average loan amount in non-Appalachian portions of the states. Although Maryland emerged as a unique case, with the Appalachian portion of the state exhibiting a higher total aggregate capital supply and average loan amount compared to its non-Appalachian portions, the available data **supports a consistent theme within Appalachian portions of the state: a capital supply gap for small businesses.**



4.2 Banking Landscape in Appalachia

Banks help bridge the gap between capital needs and available resources. Moreover, banks can also provide valuable expertise and guidance and, particularly for local and regional banks, act as intermediaries between small businesses and the larger financial ecosystem. As bank lending comprises the vast majority of small business capital supply, this offers a detailed examination of the banking landscape and aggregate lending in Appalachia. Key points on bank lending follow:

- **The number of banks and bank branches have declined across Appalachia and across the United States, while larger banks grew in size** due to the trend of banking consolidation.
- **Small and mid-sized banks play a significant role in Appalachian's banking sector**, accounting for 80% to 90% of banks in the Appalachian Region from 2015 to 2022.
- **The average banking organization with $1 billion or less in total assets held over 13% of its portfolio as small business loans in June 2021.** While large banks[40] tend to have a lower ratio of small business loans to assets relative to smaller banks, the leading small business lenders nonetheless typically include the largest banking organizations.[41]
- Appalachia and the United States witnessed significant growth in bank lending during recent years, particularly during the onset of the COVID-19 pandemic with emergency relief funding allocated across the country.
- Banks with assets over $1 billion accounted for about 95% of the total dollar amount of emergency COVID-19 relief Paycheck Protection Program (PPP) loans disbursed nationally during the distribution period.
- **While total dollar supply increased significantly, the annualized growth rate for the number of loans from 2019 to 2022 in Appalachia slightly lagged that of the total dollar supply**. Bank lending per small business in Appalachia generally trailed that of the United States and most states demonstrated higher total lending per small business for the non-Appalachian portions of their states.
- There has been increasing support for businesses seeking mid-level financing from banks in the Appalachian Region, **but there is still a lingering gap**. Between 2015 and 2021, 90% of bank loans in Appalachia fell below the $100,000 threshold, mirroring the national lending landscape. The most significant increases in the Region were observed from 2019 to 2021 in larger loan categories with a 28.0% growth in loans ranging from $100,000 to $250,000 and a 19.8% growth in loans exceeding $250,000 but the majority of loans made are not within these mid-level ranges.

40 Note: Small banks are defined as banks with assets totaling less than $250 million; mid-size banks have assets totaling between $250 million and $1 billion; large banks are defined as banks with assets over $1 billion.

41 "Availability of Credit to Small Businesses." Board of Governors of the Federal Reserve System, October 2022. https://www.federalreserve.gov/publications/2022-october-availability-of-credit-to-small-businesses.htm.

BANKING LANDSCAPE

Between 2015 and 2022, Appalachia was home to nearly 10% of the nation's FDIC-insured bank headquarters.[42] This is proportionally larger than the share of small businesses in Appalachia within the United States (approximately 6.7%, according to the most recent available data). These institutions serve as the primary source of capital for small businesses in the Region, with bank lending accounting for an average of 97% of the total aggregate supply from 2017 to 2021.

While smaller banks deploy a larger proportion of their own lending to small businesses, large multinational banks account for a greater portion of the reported small business lending in total dollar amount. During 2020, banks and thrifts (savings and loan associations) with assets of $1.3 billion or more accounted for over 98% of reported small business loan originations. The very largest institutions –with assets of $10 billion or more – accounted for about 71% of small business loans originated in 2020.[43]

Figure 4.2.1: FDIC-Insured Banks by Asset Size, 2015, 2019, 2022

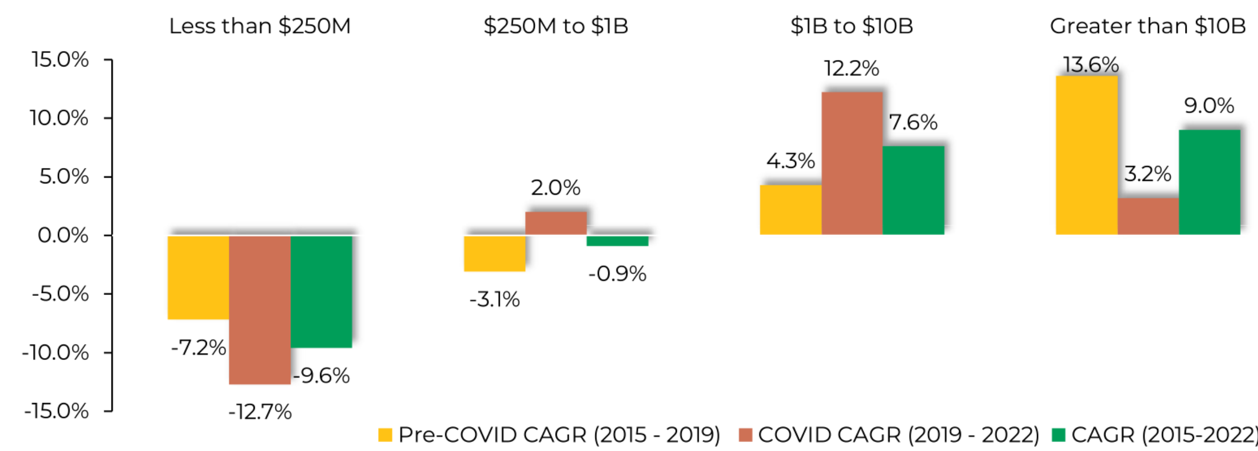
FDIC Banks by Asset Size	2015			2019			2022		
	U.S.	Appalachia	% of Total (Appalachia)	U.S.	Appalachia	% of Total (Appalachia)	U.S.	Appalachia	% of Total (Appalachia)
Small Banks (Less than $250M)	3,800	339	56.7%	2,801	251	50.3%	2,006	167	37.0%
Mid-sized Banks ($250M to $1B)	1,848	204	34.1%	1,712	180	36.1%	1,791	191	42.4%
Large Banks ($1B to $10B)	598	49	8.2%	656	58	11.6%	823	82	18.2%
Largest Banks (Greater than $10B)	112	6	1.0%	144	10	2.0%	161	11	2.4%

Source: Federal Financial Institutions Examination Council, Community Reinvestment Act Data Products, 2015 - 2022.

While banks of all sizes are important sources of credit for small businesses, large banks tend to be proportionately less committed than smaller banks to small business lending. The average banking organization with $1 billion or less in total assets held over 13% of its portfolio as small business loans in June 2021. While large banks tend to have a lower ratio of small business loans to assets relative to smaller banks, small business lenders with the largest dollar amounts of loans nonetheless typically include the largest banking organizations.[44] Additionally, banks with assets over $1 billion also accounted for about 95% of all PPP loans disbursed in dollar amounts nationally during the distribution period.[45]

42 Note: FDIC-insured banks can also be CDFIs and therefore there may be some overlap between the numbers of establishments by provider.
43 "Findings from Analysis of Nationwide Summary Statistics for 2020 Community Reinvestment Act Data Fact Sheet," FDIC, accessed July 7, 2023, https://www.fdic.gov/news/press-releases/2021/pr21105a.pdf.
44 "Availability of Credit to Small Businesses." Board of Governors of the Federal Reserve System, October 2022. https://www.federalreserve.gov/publications/2022-october-availability-of-credit-to-small-businesses.htm.
45 BankRegData.com, "PPP Loans: All U.S. Banks," PPP Loans | All Banks, accessed August 21, 2023, https://bankregdata.com/allAQmet.asp?met=PPP.; Pandemic Oversight, "PPP Loan Forgiveness: How Do the Top Lenders Compare?," Pandemic Oversight, March 24, 2022, https://www.pandemicoversight.gov/news/articles/ppp-loan-forgiveness-how-do-top-lenders-compare.

Figure 4.2.2: Growth Rates for Appalachia Banks by Asset Size, CAGR, 2015 – 2022



Source: Federal Financial Institutions Examination Council, Community Reinvestment Act Data Products, 2015 - 2022.

Banks in Appalachia with less than $250 million in assets, and, to a lesser degree, banks with assets under $1 billion, have been consolidating more than larger banks, aligning with national trends. The reduction in small banks can pose challenges for small businesses seeking to access capital, particularly those in economically distressed areas of Appalachia. A 2023 Goldman Sachs Economic Outlook report showed that businesses with fewer than 100 employees rely disproportionately on small banks for borrowing, receiving almost 70% of their commercial and industrial loans from banks with less than $250 million in assets.[46]

In contrast, in 2022, large banks with assets exceeding $1 billion accounted for 20% of the market in Appalachia, and within that segment, the largest banks (greater than $10 billion) made up just 2%. Banks with assets greater than $1 billion have been consistently growing in both Appalachia and nationally.[47] A recent example is the announcement of the acquisition of Limestone Bancorp, Inc. by Peoples Bank in Marietta, Ohio in 2022.[48]

46 "Smaller US Businesses and Towns Are Likely to Be Hit Hardest by Bank Turmoil," Goldman Sachs, April 13, 2023, https://www.goldmansachs.com/intelligence/pages/smaller-businesses-and-towns-are-likely-to-be-hit-hardest-by- bankturmoil.html#:~:text=%E2%80%9CBecause%20small%20banks%20are%20likely,largest%20concentration%20of%20small%20businesses.

47 "Time Is Right for a Wave of Bank Consolidation," Deloitte United States, November 22, 2019, https://www2.deloitte.com/us/en/pages/financial-services/articles/bank-consolidation-merger-of-equals.html.

48 "Peoples Bancorp Completes Acquisition of Limestone Bancorp," PR Newswire, May 1, 2023, https://www.prnewswire.com/news-releases/peoples-bancorp-completes-acquisition-of-limestone-bancorp-301811352.html.

Figure 4.2.3: Total Number of FDIC-Insured Banks Headquartered in Appalachia by Asset Size, 2022[49]

FDIC Banks by asset size	Less than $250M		$250M to $1B		$1B to $10B		Greater than $10B		Total
	#	%	#	%	#	%	#	%	#
United States	**2,006**	**42%**	**1,791**	**37%**	**823**	**17%**	**161**	**3%**	**4,781**
Appalachian Region	**167**	**37%**	**191**	**42%**	**82**	**18%**	**11**	**2%**	**451**
Subregions									
Northern Appalachia	**25**	**23%**	**49**	**45%**	**30**	**28%**	**5**	**5%**	**109**
North Central Appalachia	**39**	**54%**	**24**	**33%**	**8**	**11%**	**1**	**1%**	**72**
Central Appalachia	**38**	**44%**	**36**	**42%**	**12**	**14%**	**-**	**0%**	**86**
South Central Appalachia	**24**	**38%**	**23**	**36%**	**17**	**27%**	**-**	**0%**	**64**
Southern Appalachia	**41**	**34%**	**59**	**49%**	**15**	**13%**	**5**	**4%**	**120**
County Types									
Large Metros (pop. 1 million +)	**17**	**26%**	**35**	**54%**	**9**	**14%**	**4**	**6%**	**65**
Small Metros (pop. <1 million)	**43**	**32%**	**55**	**41%**	**35**	**26%**	**2**	**1%**	**135**
Nonmetro, Adjacent to Large Metros	**12**	**26%**	**25**	**54%**	**9**	**20%**	**-**	**0%**	**46**
Nonmetro, Adjacent to Small Metros	**52**	**45%**	**43**	**37%**	**17**	**15%**	**3**	**3%**	**115**
Rural (nonmetro, not adjacent)	**43**	**48%**	**33**	**37%**	**12**	**13%**	**2**	**2%**	**90**
Economic Status									
Distressed	**41**	**64%**	**21**	**33%**	**2**	**3%**	**-**	**0%**	**64**
At-Risk	**49**	**41%**	**48**	**40%**	**21**	**18%**	**1**	**1%**	**119**
Transitional	**72**	**30%**	**108**	**45%**	**53**	**22%**	**9**	**4%**	**242**
Competitive	**4**	**22%**	**8**	**44%**	**5**	**28%**	**1**	**6%**	**18**
Attainment	**1**	**13%**	**6**	**75%**	**1**	**13%**	**-**	**0%**	**8**
Alabama	**46**	**46%**	**38**	**38%**	**13**	**13%**	**2**	**2%**	**99**
Appalachian Alabama	22	34%	31	48%	10	15%	2	3%	65
Non-Appalachian Alabama	24	71%	7	21%	3	9%	-	0%	34
Georgia	**70**	**47%**	**64**	**43%**	**14**	**9%**	**2**	**1%**	**150**
Appalachian Georgia	8	32%	16	64%	1	4%	-	0%	25
Non-Appalachian Georgia	62	50%	48	38%	13	10%	2	2%	125
Kentucky	**57**	**46%**	**51**	**41%**	**16**	**13%**	**-**	**0%**	**124**
Appalachian Kentucky	25	47%	22	42%	6	11%	-	0%	53
Non-Appalachian Kentucky	32	45%	29	41%	10	14%	-	0%	71
Maryland	**6**	**18%**	**18**	**55%**	**7**	**21%**	**2**	**6%**	**33**
Appalachian Maryland	-	0%	1	50%	1	50%	-	0%	2
Non-Appalachian Maryland	6	19%	17	55%	6	19%	2	6%	31
Mississippi	**20**	**30%**	**35**	**52%**	**8**	**12%**	**4**	**6%**	**67**
Appalachian Mississippi	7	39%	8	44%	1	6%	2	11%	18
Non-Appalachian Mississippi	13	27%	27	55%	7	14%	2	4%	49
New York	**25**	**20%**	**44**	**34%**	**45**	**35%**	**14**	**11%**	**128**
Appalachian New York	4	36%	4	36%	2	18%	1	9%	11
Non-Appalachian New York	21	18%	40	34%	43	37%	13	11%	117

49 Refer to Appendix for data on years prior to 2022.

FDIC Banks by asset size	Less than $250M		$250M to $1B		$1B to $10B		Greater than $10B		Total
	#	%	#	%	#	%	#	%	#
North Carolina	**17**	**39%**	**12**	**27%**	**11**	**25%**	**4**	**9%**	**44**
Appalachian North Carolina	5	45%	3	27%	3	27%	-	0%	11
Non-Appalachian North Carolina	12	36%	9	27%	8	24%	4	12%	33
Ohio	**89**	**51%**	**52**	**30%**	**27**	**15%**	**7**	**4%**	**175**
Appalachian Ohio	25	49%	17	33%	9	18%	-	0%	51
Non-Appalachian Ohio	64	52%	35	28%	18	15%	7	6%	124
Pennsylvania	**27**	**20%**	**59**	**45%**	**40**	**30%**	**6**	**5%**	**132**
Appalachian Pennsylvania	16	20%	36	46%	23	29%	4	5%	79
Non-Appalachian Pennsylvania	11	21%	23	43%	17	32%	2	4%	53
South Carolina	**15**	**32%**	**22**	**47%**	**9**	**19%**	**1**	**2%**	**47**
Appalachian South Carolina	4	33%	4	33%	3	25%	1	8%	12
Non-Appalachian South Carolina	11	31%	18	51%	6	17%	-	0%	35
Tennessee	**42**	**34%**	**55**	**45%**	**23**	**19%**	**3**	**2%**	**123**
Appalachian Tennessee	20	35%	23	40%	14	25%	-	0%	57
Non-Appalachian Tennessee	22	33%	32	48%	9	14%	3	5%	66
Virginia	**15**	**23%**	**22**	**34%**	**21**	**33%**	**6**	**9%**	**64**
Appalachian Virginia	8	38%	7	33%	6	29%	-	0%	21
Non-Appalachian Virginia	7	16%	15	35%	15	35%	6	14%	43
West Virginia	**23**	**50%**	**19**	**41%**	**3**	**7%**	**1**	**2%**	**46**

Source: FDIC, Summary of Deposits Download, 2022.

CONSOLIDATION

However, as illustrated in Figure 4.2.4, there has been a notable trend of consolidation in the banking sector. Since the financial crisis in 2008, the number of FDIC-insured institutions has nearly halved across the United States, falling from 8,441 to 4,781 in 2022.[50] The number of banks in Appalachia, in line with the United States, declined at an annualized rate of -4% from 2015 to 2022, with a -4.4% decline from 2015 to 2019 and a -3.3% decline after the onset of the COVID-19 pandemic from 2019 to 2022.

Figure 4.2.4: Number of FDIC-Insured Institutions (Headquarters) in Appalachia, CAGR 2015 - 2022

Total Number of FDIC-Insured Institution Headquarters	2015	2019	2020	2022	Pre-COVID CAGR (2015-2019)	COVID CAGR (2019 – 2022)
United States	**6,358**	**5,313**	**5,076**	**4,781**	**-4.4%**	**-3.5%**
Appalachian Region	**598**	**499**	**474**	**451**	**-4.4%**	**-3.3%**
Appalachia as a % of U.S.	**9.4%**	**9.4%**	**9.3%**	**9.4%**	**-**	**-**
Subregions						
Northern Appalachia	**135**	**115**	**112**	**109**	**-3.9%**	**-1.8%**
North Central Appalachia	**90**	**76**	**74**	**72**	**-4.1%**	**-1.8%**
Central Appalachia	**109**	**98**	**90**	**86**	**-2.6%**	**-4.3%**
South Central Appalachia	**95**	**71**	**67**	**64**	**-7.0%**	**-3.4%**
Southern Appalachia	**169**	**139**	**131**	**120**	**-4.8%**	**-4.8%**
County Types						
Large Metros (pop. 1 million +)	**89**	**72**	**71**	**65**	**-5.2%**	**-3.4%**
Small Metros (pop. <1 million)	**188**	**149**	**141**	**135**	**-5.6%**	**-3.2%**
Nonmetro, Adj. to Large Metros	**59**	**50**	**47**	**46**	**-4.1%**	**-2.7%**
Nonmetro, Adj. to Small Metros	**152**	**128**	**122**	**115**	**-4.2%**	**-3.5%**
Rural (nonmetro, not adj. to metro)	**110**	**100**	**93**	**90**	**-2.4%**	**-3.5%**
County Economic Status						
Distressed	**79**	**71**	**66**	**64**	**-2.6%**	**-3.4%**
At-Risk	**157**	**136**	**127**	**119**	**-3.5%**	**-4.4%**
Transitional	**327**	**267**	**256**	**242**	**-4.9%**	**-3.2%**
Competitive	**25**	**16**	**16**	**18**	**-10.6%**	**4.0%**
Attainment	**10**	**9**	**9**	**8**	**-2.6%**	**-3.9%**
Alabama	**131**	**115**	**110**	**99**	**-3.2%**	**-4.9%**
Appalachian Alabama	88	77	73	65	*-3.3%*	*-5.5%*
Non-Appalachian Alabama	43	38	37	34	*-3.0%*	*-3.6%*
Georgia	**203**	**166**	**155**	**150**	**-4.9%**	**-3.3%**
Appalachian Georgia	41	31	27	25	*-6.8%*	*-6.9%*
Non-Appalachian Georgia	162	135	128	125	*-4.5%*	*-2.5%*
Kentucky	**171**	**145**	**133**	**124**	**-4.0%**	**-5.1%**
Appalachian Kentucky	68	61	56	53	*-2.7%*	*-4.6%*
Non-Appalachian Kentucky	103	84	77	71	*-5.0%*	*-5.5%*
Maryland	**67**	**43**	**38**	**33**	**-10.5%**	**-8.4%**
Appalachian Maryland	2	2	2	2	*0.0%*	*0.0%*
Non-Appalachian Maryland	65	41	36	31	*-10.9%*	*-8.9%*

50 "Summary of Deposits Download," FDIC, accessed August 12, 2023, https://www7.fdic.gov/sod/dynaDownload.asp.

Total Number of FDIC-Insured Institution Headquarters	2015	2019	2020	2022	Pre-COVID CAGR (2015-2019)	COVID CAGR (2019 – 2022)
Mississippi	**80**	**71**	**70**	**67**	**-2.9%**	**-1.9%**
Appalachian Mississippi	21	20	20	18	*-1.2%*	*-3.5%*
Non-Appalachian Mississippi	59	51	50	49	*-3.6%*	*-1.3%*
New York	**162**	**145**	**140**	**128**	**-2.7%**	**-4.1%**
Appalachian New York	15	13	12	11	*-3.5%*	*-5.4%*
Non-Appalachian New York	147	132	128	117	*-2.7%*	*-3.9%*
North Carolina	**67**	**48**	**47**	**44**	**-8.0%**	**-2.9%**
Appalachian North Carolina	18	14	11	11	*-6.1%*	*-7.7%*
Non-Appalachian North Carolina	49	34	36	33	*-8.7%*	*-1.0%*
Ohio	**207**	**182**	**176**	**175**	**-3.2%**	**-1.3%**
Appalachian Ohio	61	54	53	51	*-3.0%*	*-1.9%*
Non-Appalachian Ohio	146	128	123	124	*-3.2%*	*-1.1%*
Pennsylvania	**183**	**144**	**138**	**132**	**-5.8%**	**-2.9%**
Appalachian Pennsylvania	98	81	80	79	*-4.7%*	*-0.8%*
Non-Appalachian Pennsylvania	85	63	58	53	*-7.2%*	*-5.6%*
South Carolina	**63**	**47**	**45**	**47**	**-7.1%**	**0.0%**
Appalachian South Carolina	19	11	11	12	*-12.8%*	*2.9%*
Non-Appalachian South Carolina	44	36	34	35	*-4.9%*	*-0.9%*
Tennessee	**172**	**143**	**136**	**123**	**-4.5%**	**-4.9%**
Appalachian Tennessee	81	63	61	57	*-6.1%*	*-3.3%*
Non-Appalachian Tennessee	91	80	75	66	*-3.2%*	*-6.2%*
Virginia	**93**	**71**	**69**	**64**	**-6.5%**	**-3.4%**
Appalachian Virginia	26	22	21	21	*-4.1%*	*-1.5%*
Non-Appalachian Virginia	67	49	48	43	*-7.5%*	*-4.3%*
West Virginia (entire state)	**60**	**50**	**47**	**46**	**-4.5%**	**-2.7%**

Source: FDIC, Summary of Deposits Download, 2015 – 2022.

Recently, the pace of bank contraction eased slightly, with banks declining at an annualized rate of -3.3% in Appalachia from 2019 to 2022 during the onset and immediately post-pandemic. Particularly between 2020 and 2022, the Region saw only a minimal -0.5% annualized decrease in the total number of banks. However, as discussed later in this report, despite this slight easing, the effect of consolidation on capital access has been lasting.

As depicted in Figure 4.2.1, small and mid-sized banks[51] made up a sizable portion of the FDIC-insured institutional landscape, accounting for 80% to 90% of banks in Appalachia from 2015 to 2022. Smaller-sized banks with assets of $1 billion and less play a pivotal role in supporting local businesses in Appalachia and are particularly vital in economically vulnerable or distressed rural areas within the Region. In 2022, these banks represented 97% of banks headquartered in Distressed counties and 81% of those in At-Risk counties in the Region. In Rural county types, small and mid-sized banks accounted for 85% of all banks, the highest percentage among all county types in 2022. Detail about density and location of banks and bank branches is discussed later in Section 6.2, providing additional nuance to the assessment of capital access.

51 Note: Small banks are defined as banks with assets totaling less than $250 million; mid-size banks have assets totaling between $250 million and $1 billion; large banks are defined as banks with assets over $1 billion.

4.2.1 Bank Lending

Congress passed the Community Reinvestment Act (CRA) in 1977 with the aim of prompting depository institutions to actively address the credit needs of the communities they serve. This includes low- and moderate-income neighborhoods, consistent with secure banking practices, and requires data reported on lending activity. [52] The bank lending data in this research is reported under these requirements.

Note: At the time of report publication, the Federal Reserve Board, the Federal Deposit Insurance Corporation, and the Office of the Comptroller of the Currency released new regulation (the "Final Rule") at the end of October 2023. The Final Rule changes will not take effect until January 2026, but will have significant implications for bank lending in Appalachia. Under the new rules, bank evaluation will now include digital banking and online lending activity, and banks will be assessed regardless of whether physical locations exist or not. Other changes to the CRA regulations will include higher standards for metrics and evaluation, and increased data collection and reporting requirements.

AGGREGATE BANK LENDING

Between 2015 and 2021, the Appalachian Region accounted for 4.8% of the total dollars of bank loans reported under CRA requirements and 4.3% of the loan volume nationally. The Region, as well as the broader United States, witnessed significant growth in bank lending during recent years, particularly during the onset of the pandemic. **The annualized growth rate of total bank lending amounts from 2019 to 2021 was 18.5%, much higher than the annualized rate of 2.6% from 2015 to 2019, prior to the pandemic.** The number of loans followed a similar trajectory both nationally and within the Appalachian Region. **However, the annualized growth in the number of loans from 2019 to 2022 in Appalachia slightly lagged that of the total dollar supply, which is supported by the deployment of higher loan sizes.**

Figure 4.2.1.1: Aggregate Bank Lending Dollar Amounts Reported Under the Community Reinvestment Act to Small Businesses in Appalachia, CAGR 2015 – 2021[53]

Bank Lending Dollar Amounts (in billions of $)	2015	2019	2021	Pre-COVID CAGR (2015 – 2019)	COVID CAGR (2019 – 2021)
United States	$876.5	$1,002	$1,417	3.4%	19.0%
Appalachian Region	$43.2	$47.9	$67.3	2.6%	18.5%
Appalachia as % U.S.	4.90%	4.80%	4.70%	-	-
Subregions					
Northern Appalachia	$15.2	$14.0	$21.4	-2.1%	23.6%
North Central Appalachia	$3.4	$3.7	$4.8	1.8%	13.8%
Central Appalachia	$1.2	$1.6	$2.3	8.5%	19.5%
South Central Appalachia	$8.8	$10.3	$14.7	4.0%	19.2%
Southern Appalachia	$14.5	$18.3	$24.2	5.9%	14.9%
County Types					
Large Metros (pop. 1 million +)	$12.2	$14.6	$20.9	4.6%	19.6%
Small Metros (pop. <1 million)	$19.5	$22.2	$31.0	3.2%	18.2%
Nonmetro, Adj. to Large Metros	$2.8	$2.9	$4.1	0.2%	19.2%
Nonmetro, Adj. to Small Metros	$5.5	$5.1	$7.1	-1.6%	17.1%
Rural (nonmetro, not adj. to metro)	$3.1	$3.2	$4.3	0.3%	16.9%

52 FFIEC Community Reinvestment Act. Accessed March 18, 2023. https://www.ffiec.gov/Cra/default.htm.
53 Note: Other years in analysis period can be referenced in the Appendix

Bank Lending Dollar Amounts (in billions of $)	2015	2019	2021	Pre-COVID CAGR (2015 – 2019)	COVID CAGR (2019 – 2021)
County Economic Status					
Distressed	**$1.1**	**$1.2**	**$1.7**	**3.6%**	**16.8%**
At-Risk	**$5.2**	**$5.0**	**$7.0**	**-1.1%**	**18.6%**
Transitional	**$32.3**	**$35.2**	**$50.4**	**2.2%**	**19.6%**
Competitive	**$2.8**	**$4.2**	**$5.4**	**10.0%**	**13.9%**
Attainment	**$1.7**	**$2.3**	**$2.8**	**8.0%**	**10.8%**
Alabama	**$9.8**	**$11.8**	**$15.6**	**4.8%**	**14.9%**
Appalachian Alabama	$5.5	$7.3	$9.0	*7.4%*	*11.2%*
Non-Appalachian Alabama	$4.3	$4.5	$6.6	*1.3%*	*20.5%*
Georgia	**$19.0**	**$22.6**	**$31.5**	**4.4%**	**18.2%**
Appalachian Georgia	$5.7	$7.1	$9.6	*5.9%*	*16.0%*
Non-Appalachian Georgia	$13.3	$15.5	$21.9	*3.8%*	*19.2%*
Kentucky	**$6.5**	**$7.9**	**$10.6**	**4.9%**	**16.3%**
Appalachian Kentucky	$.8	$1.0	$1.5	*7.9%*	*20.2%*
Non-Appalachian Kentucky	$5.7	$6.8	$9.1	*4.5%*	*15.7%*
Maryland	**$11.6**	**$12.5**	**$18.9**	**1.9%**	**23.0%**
Appalachian Maryland	$.5	$.4	$.7	*-4.4%*	*27.0%*
Non-Appalachian Maryland	$11.1	$12.1	$18.2	*2.1%*	*22.9%*
Mississippi	**$5.0**	**$5.6**	**$8.2**	**2.9%**	**20.8%**
Appalachian Mississippi	$1.1	$1.1	$1.4	*-0.3%*	*11.7%*
Non-Appalachian Mississippi	$3.9	$4.5	$6.8	*3.7%*	*22.9%*
New York	**$39.5**	**$48.3**	**$73.8**	**5.2%**	**23.6%**
Appalachian New York	$1.6	$1.4	$2.0	*-4.3%*	*19.3%*
Non-Appalachian New York	$37.9	$46.9	$71.9	*5.5%*	*23.8%*
North Carolina	**$22.7**	**$22.8**	**$33.1**	**0.1%**	**20.4%**
Appalachian North Carolina	$4.3	$3.9	$6.1	*-2.4%*	*24.8%*
Non-Appalachian North Carolina	$18.4	$18.9	$27.0	*0.7%*	*19.5%*
Ohio	**$22.3**	**$23.1**	**$32.2**	**0.9%**	**18.2%**
Appalachian Ohio	$2.5	$2.6	$3.7	*1.6%*	*18.1%*
Non-Appalachian Ohio	$19.8	$20.4	$28.5	*0.8%*	*18.2%*
Pennsylvania	**$27.5**	**$27.9**	**$41.0**	**0.4%**	**21.1%**
Appalachian Pennsylvania	$11.4	$10.4	$16.3	*-2.2%*	*24.9%*
Non-Appalachian Pennsylvania	$16.1	$17.5	$24.7	*2.1%*	*18.8%*
South Carolina	**$9.0**	**$10.5**	**$14.7**	**4.0%**	**18.4%**
Appalachian South Carolina	$2.3	$2.8	$4.2	*5.3%*	*22.8%*
Non-Appalachian South Carolina	$6.7	$7.7	$10.5	*3.6%*	*16.8%*
Tennessee	**$11.3**	**$14.9**	**$21.1**	**7.0%**	**19.1%**
Appalachian Tennessee	$4.0	$5.9	$8.0	*10.5%*	*16.4%*
Non-Appalachian Tennessee	$7.4	$9.0	$13.1	*5.0%*	*20.8%*
Virginia	**$16.2**	**$17.1**	**$23.9**	**1.3%**	**18.3%**
Appalachian Virginia	$.9	$1.0	$1.3	*3.0%*	*13.0%*
Non-Appalachian Virginia	$15.3	$16.1	$22.6	*1.2%*	*18.6%*
West Virginia (entire state)	**$2.7**	**$2.9**	**$3.7**	**1.7%**	**12.5%**

Source: Federal Financial Institutions Examination Council, Community Reinvestment Act Data Products, 2015 - 2021.

Figure 4.2.1.2: Total Number of Bank Loans Reported Under the Community Reinvestment Act to Small Businesses in Appalachia, CAGR 2015 – 2021

Bank Lending	2015	2019	2021	Pre-COVID CAGR (2015 – 2019)	COVID CAGR (2019 – 2021)
United States	**23,311,983**	**28,770,814**	**35,995,132**	**5.4%**	**11.9%**
Appalachian Region	**981,707**	**1,195,467**	**1,533,933**	**5.0%**	**13.3%**
Appalachia as % U.S.	**4.2%**	**4.2%**	**4.3%**	**-**	**-**
Subregions					
Northern Appalachia	**326,871**	**364,751**	**450,330**	**2.8%**	**11.1%**
North Central Appalachia	**72,865**	**88,509**	**102,899**	**5.0%**	**7.8%**
Central Appalachia	**40,015**	**51,157**	**70,427**	**6.3%**	**17.3%**
South Central Appalachia	**191,318**	**237,746**	**304,217**	**5.6%**	**13.1%**
Southern Appalachia	**350,638**	**453,304**	**606,060**	**6.6%**	**15.6%**
County Types					
Large Metros (pop. 1 million +)	**301,382**	**385,058**	**510,729**	**6.3%**	**15.2%**
Small Metros (pop. <1 million)	**406,580**	**504,559**	**631,865**	**5.5%**	**11.9%**
Nonmetro, Adj. to Large Metros	**66,973**	**79,659**	**100,486**	**4.4%**	**12.3%**
Nonmetro, Adj. to Small Metros	**130,719**	**139,707**	**177,069**	**1.7%**	**12.6%**
Rural (nonmetro, not adj. to metro)	**76,053**	**86,484**	**113,784**	**3.3%**	**14.7%**
County Economic Status					
Distressed	**32,489**	**39,798**	**52,404**	**5.2%**	**14.7%**
At-Risk	**123,084**	**133,990**	**167,832**	**2.1%**	**11.9%**
Transitional	**711,537**	**865,618**	**1,119,321**	**5.0%**	**13.7%**
Competitive	**68,811**	**93,826**	**118,027**	**8.1%**	**12.2%**
Attainment	**45,786**	**62,235**	**76,349**	**8.0%**	**10.8%**
Alabama	**183,302**	**225,206**	**297,090**	**5.3%**	**14.9%**
Appalachian Alabama	107,573	137,037	175,291	*6.2%*	*13.1%*
Non-Appalachian Alabama	75,729	88,169	121,799	*3.9%*	*17.5%*
Georgia	**532,031**	**685,490**	**990,442**	**6.5%**	**20.2%**
Appalachian Georgia	169,443	225,090	307,441	*7.4%*	*16.9%*
Non-Appalachian Georgia	362,588	460,400	683,001	*6.2%*	*21.8%*
Kentucky	**152,706**	**193,027**	**233,967**	**6.0%**	**10.1%**
Appalachian Kentucky	27,246	34,031	47,349	*5.7%*	*18.0%*
Non-Appalachian Kentucky	125,460	158,996	186,618	*6.1%*	*8.3%*
Maryland	**326,644**	**393,942**	**504,102**	**4.8%**	**13.1%**
Appalachian Maryland	10,336	12,165	16,853	*4.2%*	*17.7%*
Non-Appalachian Maryland	316,308	381,777	487,249	*4.8%*	*13.0%*
Mississippi	**98,394**	**122,572**	**193,707**	**5.6%**	**25.7%**
Appalachian Mississippi	21,162	22,442	32,583	*1.5%*	*20.5%*
Non-Appalachian Mississippi	77,232	100,130	161,124	*6.7%*	*26.9%*
New York	**1,288,283**	**1,639,146**	**1,977,188**	**6.2%**	**9.8%**
Appalachian New York	36,058	38,625	46,977	*1.7%*	*10.3%*
Non-Appalachian New York	1,252,225	1,600,521	1,930,211	*6.3%*	*9.8%*

Bank Lending	2015	2019	2021	Pre-COVID CAGR (2015 – 2019)	COVID CAGR (2019 – 2021)
North Carolina	**482,110**	**593,629**	**789,644**	**5.3%**	**15.3%**
Appalachian North Carolina	91,591	107,146	135,087	*4.0%*	*12.3%*
Non-Appalachian North Carolina	390,519	486,483	654,557	*5.6%*	*16.0%*
Ohio	**463,538**	**554,705**	**677,453**	**4.6%**	**10.5%**
Appalachian Ohio	61,394	72,368	83,716	*4.2%*	*7.6%*
Non-Appalachian Ohio	402,144	482,337	593,737	*4.7%*	*10.9%*
Pennsylvania	**590,730**	**698,957**	**887,491**	**4.3%**	**12.7%**
Appalachian Pennsylvania	242,832	269,269	335,413	*2.6%*	*11.6%*
Non-Appalachian Pennsylvania	347,898	429,688	552,078	*5.4%*	*13.4%*
South Carolina	**201,070**	**263,299**	**352,918**	**7.0%**	**15.8%**
Appalachian South Carolina	52,460	68,735	90,745	*7.0%*	*14.9%*
Non-Appalachian South Carolina	148,610	194,564	262,173	*7.0%*	*16.1%*
Tennessee	**244,492**	**318,445**	**437,768**	**6.8%**	**17.2%**
Appalachian Tennessee	87,817	118,813	156,392	*7.9%*	*14.7%*
Non-Appalachian Tennessee	156,675	199,632	281,376	*6.2%*	*18.7%*
Virginia	**430,444**	**506,926**	**613,489**	**4.2%**	**10.0%**
Appalachian Virginia	22,173	25,709	32,064	*3.8%*	*11.7%*
Non-Appalachian Virginia	408,271	481,217	581,425	*4.2%*	*9.9%*
West Virginia (entire state)	**51,622**	**64,037**	**74,022**	**5.5%**	**7.5%**

Source: Federal Financial Institutions Examination Council, Community Reinvestment Act Data Products, 2015 - 2021.

The dollar amount of bank lending varied according to county type and economic status before and during the COVID-19 pandemic in Appalachia. Large Metro areas saw the most significant increases for total dollars lent, at an annualized growth rate of 19.6% from 2019 – 2022, surpassing the national figure of 19.0%. Rural regions grew 16.9% compounded annually from 2019 to 2022, a significant increase from the 0.3% annualized growth from 2015 to 2019. Similarly, Nonmetro counties adjusted from a -0.7% annualized decrease from 2015 to 2019 to an 18.2% annualized increase from 2019 to 2022. This trend has also been reflected in an increase in the number of bank loans to Rural and Nonmetro areas.

Furthermore, from 2019 to 2022, the overall amount of bank lending to Distressed and At-Risk counties grew considerably, outpacing annualized growth rates in economically strong Competitive and Attainment areas.

When compared to the period prior to the pandemic (between 2015 and 2019), all thirteen states in the Region reported an increase in bank lending activity from 2019 to 2021. The Appalachian portions of Pennsylvania, Tennessee, Alabama, Georgia, and North Carolina experienced the largest increases in the value and quantity of bank loans in 2021. Additionally, some states that experienced negative annualized growth rates prior to the pandemic had substantial improvements from 2019 to 2021. For example, before the pandemic, bank lending in Appalachian Mississippi declined by an annualized -0.3% from 2015 to 2019, compared to an 11.7% annualized increase from 2019 to 2021. Furthermore, throughout the pandemic, many Appalachian portions of states exceeded or matched the growth of non-Appalachian portions in the same states, including Kentucky, Maryland, North Carolina, Pennsylvania, and South Carolina.

Figure 4.2.1.3: Annualized Growth Rates (CAGR) of Total Dollar Amounts of Bank Lending in Appalachian States, CAGR 2015 – 2021

States	Pre-COVID CAGR (2015– 2019)	COVID CAGR (2019 – 2021)
Alabama	**4.8%**	**14.9%**
Appalachian Alabama	7.4%	11.2%
Non-Appalachian Alabama	1.3%	20.5%
Georgia	**4.4%**	**18.2%**
Appalachian Georgia	5.9%	16.0%
Non-Appalachian Georgia	3.8%	19.2%
Kentucky	**4.9%**	**16.3%**
Appalachian Kentucky	7.9%	20.2%
Non-Appalachian Kentucky	4.5%	15.7%
Maryland	**1.9%**	**23.0%**
Appalachian Maryland	-4.4%	27.0%
Non-Appalachian Maryland	2.1%	22.9%
Mississippi	**2.9%**	**20.8%**
Appalachian Mississippi	-0.3%	11.7%
Non-Appalachian Mississippi	3.7%	22.9%
New York	**5.2%**	**23.6%**
Appalachian New York	-4.3%	19.3%
Non-Appalachian New York	5.5%	23.8%
North Carolina	**0.1%**	**20.4%**
Appalachian North Carolina	-2.4%	24.8%
Non-Appalachian North Carolina	0.7%	19.5%
Ohio	**0.9%**	**18.2%**
Appalachian Ohio	1.6%	18.1%
Non-Appalachian Ohio	0.8%	18.2%
Pennsylvania	**0.4%**	**21.1%**
Appalachian Pennsylvania	-2.2%	24.9%
Non-Appalachian Pennsylvania	2.1%	18.8%
South Carolina	**4.0%**	**18.4%**
Appalachian South Carolina	5.3%	22.8%
Non-Appalachian South Carolina	3.6%	16.8%
Tennessee	**7.0%**	**19.1%**
Appalachian Tennessee	10.5%	16.4%
Non-Appalachian Tennessee	5.0%	20.8%
Virginia	**1.3%**	**18.3%**
Appalachian Virginia	3.0%	13.0%
Non-Appalachian Virginia	1.2%	18.6%
West Virginia (entire state)	**1.7%**	**12.5%**

Source: Federal Financial Institutions Examination Council, Community Reinvestment Act Data Products, 2015 - 2021.

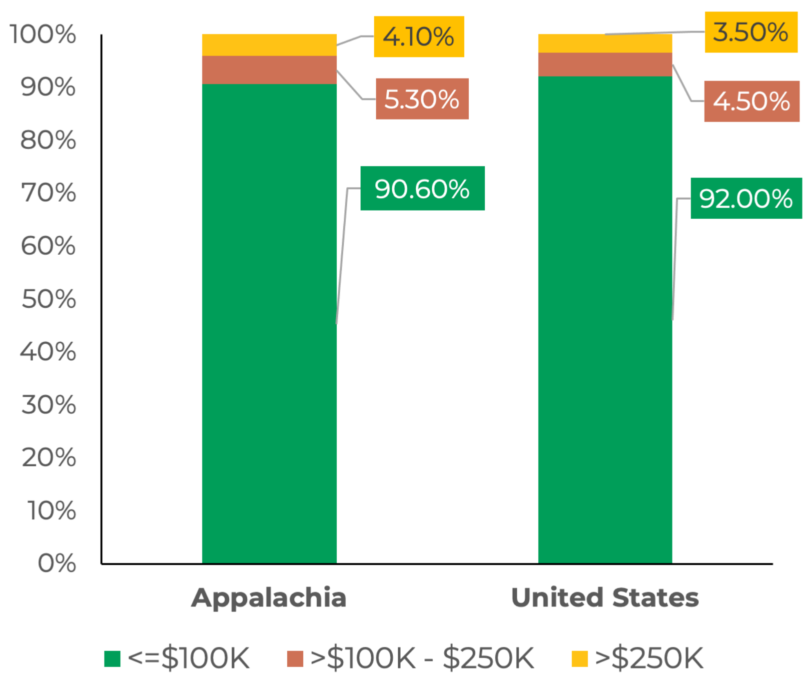
From 2015 through 2021, 90% of bank loans in Appalachia were less than or equal to $100,000, similar to the national lending landscape. Following the onset of the COVID-19 pandemic, the number of bank loans of all sizes increased. From 2019 to 2021, the largest gains in the Region were seen in the higher loan size categories, with a 28.0% increase in loans ranging from $100,000 to $250,000 and a 19.8% growth in loans exceeding $250,000.

Figure 4.2.1.4: Total Number of Bank Loans to Small Businesses by Loan Size in Appalachia, CAGR 2015 – 2022

Loan Size Distribution	2015	2019	2021	Pre-COVID CAGR (2015-2019)	COVID CAGR (2019-2021)
<=$100K	896,665	1,102,191	1,389,990	3.9%	12.3%
>$100K - $250K	43,827	49,338	80,884	2.3%	28.0%
>$250K	41,215	43,938	63,059	1.3%	19.8%

Source: Federal Financial Institutions Examination Council, Community Reinvestment Act Data Products, 2015 - 2021.

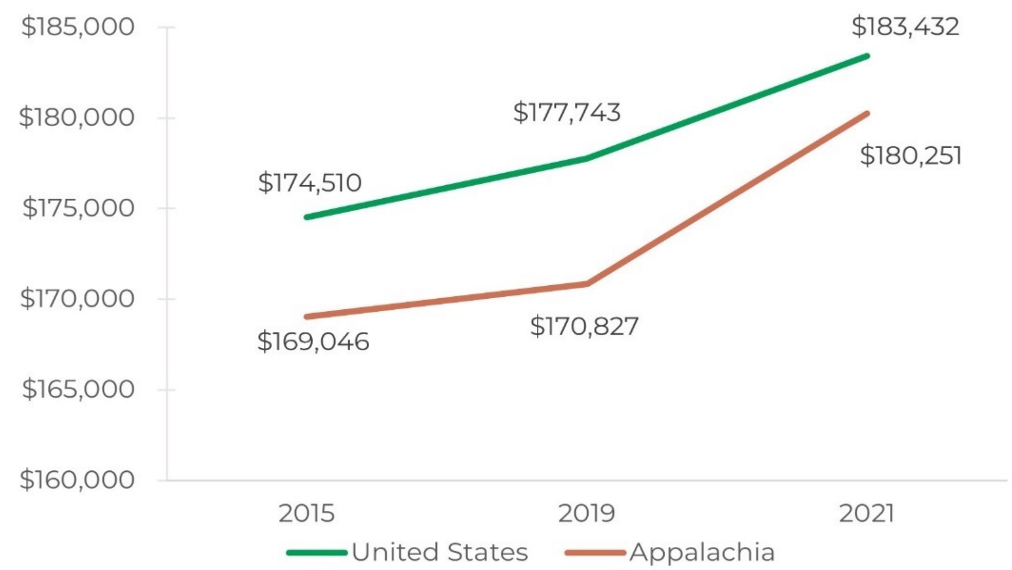
Figure 4.2.1.5: Total Number of Bank Loans as a Percent in Appalachia by Loan Size, 2021



Source: Federal Financial Institutions Examination Council, Community Reinvestment Act Data Products, 2015 - 2021.

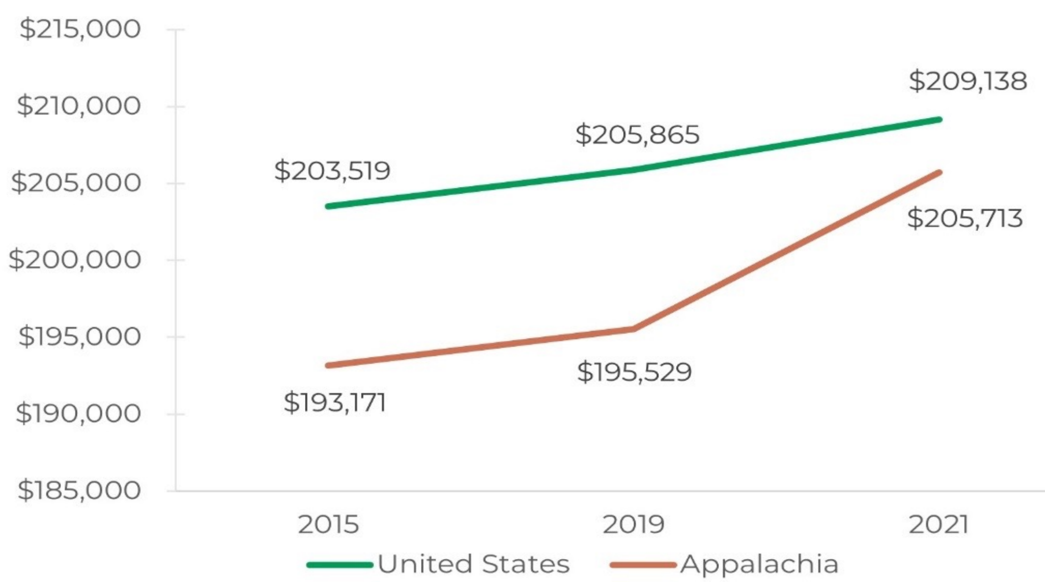
From 2015 to 2021, the United States consistently reported higher average and median bank loan sizes compared to Appalachia. Interestingly, the median loan size surpassed the average loan size figure both nationally and regionally. This suggests that substantial number of smaller-sized loans were skewing the average.

Figure 4.2.1.6: Mean (Average) Dollar Amount Per Bank Loan to Small Businesses in the United States and Appalachia, 2015 – 2022



oducts, 2015 - 2021.

Figure 4.2.1.7: Median Amount Per Loan to Small Businesses in the United States and Appalachia, 2015 – 2022



Source: Federal Financial Institutions Examination Council, Community Reinvestment Act Data Products, 2015 - 2021.

BANK LENDING PER SMALL BUSINESS

As seen in Figure 4.2.1.8, the bank lending amount per small business in Appalachia was $35,735 in 2020, which fell short of the national average of $50,980 per small business. Similarly, the number of bank loans per 10,000 small businesses was 5,882 in Appalachia that same year, while the national figure stood at 9,094. These differences highlight the challenges that small businesses in Appalachia encountered in securing as much bank financing when compared to businesses elsewhere in the country.

Over the period from 2017 to 2020, the bank lending amount per small business in Appalachia saw annualized increases of 22.5%, moving from $19,443 to $35,735, aligning with the national trend. During the same timeframe, the number of bank loans to smaller businesses in Appalachia saw more moderate annualized growth of 7.9%, slightly surpassing the national annualized rate of 7.7%. This suggests that while loan amounts increased significantly, the number of loans did not increase at the same pace, indicating a higher prevalence of larger bank loan sizes in the Region.

Additionally, when comparing the annualized growth rate of small businesses in Appalachia from 2017 to 2020 to the growth rate of lending per small business, it becomes evident that while the number of small businesses in the Region either decreased or grew very slowly, the amount of lending per small business increased. This implies that more lending was directed to existing small businesses during this period.

Within the Region, this data shows expected trends following population concentration and location of banks, as Metro areas averaged a higher dollar amount of lending per small business at $39,504, while Rural and Nonmetro areas trailed at an average of $26,823 in 2020. When considering economic status, Distressed and At-Risk counties within Appalachia displayed the lowest lending amount per small business.

Considering the Appalachian portions of the thirteen states, Appalachian Pennsylvania led with the highest dollar of lending per small business at $44,207. Across most states in the Region, lending per small business was notably higher in their respective non-Appalachian portions, with the exceptions of Maryland and South Carolina. Nevertheless, it is important to highlight that none of the 13 states (including both Appalachian and non-Appalachian portions) reached the national figures of $50,980 per small business or 9,094 loans per 10,000 small businesses, signifying lower bank lending activity in the Appalachian states compared to other parts of the country.

Figure 4.2.1.8: Total Bank Lending, Number of Establishments, Loan Amounts per Small Business, CAGR, 2017-2020

Total Small Business Bank Lending	2017 (in billions of $)	2017 # of SMBs	$ Loan per SMB (2017)	2020 (in billions of $)	2020 Number of SMBs	$ Loan per SMB (2020)	CAGR, $ per SMB (2017 - 2020)	CAGR, # of SMBs (2017-2020)
United States	**$912.1**	**33,563,720**	**$27,176**	**$1,792**	**35,148,794**	**$50,980**	**23.3%**	**1.6%**
Appalachian Region	**$44.2**	**2,275,474**	**$19,443**	**$84.5**	**2,363,544**	**$35,735**	**22.5%**	**1.3%**
Subregions								
Northern Appalachia	**$14.8**	**670,780**	**$22,094**	**$27.4**	**660,583**	**$41,509**	**23.4%**	**-0.5%**
North Central Appalachia	**$3.2**	**181,630**	**$17,836**	**$6.3**	**177,381**	**$35,356**	**25.6%**	**-0.8%**
Central Appalachia	**$1.4**	**136,964**	**$10,187**	**$2.7**	**136,208**	**$19,484**	**24.1%**	**-0.2%**
South Central Appalachia	**$9.2**	**473,108**	**$19,344**	**$17.9**	**493,835**	**$36,344**	**23.4%**	**1.4%**
Southern Appalachia	**$15.6**	**812,992**	**$19,232**	**$30.2**	**895,537**	**$33,688**	**20.5%**	**3.3%**
County Types								
Large Metros (pop. 1 million +)	**$13.3**	**623,600**	**$21,382**	**$26.3**	**671,264**	**$39,123**	**22.3%**	**2.5%**
Small Metros (pop. <1 million)	**$20.4**	**937,253**	**$21,773**	**$38.8**	**973,867**	**$39,884**	**22.4%**	**1.3%**
Nonmetro, Adjacent to Large Metros	**$2.7**	**187,832**	**$14,390**	**$5.1**	**190,344**	**$26,781**	**23.0%**	**0.4%**
Nonmetro, Adjacent to Small Metros	**$4.8**	**317,518**	**$15,142**	**$8.8**	**319,379**	**$27,621**	**22.2%**	**0.2%**
Rural (nonmetro, not adj. to a metro)	**$3.0**	**209,271**	**$14,297**	**$5.4**	**208,690**	**$26,066**	**22.2%**	**-0.1%**
County Economic Status								
Distressed	**$1.1**	**109,793**	**$10,341**	**$2.1**	**106,711**	**$19,470**	**23.5%**	**-0.9%**
At-Risk	**$4.7**	**310,847**	**$15,033**	**$9.2**	**313,108**	**$29,387**	**25.0%**	**0.2%**
Transitional	**$32.9**	**1,610,925**	**$20,451**	**$62.6**	**1,673,872**	**$37,417**	**22.3%**	**1.3%**
Competitive	**$3.4**	**159,155**	**$21,543**	**$6.8**	**175,301**	**$38,877**	**21.7%**	**3.3%**
Attainment	**$2.1**	**84,754**	**$24,323**	**$3.7**	**94,552**	**$39,517**	**17.6%**	**3.7%**
Alabama	**$10.2**	**429,609**	**$23,654**	**$18.6**	**450,520**	**$41,254**	**20.4%**	**1.6%**
Appalachian Alabama	$6.2	274,267	$22,450	$11.3	288,524	$39,275	*20.5%*	*1.7%*
Non-Appalachian Alabama	$4.0	155,342	$25,779	$7.3	161,996	$44,779	*20.2%*	*1.4%*
Georgia	**$20.3**	**1,146,937**	**$17,656**	**$38.9**	**1,278,779**	**$30,381**	**19.8%**	**3.7%**
Appalachian Georgia	$6.2	365,200	$16,852	$11.9	417,387	$28,555	*19.2%*	*4.6%*
Non-Appalachian Georgia	$14.1	781,737	$18,032	$26.9	861,392	$31,266	*20.1%*	*3.3%*
Kentucky	**$7.5**	**381,468**	**$19,784**	**$13.0**	**388,673**	**$33,442**	**19.1%**	**0.6%**
Appalachian Kentucky	$.9	90,492	$9,674	$1.6	89,972	$18,248	*23.6%*	*-0.2%*
Non-Appalachian Kentucky	$6.7	290,976	$22,928	$11.4	298,701	$38,019	*18.4%*	*0.9%*
Maryland	**$11.6**	**635,716**	**$18,275**	**$25.1**	**670,965**	**$37,379**	**26.9%**	**1.8%**
Appalachian Maryland	$.4	19,986	$21,885	$.8	20,310	$41,232	*23.5%*	*0.5%*
Non-Appalachian Maryland	$11.2	615,730	$18,158	$24.2	650,655	$37,258	*27.1%*	*1.9%*
Mississippi	**$5.2**	**278,282**	**$18,777**	**$10.0**	**282,412**	**$35,450**	**23.6%**	**0.5%**
Appalachian Mississippi	$1.1	54,830	$19,285	$1.9	56,028	$33,342	*20.0%*	*0.7%*
Non-Appalachian Mississippi	$4.2	223,452	$18,652	$8.1	226,384	$35,971	*24.5%*	*0.4%*

Total Small Business Bank Lending	2017 (in billions of $)	2017 # of SMBs	$ Loan per SMB (2017)	2020 (in billions of $)	2020 Number of SMBs	$ Loan per SMB (2020)	CAGR, $ per SMB (2017 - 2020)	CAGR, # of SMBs (2017-2020)
New York	**$44.4**	**2,296,035**	**$19,318**	**$90.5**	**2,290,752**	**$39,512**	**26.9%**	**-0.1%**
Appalachian New York	$1.4	80,656	$17,573	$2.5	77,305	$32,005	*22.1%*	*-1.4%*
Non-Appalachian New York	$42.9	2,215,379	$19,381	$88.0	2,213,447	$39,774	*27.1%*	*0.0%*
North Carolina	**$21.1**	**992,614**	**$21,292**	**$41.0**	**1,066,960**	**$38,415**	**21.7%**	**2.4%**
Appalachian North Carolina	$3.8	201,092	$18,819	$7.5	207,769	$36,192	*24.4%*	*1.1%*
Non-Appalachian North Carolina	$17.4	791,522	$21,920	$33.5	859,191	$38,953	*21.1%*	*2.8%*
Ohio	**$23.0**	**1,037,104**	**$22,200**	**$43.3**	**1,058,769**	**$40,909**	**22.6%**	**0.7%**
Appalachian Ohio	$2.5	160,823	$15,629	$5.1	160,023	$32,000	*27.0%*	*-0.2%*
Non-Appalachian Ohio	$20.5	876,281	$23,406	$38.2	898,746	$42,495	*22.0%*	*0.8%*
Pennsylvania	**$27.5**	**1,149,710**	**$23,919**	**$53.3**	**1,156,400**	**$46,089**	**24.4%**	**0.2%**
Appalachian Pennsylvania	$11.3	475,205	$23,747	$20.7	468,195	$44,207	*23.0%*	*-0.5%*
Non-Appalachian Pennsylvania	$16.2	674,505	$24,041	$32.6	688,205	$47,369	*25.4%*	*0.7%*
South Carolina	**$9.2**	**459,785**	**$19,918**	**$17.4**	**507,520**	**$34,198**	**19.7%**	**3.3%**
Appalachian South Carolina	$2.3	118,695	$19,098	$5.1	133,598	$37,801	*25.6%*	*4.0%*
Non-Appalachian South Carolina	$6.9	341,090	$20,204	$12.3	373,922	$32,911	*17.7%*	*3.1%*
Tennessee	**$13.4**	**660,820**	**$20,284**	**$25.2**	**706,007**	**$35,713**	**20.8%**	**2.2%**
Appalachian Tennessee	$4.9	256,088	$19,190	$9.5	270,725	$35,225	*22.4%*	*1.9%*
Non-Appalachian Tennessee	$8.5	404,732	$20,976	$15.7	435,282	$36,017	*19.7%*	*2.5%*
Virginia	**$16.1**	**817,639**	**$19,634**	**$31.7**	**868,946**	**$36,475**	**22.9%**	**2.0%**
Appalachian Virginia	$.9	53,741	$16,608	$1.7	53,794	$31,754	*24.1%*	*0.0%*
Non-Appalachian Virginia	$15.2	763,898	$19,847	$30.0	815,152	$36,787	*22.8%*	*2.2%*
West Virginia (entire state)	**$2.5**	**124,399**	**$19,998**	**$4.8**	**119,914**	**$39,678**	**25.7%**	**-1.2%**

Source: Federal Financial Institutions Examination Council, Community Reinvestment Act Data Products, 2015 - 2021.

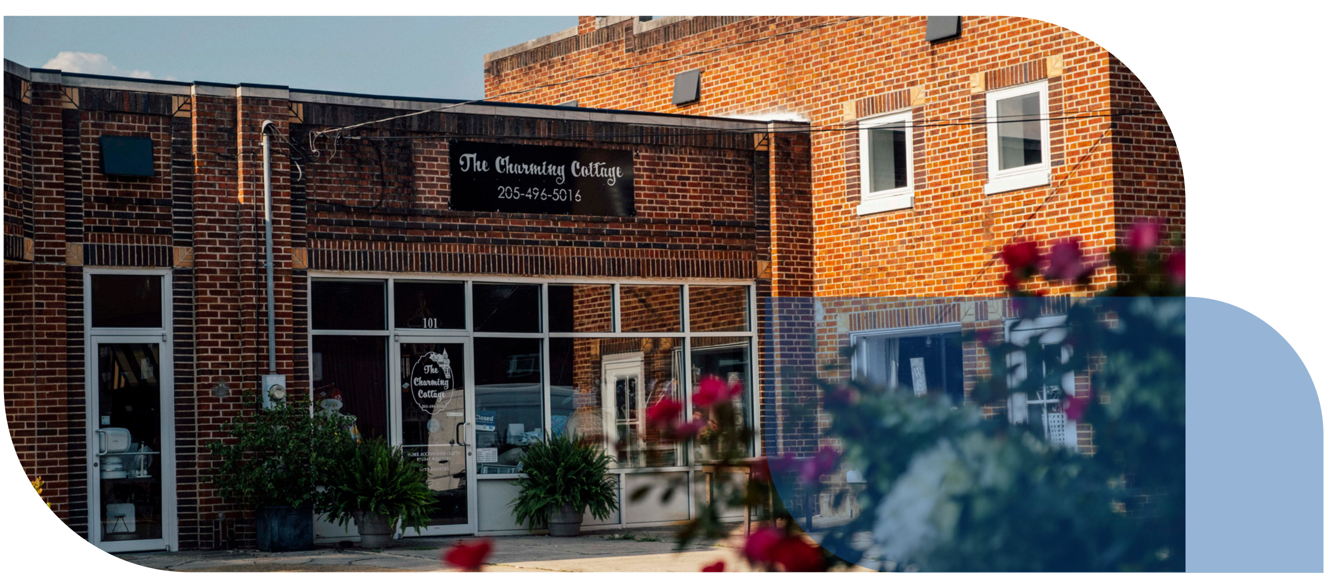
Figure 4.2.1.9: Total Number of Bank Loans, Establishments, and Number of Loans per 10,000 Small Businesses, CAGR 2017 - 2020

Total Small Business Bank lending	2017 Number of Loans	2017 Number of SMBs	Number of Loans per 10,000 SMBs (2017)	2020 Number of Loans	2020 Number of SMBs	Number of Loans per 10,000 SMBs (2020)	CAGR, # per 10,000 SMBs (2017 - 2020)	CAGR, # of SMBs (2017-2020)
United States	**24,401,591**	**33,563,720**	**7,270**	**31,964,085**	**35,148,794**	**9,094**	**7.7%**	**1.6%**
Appalachian Region	**1,065,405**	**2,275,474**	**4,682**	**1,390,196**	**2,363,544**	**5,882**	**7.9%**	**1.3%**
Subregions			-					
Northern Appalachia	**350,015**	**670,780**	**5,218**	**430,175**	**660,583**	**6,512**	**7.7%**	**-0.5%**
North Central Appalachia	**74,319**	**181,630**	**4,092**	**97,786**	**177,381**	**5,513**	**10.4%**	**-0.8%**
Central Appalachia	**43,821**	**136,964**	**3,199**	**54,244**	**136,208**	**3,982**	**7.6%**	**-0.2%**
South Central Appalachia	**204,248**	**473,108**	**4,317**	**280,788**	**493,835**	**5,686**	**9.6%**	**1.4%**
Southern Appalachia	**393,002**	**812,992**	**4,834**	**527,203**	**895,537**	**5,887**	**6.8%**	**3.3%**

Total Small Business Bank lending	2017 Number of Loans	2017 Number of SMBs	Number of Loans per 10,000 SMBs (2017)	2020 Number of Loans	2020 Number of SMBs	Number of Loans per 10,000 SMBs (2020)	CAGR, # per 10,000 SMBs (2017 - 2020)	CAGR, # of SMBs (2017-2020)
County Types			-					
Large Metros (pop. 1 million +)	**348,166**	**623,600**	**5,583**	**447,454**	**671,264**	**6,666**	**6.1%**	**2.5%**
Small Metros (pop. <1 million)	**445,578**	**937,253**	**4,754**	**592,885**	**973,867**	**6,088**	**8.6%**	**1.3%**
Nonmetro, Adjacent to Large Metros	**71,930**	**187,832**	**3,829**	**90,447**	**190,344**	**4,752**	**7.5%**	**0.4%**
Nonmetro, Adjacent to Small Metros	**122,529**	**317,518**	**3,859**	**156,794**	**319,379**	**4,909**	**8.4%**	**0.2%**
Rural (nonmetro, not adj. to a metro)	**77,202**	**209,271**	**3,689**	**102,616**	**208,690**	**4,917**	**10.1%**	**-0.1%**
County Economic Status								
Distressed	**34,693**	**109,793**	**3,160**	**44,793**	**106,711**	**4,198**	**9.9%**	**-0.9%**
At-Risk	**120,122**	**310,847**	**3,864**	**153,496**	**313,108**	**4,902**	**8.3%**	**0.2%**
Transitional	**775,998**	**1,610,925**	**4,817**	**1,014,118**	**1,673,872**	**6,059**	**7.9%**	**1.3%**
Competitive	**79,956**	**159,155**	**5,024**	**107,259**	**175,301**	**6,119**	**6.8%**	**3.3%**
Attainment	**54,636**	**84,754**	**6,446**	**70,530**	**94,552**	**7,459**	**5.0%**	**3.7%**
Alabama	**200,562**	**429,609**	**4,668**	**276,711**	**450,520**	**6,142**	**9.6%**	**1.6%**
Appalachian Alabama	122,439	274,267	4,464	165,584	288,524	5,739	*8.7%*	*1.7%*
Non-Appalachian Alabama	78,123	155,342	5,029	111,127	161,996	6,860	*10.9%*	*1.4%*
Georgia	**593,298**	**1,146,937**	**5,173**	**789,569**	**1,278,779**	**6,174**	**6.1%**	**3.7%**
Appalachian Georgia	190,742	365,200	5,223	248,486	417,387	5,953	*4.5%*	*4.6%*
Non-Appalachian Georgia	402,556	781,737	5,150	541,083	861,392	6,281	*6.8%*	*3.3%*
Kentucky	**170,081**	**381,468**	**4,459**	**202,983**	**388,673**	**5,222**	**5.4%**	**0.6%**
Appalachian Kentucky	29,231	90,492	3,230	34,636	89,972	3,850	*6.0%*	*-0.2%*
Non-Appalachian Kentucky	140,850	290,976	4,841	168,347	298,701	5,636	*5.2%*	*0.9%*
Maryland	**345,337**	**635,716**	**5,432**	**438,400**	**670,965**	**6,534**	**6.3%**	**1.8%**
Appalachian Maryland	10,278	19,986	5,143	13,945	20,310	6,866	*10.1%*	*0.5%*
Non-Appalachian Maryland	335,059	615,730	5,442	424,455	650,655	6,524	*6.2%*	*1.9%*
Mississippi	**109,972**	**278,282**	**3,952**	**183,747**	**282,412**	**6,506**	**18.1%**	**0.5%**
Appalachian Mississippi	20,652	54,830	3,767	32,761	56,028	5,847	*15.8%*	*0.7%*
Non-Appalachian Mississippi	89,320	223,452	3,997	150,986	226,384	6,669	*18.6%*	*0.4%*
New York	**1,391,564**	**2,296,035**	**6,061**	**1,751,376**	**2,290,752**	**7,645**	**8.0%**	**-0.1%**
Appalachian New York	36,079	80,656	4,473	41,774	77,305	5,404	*6.5%*	*-1.4%*
Non-Appalachian New York	1,355,485	2,215,379	6,119	1,709,602	2,213,447	7,724	*8.1%*	*0.0%*

Total Small Business Bank lending	2017 Number of Loans	2017 Number of SMBs	Number of Loans per 10,000 SMBs (2017)	2020 Number of Loans	2020 Number of SMBs	Number of Loans per 10,000 SMBs (2020)	Annual Growth Rate # per 10,000 SMBs (2017 - 2020)	Annual Growth Rate # of SMBs (2017-2020)
North Carolina	**505,661**	**992,614**	**5,094**	**700,789**	**1,066,960**	**6,568**	**8.8%**	**2.4%**
Appalachian North Carolina	94,928	201,092	4,721	126,980	207,769	6,112	*9.0%*	*1.1%*
Non-Appalachian North Carolina	410,733	791,522	5,189	573,809	859,191	6,678	*8.8%*	*2.8%*
Ohio	**496,311**	**1,037,104**	**4,786**	**637,148**	**1,058,769**	**6,018**	**7.9%**	**0.7%**
Appalachian Ohio	65,007	160,823	4,042	80,871	160,023	5,054	*7.7%*	*-0.2%*
Non-Appalachian Ohio	431,304	876,281	4,922	556,277	898,746	6,189	*7.9%*	*0.8%*
Pennsylvania	**642,135**	**1,149,710**	**5,585**	**834,370**	**1,156,400**	**7,215**	**8.9%**	**0.2%**
Appalachian Pennsylvania	262,793	475,205	5,530	323,959	468,195	6,919	*7.8%*	*-0.5%*
Non-Appalachian Pennsylvania	379,342	674,505	5,624	510,411	688,205	7,417	*9.7%*	*0.7%*
South Carolina	**226,626**	**459,785**	**4,929**	**303,316**	**507,520**	**5,976**	**6.6%**	**3.3%**
Appalachian South Carolina	59,169	118,695	4,985	80,372	133,598	6,016	*6.5%*	*4.0%*
Non-Appalachian South Carolina	167,457	341,090	4,909	222,944	373,922	5,962	*6.7%*	*3.1%*
Tennessee	**271,387**	**660,820**	**4,107**	**392,977**	**706,007**	**5,566**	**10.7%**	**2.2%**
Appalachian Tennessee	99,002	256,088	3,866	139,952	270,725	5,170	*10.2%*	*1.9%*
Non-Appalachian Tennessee	172,385	404,732	4,259	253,025	435,282	5,813	*10.9%*	*2.5%*
Virginia	**441,848**	**817,639**	**5,404**	**544,713**	**868,946**	**6,269**	**5.1%**	**2.0%**
Appalachian Virginia	21,858	53,741	4,067	29,860	53,794	5,551	*10.9%*	*0.0%*
Non-Appalachian Virginia	419,990	763,898	5,498	514,853	815,152	6,316	*4.7%*	*2.2%*
West Virginia (entire state)	**53,227**	**124,399**	**4,279**	**71,016**	**119,914**	**5,922**	**11.4%**	**-1.2%**

Source: Federal Financial Institutions Examination Council, Community Reinvestment Act Data Products, 2015 - 2021.



CREDIT CARDS

The high concentration of smaller loans may be attributed in part to the inclusion of credit card debt in this data, which is often represented in the 'less than $50,000' category. While it is not possible to isolate small business credit card usage from the reported data[54], it is pertinent to examine the overall credit card lending trends. Credit cards can be an important resource for small businesses, acting as a stopgap for emergencies and building credit for the small business owner over time. However, business owners end up being responsible for balancing credit card usage with high interest rates and carried balances over time.

Rural Appalachians are less likely than the average national consumer to have a general-purpose credit card, according to the Consumer Financial Protection Bureau. In comparison to 80% of consumers nationally, just 71% of rural Appalachians and 63% of rural Appalachians residing in Persistent Poverty Counties (PPCs) have an open credit card. As seen in Figure 4.2.1.10, median credit card balances in rural Appalachia are only marginally lower than the national average, despite significantly lower family incomes.

Figure 4.2.1.10: Credit Card Usage in Rural Appalachia and Nationwide, 2021

	Rural Appalachian Persistent Poverty Counties	Appalachian Rural	Non-Appalachian Rural	Nationwide
Percent with credit card	63%	71%	74%	80%
Median balance ($)	$915	$1,011	$1,115	$1,207
Utilization rate	40%	35%	33%	31%
Percent delinquent	19%	15%	14%	14%

Source: Consumer Finances in Rural Appalachia, CFPB

Similarly, credit card users residing in rural Appalachia, particularly in rural PPCs exhibit higher utilization rates compared to cardholders across the nation. Credit card utilization rates, which are calculated by dividing the balance on the card by the credit limit, serve as a gauge of potential financial stress, and when they surpass 30%, they can negatively impact credit scores. The average credit card utilization rate nationwide hovers around 31%, but it is notably higher in rural Appalachian areas at 35%, even reaching 40% for the typical consumer in rural Appalachian PPCs.

An examination of credit card account data in the CFPB report indicates that credit card accounts held by rural Appalachians are considerably more likely to be revolving accounts, subjecting them to an average interest rate of over 20% each month.[55] These observations indicate that although credit card ownership is less common among rural Appalachians compared to the national average, those who do have credit cards often carry a heavier burden of credit card debt. This underscores the importance of reducing reliance on credit card lending for the financial well-being of small businesses.[56]

54 Note: This is partially because there is often no way to disentangle personal from business spending in the available data for an individual business owner

55 Note: In the CFPB report, they calculated the share of general-purpose credit card accounts in the Federal Reserve Board's Y-14 dataset that are revolving divided by the total number of revolving and transacting accounts in November 2021. This dataset contains monthly bank holding companies with total consolidated assets exceeding $50 billion. Among these accounts of Appalachian consumers, 80% are revolving (82% in rural Appalachia), while the national average outside of Appalachia is 76%. Average credit card interest rates are above 20% for consumers with a prime credit score (See https://files.consumerfinance.gov/f/documents/cfpb_consumer-credit-card-market-report_2021.pdf), such as the average rural Appalachian, and higher for those with lower credit scores.

56 Matthew Liu et al., "Consumer Finances in Rural Appalachia," Consumer Financial Protection Bureau, September 1, 2022, https://files.consumerfinance.gov/f/documents/cfpb_consumer-finances-in-rural-appalachia_report_2022-09.pdf.

4.3 Credit Union Landscape in Appalachia

Credit unions are important community assets, as the non-profit structures and membership orientations of these financial institutions can lead to stronger relationships with banking clients and more favorable terms for lending. Particularly in Appalachia, this innate cooperative structure aligns with the Region's strong local community values. The research uncovers the following key points about credit union lending in Appalachia:

- The credit union market, like banking institutions, has undergone consolidation. Since 2015, **the number of credit unions has decreased across Appalachia from 2015 to 2022, regardless of subregion, county type, economic status, or state.**
- From 2019 to 2022, credit union lending to small businesses saw annualized increases of 38.7% in the Region compared to 19.8% nationally, while loan volume saw annualized increases of 23.8% in Appalachia compared to 5.4% nationally. Notably, lending to rural counties in Appalachia saw annualized increases of 131.8% between 2019 and 2022.
- Credit union small business lending[57] in Appalachia totaled $390.3 million in 2022, or 9.4% of total United States small business lending by credit unions. This represents a significant increase in both dollar amount (from $103.8 million in 2017) and share of national lending (from 4.3% in 2017).

Appalachia's proportion of credit unions compared to all credit unions in United States stands at a notable 12%.[58] As shown in figure 4.3.1, when compared to other financial institutions, credit unions have the highest representation in Appalachia.

Figure 4.3.1: Institutions in Appalachia as a Percentage of the United States, 2022[59]

Type	# Appalachia	# United States	Appalachia as a % of U.S.
FDIC Banks	451	4,781	9.4%
CDFIs	91	1,262	7.2%
Credit Unions	572	4,760	12.0%
Small Businesses (2020)	2,363,544	35,148,794	6.7%

Source: United States Census Bureau, County Business Patterns, 2020; United States Census Bureau, Nonemployer Statistics, 2020; FDIC, Summary of Deposits Download; NCUA Federally Insured Credit Unions; CDFI Fund, List of Certified CDFIs.

However, much like the banking industry, the credit union market has undergone consolidation. The number of credit unions fell across Appalachia, regardless of subregion, county type, economic status, or state. As shown in Figure 4.3.2, Appalachia experienced a -3.6% annualized decrease in the number of total credit union institutions, declining from 738 in 2015 to 572 in 2022, slightly higher than the -3.3% reported for the United States. Rural counties in the Region, which have the fewest credit unions compared to other county types, experienced the greatest annualized declines of -5.9% during the pandemic from 2019 to 2022. Appalachia's Distressed and Attainment counties, which had the fewest credit unions by economic status, endured the greatest annualized declines of -9.6% and -12.6%, respectively, in the same time period.

57 Note: Credit Union small business loans include Member Commercial and Industrial loans granted or acquired Year-to-Date, and does not include PPP; additionally, this is lending by credit unions based in Appalachia, which we assume is mostly local, rather than lending to a business based in Appalachia.

58 Note: Not all credit unions engage in small business lending; also credit unions can also be CDFIs.

59 Data is not available for small businesses in 2022, however the ~7% figure is still aligned as the projected estimate for the number of small businesses in Appalachia for the years 2021 and 2022, in comparison to the broader U.S. This projection is based on historical data and CPB employer statistics. Additionally, it is important to acknowledge that there may be overlaps among these categories; for example, some FDIC-insured banks may also be classified as CDFIs.

Figure 4.3.2: Number of Credit Unions in Appalachia and the United States, CAGR 2015 - 2022

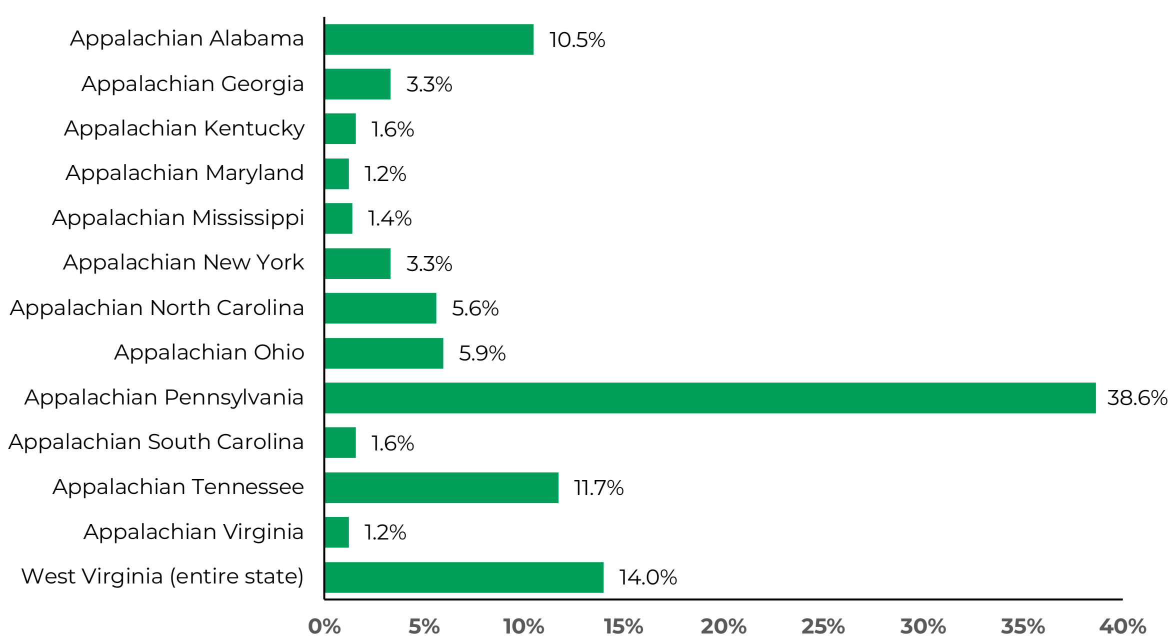
Total Number of Credit Unions	2015	2019	2022	Pre-COVID CAGR (2015 – 2019)	COVID CAGR (2019 – 2022)	7-Year CAGR (2015 – 2022)
United States	**6,001**	**5,226**	**4,760**	**-3.4%**	**-3.1%**	**-3.3%**
Appalachian Region	**738**	**651**	**572**	**-3.1%**	**-4.2%**	**-3.6%**
Subregions						
Northern Appalachia	**376**	**322**	**280**	**-3.8%**	**-4.6%**	**-4.1%**
North Central Appalachia	**93**	**87**	**84**	**-1.7%**	**-1.2%**	**-1.4%**
Central Appalachia	**33**	**31**	**24**	**-1.6%**	**-8.2%**	**-4.4%**
South Central Appalachia	**103**	**95**	**88**	**-2.0%**	**-2.5%**	**-2.2%**
Southern Appalachia	**133**	**116**	**96**	**-3.4%**	**-6.1%**	**-4.6%**
County Types						
Large Metros (pop. 1 million +)	**201**	**176**	**153**	**-3.3%**	**-4.6%**	**-3.8%**
Small Metros (pop. <1 million)	**338**	**305**	**272**	**-2.5%**	**-3.7%**	**-3.1%**
Nonmetro, Adj. to Large Metros	**61**	**54**	**49**	**-3.0%**	**-3.2%**	**-3.1%**
Nonmetro, Adj. to Small Metros	**86**	**74**	**63**	**-3.7%**	**-5.2%**	**-4.3%**
Rural (nonmetro, not adj. to metro)	**52**	**42**	**35**	**-5.2%**	**-5.9%**	**-5.5%**
County Economic Status						
Distressed	**25**	**23**	**17**	**-2.1%**	**-9.6%**	**-5.4%**
At-Risk	**117**	**105**	**89**	**-2.7%**	**-5.4%**	**-3.8%**
Transitional	**562**	**493**	**443**	**-3.2%**	**-3.5%**	**-3.3%**
Competitive	**28**	**24**	**19**	**-3.8%**	**-7.5%**	**-5.4%**
Attainment	**6**	**6**	**4**	**0.0%**	**-12.6%**	**-5.6%**
Alabama	**113**	**103**	**92**	**-2.3%**	**-3.7%**	**-2.9%**
Appalachian Alabama	72	68	60	*-1.4%*	*-4.1%*	*-2.6%*
Non-Appalachian Alabama	41	35	32	*-3.9%*	*-2.9%*	*-3.5%*
Georgia	**121**	**99**	**84**	**-4.9%**	**-5.3%**	**-5.1%**
Appalachian Georgia	30	24	19	*-5.4%*	*-7.5%*	*-6.3%*
Non-Appalachian Georgia	91	75	65	*-4.7%*	*-4.7%*	*-4.7%*
Kentucky	**72**	**63**	**55**	**-3.3%**	**-4.4%**	**-3.8%**
Appalachian Kentucky	13	11	9	*-4.1%*	*-6.5%*	*-5.1%*
Non-Appalachian Kentucky	59	52	46	*-3.1%*	*-4.0%*	*-3.5%*
Maryland	**90**	**80**	**71**	**-2.9%**	**-3.9%**	**-3.3%**
Appalachian Maryland	11	9	7	*-4.9%*	*-8.0%*	*-6.3%*
Non-Appalachian Maryland	79	71	64	*-2.6%*	*-3.4%*	*-3.0%*
Mississippi	**81**	**72**	**64**	**-2.9%**	**-3.9%**	**-3.3%**
Appalachian Mississippi	13	10	8	*-6.3%*	*-7.2%*	*-6.7%*
Non-Appalachian Mississippi	68	62	56	*-2.3%*	*-3.3%*	*-2.7%*
New York	**78**	**67**	**62**	**-3.7%**	**-2.6%**	**-3.2%**
Appalachian New York	23	19	19	*-4.7%*	*0.0%*	*-2.7%*
Non-Appalachian New York	55	48	43	*-3.3%*	*-3.6%*	*-3.5%*
North Carolina	**375**	**329**	**296**	**-3.2%**	**-3.5%**	**-3.3%**
Appalachian North Carolina	40	35	32	*-3.3%*	*-2.9%*	*-3.1%*
Non-Appalachian North Carolina	335	294	264	*-3.2%*	*-3.5%*	*-3.3%*

Total Number of Credit Unions	2015	2019	2022	Pre-COVID CAGR (2015 – 2019)	COVID CAGR (2019 – 2022)	7-Year CAGR (2015 – 2022)
Ohio	**250**	**210**	**176**	**-4.3%**	**-5.7%**	**-4.9%**
Appalachian Ohio	45	42	34	*-1.7%*	*-6.8%*	*-3.9%*
Non-Appalachian Ohio	205	168	142	*-4.9%*	*-5.5%*	*-5.1%*
Pennsylvania	**440**	**360**	**320**	**-4.9%**	**-3.9%**	**-4.4%**
Appalachian Pennsylvania	295	250	221	*-4.1%*	*-4.0%*	*-4.0%*
Non-Appalachian Pennsylvania	145	110	99	*-6.7%*	*-3.5%*	*-5.3%*
South Carolina	**68**	**59**	**47**	**-3.5%**	**-7.3%**	**-5.1%**
Appalachian South Carolina	18	14	9	*-6.1%*	*-13.7%*	*-9.4%*
Non-Appalachian South Carolina	50	45	38	*-2.6%*	*-5.5%*	*-3.8%*
Tennessee	**149**	**139**	**131**	**-1.7%**	**-2.0%**	**-1.8%**
Appalachian Tennessee	75	72	67	*-1.0%*	*-2.4%*	*-1.6%*
Non-Appalachian Tennessee	74	67	64	*-2.5%*	*-1.5%*	*-2.1%*
Virginia	**144**	**117**	**102**	**-5.1%**	**-4.5%**	**-4.8%**
Appalachian Virginia	12	11	7	*-2.2%*	*-14.0%*	*-7.4%*
Non-Appalachian Virginia	132	106	95	*-5.3%*	*-3.6%*	*-4.6%*
West Virginia (entire state)	**91**	**86**	**80**	**-1.4%**	**-2.4%**	**-1.8%**

Source: NCUA Federally Insured Credit Union, 2015 – 2022.

Of the twelve states with Appalachian and non-Appalachian portions, decreases in ten of the Appalachian portions of states were higher than in the non-Appalachian portions during the COVID-19 pandemic 2019 to 2022, most significantly in South Carolina, Virginia, Georgia, and Maryland. There was some fluctuation in the number of credit unions in Appalachian portions of states compared to non-Appalachian portions of states. However, as seen in Figure 4.3.3, the distribution of credit unions throughout the Region is unequal, with Appalachian Pennsylvania, West Virginia, and Tennessee having the greatest percentages (38.6%, 14.0%, and 11.7%, respectively).

Figure 4.3.3: Percentage of Credit Unions by State, 2022

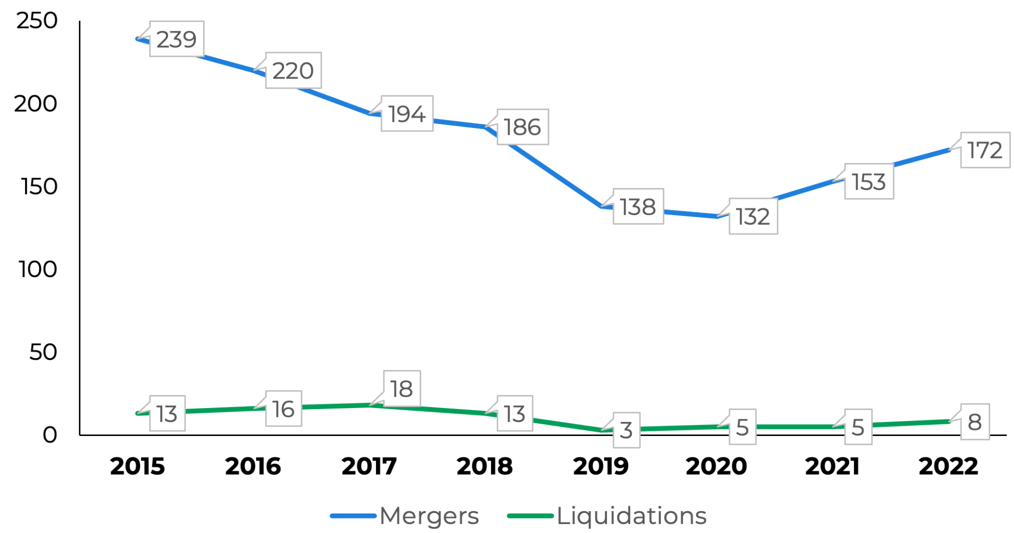


Source: NCUA Federally Insured Credit Unions, 2022.

Consolidation

Between 2015 and 2022, there were 1,434 credit union mergers in the United States, an average of 171 each year, and 81 liquidations, with an average of 10 each year.[60] These changes were primarily motivated by profitability during rising costs and a struggle to keep up with the variety of banking options provided by larger institutions. Some notable Appalachian mergers in 2021 include Tri Ag Federal Credit Union in Morgantown, West Virginia ($9.5 million in assets) merging with Pioneer Appalachia Federal Credit Union in Charleston, West Virginia ($214 million in assets) and Riverset Credit Union in Pittsburgh, Pennsylvania ($117.6 million in assets) merging with Allegent Community Federal Credit Union ($151.7 million, also in Pittsburgh).[61]

Figure 4.3.4: Number of Credit Union Mergers and Liquidations in the United States, 2015-2022

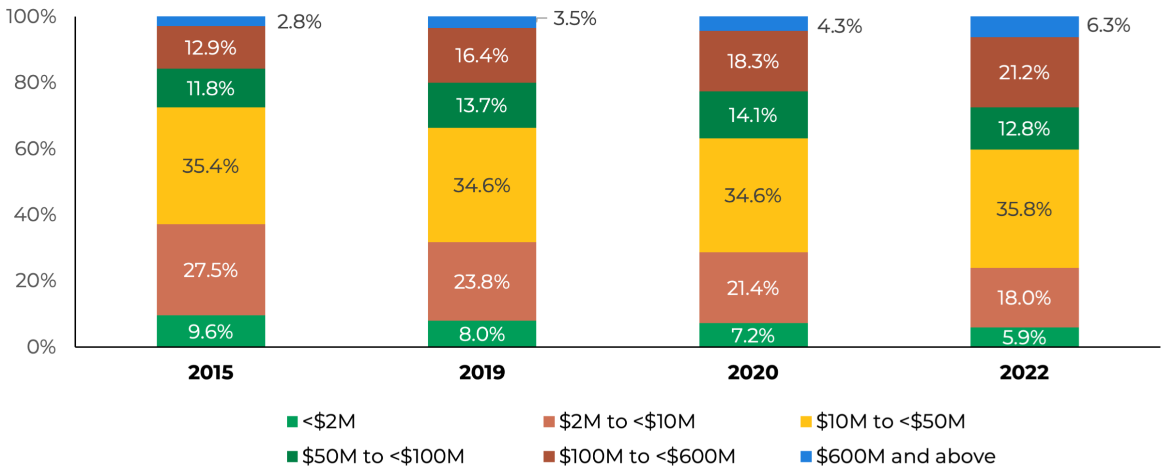


Source: National Credit Union Administration, Financial Trends in Federally Insured Credit Unions, 2015 – 2022.

As of April 2023, the National Credit Union Administration (NCUA) has issued only 26 new charters since 2014,[62] partly due to stringent capital requirements and limitations on services for new credit unions. In part because of these constraints, only four new credit unions received charters in 2021, which is noteworthy progress considering this is the same number that was chartered in the prior three years combined. As a reference, nine community banks were chartered in 2021, according to the FDIC.[63] In an attempt to boost growth, NCUA Vice Chairman Kyle Hauptman announced a "provisional charter" at a conference in March 2023, which aims to remove the barrier faced by new credit union organizers (who currently struggle to secure startup funding without an existing charter). Assuming this change is successful, it would be a welcome development for Appalachia if additional credit unions engaging in small business lending were chartered in states and counties without current representation.

60 "Financial Trends in Federally Insured Credit Unions," National Credit Union Administration, March 7, 2019, https://ncua.gov/analysis/credit-union-corporate-call-report-data/financial-trends-federally-insured-credit-unions.
61 Peter Strozniak, "NCUA Approves 43 Mergers During Q3 as Consolidations Climb," Credit Union Times, October 28, 2021, https://www.cutimes.com/2021/10/28/ncua-approves-43-mergers-during-q3-as-consolidations-climb/?slreturn=20230913170003; Will Hunt, "Credit Union Consolidation Continues," Credit Union Times, October 11, 2021, https://www.cutimes.com/2021/10/11/credit-union-consolidation-continues/?slreturn=20230827090414.
62 Ken McCarthy, "NCUA Grants Second Federal Charter of 2023," American Banker, April 28, 2023, https://www.americanbanker.com/creditunions/news/ncua-grants-second-federal-charter-of-2023.
63 Ken McCarthy, "Credit Union Startups Rise after NCUA Simplifies Chartering Rules," NewsRoom, January 6, 2022, https://www.honigman.com/media/news/3095_Credit%20union%20startups%20rise%20after%20NCUA%20simplifies%20chartering%20rules.pdf.

Figure 4.3.5: Percentage of Credit Unions in Appalachia by Asset Size, 2015, 2019, 2020, 2022



Source: CDFI ILR / CDFI Annual Certification, 2015 – 2022.

Figure 4.3.6: Credit Unions in Appalachia by Asset Size, CAGR, 2015 - 2022

Credit Union Asset Size	2015	2019	2020	2022	Pre-COVID CAGR (2015 - 2019)	COVID CAGR (2019 - 2022)	7-Year CAGR (2015-2022)
<$2M	71	52	45	34	-7.5%	-13.2%	-10.0%
$2M to <$10M	203	155	133	103	-6.5%	-12.7%	-9.2%
$10M to <$50M	261	225	215	205	-3.6%	-3.1%	-3.4%
$50M to <$100M	87	89	88	73	0.6%	-6.4%	-2.5%
$100M to <$600M	95	107	114	121	3.0%	4.2%	3.5%
$600M and above	21	23	27	36	2.3%	16.1%	8.0%
Total	738	651	622	572	-3.09%	-4.22%	-3.57%

Source: CDFI ILR / CDFI Annual Certification, 2015 – 2022.

The reduction in credit unions in Appalachia mostly impacted smaller institutions with assets under $10 million, while those with assets greater than $100 million grew annually from 2015 to 2022, as shown in Figure 4.3.5. The majority of credit unions in Appalachia have assets ranging from $2 million to $50 million, accounting for 53.8% of credit unions in 2022. However, the Region has fewer larger credit unions. For example, in 2022, the share of credit unions in Appalachia with assets higher than $100 million accounted for 27.5% of all credit unions, compared to 37.4% countrywide.

Figure 4.3.7: Total Number of Credit Unions in Appalachia by Asset Size, 2022

Credit Unions by Asset Size	Total Number of Credit Unions	Less than $2M		$2M to $10M		$10M to $50M		$50M to $100M		$100M to $600M		Greater than $600M	
		Number and Percentage		Number and Percentage		Number and Percentage		Number and Percentage		Number and Percentage		Number and Percentage	
United States	**4,760**	**294**	**6.2%**	**673**	**14.1%**	**1,357**	**28.5%**	**657**	**13.8%**	**1,142**	**24.0%**	**637**	**13.4%**
Appalachian Region	**572**	**34**	**5.9%**	**103**	**18.0%**	**205**	**35.8%**	**73**	**12.8%**	**121**	**21.2%**	**36**	**6.3%**
Subregions													
Northern Appalachia	**280**	**16**	**5.7%**	**54**	**19.3%**	**107**	**38.2%**	**39**	**13.9%**	**54**	**19.3%**	**10**	**3.6%**
North Central Appalachia	**84**	**8**	**9.5%**	**11**	**13.1%**	**37**	**44.0%**	**10**	**11.9%**	**17**	**20.2%**	**1**	**1.2%**
Central Appalachia	**24**	**3**	**12.5%**	**7**	**29.2%**	**7**	**29.2%**	**1**	**4.2%**	**2**	**8.3%**	**4**	**16.7%**
South Central Appalachia	**88**	**3**	**3.4%**	**12**	**13.6%**	**30**	**34.1%**	**12**	**13.6%**	**24**	**27.3%**	**7**	**8.0%**
Southern Appalachia	**96**	**4**	**4.2%**	**19**	**19.8%**	**24**	**25.0%**	**11**	**11.5%**	**24**	**25.0%**	**14**	**14.6%**
County Types													
Large Metros (pop. 1M +)	**153**	**11**	**7.2%**	**38**	**24.8%**	**59**	**38.6%**	**14**	**9.2%**	**22**	**14.4%**	**9**	**5.9%**
Small Metros (pop. <1 M)	**272**	**11**	**4.0%**	**38**	**14.0%**	**104**	**38.2%**	**31**	**11.4%**	**65**	**23.9%**	**23**	**8.5%**
Nonmetro, Adj. to Large Metros	**49**	**-**	**0.0%**	**10**	**20.4%**	**19**	**38.8%**	**5**	**10.2%**	**14**	**28.6%**	**1**	**2.0%**
Nonmetro, Adj. to Small Metros	**63**	**8**	**12.7%**	**11**	**17.5%**	**22**	**34.9%**	**4**	**6.3%**	**15**	**23.8%**	**3**	**4.8%**
Rural (nonmetro, not adj.)	**35**	**4**	**11.4%**	**6**	**17.1%**	**17**	**48.6%**	**3**	**8.6%**	**5**	**14.3%**	**-**	**0.0%**
Economic Status													
Distressed	**17**	**4**	**23.5%**	**4**	**23.5%**	**5**	**29.4%**	**-**	**0.0%**	**4**	**23.5%**	**-**	**0.0%**
At-Risk	**89**	**9**	**10.1%**	**24**	**27.0%**	**31**	**34.8%**	**6**	**6.7%**	**16**	**18.0%**	**3**	**3.4%**
Transitional	**443**	**20**	**4.5%**	**73**	**16.5%**	**165**	**37.2%**	**64**	**14.4%**	**92**	**20.8%**	**29**	**6.5%**
Competitive	**19**	**1**	**5.3%**	**2**	**10.5%**	**4**	**21.1%**	**3**	**15.8%**	**7**	**36.8%**	**2**	**10.5%**
Attainment	**4**	**-**	**0.0%**	**-**	**0.0%**	**-**	**0.0%**	**-**	**0.0%**	**2**	**50.0%**	**2**	**50.0%**
Alabama	**92**	**4**	**2.2%**	**19**	**15.9%**	**26**	**26.4%**	**10**	**7.5%**	**19**	**28.3%**	**14**	**19.7%**
Appalachian Alabama	60	2	*1.6%*	13	*16.2%*	15	*24.2%*	6	*9.0%*	14	*28.9%*	10	*20.1%*
Non-Appalachian Alabama	32	2	*3.3%*	6	*15.2%*	11	*31.1%*	4	*4.5%*	5	*26.9%*	4	*18.9%*
Georgia	**84**	**7**	**5.5%**	**17**	**15.7%**	**21**	**24.6%**	**9**	**11.8%**	**22**	**27.7%**	**8**	**14.6%**
Appalachian Georgia	19	1	*2.7%*	3	*8.7%*	5	*36.3%*	3	*11.2%*	4	*21.7%*	3	*19.4%*
Non-Appalachian Georgia	65	6	*6.4%*	14	*17.9%*	16	*21.0%*	6	*11.9%*	18	*29.6%*	5	*13.1%*
Kentucky	**55**		**0.0%**	**9**	**7.1%**	**20**	**38.8%**	**10**	**20.3%**	**11**	**26.6%**	**5**	**7.3%**
Appalachian Kentucky	9	-	*0.0%*	3	*14.2%*	3	*23.6%*	-	*0.0%*	2	*52.0%*	1	*10.2%*
Non-Appalachian Kentucky	46	-	*0.0%*	6	*6.0%*	17	*41.2%*	10	*23.5%*	9	*22.6%*	4	*6.8%*
Maryland	**71**	**2**	**3.7%**	**7**	**9.4%**	**19**	**29.1%**	**6**	**8.7%**	**23**	**25.5%**	**14**	**23.6%**
Appalachian Maryland	7	-	*0.0%*		*0.0%*	1	*14.1%*	1	*9.5%*	5	*76.4%*	-	*0.0%*
Non-Appalachian Maryland	64	2	*3.9%*	7	*9.9%*	18	*30.0%*	5	*8.7%*	18	*22.4%*	14	*25.0%*

Credit Unions by Asset Size	Total Number of Credit Unions	Less than $2M		$2M to $10M		$10M to $50M		$50M to $100M		$100M to $600M		Greater than $600M	
		Number and Percentage		Number and Percentage		Number and Percentage		Number and Percentage		Number and Percentage		Number and Percentage	
Mississippi	**64**	**6**	**9.4%**	**17**	**25.8%**	**23**	**39.0%**	**5**	**6.3%**	**12**	**19.0%**	**1**	**0.5%**
Appalachian Mississippi	8	1	*15.7%*	3	*32.4%*	3	*43.4%*	-	*0.0%*	1	*8.5%*	-	*0.0%*
Non-Appalachian Mississippi	56	5	*8.4%*	14	*24.8%*	20	*38.3%*	5	*7.3%*	11	*20.7%*	1	*0.6%*
New York	**62**	**2**	**3.3%**	**5**	**11.0%**	**17**	**31.5%**	**13**	**16.3%**	**15**	**24.6%**	**10**	**13.4%**
Appalachian New York	19	-	*0.0%*	2	*9.5%*	7	*34.3%*	2	*9.9%*	6	*42.6%*	2	*3.6%*
Non-Appalachian New York	43	2	*5.1%*	3	*11.8%*	10	*29.9%*	11	*19.7%*	9	*14.8%*	8	*18.7%*
North Carolina	**296**	**34**	**12.1%**	**37**	**12.2%**	**98**	**31.6%**	**44**	**12.9%**	**54**	**17.5%**	**29**	**13.8%**
Appalachian North Carolina	32	-	*0.0%*	4	*17.3%*	13	*33.1%*	4	*11.3%*	6	*16.3%*	5	*22.0%*
Non-Appalachian North Carolina	264	34	*13.4%*	33	*11.6%*	85	*31.4%*	40	*13.1%*	48	*17.6%*	24	*12.9%*
Ohio	**176**	**10**	**4.2%**	**21**	**10.4%**	**60**	**31.8%**	**28**	**15.4%**	**44**	**26.2%**	**13**	**11.9%**
Appalachian Ohio	34	5	*14.7%*	6	*12.7%*	9	*19.2%*	2	*3.6%*	10	*43.2%*	2	*6.6%*
Non-Appalachian Ohio	142	5	*1.6%*	15	*9.8%*	51	*35.0%*	26	*18.5%*	34	*21.9%*	11	*13.3%*
Pennsylvania	**320**	**25**	**8.5%**	**62**	**19.1%**	**104**	**31.7%**	**47**	**12.0%**	**60**	**19.1%**	**22**	**9.6%**
Appalachian Pennsylvania	221	12	*7.6%*	46	*21.3%*	87	*43.4%*	33	*7.5%*	40	*19.2%*	3	*1.0%*
Non-Appalachian Pennsylvania	99	13	*9.7%*	16	*16.3%*	17	*16.6%*	14	*17.7%*	20	*18.9%*	19	*20.8%*
South Carolina	**47**		**0.0%**	**5**	**12.6%**	**9**	**17.6%**	**11**	**28.5%**	**11**	**28.7%**	**11**	**12.7%**
Appalachian South Carolina	9	-	*0.0%*		*0.0%*	1	*15.0%*	2	*26.1%*	5	*58.6%*	1	*0.3%*
Non-Appalachian South Carolina	38	-	*0.0%*	5	*14.4%*	8	*18.0%*	9	*28.8%*	6	*24.3%*	10	*14.5%*
Tennessee	**131**	**6**	**5.1%**	**19**	**15.5%**	**46**	**38.9%**	**20**	**14.5%**	**27**	**18.6%**	**13**	**7.3%**
Appalachian Tennessee	67	1	*2.5%*	9	*16.7%*	22	*38.1%*	11	*16.4%*	16	*18.3%*	8	*8.1%*
Non-Appalachian Tennessee	64	5	*7.7%*	10	*14.5%*	24	*39.6%*	9	*12.7%*	11	*19.0%*	5	*6.5%*
Virginia	**102**	**8**	**6.1%**	**14**	**11.5%**	**20**	**23.0%**	**14**	**22.0%**	**29**	**24.0%**	**17**	**13.5%**
Appalachian Virginia	7	2	*19.3%*	2	*23.7%*	1	*5.4%*	-	*0.0%*	2	*51.6%*	-	*0.0%*
Non-Appalachian Virginia	95	6	*5.2%*	12	*10.6%*	19	*24.1%*	14	*23.5%*	27	*22.1%*	17	*14.4%*
West Virginia	**80**	**10**	**16.5%**	**12**	**18.4%**	**38**	**42.4%**	**9**	**12.5%**	**10**	**9.3%**	**1**	**0.9%**

Source: CDFI ILR / CDFI Annual Certification, 2022.

While still representing the highest share of lending institutions in Appalachia, there is a declining presence of credit unions in Appalachia. Credit unions have traditionally played a crucial role in providing core financial services to underbanked populations, especially in rural areas, where small and mid-sized businesses heavily rely on them. Historically, credit unions, deeply embedded in the community, extended loans based on "soft information," like reputation, in contrast to the data-intensive approach of larger banks.

However, recent bank failures, including Silicon Valley Bank, Signature Bank, and First Republic Bank, have raised concerns about smaller institutions' willingness to extend credit. This trend could compel rural business owners to turn to larger banks lacking community knowledge, further limiting their options. A lending freeze, coupled with the decline of credit unions, could have dire consequences for communities and small businesses. As a result, in an environment of lower transactions and labor issues, Appalachian credit unions must discover innovative strategies to maintain their existence and operations.[64]

4.3.1 Credit Union Lending

Note: Due to constraints in available data, it is important to acknowledge that the credit union lending analysis provided in this report may not fully capture the entirety of credit union small business lending, as credit unions have not historically been required to report lending activity under the Community Reinvestment Act (additional detail in Appendix).

AGGREGATE CREDIT UNION LENDING

Although the presence of credit unions has declined, credit union small business lending[65] in Appalachia totaled $390.3 million in 2022, or 9.4% of total United States small business lending by credit unions. This represents growth in both dollar amount ($103.8 million in 2017) and share of national lending (4.3% in 2017). Similarly, the share of credit union loans in Appalachia increased from 5.0% in 2017 to 9.2% by 2022.

Credit union lending and loan deployment growth have significantly outperformed national data over time, spanning both the pre-COVID and pandemic eras. From 2019 to 2022, credit union lending to small businesses saw annualized increases of 38.7% in the Region compared to 19.8% nationally, while loan volume saw annualized increases of 23.8% in Appalachia compared to 5.4% nationally. Notably, lending to Rural counties in Appalachia had annualized growth of 131.8% between 2019 and 2022. However, in 2022, the rural aggregate loan total was significantly smaller at $3.7 million compared to $241.7 million for Large Metro areas.

64 Simon Powley, "How Innovation Is Reshaping the Landscape of Rural Banking in the U.S.," Credit Union Times, July 3, 2023, https://www.cutimes.com/2023/07/03/how-innovation-is-reshaping-the-landscape-of-rural-banking-in-the-u-s/.
65 Note: Credit Union small business loans include Member Commercial and Industrial loans granted or acquired Year-to-Date, and does not include PPP; additionally, this is lending by credit unions based in Appalachia, which we assume is mostly local, rather than lending to a business based in Appalachia.

Figure 4.3.1.1: Total Dollar Amount of Loans by Credit Unions, CAGR, 2017 - 2022[66]

Credit Union Lending, Dollar Amounts (in millions of $)	2017	2019	2022	Pre-COVID CAGR (2017 - 2019)	COVID CAGR (2019 - 2022)
United States	**$2,436**	**$2,410**	**$4,140**	**-0.5%**	**19.8%**
Appalachian Region	**$103.8**	**$146.2**	**$390.3**	**18.7%**	**38.7%**
Appalachia as % of U.S.	**4.30%**	**6.10%**	**9.40%**	**-**	**-**
Subregions					
Northern Appalachia	**$54.1**	**$46.3**	**$48.2**	**-7.5%**	**1.4%**
North Central Appalachia	**$4.2**	**$3.0**	**$12.2**	**-16.2%**	**60.2%**
Central Appalachia	**$13.2**	**$3.6**	**$7.5**	**-47.5%**	**27.3%**
South Central Appalachia	**$20.7**	**$26.7**	**$50.6**	**13.7%**	**23.7%**
Southern Appalachia	**$11.6**	**$66.6**	**$271.9**	**139.6%**	**59.8%**
County Types					
Large Metros (pop. 1 million +)	**$3.6**	**$46.3**	**$241.7**	**256.3%**	**73.5%**
Small Metros (pop. <1 million)	**$81.3**	**$87.4**	**$115.0**	**3.7%**	**9.6%**
Nonmetro, Adj. to Large Metros	**$12.4**	**$6.7**	**$14.0**	**-26.8%**	**28.0%**
Nonmetro, Adj. to Small Metros	**$6.4**	**$5.5**	**$16.0**	**-6.9%**	**42.2%**
Rural (nonmetro, not adj. to metro)	**-**	**$0.3**	**$3.7**	**-**	**131.8%**
County Economic Status					
Distressed	**$4.6**	**$2.8**	**$8.1**	**-21.4%**	**42.5%**
At-Risk	**$4.8**	**$6.8**	**$9.7**	**19.6%**	**12.6%**
Transitional	**$90.2**	**$121.2**	**$358.3**	**15.9%**	**43.5%**
Competitive	**$3.1**	**$13.9**	**$3.0**	**112.4%**	**-40.2%**
Attainment	**$1.2**	**$1.5**	**$11.2**	**11.7%**	**96.4%**
Alabama	**$19.3**	**$38.7**	**$83.2**	**41.7%**	**29.1%**
Appalachian Alabama	$7.8	$22.2	$59.0	*68.1%*	*38.6%*
Non-Appalachian Alabama	$11.4	$16.5	$24.2	*20.3%*	*13.6%*
Georgia	**$13.4**	**$62.0**	**$311.8**	**114.9%**	**71.3%**
Appalachian Georgia	$2.9	$43.0	$209.9	*285.8%*	*69.6%*
Non-Appalachian Georgia	$10.5	$19.0	$101.8	*34.2%*	*75.1%*
Kentucky	**$3.3**	**$4.3**	**$23.4**	**15.3%**	**75.5%**
Appalachian Kentucky	$1.7	$0.8	$1.4	*-32.1%*	*21.2%*
Non-Appalachian Kentucky	$1.5	$3.5	$22.0	*51.7%*	*83.9%*
Maryland	**$8.4**	**$13.3**	**$21.1**	**25.4%**	**16.8%**
Appalachian Maryland	$3.1	$4.9	$3.5	*24.2%*	*-10.7%*
Non-Appalachian Maryland	$5.3	$8.4	$17.7	*26.1%*	*28.2%*
Mississippi	**$4.8**	**$8.0**	**$7.9**	**28.7%**	**-0.4%**
Appalachian Mississippi	-	-	-	-	-
Non-Appalachian Mississippi	$4.8	$8.0	$7.9	*28.7%*	*-0.4%*
New York	**$252.9**	**$112.6**	**$178.9**	**-33.3%**	**16.7%**
Appalachian New York	$44.9	$30.5	$33.9	*-17.6%*	*3.6%*
Non-Appalachian New York	$208.0	$82.1	$145.0	*-37.2%*	*20.9%*

66 Note: Due to constraints in available data, this study cannot definitively ascertain whether there was a complete absence of credit union lending to small businesses in rural areas during 2017 or if credit unions refrained from extending such loans in the specific context of Appalachian Mississippi.

Credit Union Lending, Dollar Amounts (in millions of $)	2017	2019	2022	Pre-COVID CAGR (2017 - 2019)	COVID CAGR (2019 - 2022)
North Carolina	**$22.2**	**$15.6**	**$37.6**	**-16.0%**	**34.0%**
Appalachian North Carolina	$7.1	$4.1	$20.1	*-23.9%*	*69.8%*
Non-Appalachian North Carolina	$15.1	$11.5	$17.5	*-12.6%*	*14.9%*
Ohio	**$74.8**	**$32.8**	**$74.8**	**-33.7%**	**31.6%**
Appalachian Ohio	$3.8	$2.9	$8.8	*-12.0%*	*44.5%*
Non-Appalachian Ohio	$71.0	$29.9	$66.0	*-35.1%*	*30.2%*
Pennsylvania	**$27.1**	**$60.9**	**$71.9**	**49.9%**	**5.7%**
Appalachian Pennsylvania	$4.8	$10.2	$8.8	*45.1%*	*-4.8%*
Non-Appalachian Pennsylvania	$22.3	$50.8	$63.1	*51.0%*	*7.6%*
South Carolina	**$7.2**	**$5.1**	**$12.6**	**-16.0%**	**35.4%**
Appalachian South Carolina	$0.9	$1.4	$3.0	*27.3%*	*28.2%*
Non-Appalachian South Carolina	$6.3	$3.7	$9.6	*-23.8%*	*37.9%*
Tennessee	**$25.3**	**$26.0**	**$36.5**	**1.5%**	**11.9%**
Appalachian Tennessee	$24.1	$24.3	$34.4	0.4%	12.3%
Non-Appalachian Tennessee	$1.1	$1.7	$2.0	21.1%	6.1%
Virginia	**$29.6**	**$71.6**	**$69.7**	**55.5%**	**-0.9%**
Appalachian Virginia	$0.9	$1.1	$2.1	9.9%	22.6%
Non-Appalachian Virginia	$28.7	$70.5	$67.7	56.8%	-1.4%
West Virginia (entire state)	**$1.7**	**$0.8**	**$5.4**	**-31.2%**	**88.6%**

Source: National Credit Union Administration, Call Report Quarterly Data, 2017 – 2022.

Figure 4.3.1.2: Total Number of Loans by Credit Unions, CAGR, 2017 - 2022

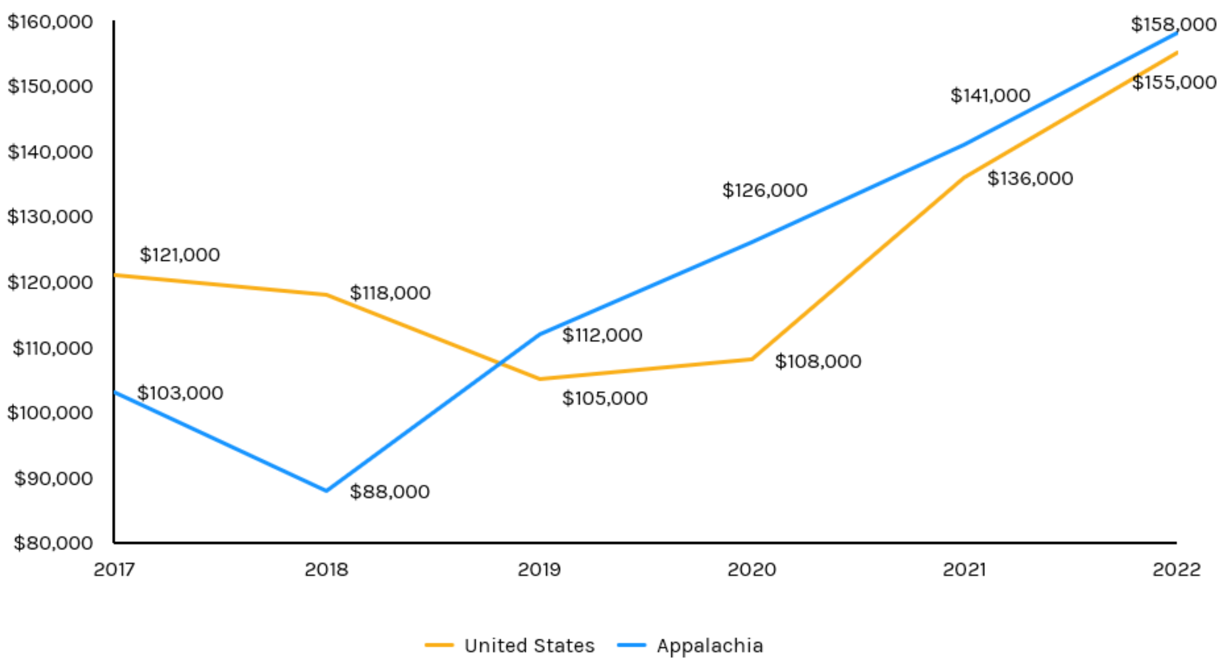
Credit Union Lending, Dollar Amounts	2017	2019	2022	Pre-COVID CAGR (2017 - 2019)	COVID CAGR (2019 - 2022)
United States	**20,064**	**22,854**	**26,741**	**6.7%**	**5.4%**
Appalachian Region	**1,006**	**1,302**	**2,472**	**13.8%**	**23.8%**
Appalachia as % of U.S.	**5.0%**	**5.7%**	**9.2%**	**-**	**-**
Subregions					
Northern Appalachia	**430**	**491**	**416**	**6.9%**	**-5.4%**
North Central Appalachia	**67**	**58**	**171**	**-7.0%**	**43.4%**
Central Appalachia	**34**	**32**	**126**	**-3.0%**	**57.9%**
South Central Appalachia	**289**	**313**	**474**	**4.1%**	**14.8%**
Southern Appalachia	**186**	**408**	**1,285**	**48.1%**	**46.6%**
County Types					
Large Metros (pop. 1 million +)	**48**	**237**	**962**	**122.2%**	**59.5%**
Small Metros (pop. <1 million)	**740**	**840**	**1,123**	**6.5%**	**10.2%**
Nonmetro, Adj. to Large Metros	**105**	**117**	**104**	**5.6%**	**-3.9%**
Nonmetro, Adj. to Small Metros	**113**	**102**	**199**	**-5.0%**	**25.0%**
Rural (nonmetro, not adj. to metro)	**-**	**6**	**84**	**-**	**141.0%**

Credit Union Lending, Dollar Amounts	2017	2019	2022	Pre-COVID CAGR (2017 - 2019)	COVID CAGR (2019 - 2022)
County Economic Status					
Distressed	**73**	**51**	**109**	**-16.4%**	**28.8%**
At-Risk	**52**	**56**	**164**	**3.8%**	**43.1%**
Transitional	**821**	**1,098**	**2,052**	**15.6%**	**23.2%**
Competitive	**41**	**66**	**40**	**26.9%**	**-15.4%**
Attainment	**19**	**31**	**107**	**27.7%**	**51.1%**
Alabama	**226**	**369**	**695**	**27.8%**	**23.5%**
Appalachian Alabama	123	192	388	*24.9%*	*26.4%*
Non-Appalachian Alabama	103	177	307	*31.1%*	*20.1%*
Georgia	**182**	**367**	**1,343**	**42.0%**	**54.1%**
Appalachian Georgia	47	200	873	*106.3%*	*63.4%*
Non-Appalachian Georgia	135	167	470	*11.2%*	*41.2%*
Kentucky	**20**	**52**	**80**	**61.2%**	**15.4%**
Appalachian Kentucky	6	8	26	*15.5%*	*48.1%*
Non-Appalachian Kentucky	14	44	54	*77.3%*	*7.1%*
Maryland	**130**	**173**	**178**	**15.4%**	**1.0%**
Appalachian Maryland	58	69	34	*9.1%*	*-21.0%*
Non-Appalachian Maryland	72	104	144	*20.2%*	*11.5%*
Mississippi	**36**	**37**	**45**	**1.4%**	**6.7%**
Appalachian Mississippi	-	-	-	-	-
Non-Appalachian Mississippi	36	37	45	*1.4%*	*6.7%*
New York	**1,265**	**1,243**	**1,377**	**-0.9%**	**3.5%**
Appalachian New York	291	329	270	*6.3%*	*-6.4%*
Non-Appalachian New York	974	914	1,107	*-3.1%*	*6.6%*
North Carolina	**138**	**79**	**120**	**-24.3%**	**15.0%**
Appalachian North Carolina	62	32	27	*-28.2%*	*-5.5%*
Non-Appalachian North Carolina	76	47	93	*-21.4%*	*25.5%*
Ohio	**446**	**386**	**451**	**-7.0%**	**5.3%**
Appalachian Ohio	56	46	85	*-9.4%*	*22.7%*
Non-Appalachian Ohio	390	340	366	*-6.6%*	*2.5%*
Pennsylvania	**340**	**454**	**610**	**15.6%**	**10.3%**
Appalachian Pennsylvania	63	85	102	*16.2%*	*6.3%*
Non-Appalachian Pennsylvania	277	369	508	*15.4%*	*11.2%*
South Carolina	**88**	**51**	**94**	**-23.9%**	**22.6%**
Appalachian South Carolina	16	16	24	*0.0%*	*14.5%*
Non-Appalachian South Carolina	72	35	70	*-30.3%*	*26.0%*
Tennessee	**256**	**315**	**574**	**10.9%**	**22.1%**
Appalachian Tennessee	245	288	533	*8.4%*	*22.8%*
Non-Appalachian Tennessee	11	27	41	*56.7%*	*14.9%*
Virginia	**385**	**457**	**393**	**9.0%**	**-4.9%**
Appalachian Virginia	10	17	14	*30.4%*	*-6.3%*
Non-Appalachian Virginia	375	440	379	*8.3%*	*-4.9%*
West Virginia (entire state)	**29**	**20**	**96**	**-17.0%**	**68.7%**

Source: National Credit Union Administration: Call Report Quarterly Data, 2017 – 2022.

Furthermore, while the average business loan amount from credit unions in 2017 was initially larger at the national level than in Appalachia, $121,000 versus $103,000, this changed in 2019. In 2022, Appalachian credit unions reported an average loan size of $158,000, exceeding the national average of $155,000.

Figure 4.3.1.3: Average Dollar Amount per Credit Union Loan to Small Businesses in the United States and Appalachia, 2017 – 2022



Source: National Credit Union Administration, Call Report Quarterly Data, 2017 – 2022.

CREDIT UNION LENDING PER SMALL BUSINESS

Analyzing the concentration of credit union lending per small business provides a more nuanced view of the regional lending patterns, while accounting for geographic distribution. In the period from 2017 to 2019, Appalachia recorded lower lending per business compared to the broader United States. However, in 2020, Appalachia surpassed the national average, with $81 lent per small business, outperforming the national figure of $76. The substantial growth in credit union lending per small business in Appalachia was an annualized 20.9% increase from 2017 to 2020, far exceeding the national annualized growth rate of 1.4%.

This information also accentuates the stark disparities in credit union lending per small business between Metro and Rural areas. Large Metros, for example, had a ratio of $115 per small business in 2020, whereas Rural areas only had less than 1% of that amount, totaling $1 per small business. Meanwhile, from 2017 to 2020, business lending per small business in Distressed and At-Risk counties saw annualized declines of -13.3% and -17.7%, respectively, while Competitive and Attainment loans saw annualized increases 21.1% and 65.1%, respectively.

Figure 4.3.1.4: Credit Union Lending per Small Businesses in Appalachia, CAGR, 2017 – 2020

Credit Union Lending per SMB	2017	2018	2019	2020	3-Year CAGR
United States	**$73**	**$72**	**$69**	**$76**	**1.4%**
Appalachian Region	**$46**	**$45**	**$62**	**$81**	**20.9%**
Subregions					
Northern Appalachia	**$81**	**$71**	**$69**	**$54**	**-12.3%**
North Central Appalachia	**$23**	**$27**	**$16**	**$20**	**-5.3%**
Central Appalachia	**$96**	**$53**	**$27**	**$56**	**-16.6%**
South Central Appalachia	**$44**	**$46**	**$55**	**$101**	**32.1%**
Southern Appalachia	**$14**	**$26**	**$77**	**$105**	**94.3%**
County Types					
Large Metros (pop. 1 million +)	**$6**	**$14**	**$70**	**$115**	**170.2%**
Small Metros (pop. <1 million)	**$87**	**$83**	**$91**	**$100**	**4.9%**
Nonmetro, Adj. to Large Metros	**$66**	**$46**	**$35**	**$42**	**-13.9%**
Nonmetro, Adj. to Small Metros	**$20**	**$20**	**$17**	**$23**	**5.0%**
Rural (nonmetro, not adj. to metro)	**$0**	**$1**	**$1**	**$1**	**-**
County Economic Status					
Distressed	**$42**	**$36**	**$26**	**$27**	**-13.3%**
At-Risk	**$15**	**$10**	**$22**	**$9**	**-17.7%**
Transitional	**$56**	**$53**	**$73**	**$103**	**22.7%**
Competitive	**$19**	**$56**	**$82**	**$34**	**21.1%**
Attainment	**$14**	**$12**	**$16**	**$63**	**65.1%**
Alabama	**$45**	**$66**	**$87**	**$76**	**19.2%**
Appalachian Alabama	$29	$63	$78	$66	*32.0%*
Non-Appalachian Alabama	$74	$73	$104	$94	*8.7%*
Georgia	**$12**	**$18**	**$50**	**$83**	**92.2%**
Appalachian Georgia	$8	$4	$108	$168	*176.8%*
Non-Appalachian Georgia	$14	$25	$23	$42	*46.2%*
Kentucky	**$9**	**$8**	**$11**	**$26**	**45.8%**
Appalachian Kentucky	$19	$23	$9	$15	*-8.4%*
Non-Appalachian Kentucky	$5	$3	$12	$30	*78.6%*
Maryland	**$13**	**$18**	**$20**	**$19**	**13.0%**
Appalachian Maryland	$158	$182	$240	$140	*-3.9%*
Non-Appalachian Maryland	$9	$12	$13	$15	*21.5%*
Mississippi	**$17**	**$9**	**$28**	**$19**	**2.8%**
Appalachian Mississippi	$0	$0	$0	$0	-
Non-Appalachian Mississippi	$22	$12	$35	$24	*2.8%*
New York	**$110**	**$60**	**$48**	**$43**	**-27.0%**
Appalachian New York	$556	$408	$381	$337	*-15.4%*
Non-Appalachian New York	$94	$47	$36	$33	*-29.8%*
North Carolina	**$22**	**$33**	**$15**	**$34**	**15.3%**
Appalachian North Carolina	$35	$38	$20	$123	*51.9%*
Non-Appalachian North Carolina	$19	$31	$14	$13	*-12.9%*

Credit Union Lending per SMB	2017	2018	2019	2020	3-Year CAGR
Ohio	**$72**	**$38**	**$31**	**$28**	**-27.2%**
Appalachian Ohio	$23	$29	$18	$16	*-12.1%*
Non-Appalachian Ohio	$81	$40	$33	$30	*-28.2%*
Pennsylvania	**$24**	**$34**	**$52**	**$50**	**28.9%**
Appalachian Pennsylvania	$10	$21	$21	$14	*11.5%*
Non-Appalachian Pennsylvania	$33	$43	$73	$75	*31.6%*
South Carolina	**$16**	**$11**	**$10**	**$15**	**-2.2%**
Appalachian South Carolina	$7	$21	$11	$36	*70.1%*
Non-Appalachian South Carolina	$19	$8	$10	$7	*-27.7%*
Tennessee	**$38**	**$30**	**$38**	**$50**	**9.2%**
Appalachian Tennessee	$94	$71	$92	$105	*3.6%*
Non-Appalachian Tennessee	$3	$4	$4	$16	*76.6%*
Virginia	**$36**	**$58**	**$85**	**$64**	**20.6%**
Appalachian Virginia	$18	$18	$21	$37	*28.8%*
Non-Appalachian Virginia	$38	$60	$89	$65	*20.2%*
West Virginia (entire state)	**$14**	**$10**	**$7**	**$11**	**-6.0%**

Source: National Credit Union Administration, Call Report Quarterly Data, 2017 – 2020.

Similarly, the ratio of loans per 10,000 small businesses declined in these more economically challenged counties over that time period, with growth in Appalachia's economically strongest counties. Although the total number of loans per 10,000 small businesses in 2020 remained slightly higher nationwide at 7.0 per 10,000 small businesses compared to 6.4 in the Appalachian Region, this confirms that credit unions in Appalachia were making larger size loans to small businesses. Furthermore, the rate of loan issuance per 10,000 small businesses grew by 13.0% annually from 2017 to 2020, which is more than double the national rate of 5.3%.

Figure 4.3.1.5: Credit Union Lending to Small Businesses in Appalachia, per 10,000 Small Businesses, CAGR, 2017 – 2020

Number of Credit Union Loans per 10,000 SMBs	2017	2018	2019	2020	3-Year CAGR
United States	**6.0**	**6.1**	**6.5**	**7.0**	**5.3%**
Appalachian Region	**4.4**	**5.1**	**5.5**	**6.4**	**13.0%**
Subregions					
Northern Appalachia	**6.4**	**6.8**	**7.3**	**6.5**	**0.4%**
North Central Appalachia	**3.7**	**4.8**	**3.2**	**4.2**	**4.7%**
Central Appalachia	**2.5**	**3.4**	**2.3**	**3.6**	**13.2%**
South Central Appalachia	**6.1**	**7.4**	**6.4**	**8.1**	**9.8%**
Southern Appalachia	**2.3**	**2.7**	**4.7**	**6.2**	**39.5%**
County Types					
Large Metros (pop. 1 million +)	**0.8**	**1.4**	**3.6**	**5.7**	**94.6%**
Small Metros (pop. <1 million)	**7.9**	**8.5**	**8.7**	**9.4**	**5.9%**
Nonmetro, Adj. to Large Metros	**5.6**	**6.7**	**6.1**	**3.8**	**-11.8%**
Nonmetro, Adj. to Small Metros	**3.6**	**4.4**	**3.2**	**4.2**	**5.6%**
Rural (nonmetro, not adj. to metro)	**0.0**	**0.2**	**0.3**	**0.2**	**-**

Number of Credit Union Loans per 10,000 SMBs	2017	2018	2019	2020	3-Year CAGR
County Economic Status					
Distressed	**6.6**	**6.2**	**4.7**	**6.2**	**-2.4%**
At-Risk	**1.7**	**1.6**	**1.8**	**1.2**	**-10.1%**
Transitional	**5.1**	**5.9**	**6.6**	**7.9**	**15.7%**
Competitive	**2.6**	**3.6**	**3.9**	**2.9**	**4.1%**
Attainment	**2.2**	**3.1**	**3.4**	**3.3**	**13.5%**
Alabama	**5.3**	**6.7**	**8.3**	**9.1**	**19.8%**
Appalachian Alabama	4.5	6.0	6.7	7.0	*15.8%*
Non-Appalachian Alabama	6.6	7.9	11.1	12.8	*24.4%*
Georgia	**1.6**	**1.7**	**3.0**	**6.4**	**59.4%**
Appalachian Georgia	1.3	0.9	5.0	8.1	*85.0%*
Non-Appalachian Georgia	1.7	2.0	2.0	5.6	*48.0%*
Kentucky	**0.5**	**0.5**	**1.3**	**1.2**	**33.1%**
Appalachian Kentucky	0.7	0.3	0.9	1.1	*18.8%*
Non-Appalachian Kentucky	0.5	0.5	1.5	1.3	*38.3%*
Maryland	**2.0**	**2.7**	**2.6**	**2.3**	**3.9%**
Appalachian Maryland	29.0	35.9	34.1	24.1	*-6.0%*
Non-Appalachian Maryland	1.2	1.6	1.6	1.6	*11.3%*
Mississippi	**1.3**	**1.2**	**1.3**	**3.3**	**37.0%**
Appalachian Mississippi	0.0	0.0	0.0	0.0	-
Non-Appalachian Mississippi	1.6	1.6	1.6	4.2	*37.1%*
New York	**5.5**	**5.5**	**5.3**	**4.3**	**-8.2%**
Appalachian New York	36.1	34.9	41.2	37.8	*1.5%*
Non-Appalachian New York	4.4	4.4	4.0	3.1	*-11.1%*
North Carolina	**1.4**	**1.8**	**0.8**	**0.7**	**-19.6%**
Appalachian North Carolina	3.1	3.6	1.5	2.0	*-13.8%*
Non-Appalachian North Carolina	1.0	1.3	0.6	0.4	*-24.2%*
Ohio	**4.3**	**4.3**	**3.6**	**2.8**	**-13.4%**
Appalachian Ohio	3.5	4.4	2.8	3.2	*-2.9%*
Non-Appalachian Ohio	4.5	4.3	3.8	2.7	*-15.1%*
Pennsylvania	**3.0**	**3.5**	**3.9**	**4.2**	**12.5%**
Appalachian Pennsylvania	1.3	1.9	1.8	1.8	*9.7%*
Non-Appalachian Pennsylvania	4.1	4.6	5.3	5.9	*12.7%*
South Carolina	**1.9**	**1.3**	**1.0**	**0.9**	**-22.6%**
Appalachian South Carolina	1.3	1.6	1.3	1.1	*-5.9%*
Non-Appalachian South Carolina	2.1	1.2	1.0	0.8	*-27.6%*
Tennessee	**3.9**	**4.4**	**4.5**	**5.7**	**13.5%**
Appalachian Tennessee	9.6	10.6	10.9	13.7	*12.6%*
Non-Appalachian Tennessee	0.3	0.5	0.6	0.7	*36.4%*
Virginia	**4.7**	**5.8**	**5.4**	**4.7**	**0.1%**
Appalachian Virginia	1.9	9.0	3.2	5.0	*39.2%*
Non-Appalachian Virginia	4.9	5.6	5.5	4.7	*-1.5%*
West Virginia (entire state)	**2.3**	**2.7**	**1.6**	**2.4**	**1.2%**

Source: National Credit Union Administration, Call Report Quarterly Data, 2017 – 2020.

It is important to note that the state-level ratios varied significantly. Notably, credit union lending to small businesses did not always correspond to the number of credit unions operating in both the Appalachian and non-Appalachian portions of the state. This disparity is mostly due to differences in the number of small businesses. For example, in 2020, Appalachian Georgia had 22 credit unions compared to 72 in non-Appalachian Georgia, while the dollar amount of loans per small business in Appalachian Georgia was $168 compared to $42 in non-Appalachian Georgia. Non-Appalachian Georgia, on the other hand, had more than double the number of small businesses as Appalachian Georgia (861,932 compared to 417,387). From 2017 to 2020, the total value of business loans per small business in many Appalachian portions of states increased significantly, including Alabama, North Carolina, South Carolina, and Virginia. Other states, such as Maryland and New York, showed a decline in the ratio, but interestingly, the dollar amount lent per small business in the Appalachian portions of each state was significantly greater than in the non-Appalachian portions.

4.4 Community Development Financial Institutions (CDFIs)

4.4.1 Community Development Financial Institutions (CDFIs) Landscape

Community Development Financial Institutions (CDFIs) are financial institutions well-positioned to provide financial services to under-resourced and historically underinvested communities that lack capital.[67] Through monetary awards and the provision of tax credits, the United States Department of the Treasury's Community Development Financial Institutions Fund (CDFI Fund) promotes access to capital and local economic growth in low-income areas across the country. Financial institutions that have been certified by the CDFI Fund are eligible to apply for monetary assistance and training to help them increase organizational capacity.

The research outlines the following takeaways for the landscape for CDFIs in Appalachia:

- Approximately 67% of CDFIs that provided loans to the Appalachian Region issued small business loans.
- Unlike the trend of bank and credit union consolidations, the number of CDFIs in Appalachia increased from 2019 to 2022, as did CDFIs across the United States, likely related to increased awareness and funding during the COVID-19 pandemic.
- The expansion of CDFI lending extended to all county types in Appalachia, with Large Metros and Rural areas exhibiting particularly robust growth. Moreover, CDFI dollars were predominantly allocated to counties with transitioning economies and elevated distress levels, signifying a targeted deployment of funds to Appalachian communities in pressing need of capital.

According to the CDFI Fund's 2021 data disclosures,[68] approximately 67% of CDFIs that provided loans in the Appalachian Region issued small business loans.[69] Not all CDFIs provide financing to small businesses: some may focus on housing, commercial real estate, farming, and/or consumer loans.

67 "Annual Certification and Data Collection Report and Transaction Level Report." U.S. Department of the Treasury: CDFI Fund. Accessed July 12, 2023. https://www.cdfifund.gov/documents/research-reports;
Note: There is some overlap between CDFIs and FDICs, as well as credit unions and CDFIs because these groups are not completely mutually exclusive.

68 Note: CDFI Fund data is self-reported and is assumed to include about 75% of all CDFI data.

69 Note: Loans with the purpose of Non-Real Estate Business and non-real estate Microenterprise are included in the small business lending count; these are not necessarily Appalachia-based CDFIs, but any CDFI that lends in the Appalachian Region.

Figure 4.4.1: Total Number of CDFIs in Appalachia and the United States, CAGR, 2010 – 2022

	2010	2019	2020	2021	2022	Pre-COVID CAGR (2010-2019)	COVID CAGR (2019 – 2022)
United States	**939**	**1,007**	**1,048**	**1,138**	**1,262**	**0.8%**	**7.8%**
Appalachian Region	**71**	**69**	**72**	**81**	**91**	**-0.3%**	**9.7%**
Appalachia as a % of the U.S.	**7.6%**	**6.9%**	**6.9%**	**7.1%**	**7.2%**	**-**	**-**
Subregions							
Northern Appalachia	**21**	**15**	**16**	**18**	**18**	**-3.7%**	**6.3%**
North Central Appalachia	**5**	**5**	**5**	**7**	**10**	**0.0%**	**26.0%**
Central Appalachia	**10**	**8**	**8**	**9**	**12**	**-2.4%**	**14.5%**
South Central Appalachia	**12**	**16**	**17**	**20**	**22**	**3.2%**	**11.2%**
Southern Appalachia	**23**	**25**	**26**	**27**	**29**	**0.9%**	**5.1%**
County Types							
Large Metros (pop. 1 million +)	**13**	**11**	**13**	**15**	**16**	**-1.8%**	**13.3%**
Small Metros (pop. <1 million)	**23**	**32**	**34**	**36**	**43**	**3.7%**	**10.4%**
Nonmetro, Adj. to Large Metros	**4**	**6**	**5**	**7**	**7**	**4.6%**	**5.3%**
Nonmetro, Adj. to Small Metros	**12**	**5**	**5**	**8**	**9**	**-9.3%**	**21.6%**
Rural (nonmetro, not adj. to metro)	**19**	**15**	**15**	**15**	**16**	**-2.6%**	**2.2%**
County Economic Status							
Distressed	**14**	**5**	**6**	**10**	**12**	**-10.8%**	**33.9%**
At-Risk	**9**	**20**	**20**	**22**	**22**	**9.3%**	**3.2%**
Transitional	**34**	**39**	**42**	**46**	**54**	**1.5%**	**11.5%**
Competitive	**14**	**5**	**4**	**3**	**3**	**-10.8%**	**-15.7%**
Attainment	**0**	**0**	**0**	**0**	**0**	**-**	**-**
Alabama	**22**	**15**	**16**	**18**	**24**	**-4.2%**	**17.0%**
Appalachian Alabama	11	4	6	8	9	*-10.6%*	*31.0%*
Non-Appalachian Alabama	11	11	10	10	15	*0.0%*	*10.9%*
Georgia	**21**	**23**	**21**	**24**	**25**	**1.0%**	**2.8%**
Appalachian Georgia	1	3	2	2	3	*13.0%*	*0.0%*
Non-Appalachian Georgia	20	20	19	22	22	*0.0%*	*3.2%*
Kentucky	**14**	**10**	**11**	**9**	**11**	**-3.7%**	**3.2%**
Appalachian Kentucky	9	5	5	4	6	*-6.3%*	*6.3%*
Non-Appalachian Kentucky	5	5	6	5	5	*0.0%*	*0.0%*
Maryland	**17**	**14**	**14**	**14**	**12**	**-2.1%**	**-5.0%**
Appalachian Maryland	1	0	0	0	0	*-100.0%*	-
Non-Appalachian Maryland	16	14	14	14	12	*-1.5%*	*-5.0%*
Mississippi	**36**	**60**	**62**	**63**	**66**	**5.8%**	**3.2%**
Appalachian Mississippi	11	14	14	14	14	*2.7%*	*0.0%*
Non-Appalachian Mississippi	25	46	48	49	50	*7.0%*	*2.8%*
New York	**79**	**77**	**78**	**74**	**79**	**-0.3%**	**0.9%**
Appalachian New York	0	5	5	4	3	*101.8%*	*-15.7%*
Non-Appalachian New York	71	72	73	70	74	*0.2%*	*0.9%*
North Carolina	**21**	**20**	**22**	**21**	**26**	**-0.5%**	**9.1%**
Appalachian North Carolina	4	4	4	4	6	*0.0%*	*14.5%*
Non-Appalachian North Carolina	17	16	18	17	20	*-0.7%*	*7.7%*

Number of CDFIs	2010	2019	2020	2021	2022	Pre-COVID CAGR (2010-2019)	COVID CAGR (2019 – 2022)
Ohio	**24**	**25**	**26**	**32**	**39**	**0.5%**	**16.0%**
Appalachian Ohio	1	2	2	6	8	*8.0%*	*58.7%*
Non-Appalachian Ohio	23	23	24	26	30	*0.0%*	*9.3%*
Pennsylvania	**33**	**31**	**32**	**34**	**30**	**-0.7%**	**-1.1%**
Appalachian Pennsylvania	12	9	10	11	10	*-3.1%*	*3.6%*
Non-Appalachian Pennsylvania	21	22	22	23	21	*0.5%*	*-1.5%*
South Carolina	**9**	**13**	**13**	**14**	**18**	**4.2%**	**11.5%**
Appalachian South Carolina	-	4	4	3	3		*-9.1%*
Non-Appalachian South Carolina	9	9	9	11	15	*0.0%*	*18.6%*
Tennessee	**17**	**24**	**27**	**37**	**37**	**3.9%**	**15.5%**
Appalachian Tennessee	6	12	13	17	17	*8.0%*	*12.3%*
Non-Appalachian Tennessee	11	12	14	20	20	*1.0%*	*18.6%*
Virginia	**18**	**18**	**19**	**20**	**22**	**0.0%**	**6.9%**
Appalachian Virginia	3	2	2	2	2	*-4.4%*	*0.0%*
Non-Appalachian Virginia	15	16	17	18	20	*0.7%*	*7.7%*
West Virginia (entire state)	**4**	**5**	**5**	**6**	**9**	**2.5%**	**21.6%**

Source: CDFI ILR / CDFI Annual Certification, 2010 – 2022.

Unlike the continued trend of banking consolidation, the number of CDFIs in Appalachia increased from 2019 to 2022, as did CDFIs across the United States, related to increased awareness and funding during the COVID-19 pandemic.[70] While the total numbers of CDFIs nationally is relatively small, additional certification and expansion of CDFIs to the Region can continue to support the development of Appalachia's financial infrastructure.

70 Surekha Carpenter et al., "2021 CDFI Survey Key Findings," Fed Communities, August 12, 2021, https://fedcommunities.org/data/2021-cdfi-survey-key-findings/.

As shown in Figure 4.4.2, the Region's CDFI growth between 2019 to 2022 has been driven by increases in banks and thrifts and credit unions. However, the number of CDFIs with less than $1 million in assets saw annualized decreases of -20.6% from 2019 to 2022, while the number of CDFIs with more than $250 million in assets had annualized increases of 46.5% in that same time period. The increase in CDFIs with larger assets sizes is largely due to the growth of credit unions, as credit unions held 66% of all CDFI assets as of Q1 2023.[71] With larger balance sheets, these CDFIs are able to deploy more loans and higher loan amounts.

Figure 4.4.2: CDFIs by Type in the United States and Appalachia, 2019 and 2022

CDFI Type	2019				2022			
	United States		Appalachia		United States		Appalachia	
	#	%	#	%	#	%	#	%
Bank or Thrift	139	13.8%	15	21.7%	191	15.1%	24	26.4%
Credit Union	290	28.8%	15	21.7%	491	38.9%	29	31.9%
Depository Institution Holding Company	25	2.5%	1	1.4%	6	0.5%	0	0.0%
Loan Fund	546	54.2%	37	53.6%	569	45.1%	37	40.7%
Venture Capital Fund	7	0.7%	1	1.4%	5	0.4%	1	1.1%
Total	1,007	-	69	-	1,262	-	91	-

Source: Source: CDFI ILR / CDFI Annual Certification, 2019 – 2022.

Figure 4.4.3: Changes in the Number of CDFIs in Appalachia by Asset Size, CAGR 2019 – 2022

	Under $1M CAGR	$1M - $25M CAGR	>$25M - $100M CAGR	>$100M - $250M CAGR	> $250M CAGR
Appalachian Region	**-20.6%**	**6.4%**	**6.2%**	**31.4%**	**46.5%**

Source: CDFI ILR / CDFI Annual Certification, 2019 – 2022.

71 Jacob Scott, Maria Carmelita Recto, and Jonathan Kivell, "Sizing the CDFI Market: Understanding Industry Growth," Federal Reserve Bank of New York, August 2023, https://www.newyorkfed.org/medialibrary/media/newsevents/news/regional_outreach/2023/a-case-study-of-managers-of-multifamily-affordable-housing-private-investment-vehicles.

Figure 4.4.4: Total Number of CDFIs in Appalachia in by Asset Size, 2022[72]

CDFIs by Asset	Under $1 Million		$1M - $25M		>$25M - $100M		>$100M - $250M		> $250M	
	#	%	#	%	#	%	#	%	#	%
Appalachian Region	3	3%	35	31%	24	21%	25	22%	22	19%
Subregions										
Northern Appalachia	1	5%	8	42%	5	26%	4	21%	0	0%
North Central Appalachia	0	0%	3	30%	2	20%	2	20%	2	20%
Central Appalachia	0	0%	6	40%	4	27%	3	20%	1	7%
South Central Appalachia	2	9%	6	26%	5	22%	8	35%	2	9%
Southern Appalachia	0	0%	12	26%	8	17%	8	17%	17	37%
County Types										
Large Metros (pop. 1M+)	1	7%	9	43%	6	29%	1	5%	4	19%
Small Metros (pop. <1M)	1	3%	13	28%	12	26%	14	30%	6	13%
Nonmetro, Adj. to Large Metros	0	0%	3	38%	0	0%	3	38%	1	13%
Nonmetro, Adj. to Small Metros	1	11%	2	17%	3	25%	2	17%	4	33%
Rural (nonmetro, not adj. to metro)	0	0%	8	32%	3	12%	5	20%	7	28%
County Types										
Distressed	1	5%	9	47%	0	0%	5	26%	3	16%
At-Risk	0	0%	6	21%	5	18%	6	21%	10	36%
Transitional	2	4%	19	30%	17	27%	14	22%	9	14%
Competitive	0	0%	1	33%	2	67%	0	0%	0	0%
Attainment	0	--	0	--	0	--	0	--	0	--
Alabama										
Appalachian Alabama	0	0%	5	36%	2	14%	2	14%	5	36%
Georgia										
Appalachian Georgia	0	0%	1	25%	2	50%	0	0%	1	25%
Kentucky										
Appalachian Kentucky	0	0%	3	43%	3	43%	1	14%	0	0%
Maryland										
Appalachian Maryland	0	-	0	-	0	-	0	-	0	-
Mississippi										
Appalachian Mississippi	0	0%	6	24%	3	12%	4	16%	11	44%
New York										
Appalachian New York	0	0%	1	20%	1	20%	2	40%	0	0%
North Carolina										
Appalachian North Carolina	1	20%	2	33%	1	17%	0	0%	2	33%
Ohio										
Appalachian Ohio	0	0%	2	25%	2	25%	2	25%	2	25%
Pennsylvania										
Appalachian Pennsylvania	1	13%	6	60%	2	20%	1	10%	0	0%

72 Note: There was not a comprehensive source for this data set, so CDFI asset size was determined through 1) FFEIC CRA Data, 2) NCUA Credit Union Data, 3) CDFI Fund website, and 4) desk research, and may include outliers and does not include CDFIs with unspecified assets.

CDFIs by Asset	Under $1 Million		$1M - $25M		>$25M - $100M		>$100M - $250M		> $250M	
	#	%	#	%	#	%	#	%	#	%
South Carolina										
Appalachian South Carolina	0	0%	0	0%	1	33%	2	67%	0	0%
Tennessee										
Appalachian Tennessee	1	7%	3	17%	4	22%	8	44%	1	6%
Virginia										
Appalachian Virginia	0	0%	1	50%	1	50%	0	0%	0	0%
West Virginia (entire state)	0	0%	5	45%	2	18%	3	27%	0	0%

Source: CDFI ILR / CDFI Annual Certification

4.4.2 Community Development Financial Institution (CDFI) Lending

In tandem with the increasing number of CDFIs, small business lending through CDFIs grew in both Appalachia and the broader United States from 2015 to 2021. Notably, Appalachia displayed a higher growth than the national average, both before and during the pandemic. While United States CDFI lending had annualized growth of 25.4% from 2019 to 2021, Appalachia CDFI lending saw annualized increases of 41.6%. The number of CDFIs in Appalachia constituted 7.2% of all CDFIs nationally in 2021, lending volume accounted for a greater 8.5% share. The expansion of CDFI lending extended to all county types, with large Metropolitan and Rural areas exhibiting particularly robust growth.

Figure 4.4.2.1: Total Dollar Amount of CDFI Lending in Appalachia, CAGR, 2015, 2019, 2021

Total Dollar Amount of CDFI Lending (in millions of $)	2015	2019	2021	Pre-COVID CAGR (2015 – 2019)	COVID CAGR (2019 – 2021)
United States	**$1,050.9**	**$4,025.1**	**$6,331.0**	**39.9%**	**25.4%**
Appalachian Region	**$55.7**	**$267.8**	**$536.8**	**48.1%**	**41.6%**
Appalachia as a % of U.S.	**5.3%**	**6.7%**	**8.5%**	**-**	**-**
Subregions					
Northern Appalachia	**$5.0**	**$16.7**	**$29.0**	**29.6%**	**31.8%**
North Central Appalachia	**$0.9**	**$1.9**	**$7.8**	**20.3%**	**101.0%**
Central Appalachia	**$14.4**	**$70.1**	**$24.9**	**48.5%**	**-40.4%**
South Central Appalachia	**$26.4**	**$50.5**	**$31.2**	**17.6%**	**-21.3%**
Southern Appalachia	**$8.1**	**$128.6**	**$444.0**	**99.4%**	**85.8%**
County Types					
Large Metros (pop. 1 million +)	**$3.2**	**$18.6**	**$74.7**	**55.4%**	**100.2%**
Small Metros (pop. <1 million)	**$14.4**	**$67.3**	**$119.1**	**47.0%**	**33.0%**
Nonmetro, Adjacent to Large Metros	**$7.3**	**$57.7**	**$61.3**	**67.7%**	**3.1%**
Nonmetro, Adjacent to Small Metros	**$6.2**	**$19.1**	**$41.4**	**32.3%**	**47.2%**
Rural (nonmetro, not adj. to a metro)	**$24.6**	**$105.0**	**$240.4**	**43.8%**	**51.3%**
County Economic Status					
Distressed	**$18.3**	**$89.9**	**$138.6**	**49.0%**	**24.1%**
At-Risk	**$7.6**	**$50.0**	**$115.9**	**59.9%**	**52.2%**
Transitional	**$29.7**	**$116.9**	**$257.3**	**40.9%**	**48.4%**
Competitive	**$0.1**	**$3.2**	**$21.1**	**132.6%**	**155.6%**
Attainment	**$0M***	**$7.7**	**$4.1**	**332.2%**	**-27.4%**

Total Dollar Amount of CDFI Lending (in millions of $)	2015	2019	2021	Pre-COVID CAGR (2015 – 2019)	COVID CAGR (2019 – 2021)
Alabama	**$1.1**	**$52.4**	**$412.9**	**162.2%**	**180.8%**
Appalachian Alabama	$0.9	$15.6	$157.6	*263.7%*	*163.6%*
Non-Appalachian Alabama	$0.2	$36.7	$255.3	*104.2%*	*217.6%*
Georgia	**$30.0**	**$35.9**	**$140.1**	**4.7%**	**97.3%**
Appalachian Georgia	$0.2	$9.2	$12.3	*159.4%*	*15.5%*
Non-Appalachian Georgia	$29.8	$26.7	$127.8	*-2.6%*	*118.6%*
Kentucky	**$23.00**	**$64.8**	**$32.2**	**29.5%**	**-29.6%**
Appalachian Kentucky	$13.40	$63.3	$23.7	*47.4%*	*-38.8%*
Non-Appalachian Kentucky	$9.60	$1.5	$8.4	*-36.7%*	*133.4%*
Maryland	**$1.5**	**$6.0**	**$24.8**	**41.5%**	**103.8%**
Appalachian Maryland	-	$0.2	$0.2	-	*2.9%*
Non-Appalachian Maryland	$1.5	$5.8	$24.6	*40.2%*	*106.6%*
Mississippi	**$64.7**	**$1,107.4**	**$1,243.7**	**103.4%**	**6.0%**
Appalachian Mississippi	$6.7	$98.3	$264.6	*96.0%*	*64.1%*
Non-Appalachian Mississippi	$58.0	$1,009.1	$979.0	*104.2%*	*-1.5%*
New York	**$146.6**	**$309.7**	**$295.8**	**20.6%**	**-2.3%**
Appalachian New York	$3.8	$9.2	$13.9	*24.2%*	*23.3%*
Non-Appalachian New York	$142.8	$300.6	$281.8	*20.5%*	*-3.2%*
North Carolina	**$49.9**	**$64.3**	**$75.8**	**6.5%**	**8.6%**
Appalachian North Carolina	$17.5	$17.4	$21.0	*-0.2%*	*9.8%*
Non-Appalachian North Carolina	$32.4	$46.9	$54.9	*9.7%*	*8.1%*
Ohio	**$20.1**	**$15.9**	**$145.9**	**-5.8%**	**203.3%**
Appalachian Ohio	$1.0	$0.4	$6.6	*-19.3%*	*289.2%*
Non-Appalachian Ohio	$19.1	$15.4	$139.3	*-5.2%*	*200.6%*
Pennsylvania	**$45.4**	**$43.3**	**$48.5**	**-1.2%**	**5.8%**
Appalachian Pennsylvania	$1.8	$7.0	$11.1	*40.0%*	*26.1%*
Non-Appalachian Pennsylvania	$43.6	$36.3	$37.4	*-4.4%*	*1.5%*
South Carolina	**$23.6**	**$13.7**	**$59.1**	**-12.8%**	**108.0%**
Appalachian South Carolina	$0.4	$5.4	$9.3	*96.2%*	*31.9%*
Non-Appalachian South Carolina	$23.2	$8.3	$49.8	*-22.7%*	*145.0%*
Tennessee	**$18.8**	**$58.7**	**$86.2**	**32.9%**	**21.2%**
Appalachian Tennessee	$9.1	$29.1	$9.8	*33.8%*	*-42.0%*
Non-Appalachian Tennessee	$9.8	$29.6	$76.4	*32.0%*	*60.7%*
Virginia	**$3.7**	**$39.5**	**$47.7**	**81.1%**	**10.0%**
Appalachian Virginia	$0.8	$10.0	$0.8	*90.9%*	*-72.4%*
Non-Appalachian Virginia	$2.9	$29.5	$47.0	*78.3%*	*26.3%*
West Virginia (entire state)	**$0.2**	**$2.6**	**$5.8**	**100.7%**	**49.6%**

Source: CDFI Fund Data Releases, 2015 – 2021.

* Total CDFI lending in Attainment in 2015 is $22,170

Figure 4.4.2.2: Total Number of CDFI Loans to Small Businesses, CAGR, 2015, 2019, 2021

Number of CDFI Loans	2015	2019	2021	Pre-COVID CAGR (2015 – 2019)	COVID CAGR (2019 – 2021
United States	**15,118**	**130,580**	**106,557**	**71%**	**-10%**
Appalachian Region	**750**	**1,580**	**6,956**	**20%**	**110%**
Subregions					
Northern Appalachia	**205**	**167**	**584**	**-5%**	**87%**
North Central Appalachia	**9**	**25**	**165**	**29%**	**157%**
Central Appalachia	**218**	**171**	**56**	**-6%**	**-43%**
South Central Appalachia	**224**	**271**	**607**	**5%**	**50%**
Southern Appalachia	**94**	**946**	**5,544**	**78%**	**142%**
County Types					
Large Metros (pop. 1 million +)	**153**	**163**	**720**	**2%**	**110%**
Small Metros (pop. <1 million)	**273**	**455**	**1,920**	**14%**	**105%**
Nonmetro, Adjacent to Large Metros	**36**	**367**	**771**	**79%**	**45%**
Nonmetro, Adjacent to Small Metros	**95**	**115**	**469**	**5%**	**102%**
Rural (nonmetro, not adj. to a metro)	**193**	**480**	**3,076**	**26%**	**153%**
County Economic Status					
Distressed	**195**	**518**	**1,673**	**28%**	**80%**
At-Risk	**57**	**229**	**1,882**	**42%**	**187%**
Transitional	**486**	**746**	**3,038**	**11%**	**102%**
Competitive	**9**	**57**	**293**	**59%**	**127%**
Attainment	**3**	**30**	**70**	**78%**	**53%**
Alabama	**43**	**381**	**3,901**	**73%**	**220%**
Appalachian Alabama	37	96	1,284	27%	266%
Non-Appalachian Alabama	6	285	2,617	163%	203%
Georgia	**77**	**356**	**2,186**	**47%**	**148%**
Appalachian Georgia	25	71	306	30%	108%
Non-Appalachian Georgia	52	285	1,880	53%	157%
Kentucky	**363**	**268**	**217**	**-7%**	**-10%**
Appalachian Kentucky	193	160	42	-5%	-49%
Non-Appalachian Kentucky	170	108	175	-11%	27%
Maryland	**63**	**124**	**361**	**18%**	**71%**
Appalachian Maryland	-	2	2	-	0%
Non-Appalachian Maryland	63	122	359	18%	72%
Mississippi	**664**	**7,966**	**15,576**	**86%**	**40%**
Appalachian Mississippi	31	703	3,496	118%	123%
Non-Appalachian Mississippi	633	7,263	12,080	84%	29%
New York	**1,787**	**47,849**	**5,606**	**127%**	**-66%**
Appalachian New York	74	102	348	8%	85%
Non-Appalachian New York	1,713	47,747	5,258	130%	-67%

Number of CDFI Loans	2015	2019	2021	Pre-COVID CAGR (2015 – 2019)	COVID CAGR (2019 – 2021
North Carolina	**334**	**8,237**	**2,899**	**123%**	**-41%**
Appalachian North Carolina	196	194	493	*0%*	59%
Non-Appalachian North Carolina	138	8,043	2,406	*176%*	-45%
Ohio	**265**	**403**	**3,245**	**11%**	**184%**
Appalachian Ohio	8	20	142	*26%*	166%
Non-Appalachian Ohio	257	383	3,103	*10%*	185%
Pennsylvania	**651**	**568**	**501**	**-3%**	**-6%**
Appalachian Pennsylvania	126	48	144	*-21%*	73%
Non-Appalachian Pennsylvania	525	520	357	*0%*	-17%
South Carolina	**88**	**201**	**1,267**	**23%**	**151%**
Appalachian South Carolina	1	76	458	*195%*	145%
Non-Appalachian South Carolina	87	125	809	*9%*	154%
Tennessee	**70**	**277**	**798**	**41%**	**70%**
Appalachian Tennessee	34	72	100	*21%*	18%
Non-Appalachian Tennessee	36	205	698	*54%*	85%
Virginia	**81**	**153**	**365**	**17%**	**54%**
Appalachian Virginia	19	15	23	*-6%*	24%
Non-Appalachian Virginia	62	138	342	*22%*	57%
West Virginia (entire state)	**6**	**21**	**118**	**37%**	**137%**

Source: United States Department of the Treasury, CDFI Lending, 2015 – 2021.

Figure 4.4.2.3: Total Dollar Amount of CDFI Lending to Small Businesses by Loan Size in Appalachia, 2015, 2019, 2021

Loan Size Distribution	2015 (in millions)	2019 (in millions)	2021 (in millions)
<=$100K	$14.8	$31.1	$129.5
>$100K - $250K	$14.6	$37.7	$79.1
>$250K	$26.3	$199.0	$328.2

Source: United States Department of the Treasury, CDFI Lending, 2015 – 2021.

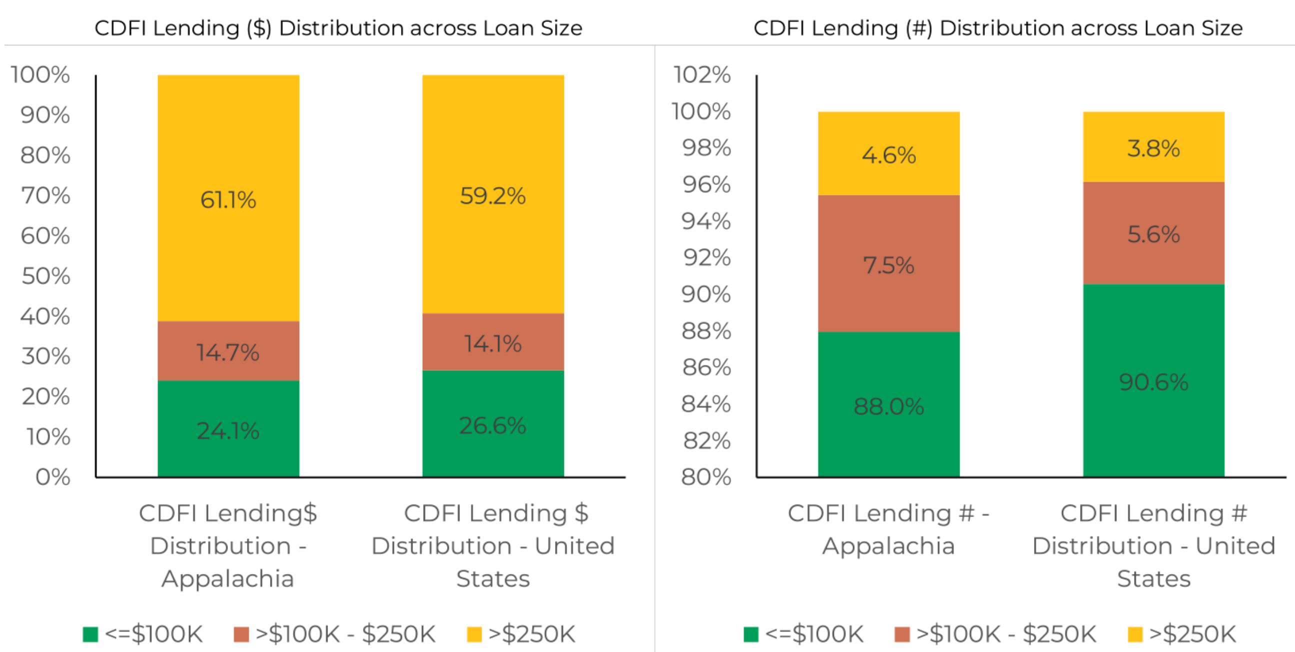
Figure 4.4.2.4: Total Number of CDFI Loans to Small Businesses by Loan Size in Appalachia, 2015, 2019, 2021

Loan Size Distribution	2015	2019	2021
<=$100K	638	1,157	6,118
>$100K - $250K	87	242	521
>$250K	25	181	317

Source: United States Department of the Treasury, CDFI Lending, 2015 – 2021.

The increase in CDFI lending in recent years stemmed primarily from the disbursal of larger loans, as well as from an increase in the number of loans.

Figure 4.4.2.5: Total CDFI Dollar Amounts and Number of Loans as a Percentage, 2021



Source: United States Department of the Treasury, CDFI Lending, 2021.

In 2020, the COVID-19 pandemic radically shifted the nature of CDFI lending in both Appalachia and the United States. In Appalachia, CDFI lending spiked dramatically, and the dollar share of **CDFI lending in the United States became more in line with Appalachia's 7% share of national small businesses, increasing from 5.3% in 2015 to 8.5% in 2021. CDFIs, well-positioned in their communities to raise the awareness of emergency assistance programs like PPP, exhibited a model for penetrating markets and developing a pipeline beyond their existing portfolios. 94% of CDFIs reported taking on new clients with whom they had no relationship prior to March 2020, indicating PPP lending allowed for new connections and long-term lending relationships that would not have otherwise existed.**

4.5 Venture Capital and Equity Investments in Appalachia

4.5.1 Venture Capital and Equity Investors

The two main sources of equity investments for Appalachian businesses are venture capital (VC) funds and angel investors. VC funds in the Region include funds that pool assets from multiple private investors, as well as public-private funds that utilize public seed funding to attract additional private investors. Angel investors are individuals who invest in entrepreneurs that are not "friends or family." This analysis focuses on formal sources of equity versus informal personal equity financing, as such data is not readily available.

There is not currently a comprehensive source that compares the number of VC investors in the Region to those from outside the Region who are investing in Appalachia. However, the major VC hubs of the United States have long been located in California's Bay Area, New York City, and the Greater Boston area, and more recently with parts of Texas, Washington, and Illinois emerging as prominent centers for activity. In contrast, a sizable portion of VC firms in the thirteen Appalachian states are based in major cities not contained within Appalachian portions of the states. Cities like Atlanta (Georgia), Fairfax (Virginia), Arlington County (Virginia), Columbus (Ohio), Nashville (Tennessee), and Memphis (Tennessee) have acted as magnets for venture capital, leaving much of Appalachia somewhat on the periphery of these financial network.[73]

However, there is a positive trend emerging in Appalachia as a growing number of venture capital firms are establishing themselves in the Region. The West Virginia Jobs Investment Trust, Alabama Futures Fund, Mountaineer Capital, Meritus Ventures, Third Security, Cayuga Venture Fund, and Winston-Salem Partners Roundtable (WSPR) Fund are starting to play more of a role in the Region's landscape.

> *"In Tennessee, we have some unique comparative advantages for start-ups and investors with a top rural health system, and the potential for advanced manufacturing and digital media."*
> *– Interviewed Appalachian small business accelerator leader*

In Appalachia, many of the recent VC investments have focused on sectors such as technology (including AI and robotics), healthcare, and environmental solutions (including clean energy, sustainability, and climate change). Venture capital firms that have invested in the Region include Mountain State Capital, Innovation Works, General Atlantic, Ben Franklin Technology Partners, UPMC Enterprises, and Health Catalyst Capital.[74]

73 "Pitchbook-NVCA Q1 Venture Monitor Data," 2017 - 2022.
74 Note: Many of these venture capital entities investing in Appalachia are not headquartered within the Region itself.

Examples of the types of companies that have received multiple venture capital deals and/or received the largest venture capital deal amounts from 2017 to 2022:

1. **Healthcare, Personalization Technology, and Data Analytics:** companies with a focus on improving health outcomes and healthcare benefits optimization. There has recently been a focus on the potential for the growth of healthcare tech and recovery systems across Appalachia.
2. **Sustainable Transportation and Electric Vehicles:** companies that promote low-and zero-emission, energy-efficient, and affordable modes of transport.
3. **Water Conservation, Smart Technology, and Green Technology:** companies that emphasize sustainable materials and technology for smart conservation and green solutions.
4. **Biotechnology, Life Sciences, and Pharmaceuticals:** companies focusing on breakthrough treatments for various medical conditions.
5. **Agriculture, Food Production, and Sustainable Farming:** companies dedicated to finding ways to meet society's present food and textile needs, with practices intended to protect the environment, expand the Region's natural resource base, and improve soil fertility.
6. **Robotics, Automation, Logistics, and Advanced Materials:** companies focused on the use of computers, control systems, and information technology to handle industrial processes and machinery.

As the venture capital landscape in Appalachia is still developing, there are several organizations that play critical roles to bolster and encourage investment through targeted initiatives. Such initiatives, often supported by philanthropy or organized as public-private partnerships, are key to creating conditions attracting investment to the Region, by maintaining connections to economic development priorities. Currently, equity investing in the Appalachian Region is facilitated by several key players:

Figure 4.5.1.1: Notable Investment-Enabling Organizations in Appalachia

Organization	Description
Appalachian Investors Alliance (AIA)	AIA, a fund administration headquartered in Knoxville, Tennessee, is dedicated to reinvigorating the Region's economy by promoting community-driven, mutually reinforcing economic and workforce development through entrepreneur preparedness. Their mission involves providing essential services to angel investors with a community focus and dedicated entrepreneurs. These services encompass organizing capital and enhancing accelerator programs, along with integrating practical entrepreneurial training into academic and business school curricula, enabling them to compete effectively for regional and national venture resources and funding. As of now, AIA boasts a network of over 130 accredited investor members who have initiated and funded eight (soon to be 11) angel/impact funds across multiple Appalachian states, injecting $10 million of direct private investment into 34 entrepreneurial companies.
Tri-State Angel Investment Group	As a part of the AIA network, this group primarily focuses on early-stage investments within Kentucky, Ohio, and West Virginia. They have collectively established a fund exceeding $1.2 million, sourced from over 40 accredited investors.
Appalachian Regional Commission (ARC)	ARC actively supports the growth of the entrepreneurial ecosystem by investing in and nurturing business technical assistance programs. These programs are instrumental in increasing entrepreneurs' access to capital and providing additional support services, particularly in sectors such as local food, agriculture, outdoor recreation, advanced forest products, small-scale manufacturing, and more.
Appalachian Community Capital (ACC)	In 2019, ACC secured $1.5 million from ARC's POWER Initiative to launch Opportunity Appalachia, a dedicated initiative aimed at helping sixteen local communities craft investment proposals to attract additional capital into federally designated Opportunity Zones.
INVEST Appalachia	INVEST Appalachia, a regional social investment fund built by and for the people of Central Appalachia, help finance Appalachia's transition to a more resilient, equitable, and sustainable economic future. They aim to accelerate and expand community investment across Central Appalachia and work side-by-side with partners who are rooted in place and understand their community. For instance, INVEST Appalachia connects community-centered projects and businesses to creative and flexible capital, addressing common obstacles that prevent investment-worthy projects from becoming investment-ready. They assist in pinpointing clusters of potential and pursuing agreements that stimulate the expansion of critical wealth-building sectors. This drive towards regional transformation aims to boost key industries, advance racial and socioeconomic equity, foster community wealth, encourage local ownership, create high-quality jobs, and enhance climate resilience and environmental sustainability. They work across the Appalachian counties of Kentucky, West Virginia, Virginia, Ohio, North Carolina, and Tennessee.

These organizations are dedicated to enhancing and educating investor networks, promoting competitive entrepreneurship, and, in turn, fostering economic growth within the Appalachian Region.

4.5.2 Venture Capital Investments

AGGREGATE INVESTMENTS AND GROWTH

The Appalachian Region commands a small share of the national venture capital landscape, ranging from 0.4% to 1.3% of the total equity funding dollars in the United States, with a corresponding 1.4% to 1.6% of the total deals nationwide from 2017 to 2022.

Figure 4.5.2.1: Total Equity Funding Amounts to Businesses in Appalachia, 2017 – 2022

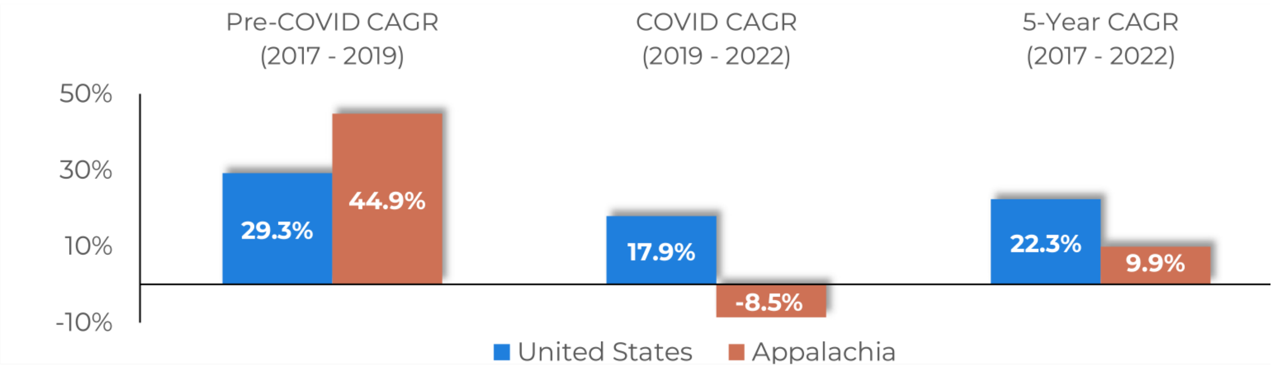
Equity Funding (in millions of $)	2017	2018	2019	2020	2021	2022
United States	**$89,935**	**$145,655**	**$150,255**	**$170,935**	**$345,959**	**$246,280**
Appalachian Region	**$900**	**$690**	**$1,888**	**$1,166**	**$1,529**	**$1,444**
Appalachia as % of the U.S.	**1.0%**	**0.5%**	**1.3%**	**0.7%**	**0.4%**	**0.6%**
Subregions						
Northern Appalachia	$524	$264	$1,340	$674	$795	$751
North Central Appalachia	$1	$28	$1	$42	$7	$10
Central Appalachia	$23	$75	$204	$13	$10	$0
South Central Appalachia	$86	$185	$118	$175	$170	$245
Southern Appalachia	$265	$137	$225	$263	$547	$438
County Types						
Large Metros (pop. 1M +)	$697	$254	$1,444	$733	$648	$975
Small Metros (pop. <1M)	$180	$356	$432	$363	$576	$436
Nonmetro, Adj. to Large Metros	$14	$23	$3	$42	$126	$17
Nonmetro, Adj. to Small Metros	$9	$10	$1	$12	$152	$16
Rural (nonmetro, not adj. to metro)	$0	$48	$7	$16	$28	$1
County Economic Status						
Distressed	$1	$23	$4	$55	$10	$1
At-Risk	$52	$102	$267	$78	$30	$21
Transitional	$788	$489	$1,563	$964	$1,247	$1,306
Competitive	$57	$73	$54	$70	$237	$107
Attainment	$2	$3	$1	$1	$5	$10
Alabama	**$91**	**$62**	**$101**	**$148**	**$151**	**$281**
Appalachian Alabama	$88	$62	$100	$148	$139	$276
Non-Appalachian Alabama	$3	$0	$1	$0	$12	$5
Georgia	**$1,284**	**$1,052**	**$1,770**	**$2,009**	**$3,731**	**$2,412**
Appalachian Georgia	$152	$35	$75	$67	$184	$51
Non-Appalachian Georgia	$1,132	$1,017	$1,695	$1,942	$3,547	$2,360
Kentucky	**$68**	**$143**	**$387**	**$261**	**$235**	**$75**
Appalachian Kentucky	$23	$75	$204	$11	$3	$0
Non-Appalachian Kentucky	$46	$68	$183	$250	$232	$75

Equity Funding (in millions of $)	2017	2018	2019	2020	2021	2022
Maryland	**$542**	**$1,322**	**$829**	**$1,151**	**$1,892**	**$1,420**
Appalachian Maryland	$2	$0	$0	$2	$1	$6
Non-Appalachian Maryland	$540	$1,322	$829	$1,149	$1,891	$1,414
Mississippi	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Appalachian Mississippi	$0	$0	$0	$0	$0	$0
Non-Appalachian Mississippi	$0	$0	$0	$0	$0	$0
New York	**$11,012**	**$13,925**	**$22,082**	**$16,778**	**$43,810**	**$27,134**
Appalachian New York	$15	$59	$21	$23	$148	$58
Non-Appalachian New York	$10,997	$13,866	$22,061	$16,755	$43,662	$27,076
North Carolina	**$988**	**$2,616**	**$1,320**	**$2,993**	**$3,650**	**$4,114**
Appalachian North Carolina	$27	$105	$16	$53	$116	$109
Non-Appalachian North Carolina	$962	$2,511	$1,304	$2,940	$3,534	$4,004
Ohio	**$388**	**$1,152**	**$868**	**$1,023**	**$2,161**	**$2,073**
Appalachian Ohio	$6	$27	$3	$105	$121	$6
Non-Appalachian Ohio	$382	$1,125	$865	$917	$2,039	$2,068
Pennsylvania	**$1,275**	**$1,516**	**$3,607**	**$2,362**	**$5,021**	**$4,543**
Appalachian Pennsylvania	$502	$202	$1,316	$584	$526	$682
Non-Appalachian Pennsylvania	$774	$1,315	$2,291	$1,778	$4,494	$3,860
South Carolina	**$104**	**$178**	**$137**	**$150**	**$376**	**$632**
Appalachian South Carolina	$26	$40	$50	$48	$224	$110
Non-Appalachian South Carolina	$78	$137	$88	$103	$152	$522
Tennessee	**$241**	**$311**	**$514**	**$485**	**$1,059**	**$770**
Appalachian Tennessee	$40	$80	$42	$101	$49	$122
Non-Appalachian Tennessee	$201	$231	$472	$384	$1,010	$648
Virginia	**$760**	**$1,385**	**$1,095**	**$1,102**	**$2,361**	**$3,045**
Appalachian Virginia	$20	$0	$60	$23	$5	$13
Non-Appalachian Virginia	$740	$1,384	$1,035	$1,078	$2,356	$3,032
West Virginia (entire state)	**$1**	**$6**	**$0**	**$0**	**$13**	**$10**

Source: Pitchbook, Venture Capital and Private Equity Deals, 2017 – 2022.

The total dollar amount of venture capital in Appalachia had annualized increases of 44.9% from 2017 to 2019, outpacing annualized rate in the United State of 29.3% during the same period. However, Appalachia decreased -8.5% from 2019 to 2022, compared to an annualized growth rate of 17.9% nationally. From 2017 to 2022, Appalachia's annualized growth rate increased to 9.9%, but continued to underperform the national annualized growth rate of 22.3%.

Figure 4.5.2.2: Annualized Growth Rates (CAGR) for Total Equity Funding to Businesses in Appalachia, 2017 – 2022



Source: Pitchbook, Venture Capital and Private Equity Deals, 2017 – 2022.

While the total dollar amount of deals declined in Appalachia from 2019 to 2022, the number of equity deals in the Region increased annually 11.1% in that same period, surpassing the national annualized growth rate of 8.1%. However, the dataset indicates a total of 1,235 deals over the period of analysis (2017 – 2022), in contrast to the national total of 87,278, implying Appalachia will benefit from increased focus on making its small businesses attractive to investors.

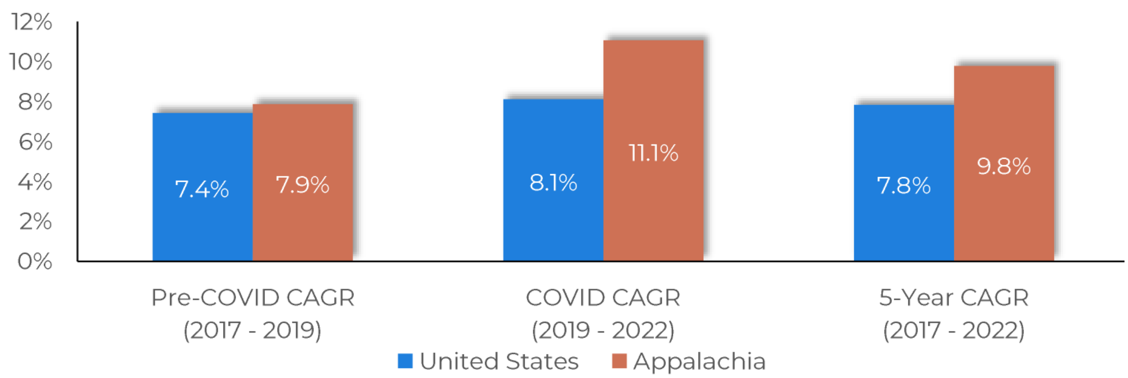
Figure 4.5.2.3: Total Number of Equity Deals to Businesses in Appalachia, 2017 – 2022

Number of Equity Deals	2017	2018	2019	2020	2021	2022
United States	11,771	12,485	13,582	13,478	18,798	17,164
Appalachian Region	165	177	192	218	220	263
Appalachia as % of the U.S.	1.40%	1.42%	1.41%	1.62%	1.17%	1.53%
Subregions						
Northern Appalachia	95	89	95	118	115	146
North Central Appalachia	3	6	3	5	3	3
Central Appalachia	2	1	4	3	3	1
South Central Appalachia	23	33	29	31	41	50
Southern Appalachia	42	48	61	61	58	63
County Types						
Large Metros (pop. 1 million +)	102	99	110	125	110	155
Small Metros (pop. <1 million)	56	66	71	81	88	95
Nonmetro, Adj. to Large Metros	5	4	3	3	5	5
Nonmetro, Adj. to Small Metros	2	4	2	4	11	5
Rural (nonmetro, not adj. to metro)	0	4	6	5	6	3

Number of Equity Deals	2017	2018	2019	2020	2021	2022
County Economic Status						
Distressed	**1**	**4**	**3**	**6**	**3**	**2**
At-Risk	**7**	**5**	**7**	**6**	**7**	**10**
Transitional	**141**	**151**	**162**	**185**	**188**	**232**
Competitive	**15**	**15**	**18**	**20**	**21**	**17**
Attainment	**1**	**2**	**2**	**1**	**1**	**2**
Alabama	**20**	**27**	**29**	**31**	**37**	**39**
Appalachian Alabama	18	26	27	31	35	34
Non-Appalachian Alabama	2	1	2	0	2	5
Georgia	**137**	**123**	**137**	**146**	**203**	**232**
Appalachian Georgia	14	12	16	10	6	14
Non-Appalachian Georgia	123	111	121	136	197	218
Kentucky	**27**	**34**	**39**	**38**	**42**	**37**
Appalachian Kentucky	1	1	4	1	2	1
Non-Appalachian Kentucky	26	33	35	37	40	36
Maryland	**116**	**130**	**122**	**125**	**151**	**152**
Appalachian Maryland	2	0	0	1	1	2
Non-Appalachian Maryland	114	130	122	124	150	150
Mississippi	**0**	**0**	**1**	**1**	**1**	**1**
Appalachian Mississippi	0	0	1	1	1	1
Non-Appalachian Mississippi	0	0	0	0	0	0
New York	**928**	**1,041**	**1,188**	**1,171**	**1,770**	**1,543**
Appalachian New York	6	14	7	8	15	14
Non-Appalachian New York	922	1,027	1,181	1,163	1,755	1,529
North Carolina	**124**	**137**	**135**	**159**	**237**	**240**
Appalachian North Carolina	10	16	8	15	28	27
Non-Appalachian North Carolina	114	121	127	144	209	213
Ohio	**110**	**132**	**115**	**110**	**139**	**139**
Appalachian Ohio	4	5	2	5	2	2
Non-Appalachian Ohio	106	127	113	105	137	137
Pennsylvania	**224**	**204**	**241**	**268**	**287**	**335**
Appalachian Pennsylvania	85	74	87	106	98	129
Non-Appalachian Pennsylvania	139	130	154	162	189	206
South Carolina	**39**	**43**	**50**	**39**	**45**	**41**
Appalachian South Carolina	10	10	17	19	16	14
Non-Appalachian South Carolina	29	33	33	20	29	27
Tennessee	**81**	**78**	**91**	**78**	**106**	**99**
Appalachian Tennessee	11	16	20	12	10	18
Non-Appalachian Tennessee	70	62	71	66	96	81
Virginia	**127**	**157**	**162**	**139**	**218**	**195**
Appalachian Virginia	3	1	1	6	3	5
Non-Appalachian Virginia	124	156	161	133	215	190
West Virginia (entire state)	**1**	**2**	**2**	**3**	**3**	**2**

Source: Pitchbook, Venture Capital and Private Equity Deals, 2017 - 2022.

Figure 4.5.2.4: Total Number of Equity Deals to Businesses in Appalachia, CAGR 2017 – 2022



Source: Pitchbook, Venture Capital and Private Equity Deals, 2017 - 2022.

The average deal size in the United States has generally been more than double that of Appalachia in the period from 2017 to 2022, with the exception of 2019, when several large deals increased the region's average deal size. In 2022, deal sizes in the Appalachian portions of each of the thirteen states ranged from $50,000 to $7.9 million. Deal sizes in the non-Appalachian portions of the Region's states were generally higher, ranging from $ 1.0 million to $18.8 million[75] with some exceptions including Appalachian Ohio in 2021 (resulting from one large deal outlined below) and Appalachian Alabama.

Figure 4.5.2.5: Average Equity Funding Amounts per Deal by Appalachian State, 2017 – 2022

Equity Funding per Deal (in millions of $)	2017	2018	2019	2020	2021	2022
United States	$7.6	$11.7	$11.1	$12.7	$18.4	$14.3
Appalachian Region	$5.5	$3.9	$9.8	$5.4	$7.0	$5.5
Subregions						
Northern Appalachia	$5.5	$3.0	$14.1	$5.7	$6.9	$5.1
North Central Appalachia	$0.4	$4.7	$0.2	$8.3	$2.4	$3.4
Central Appalachia	$11.6	$75.0	$51.0	$4.3	$3.5	$0.1
South Central Appalachia	$3.8	$5.6	$4.1	$5.7	$4.1	$4.9
Southern Appalachia	$6.3	$2.9	$3.7	$4.3	$9.4	$6.9
County Types						
Large Metros (pop. 1M +)	$6.8	$2.6	$13.1	$5.9	$5.9	$6.3
Small Metros (pop. <1M)	$3.2	$5.4	$6.1	$4.5	$6.5	$4.6
Nonmetro, Adj. to Large Metros	$2.8	$5.6	$1.0	$14.0	$25.2	$3.4
Nonmetro, Adj. to Small Metros	$4.6	$2.5	$0.7	$3.1	$13.8	$3.2
Rural (nonmetro, not adj. to metro)	-	$12.0	$1.2	$3.1	$4.6	$0.2
County Economic Status						
Distressed	$0.5	$5.6	$1.2	$9.1	$3.4	$0.3
At-Risk	$7.5	$20.5	$38.1	$13.0	$4.3	$2.1
Transitional	$5.6	$3.2	$9.6	$5.2	$6.6	$5.6
Competitive	$3.8	$4.9	$3.0	$3.5	$11.3	$6.3

75 Note: Excluding non-Appalachian Mississippi.

Attainment	$1.6	$1.5	$0.5	$0.8	$4.6	$5.0
Alabama	**$4.6**	**$2.3**	**$3.5**	**$4.8**	**$4.1**	**$7.2**
Appalachian Alabama	$4.9	$2.4	$3.7	$4.8	$4.0	$8.1
Non-Appalachian Alabama	$1.7	$0.2	$0.3	-	$5.9	$1.0
Georgia	**$9.4**	**$8.6**	**$12.9**	**-**	**$18.4**	**$10.4**
Appalachian Georgia	$10.8	$2.9	$4.7	$6.7	$30.7	$3.7
Non-Appalachian Georgia	$9.2	$9.2	$14.0	$14.3	$18.0	$10.8
Kentucky	**$2.5**	**$4.2**	**$9.9**	**$6.9**	**$5.6**	**$2.0**
Appalachian Kentucky	$22.5	$75.0	$51.0	$11.0	$1.7	$0.1
Non-Appalachian Kentucky	$1.8	$2.1	$5.2	$6.8	$5.8	$2.1
Maryland	**$4.7**	**$10.2**	**$6.8**	**$9.2**	**$12.5**	**$9.3**
Appalachian Maryland	$0.9	-	-	$2.4	$1.0	$3.0
Non-Appalachian Maryland	$4.7	$10.2	$6.8	$9.3	$12.6	$9.4
Mississippi			**$0.1**	**$0.3**	**$0.3**	**$0.3**
Appalachian Mississippi	-	-	$0.1	$0.3	$0.3	$0.3
Non-Appalachian Mississippi	-	-	-	-	-	-
New York	**$11.9**	**$13.4**	**$18.6**	**$14.3**	**$24.8**	**$17.6**
Appalachian New York	$2.4	$4.2	$3.1	$2.9	$9.8	$4.1
Non-Appalachian New York	$11.9	$13.5	$18.7	$14.4	$24.9	$17.7
North Carolina	**$8.0**	**$19.1**	**$9.8**	**$18.8**	**$15.4**	**$17.1**
Appalachian North Carolina	$2.7	$6.5	$2.0	$3.5	$4.1	$4.0
Non-Appalachian North Carolina	$8.4	$20.8	$10.3	$20.4	$16.9	$18.8
Ohio	**$3.5**	**$8.7**	**$7.5**	**$9.3**	**$15.5**	**$14.9**
Appalachian Ohio	$1.6	$5.3	$1.6	$21.0	$60.6	$2.9
Non-Appalachian Ohio	$3.6	$8.9	$7.7	$8.7	$14.9	$15.1
Pennsylvania	**$5.7**	**$7.4**	**$15.0**	**$8.8**	**$17.5**	**$13.6**
Appalachian Pennsylvania	$5.9	$2.7	$15.1	$5.5	$5.4	$5.3
Non-Appalachian Pennsylvania	$5.6	$10.1	$14.9	$11.0	$23.8	$18.7
South Carolina	**$2.7**	**$4.1**	**$2.7**	**$3.9**	**$8.4**	**$15.4**
Appalachian South Carolina	$2.6	$4.0	$2.9	$2.5	$14.0	$7.9
Non-Appalachian South Carolina	$2.7	$4.2	$2.7	$5.1	$5.3	$19.3
Tennessee	**$3.0**	**$4.0**	**$5.6**	**$6.2**	**$10.0**	**$7.8**
Appalachian Tennessee	$3.6	$5.0	$2.1	$8.4	$4.9	$6.8
Non-Appalachian Tennessee	$2.9	$3.7	$6.6	$5.8	$10.5	$8.0
Virginia	**$6.0**	**$8.8**	**$6.8**	**$7.9**	**$10.8**	**$15.6**
Appalachian Virginia	$6.8	$0.3	$60.0	$3.9	$1.6	$2.6
Non-Appalachian Virginia	$6.0	$8.9	$6.4	$8.1	$11.0	$16.0
West Virginia (entire state)	**$0.6**	**$2.8**	**$0.1**	**$0.1**	**$4.4**	**$4.9**

Source: Pitchbook, Venture Capital and Private Equity Deals, 2017 - 2022.

Examining the funding amounts per deal by state reveals areas of continued focus for those states. Some examples are below:

- The largest deal ($120 million for Series A) in this analysis period was found in Appalachian Ohio for Battle Motors, a truck manufacturer, to expand a manufacturing facility and grow production space.
- Though there have been just six equity deals in Kentucky from 2017 to 2022, early-stage investments in the state have been focused on improving operations and increasing jobs in the farming sector. For example, in 2019, Kentucky Fresh Harvest received $520,000 in venture funding to add nearly 75 permanent, full-time jobs for growers and farmworkers in an effort to boost agriculture production in rural communities.
- Alabama was the only state where the number and dollar amount of equity deals was consistently greater in the Appalachian portion than in the non-Appalachian portion of the state. In 2022, the majority of this funding occurred in Jefferson County, Alabama, particularly in Birmingham, where large institutions such as the University of Alabama at Birmingham and St. Vincent's Health System are driving innovation and entrepreneurship.[76]
- Between 2020 and 2022, West Virginia saw its equity funding increase nearly 40 times, from $250,000 in 2019 to $10 million in 2022 (the highest growth rate among Appalachian states by a wide margin), with four deals with seven-figure funding between 2021 and 2022.
- In Appalachian Virginia, equity investments have been centered around developments in technology and, more specifically, biotechnology. Of the nineteen deals in Virginia from 2017 to 2022, eighteen deals were in technology companies, of which twelve were focused on biotechnology solutions. Several companies executed multiple early-stage funding round deals with investors during that time period.

FUNDING ROUNDS

In the world of venture capital, funding rounds are critical milestones, each with its unique characteristics and purposes. The **Seed Round**, typically the initial funding stage, is usual for helping a business kickstart operations, develop its product, or reach the market. This round is usually characterized by investments from angel investors, early-stage venture capitalists, and the founders themselves. Following the seed stage, businesses may progress through various Series rounds (A, B, C, D, E, F, and beyond), each marking a phase of the company's growth and expansion.

Early-stage rounds are generally classified as Series A or B. **Series A** is primarily about scaling the business, having proven its concept, with funds often used to enhance product offerings, customer base, and market fit. **Series B** focuses on taking businesses past the development stage, funding market expansion, and possibly, technology enhancements to outpace competitors. By the time a company reaches the late stage, **Series C and D**, it is typically well-established, seeking funding to develop new products, expand into new markets, or even acquire other companies.

Series E and subsequent rounds are less common, generally reserved for companies that are seeking additional funds to optimize their valuation ahead of an IPO, finance major acquisitions, or sustain operations before achieving profitability.

The number of deals for Appalachian equity funding has largely been focused on Seed Round funding, encompassing 54.5% of deals in the Region in 2022. On the other hand, in 2022, while 4,311 venture capital deals were in Series C and D nationally, only 0.2% (8 deals total) of those types of deals were in Appalachia.

76 "2017-2018 Major Employers By County – Jefferson County," Squarespace, accessed September 10, 2023, https://static1.squarespace.com/static/5744c03020c647d51f32cecf/t/5a690c19652dea75d51eba6a/1516833817424/2018+major+employers+by+county_Jefferson.pdf.

The Seed Round in Appalachia had the highest number of deals among all the series, with a 5-year annualized growth rate for number of deals of 4.8% from 2017 to 2022 (see Figure 4.5.2.6). Among all the deal rounds in Appalachia, Series A stands out with the highest annualized increase of 25.5% in total dollar amount from 2017 to 2022, showing a growing entrepreneurial startup ecosystem in the Region.[77]

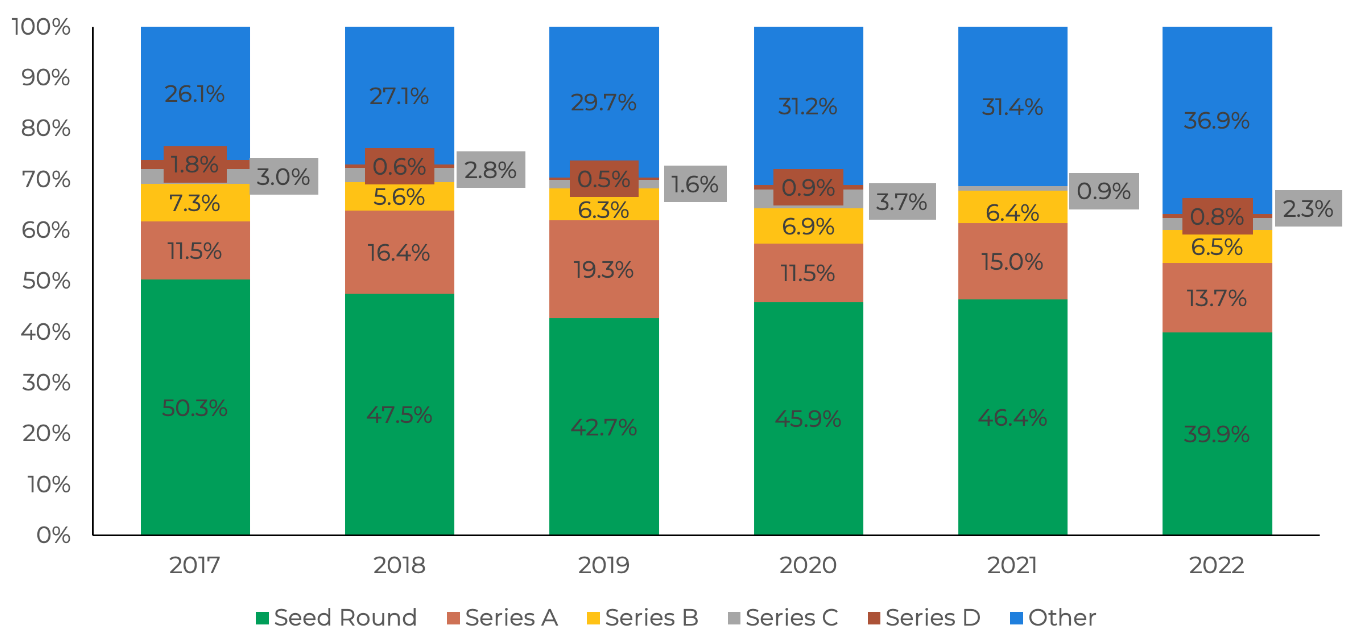
Figure 4.5.2.6: Total Number of Equity Deals to Small Businesses by Series in Appalachia, CAGR, 2017 – 2022

Series	2017	2018	2019	2020	2021	2022	Pre-COVID CAGR (2017 – 2019)	COVID CAGR (2019 – 2021)	CAGR (2017 – 2022)
Seed Round	83	84	82	100	102	105	-0.6%	8.6%	4.8%
Series A	19	29	37	25	33	36	39.5%	-0.9%	13.6%
Series B	12	10	12	15	14	17	0.0%	12.3%	7.2%
Series C	5	5	3	8	2	6	-22.5%	26.0%	3.7%
Series D	3	1	1	2	0	2	-42.3%	26.0%	-7.8%
Other	43	48	57	68	69	97	15.1%	19.4%	17.7%

Source: Pitchbook, Venture Capital and Private Equity Deals, 2017 - 2022.

Figure 4.5.2.7: Percent of Total Equity Funding in Number of Deals and Dollar Amount of Deals to Small Businesses by Funding Series in Appalachia, 2017 – 2022

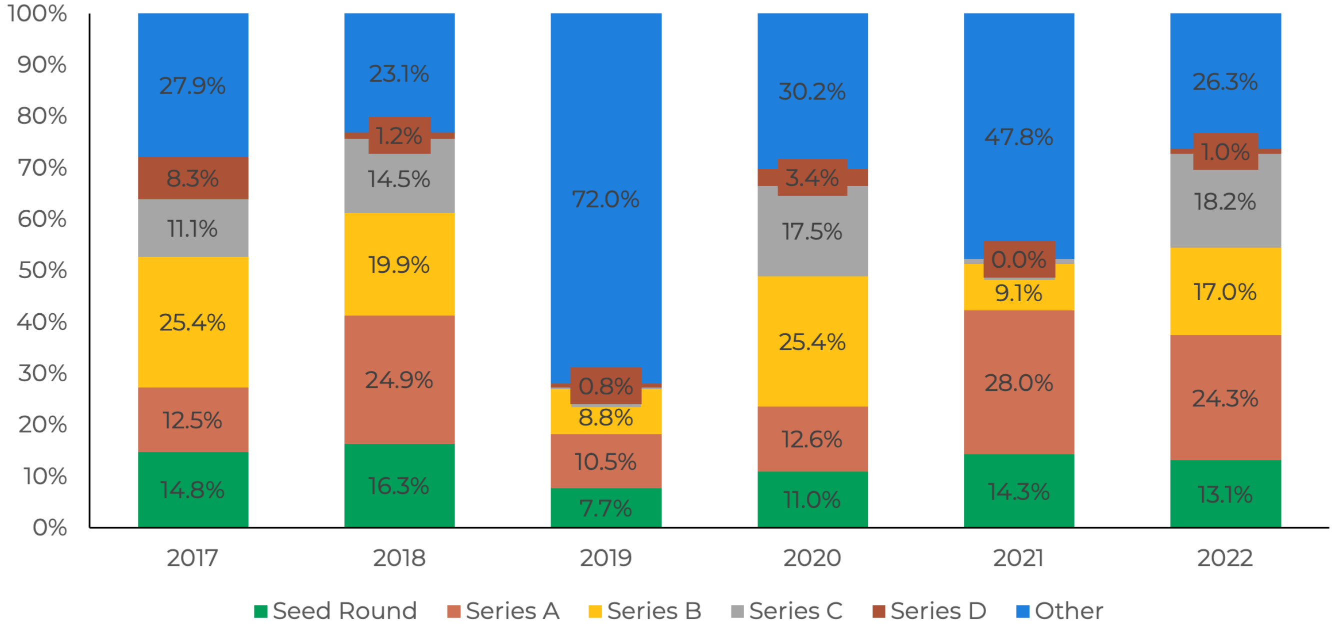
Number of Deals



77 Note: Only a few deals were Series C and D over the years, making year-over-year comparisons difficult.

Figure 4.5.2.7 Continued: Percent of Total Equity Funding in Number of Deals and Dollar Amount of Deals to Small Businesses by Funding Series in Appalachia, 2017 – 2022

Dollar Amount of Deals



Source: Pitchbook, Venture Capital and Private Equity Deals, 2017 - 2022.

The "Other" category – diverse financing beyond standard series rounds such as bridge rounds, convertible note rounds, debt financing, grants, and crowdfunding – accounted for a significant portion of both total venture capital amounts and deals. This underscores that investors are providing alternative capital types in Appalachia, thus providing opportunities for small businesses that would perhaps otherwise be considered less attractive to traditional investors. The enabling organizations noted above in Figure 4.5.1.1 support the possibility of such deals, likely supported by concessionary capital. Traditional non-concessionary capital deals for the other seed rounds are still relatively uncommon in Appalachia.

4.6 Small Business Administration (SBA) Lending

The Small Business Administration (SBA) is an independent agency of the federal government that helps entrepreneurs start and grow their businesses through capital, contracts, and counseling. As part of this mission, SBA provides various loan opportunities, including microloans and long-term and fixed-rate financing. SBA loans are made through banks, credit unions, Community Development Financial Institutions (CDFIs), and other lenders who partner with the SBA. This section takes a closer look at the specific loan products offered by the SBA in the aggregate across Appalachia, which include the 7(a) program, the 504 program, and emergency relief lending through the Paycheck Protection Program (PPP).

4.6.1 SBA 7(a) Lending

The 7(a) Loan Program is the SBA's most commonly available loan program and includes financial support for small businesses to access short-and long-term working capital, debt refinancing, and procurement of supplies and equipment.[78] The program operates in collaboration with various designated intermediary lenders, including national, regional, and local banks, credit unions, Community Development Financial Institutions (CDFIs), and Minority Depository Institutions (MDIs), to provide small business financing.

78 "7(a) Loans," U.S. Small Business Administration, accessed April 12, 2023, https://www.sba.gov/funding-programs/loans/7a-loans.

AGGREGATE SUPPLY

Between 2017 and 2022, Appalachian small businesses received approximately 5% to 6% of the national SBA 7(a) loan totals, both in funding and the number of loans. In 2021, as the ongoing pandemic continued to challenge small businesses, both the Region and the United States received their largest SBA 7(a) aggregate loan dollars, with Appalachia totaling nearly $2 billion. The aggregate loan dollars in Appalachia decreased from 2021 to $1.4 billion in 2022, but that amount still represents an increase of funding from pre-pandemic levels.

Figure 4.6.1.1: Total SBA 7(a) Loan Dollar Amounts to Small Businesses in Appalachia, 2017 – 2022

SBA 7(a) Loan Amounts (in millions of $)	2017	2018	2019	2020	2021	2022
United States	**$23,057**	**$22,826**	**$20,583**	**$19,580**	**$32,992**	**$23,862**
Appalachian Region	**$1,253**	**$1,276**	**$1,092**	**$1,165**	**$1,974**	**$1,398**
Appalachia as % of the U.S.	**5.4%**	**5.6%**	**5.3%**	**6%**	**6%**	**5.9%**
Subregions						
Northern Appalachia	**$284**	**$337**	**$294**	**$301**	**$456**	**$419**
North Central Appalachia	**$67**	**$74**	**$65**	**$65**	**$146**	**$88**
Central Appalachia	**$47**	**$34**	**$33**	**$31**	**$58**	**$54**
South Central Appalachia	**$189**	**$227**	**$176**	**$208**	**$382**	**$251**
Southern Appalachia	**$665**	**$605**	**$524**	**$561**	**$931**	**$587**
County Types						
Large Metros (pop. 1 million +)	**$490**	**$490**	**$448**	**$421**	**$730**	**$530**
Small Metros (pop. <1 million)	**$433**	**$484**	**$418**	**$473**	**$770**	**$542**
Nonmetro, Adj. to Large Metros	**$105**	**$71**	**$67**	**$86**	**$123**	**$87**
Nonmetro, Adj. to Small Metros	**$157**	**$171**	**$108**	**$119**	**$221**	**$168**
Rural (nonmetro, not adj. to metro)	**$68**	**$61**	**$52**	**$65**	**$130**	**$72**
County Economic Status						
Distressed	**$41**	**$32**	**$18**	**$17**	**$46**	**$24**
At-Risk	**$128**	**$113**	**$107**	**$149**	**$218**	**$203**
Transitional	**$839**	**$923**	**$755**	**$775**	**$1,323**	**$927**
Competitive	**$109**	**$105**	**$97**	**$97**	**$202**	**$108**
Attainment	**$137**	**$103**	**$114**	**$127**	**$185**	**$137**
Alabama	**$195**	**$174**	**$173**	**$165**	**$258**	**$165**
Appalachian Alabama	$128	$111	$116	$115	$162	$88
Non-Appalachian Alabama	$66	$63	$57	$50	$95	$77
Georgia	**$1,184**	**$1,086**	**$1,009**	**$909**	**$1,601**	**$1,071**
Appalachian Georgia	$433	$412	$318	$336	$599	$362
Non-Appalachian Georgia	$751	$674	$691	$573	$1,003	$709
Kentucky	**$154**	**$136**	**$140**	**$128**	**$231**	**$170**
Appalachian Kentucky	$36	$19	$23	$17	$30	$26
Non-Appalachian Kentucky	$118	$116	$116	$111	$201	$144
Maryland	**$270**	**$281**	**$267**	**$207**	**$338**	**$313**
Appalachian Maryland	$4	$4	$16	$9	$14	$5
Non-Appalachian Maryland	$266	$277	$251	$198	$324	$309
Mississippi	**$150**	**$139**	**$128**	**$143**	**$202**	**$126**

Appalachian Mississippi	$26	$14	$16	$25	$31	$24
Non-Appalachian Mississippi	$124	$125	$112	$118	$171	$102
New York	**$1,007**	**$955**	**$908**	**$709**	**$1,302**	**$958**
Appalachian New York	$27	$20	$43	$25	$44	$35
Non-Appalachian New York	$980	$935	$865	$684	$1,258	$923
North Carolina	**$708**	**$681**	**$583**	**$668**	**$948**	**$690**
Appalachian North Carolina	$90	$134	$98	$125	$182	$116
Non-Appalachian North Carolina	$618	$546	$486	$543	$766	$574
Ohio	**$838**	**$834**	**$760**	**$684**	**$1,064**	**$976**
Appalachian Ohio	$72	$78	$73	$74	$144	$128
Non-Appalachian Ohio	$766	$756	$688	$610	$921	$848
Pennsylvania	**$602**	**$741**	**$559**	**$505**	**$871**	**$788**
Appalachian Pennsylvania	$211	$274	$190	$213	$320	$292
Non-Appalachian Pennsylvania	$391	$467	$369	$292	$552	$496
South Carolina	**$331**	**$290**	**$277**	**$260**	**$498**	**$318**
Appalachian South Carolina	$78	$68	$73	$84	$139	$113
Non-Appalachian South Carolina	$253	$221	$204	$175	$359	$205
Tennessee	**$252**	**$260**	**$235**	**$231**	**$477**	**$338**
Appalachian Tennessee	$88	$87	$77	$75	$185	$125
Non-Appalachian Tennessee	$164	$172	$158	$156	$292	$213
Virginia	**$453**	**$387**	**$387**	**$311**	**$517**	**$401**
Appalachian Virginia	$19	$18	$8	$19	$38	$31
Non-Appalachian Virginia	$434	$369	$378	$292	$479	$370
West Virginia (entire state)	**$41**	**$36**	**$40**	**$46**	**$86**	**$54**

Source: Small Business Administration, 7(a) Loan Program, 2015 - 2022.

Figure 4.6.1.2: Total Number of SBA 7(a) Loans to Small Businesses in Appalachia, 2017 – 2022

Number of SBA 7(a) Loans	2017	2018	2019	2020	2021	2022
United States	**56,193**	**54,425**	**46,217**	**37,109**	**46,980**	**44,160**
Appalachian Region	**2,891**	**2,818**	**2,378**	**2,206**	**2,751**	**2,794**
Appalachia as % of the U.S.	**5.1%**	**5.2%**	**5.1%**	**5.9%**	**5.9%**	**6.3%**
Subregions						
Northern Appalachia	**1,101**	**1,068**	**921**	**801**	**1,007**	**1,202**
North Central Appalachia	**230**	**258**	**210**	**250**	**321**	**270**
Central Appalachia	**122**	**104**	**106**	**76**	**97**	**102**
South Central Appalachia	**449**	**465**	**342**	**331**	**394**	**376**
Southern Appalachia	**989**	**923**	**799**	**748**	**932**	**844**
County Types						
Large Metros (pop. 1 million +)	**969**	**921**	**812**	**729**	**995**	**959**
Small Metros (pop. <1 million)	**1,113**	**1,157**	**968**	**929**	**1,069**	**1,136**
Nonmetro, Adjacent to Large Metros	**279**	**217**	**195**	**178**	**224**	**228**
Nonmetro, Adjacent to Small Metros	**354**	**350**	**247**	**231**	**292**	**274**
Rural (nonmetro, not adj. to a metro)	**176**	**173**	**156**	**139**	**171**	**197**
County Economic Status						

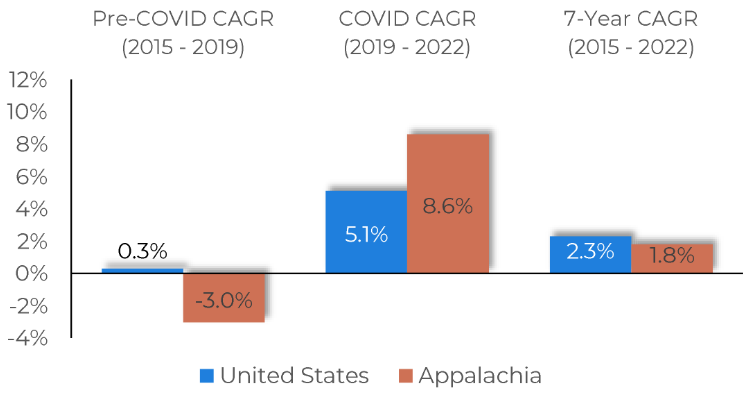
Distressed	**95**	**94**	**66**	**52**	**84**	**68**
At-Risk	**408**	**383**	**383**	**358**	**388**	**519**
Transitional	**1,992**	**1,928**	**1,559**	**1,452**	**1,848**	**1,820**
Competitive	**207**	**221**	**186**	**188**	**236**	**208**
Attainment	**189**	**192**	**184**	**156**	**195**	**179**
Alabama	**418**	**346**	**258**	**251**	**318**	**280**
Appalachian Alabama	277	219	163	173	202	168
Non-Appalachian Alabama	141	127	95	78	116	112
Georgia	**1,553**	**1,533**	**1,368**	**1,097**	**1,561**	**1,275**
Appalachian Georgia	549	522	459	424	538	449
Non-Appalachian Georgia	1,004	1,011	909	673	1,023	826
Kentucky	**449**	**427**	**393**	**321**	**421**	**363**
Appalachian Kentucky	87	62	69	49	58	66
Non-Appalachian Kentucky	362	365	324	272	363	297
Maryland	**731**	**906**	**798**	**555**	**609**	**713**
Appalachian Maryland	17	24	34	25	20	21
Non-Appalachian Maryland	714	882	764	530	589	692
Mississippi	**373**	**349**	**299**	**272**	**345**	**276**
Appalachian Mississippi	28	22	32	26	38	45
Non-Appalachian Mississippi	345	327	267	246	307	231
New York	**3,954**	**3,922**	**2,978**	**1,831**	**2,160**	**2,483**
Appalachian New York	155	141	122	75	102	99
Non-Appalachian New York	3,799	3,781	2,856	1,756	2,058	2,384
North Carolina	**1,256**	**1,166**	**1,016**	**858**	**999**	**909**
Appalachian North Carolina	254	276	199	178	183	176
Non-Appalachian North Carolina	1,002	890	817	680	816	733
Ohio	**2,939**	**3,069**	**2,521**	**2,254**	**3,023**	**3,348**
Appalachian Ohio	371	360	311	322	413	520
Non-Appalachian Ohio	2,568	2,709	2,210	1,932	2,610	2,828
Pennsylvania	**1,803**	**1,892**	**1,562**	**1,112**	**1,457**	**1,640**
Appalachian Pennsylvania	665	666	553	472	626	689
Non-Appalachian Pennsylvania	1,138	1,226	1,009	640	831	951
South Carolina	**480**	**537**	**486**	**373**	**507**	**522**
Appalachian South Carolina	135	160	145	125	154	182
Non-Appalachian South Carolina	345	377	341	248	353	340
Tennessee	**454**	**492**	**409**	**352**	**524**	**512**
Appalachian Tennessee	183	173	139	134	187	177
Non-Appalachian Tennessee	271	319	270	218	337	335
Virginia	**912**	**936**	**802**	**551**	**681**	**724**
Appalachian Virginia	37	50	29	40	51	49
Non-Appalachian Virginia	875	886	773	511	630	675
West Virginia (entire state)	**133**	**143**	**123**	**163**	**179**	**153**

Source: Small Business Administration, 7(a) Loan Program, 2015 - 2022.

From 2015 to 2019,[79] leading up to the pandemic, the United States experienced modest annualized growth (0.3%) in the SBA 7(a) loan dollars deployed, while Appalachia saw an annualized decrease of -3.0%. In that same period, both the broader United States and Appalachia saw declines in the number of SBA 7(a) loans disbursed, with Appalachia experiencing a slightly steeper annualized decline of -5.3% compared to -4.5% nationally.

The emergence of COVID-19 brought about a noteworthy shift in the SBA 7(a) loan landscape. From 2019 to 2022, Appalachia's total SBA 7(a) dollars grew at an annualized rate of 8.6%; outpacing the annualized growth of 5.1% nationally in that 3-year period.

Figure 4.6.1.3: Growth Rates for Total Dollar Amounts of SBA 7(a) Loans to Small Businesses in Appalachia, CAGR 2015 - 2022

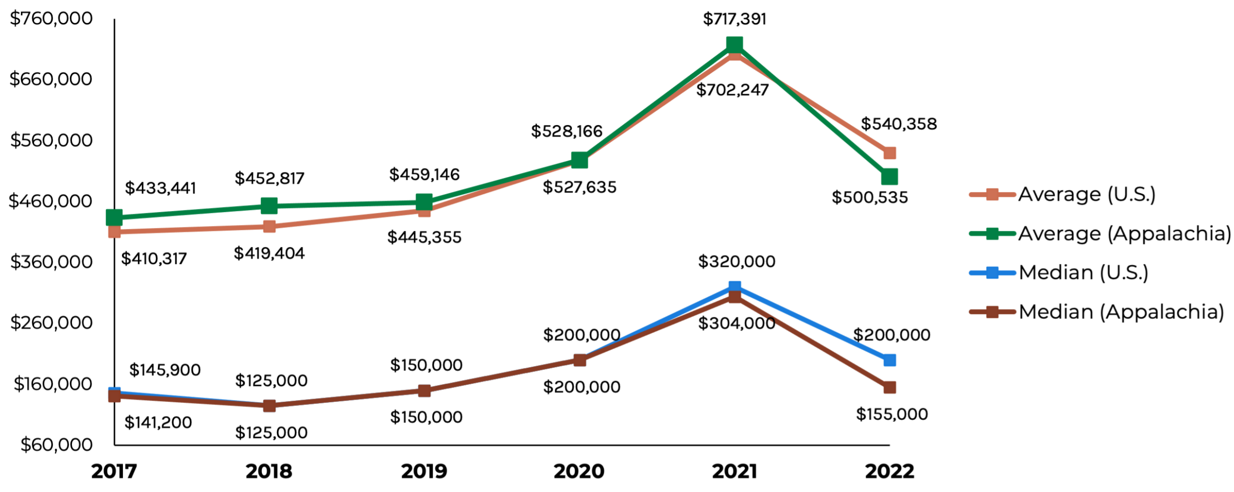


Data source: Small Business Administration, 7(a) Loan Program, 2015 - 2022.

79 Note: 2015 and 2016 7(a) data tables can be found in the Appendix.

Furthermore, the number of loans deployed in the Region from 2019 to 2022 exhibited an annualized growth rate of 5.5%, while the nation saw an annualized decrease of -1.5% during the same period. This positive shift in 7(a) loan growth rates, both in terms of dollar amounts and the number of loans, highlights the commitment to supporting small businesses emerging from the pandemic, in particular those located in underserved communities that were disproportionally affected by the pandemic. The 2022 data show a return to lower aggregate total loan amounts in Rural areas and Distressed counties, which likely follows a feeling of "returning to normal" for many lenders, and reflects the challenging interest rate and inflationary environment that began in 2022.

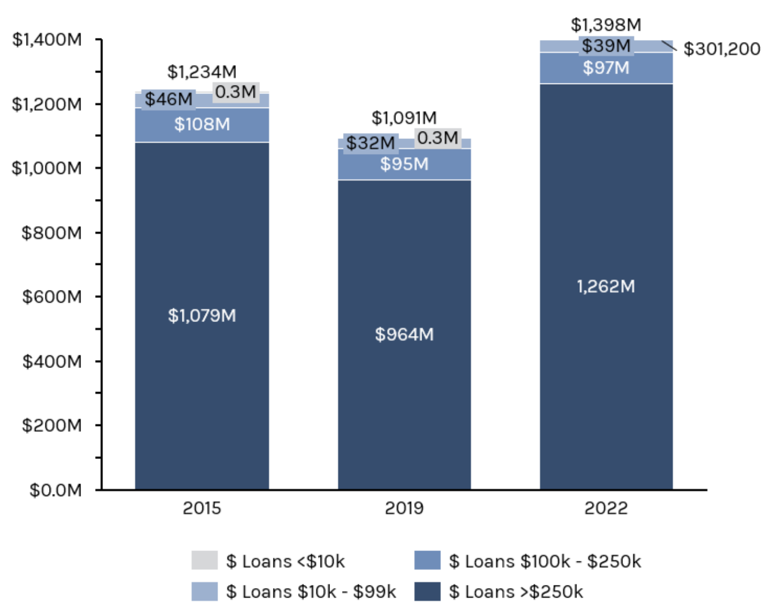
Figure 4.6.1.4: Average and Median Dollar Amount per SBA 7(a) Loan to Small Businesses in the United States and Appalachia, 2017 – 2022



Source: Small Business Administration, 7(a) Loan Program, 2015 - 2022.

From 2017 to 2021, Appalachian small businesses consistently had larger average loan sizes compared to the United States, and equal or lesser median loan sizes than the United States. (note this does not include 2022 in analysis). Together, the above points suggests that a few small businesses in Appalachia may have received larger sized loans, but the majority of businesses tended to receive loans that are not as large, as indicated by the Appalachian median being equal to or less than the national median. It reflects a distribution of loan sizes where a few large loans skew the average upwards, but most individual loans are not exceptionally large. In 2022, the average and median loan size in Appalachia decreased to lag the United States figures. This is indicative of a tightening of lending to small businesses in Appalachia relative to the rest of the country and also points to a decrease in the number and size of large loans that previously drove up the average loan size in Appalachia during the 2017 to 2021 period.

Figure 4.6.1.5: Total Dollar Amounts in SBA 7(a) Loans to Small Businesses in Appalachia by Loan Size, 2015 – 2022



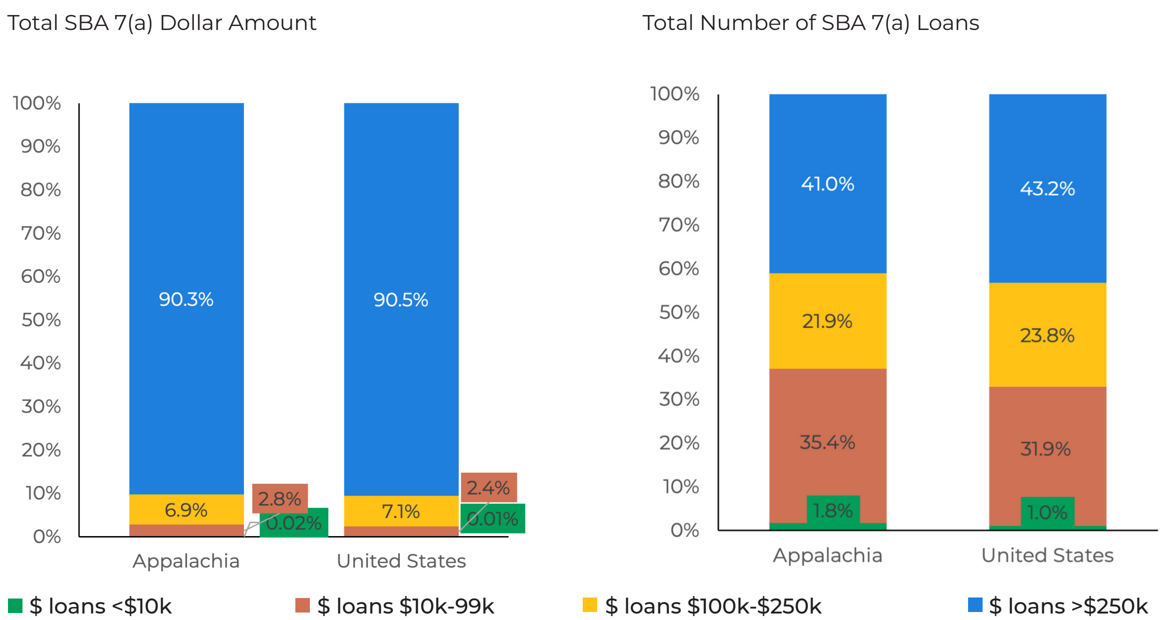
Source: Small Business Administration, 7(a) Loan Program, 2015 – 2022.

Figure 4.6.1.6: Annualized Growth Rates (CAGR) of Total Dollar Amounts in SBA 7(a) Loans to Small Businesses in Appalachia by Loan Size, 2015 – 2022

	2015 – 2019 CAGR		2019 – 2022 CAGR	
	Appalachia	United States	Appalachia	United States
Loan Size				
Loans <$10k	-1.7%	0.1%	-2.4%	-24.9%
Loans $10k – $99k	-8.5%	-9.1%	6.4%	-2.5%
Loans $100k - $250k	-3.2%	1.6%	0.6%	-4.5%
Loans >$250k	-2.8%	0.9%	9.4%	6.2%
Total	**-3.0%**	**0.3%**	**8.6%**	**5.1%**

Source: Small Business Administration, 7(a) Loan Program, 2015 – 2022.

Figure 4.6.1.7: Total Dollar Amounts and Number of Loans to Small Businesses in Appalachia as a Percentage, 2022



Source: Small Business Administration, 7(a) Loan Program, 2015 – 2022.

In 2022, loans exceeding $250,000 formed a substantial portion of the SBA 7(a) loan supply, making up approximately 90% of the total dollar amount both nationally and in Appalachia. Most SBA 7(a) loans (in terms of number of loans) are deployed in the $10,000 to $99,999 range (35.4% in Appalachia) and in the over $250,000 range (41.0% in Appalachia), which is also mirrored nationally. **Based on this makeup, there is a gap in the market for SBA 7(a) loans that are less than $10,000, as only 1.8% of loans fell into this category in Appalachia in 2022.**

AGGREGATE SUPPLY BY INDUSTRY

In 2022, SBA 7(a) loans were primarily concentrated in the Leisure & Hospitality, Retail, Business Support & Consumer Services, and Nonmanufacturing Goods Production industries. An analysis of annualized growth rates from 2015 to 2019 and from 2019 to 2022 reveals several noteworthy trends (detailed tables are contained in the Appendix):

- **Industry Turnaround:** In Appalachia, certain sectors – such as Finance & Insurance, Healthcare & Education, Nonmanufacturing Goods Production, and Professional Services & Real Estate – saw increased SBA 7(a) lending from 2019 to 2022. These industries in Appalachia surpassed lending receipt growth for their national counterparts over the same period. Construction also demonstrated substantial growth over this time period.
- **Extraction Industry Lending:** Lending to extraction industries in Appalachia displayed considerable volatility, with an annualized growth rate of 83.4% from 2015 to 2019, then an annualized decrease of -1.6% in lending from 2019 to 2022. The decrease is unsurprising when considered alongside general industry trends, with number of businesses declining over time (more detail is contained in the Small Business Landscape section and the Appendix).

DENSITY OF SBA 7(A) LENDING

In 2020, Appalachia fell slightly behind the national average for SBA 7(a) loan amount per small business ($493 in the Region compared to $557 nationally) and the number of SBA 7(a) loans per 10,000 small businesses (nine in the Region versus eleven nationally).

- Along with a higher concentration of small businesses across the Region, Large Metros have the highest loan amount per small business ($628) and the highest number of loans per 10,000 small businesses (11). Rural counties, on the other hand, have the lowest loan amount per small business ($312) and the lowest number of loans per 10,000 small businesses (7).
- **The flow of SBA 7(a) volume to small businesses in Appalachia, particularly concentrated in better-performing counties, maintains a correlation with historical economic development and disinvestment trends, and aligns with the patterns observed in various types of capital assessed in this research.** Attainment counties demonstrated the highest SBA 7(a) loan amount per small business in 2020 at $1,346, and led in loan volume with 16 loans per 10,000 small businesses. Conversely, Distressed counties had the lowest loan amount in 2020 at just $157 and five loans per 10,000 small businesses.

Figure 4.6.1.8: SBA 7(a) Loan Amount per Small Business and Number of Loans per 10,000 Small Businesses, 2020

SBA 7(a) Loan Program	SBA 7(a) Loan Amount per Small Business	SBA 7(a) Loans per 10,000 Small Businesses
United States	**$557**	**11**
Appalachian Region	**$493**	**9**
Subregions		
Northern Appalachia	**$455**	**12**
North Central Appalachia	**$364**	**14**
Central Appalachia	**$228**	**6**
South Central Appalachia	**$421**	**7**
Southern Appalachia	**$626**	**8**
County Types		
Large Metros (pop. 1 million +)	**$628**	**11**
Small Metros (pop. <1 million)	**$486**	**10**
Nonmetro, Adjacent to Large Metros	**$452**	**9**
Nonmetro, Adjacent to Small Metros	**$374**	**7**
Rural (nonmetro, not adj. to a metro)	**$312**	**7**
County Economic Status		
Distressed	**$157**	**5**
At-Risk	**$477**	**11**
Transitional	**$463**	**9**
Competitive	**$551**	**11**
Attainment	**$1,346**	**16**
Alabama	**$366**	**6**
Appalachian Alabama	$400	6
Non-Appalachian Alabama	$306	5
Georgia	**$711**	**9**
Appalachian Georgia	$805	10
Non-Appalachian Georgia	$665	8
Kentucky	**$329**	**8**
Appalachian Kentucky	$191	5
Non-Appalachian Kentucky	$370	9
Maryland	**$309**	**8**
Appalachian Maryland	$459	12
Non-Appalachian Maryland	$304	8
Mississippi	**$508**	**10**
Appalachian Mississippi	$452	5
Non-Appalachian Mississippi	$522	11
New York	**$310**	**8**
Appalachian New York	$324	10
Non-Appalachian New York	$309	8
North Carolina	**$626**	**8**
Appalachian North Carolina	$600	9
Non-Appalachian North Carolina	$632	8

SBA 7(a) Loan Program	SBA 7(a) Loan Amount per Small Business	SBA 7(a) Loans per 10,000 Small Businesses
Ohio	**$646**	**21**
Appalachian Ohio	$464	20
Non-Appalachian Ohio	$679	21
Pennsylvania	**$437**	**10**
Appalachian Pennsylvania	$455	10
Non-Appalachian Pennsylvania	$424	9
South Carolina	**$511**	**7**
Appalachian South Carolina	$629	9
Non-Appalachian South Carolina	$469	7
Tennessee	**$327**	**5**
Appalachian Tennessee	$278	5
Non-Appalachian Tennessee	$357	5
Virginia	**$358**	**6**
Appalachian Virginia	$355	7
Non-Appalachian Virginia	$358	6
West Virginia (entire state)	**$386**	**14**

Source: Small Business Administration, 7(a) Loan Program, 2022.

4.6.2 SBA 504 Lending

SBA 504 LENDING

The SBA 504 Loan Program supports business growth and encourages job creation by providing financing covering a wide range of eligible assets including property acquisition, construction, new facilities, durable machinery, equipment, and land improvement (for new and existing buildings and infrastructure). Small businesses with a tangible net worth under $15 million qualify, and the maximum loan amount available is $5.5 million.[80]

This loan program is not nearly as widespread as the SBA's 7(a) flagship lending product, and deployment of SBA 504 loans is exceptionally uncommon in Appalachia, revealing a coverage gap of long-term stable asset financing within the Region. From 2015 to 2022, the Region's SBA 504 loans totaled only 333 loans, representing 3.9% of the total volume in the United States. However, through the COVID-19 pandemic, Appalachian small businesses experienced an uptick in SBA 504 lending in both dollar amount and number of loans, outpacing the United States annualized growth rates from 2019 to 2022. As economic development initiatives (Main Street programs, for example) garnered more attention and funding support during the pandemic, loans focused on tangible assets and real estate likely became more of a reality for communities without previous asset-financing market access. It is important to note that such growth represents a very small number of loans and presents the potential for further expansion.

In aggregate, from 2015 to 2022, Southern and Northern Appalachia accounted for most of the total SBA 504 loan dollars and number of loans in the Region. Southern Appalachia's growth is primarily driven by an increase from $17.4 million to $50.6 million in Appalachian Alabama. Central Appalachia had the highest concentration of Distressed and At-Risk counties and this region saw annualized growth of 66.2% in 504 loan dollars from 2019 to 2022 after previously experiencing declines from 2015 to 2019. From 2015 to 2022, Metro areas received 80% of Appalachian SBA 504 funding, reflecting higher business density, more

80 "504 Loans." U.S. Small Business Administration. Accessed April 12, 2023. https://www.sba.gov/funding-programs/loans/504-loans.

robust lender networks, and more existing opportunities for tangible asset ownership. In contrast, Rural counties received only 3% of the funding between 2019 and 2022, and no Rural Appalachian businesses secured loans over $3 million.

Figure 4.6.2.1: Total Dollar Amounts of SBA 504 Loans to Small Businesses in Appalachia, CAGR 2015 – 2022

SBA 504 Loan Program Total Loan Amounts (in millions of $)	2015	2019	2022	Pre-COVID CAGR (2015 – 2019)	COVID CAGR (2019 – 2022)
United States	**$3,519**	**$4,567**	**$8,948**	**6.7%**	**25.1%**
Appalachian Region	**$113**	**$133**	**$346**	**4.1%**	**37.6%**
Appalachia as % of the U.S.	**3.2%**	**2.9%**	**3.9%**		
Subregions					
Northern Appalachia	**$45**	**$32**	**$112**	**-8.2%**	**51.8%**
North Central Appalachia	**$2**	**$13**	**$21**	**54.4%**	**18.4%**
Central Appalachia	**$2**	**$1**	**$5**	**-11.3%**	**66.2%**
South Central Appalachia	**$17**	**$17**	**$33**	**1.0%**	**24.5%**
Southern Appalachia	**$47**	**$70**	**$174**	**10.1%**	**35.6%**
County Types					
Large Metros (pop. 1 million +)	**$45.9**	**$57.4**	**$129.3**	**5.8%**	**31.1%**
Small Metros (pop. <1 million)	**$48.1**	**$43.0**	**$144.8**	**-2.8%**	**49.9%**
Nonmetro, Adj. to Large Metros	**$4.3**	**$10.6**	**$27.5**	**25.2%**	**37.3%**
Nonmetro, Adj. to Small Metros	**$13.4**	**$16.8**	**$35.7**	**5.8%**	**28.5%**
Rural (nonmetro, not adj. to metro)	**$1.6**	**$5.0**	**$8.4**	**32.2%**	**19.1%**
County Economic Status					
Large Metros (pop. 1 million +)	**$46**	**$57**	**$129**	**5.8%**	**31.1%**
Small Metros (pop. <1 million)	**$48**	**$43**	**$145**	**-2.8%**	**49.9%**
Nonmetro, Adj. to Large Metros	**$4**	**$11**	**$28**	**25.2%**	**37.3%**
Nonmetro, Adj. to Small Metros	**$13**	**$17**	**$36**	**5.8%**	**28.5%**
Rural (nonmetro, not adj. to metro)	**$2**	**$5**	**$8**	**32.2%**	**19.1%**
Alabama	**$28**	**$26**	**$76**	**-2.1%**	**43.5%**
Appalachian Alabama	$17	$18	$51	*0.5%*	*41.8%*
Non-Appalachian Alabama	$10	$8	$25	*-6.9%*	*47.2%*
Georgia	**$80**	**$134**	**$266**	**13.7%**	**25.8%**
Appalachian Georgia	$27	$42	$106	*12.2%*	*35.8%*
Non-Appalachian Georgia	$53	$91	$160	*14.5%*	*20.5%*
Kentucky	**$18**	**$16**	**$22**	**-3.9%**	**11.6%**
Appalachian Kentucky	$1	$1	$5	*1.2%*	*66.2%*
Non-Appalachian Kentucky	$17	$14	$16	*-4.3%*	*4.0%*
Maryland	**$24**	**$19**	**$53**	**-5.1%**	**39.5%**
Appalachian Maryland	$1	$0	$1	*-100.0%*	-
Non-Appalachian Maryland	$23	$19	$51	*-4.2%*	*38.3%*
Mississippi	**$1**	**$6**	**$5**	**50.1%**	**-3.8%**
Appalachian Mississippi	$0	$0	$3	-	-
Non-Appalachian Mississippi	$1	$5	$2	*48.1%*	*-28.8%*

SBA 504 Loan Program Total Loan Amounts (in millions of $)	2015	2019	2022	Pre-COVID CAGR (2015 – 2019)	COVID CAGR (2019 – 2022)
New York	**$164**	**$150**	**$381**	**-2.3%**	**36.4%**
Appalachian New York	$9	$0	$7	*-54.4%*	*157.6%*
Non-Appalachian New York	$156	$150	$374	*-1.0%*	*35.8%*
North Carolina	**$39**	**$49**	**$120**	**5.4%**	**35.0%**
Appalachian North Carolina	$5	$4	$12	*-6.9%*	*42.0%*
Non-Appalachian North Carolina	$34	$45	$108	*7.1%*	*34.3%*
Ohio	**$88**	**$106**	**$161**	**4.8%**	**15.1%**
Appalachian Ohio	$13	$22	$24	*14.2%*	*2.8%*
Non-Appalachian Ohio	$75	$84	$137	*2.9%*	*17.9%*
Pennsylvania	**$58**	**$78**	**$190**	**7.7%**	**34.2%**
Appalachian Pennsylvania	$23	$21	$99	*-3.0%*	*68.7%*
Non-Appalachian Pennsylvania	$35	$58	$91	*13.3%*	*16.2%*
South Carolina	**$19**	**$39**	**$76**	**18.8%**	**25.3%**
Appalachian South Carolina	$3	$9	$14	*28.5%*	*14.9%*
Non-Appalachian South Carolina	$16	$30	$62	*16.4%*	*28.2%*
Tennessee	**$12**	**$23**	**$31**	**19.0%**	**10.6%**
Appalachian Tennessee	$7	$10	$19	*7.6%*	*26.4%*
Non-Appalachian Tennessee	$4	$14	$12	*32.5%*	*-4.1%*
Virginia	**$54**	**$88**	**$120**	**13.2%**	**11.0%**
Appalachian Virginia	$5	$4	$2	*-7.1%*	*-15.9%*
Non-Appalachian Virginia	$49	$84	$118	*14.6%*	*11.8%*
West Virginia (entire state)	**$1**	**$2**	**$2**	**3.6%**	**13.7%**

Source: Small Business Administration, 504 Loan Program, 2015 – 2022.

Figure 4.6.2.2: Total Number of SBA 504 Loans to Small Businesses in Appalachia, CAGR, 2015 – 2022

SBA 504 Program	2015	2019	2022	Pre-COVID CAGR (2015 – 2019)	COVID CAGR (2019 – 2022)
United States	**4,884**	**5,623**	**8,986**	**3.6%**	**16.9%**
Appalachian Region	**145**	**175**	**333**	**4.8%**	**23.9%**
Appalachia as % of the U.S.	**3.0%**	**3.1%**	**3.7%**		
Subregions					
Northern Appalachia	**35**	**46**	**127**	**7.1%**	**40.3%**
North Central Appalachia	**4**	**11**	**23**	**28.8%**	**27.9%**
Central Appalachia	**3**	**1**	**5**	**-24.0%**	**71.0%**
South Central Appalachia	**23**	**22**	**30**	**-1.1%**	**10.9%**
Southern Appalachia	**80**	**95**	**148**	**4.4%**	**15.9%**
County Types					
Large Metros (pop. 1 million +)	**59**	**84**	**139**	**9.2%**	**18.3%**
Small Metros (pop. <1 million)	**56**	**55**	**128**	**-0.4%**	**32.5%**
Nonmetro, Adjacent to Large Metros	**9**	**13**	**24**	**9.6%**	**22.7%**
Nonmetro, Adjacent to Small Metros	**18**	**18**	**35**	**0.0%**	**24.8%**
Rural (nonmetro, not adj. to a metro)	**3**	**5**	**7**	**13.6%**	**11.9%**

SBA 504 Program	2015	2019	2022	Pre-COVID CAGR (2015 – 2019)	COVID CAGR (2019 – 2022)
County Economic Status					
Distressed	**3**	**4**	**3**	**7.5%**	**-9.1%**
At-Risk	**15**	**10**	**21**	**-9.6%**	**28.1%**
Transitional	**91**	**125**	**238**	**8.3%**	**23.9%**
Competitive	**17**	**18**	**43**	**1.4%**	**33.7%**
Attainment	**19**	**18**	**28**	**-1.3%**	**15.9%**
Alabama	**49**	**46**	**74**	**-1.6%**	**17.2%**
Appalachian Alabama	32	31	45	*-0.8%*	*13.2%*
Non-Appalachian Alabama	17	15	29	*-3.1%*	*24.6%*
Georgia	**103**	**152**	**226**	**10.2%**	**14.1%**
Appalachian Georgia	41	51	89	*5.6%*	*20.4%*
Non-Appalachian Georgia	62	101	137	*13.0%*	*10.7%*
Kentucky	**27**	**24**	**35**	**-2.9%**	**13.4%**
Appalachian Kentucky	1	1	5	*0.0%*	*71.0%*
Non-Appalachian Kentucky	26	23	30	*-3.0%*	*9.3%*
Maryland	**31**	**24**	**50**	**-6.2%**	**27.7%**
Appalachian Maryland	1	0	3	*-100.0%*	-
Non-Appalachian Maryland	30	24	47	*-5.4%*	*25.1%*
Mississippi	**3**	**5**	**4**	**13.6%**	**-7.2%**
Appalachian Mississippi	0	1	2	-	*26.0%*
Non-Appalachian Mississippi	3	4	2	*7.5%*	*-20.6%*
New York	**174**	**151**	**333**	**-3.5%**	**30.2%**
Appalachian New York	4	1	11	*-29.3%*	*122.4%*
Non-Appalachian New York	170	150	322	*-3.1%*	*29.0%*
North Carolina	**70**	**63**	**118**	**-2.6%**	**23.3%**
Appalachian North Carolina	11	8	15	*-7.7%*	*23.3%*
Non-Appalachian North Carolina	59	55	103	*-1.7%*	*23.3%*
Ohio	**165**	**156**	**202**	**-1.4%**	**9.0%**
Appalachian Ohio	12	20	29	*13.6%*	*13.2%*
Non-Appalachian Ohio	153	136	173	*-2.9%*	*8.4%*
Pennsylvania	**61**	**96**	**194**	**12.0%**	**26.4%**
Appalachian Pennsylvania	20	35	103	*15.0%*	*43.3%*
Non-Appalachian Pennsylvania	41	61	91	*10.4%*	*14.3%*
South Carolina	**29**	**48**	**56**	**13.4%**	**5.3%**
Appalachian South Carolina	7	12	12	*14.4%*	*0.0%*
Non-Appalachian South Carolina	22	36	44	*13.1%*	*6.9%*
Tennessee	**16**	**21**	**20**	**7.0%**	**-1.6%**
Appalachian Tennessee	11	10	12	*-2.4%*	*6.3%*
Non-Appalachian Tennessee	5	11	8	*21.8%*	*-10.1%*
Virginia	**84**	**121**	**146**	**9.6%**	**6.5%**
Appalachian Virginia	3	4	3	*7.5%*	*-9.1%*
Non-Appalachian Virginia	81	117	143	*9.6%*	*6.9%*
West Virginia (entire state)	**2**	**1**	**4**	**-15.9%**	**58.7%**

Source: Small Business Administration, SBA 504 Loan Program, 2015 – 2022.

4.6.3 Paycheck Protection Program (PPP) Lending

COVID-19 EMERGENCY PANDEMIC SUPPORT: SBA PAYCHECK PROTECTION PROGRAM (PPP) LENDING

In response to the COVID-19 pandemic and the increased demand for emergency capital, the federal government created the SBA Paycheck Protection Program (PPP) to allow businesses to not only stay in operation, but also keep their workforce employed. As a result, total lending across the spectrum of capital providers spiked in 2020 and 2021.[81]

A total of $43.8 billion and 11.2 million loans were distributed in Appalachia via the PPP in both 2020 and 2021, representing nearly 6% of the totals in the United States during the PPP distribution period. Despite having the fewest loans, the category of '$350,000 or more' accounted for the largest overall dollar amount total of PPP loans in both Appalachia and across the United States in 2020.

The total dollar amount disbursed through larger loans in Appalachia, ranging from $100,000 to more than $350,000, declined from 52.9% of total funding in 2020 to 33.1% in 2021. Instead, loans of less than $100,000 were most common in the Region, increasing from 22.8% in 2020 to 41.2% in 2021. This modification allowed for a more even distribution loan sizes, a trend also seen nationally.

Figure 4.6.3.1: Total Dollar Amounts of PPP Loans in Appalachia and the United States, as a Percent in 2020 and 2021

Source: U.S. Small Business Administration, Paycheck Protection Program, 2020 – 2021.
Note: State data is organized by the state a company is registered in – not the company's headquarter address – while other data is organized by company address, which is why state totals are slightly different from Appalachian totals.

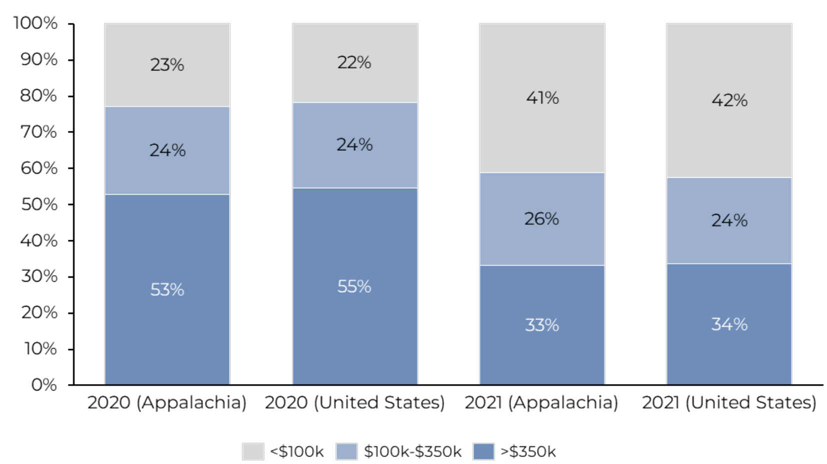
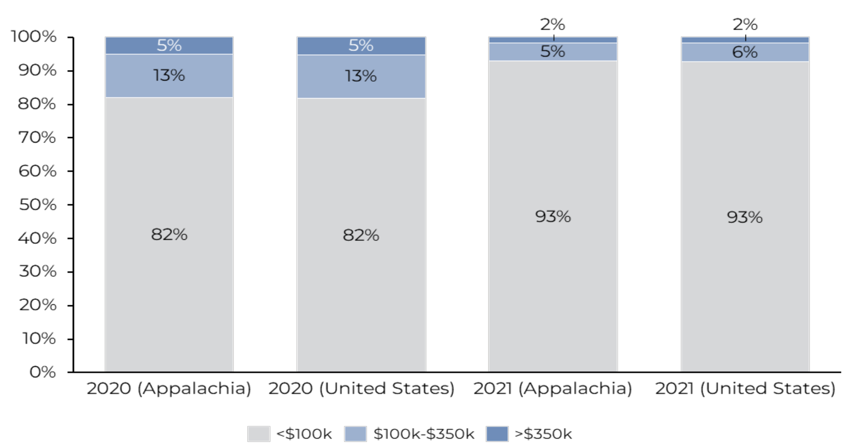


Figure 4.6.3.2: Total Number of PPP Loans in Appalachia and the United States, as a Percent in 2020 and 2021

Source: U.S. Small Business Administration, Paycheck Protection Program, 2020 – 2021.
Note: State data is organized by the state a company is registered in – not the company's headquarter address – while other data is organized by company address, which is why state totals are slightly different from Appalachian totals.



81 Paycheck Protection Program." U.S. Small Business Administration. Accessed July 12, 2023. https://www.sba.gov/funding- programs/loans/covid-19-relief-options/paycheck-protection-program

PROGRAM ADJUSTMENTS FOR EQUITABLE DISTRIBUTION

In 2020 the SBA Paycheck Protection Program (PPP), while mandated by federal requirements, primarily relied on established financial institutions and pre-existing banking relationships to deploy loans. In 2020, the program struggled to reach businesses equitably because of its untargeted nature. With the main qualification being "substantially affected by COVID-19," the result was a widespread national distribution of funds. This approach favored large banks (which, as noted earlier, are not predominant in the Region and are less willing to engage in smaller-size loans) therefore lending did not widely reach as many microbusinesses, nonemployer businesses, and Black-and-Latino or Hispanic-owned businesses, as other types of businesses receiving lending through the PPP program.[82] The reliance on authorized SBA partners who prioritized their existing banking relationships resulted in disproportionate lending support for businesses in Northern and Southern Appalachia and urban areas with higher financial institution density, leaving central subregions and Rural counties less-resourced.

In 2021 the SBA modified the program to attain a more equitable distribution, including earlier application periods for microbusinesses and increased CDFI participation. The focus shifted to businesses experiencing income losses due to COVID-19. However, fewer PPP dollars were deployed in the second year, resulting in a decrease from $29.3 billion to $14.5 billion in total funds in Appalachia. In contrast, the number of loans increased, with a larger proportion going to counties with greater economic difficulties, rural areas, and suburbs. These modifications broadened the purview of the program and made it more equitable for small businesses and underserved communities by increasing the number of smaller-size loans. The average PPP loan size in Appalachia decreased from $94,851 in 2020 to $38,608 in 2021, similar to the national average loan decline. Despite the hurdles faced during the initial round in 2020, the emergency relief funding initiated by the Federal government provides valuable insights for Appalachian policymakers and financial institutions. This is especially noteworthy as the Region effectively and swiftly distributed a substantial amount of capital to vulnerable populations. The 2021 round, as noted, contains even more critical learnings about the effects of the equity adjustments to the program.

82 Sifan Liu and Joseph Parilla, "New Data Shows Small Businesses in Communities of Color Had Unequal Access to Federal Covid-19 Relief," Brookings, September 17, 2020, https://www.brookings.edu/articles/new-data-shows-small-businesses-in-communities-of-color-had-unequal-access-to-federal-covid-19-relief/, 8.

PAYCHECK PROTECTION PROGRAM (PPP) LENDING DENSITY

2020 lending data assessed for concentration per small business shows Appalachian small businesses received slightly fewer dollars and loans, though these figures remain fairly comparable to the national average. In Appalachia, $12,381 per small business and 1,305 loans per 10,000 small businesses were distributed, compared to $13,814 per small business and 1,408 loans per 10,000 small business nationally (see Figures 4.6.3.3 and 4.7.4).

Figure 4.6.3.3: Paycheck Protection Program (PPP) Lending Dollars, Total and per Small Business in Appalachia, 2020 – 2021

PPP Dollar Lending	2020 Lending (in $ millions)	2021 (in $ millions)	2020 and 2021 Total (in $ millions)	YOY Growth (2020-2021)	PPP Lending per SMB (2020)
United States	**$485,549**	**$257,004**	**$742,553**	**-47%**	**$13,814**
Appalachian Region	**$29,263**	**$14,509**	**$43,772**	**-50%**	**$12,381**
Appalachia as a % of U.S.	**6.00%**	**5.60%**	**5.90%**		
Subregions					
Northern Appalachia	**$10,004**	**$4,804**	**$14,808**	**-52%**	**$15,144**
North Central Appalachia	**$2,233**	**$1,066**	**$3,299**	**-52%**	**$12,589**
Central Appalachia	**$1,524**	**$831**	**$2,355**	**-45%**	**$11,188**
South Central Appalachia	**$5,350**	**$2,299**	**$7,649**	**-57%**	**$10,833**
Southern Appalachia	**$10,152**	**$5,509**	**$15,661**	**-46%**	**$11,337**
County Types					
Large Metros (pop. 1 million +)	**$9,254**	**$5,002**	**$14,256**	**-46%**	**$13,785**
Small Metros (pop. <1 million)	**$12,772**	**$5,664**	**$18,436**	**-56%**	**$13,115**
Nonmetro, Adjacent to Large Metros	**$1,840**	**$915**	**$2,755**	**-50%**	**$9,665**
Nonmetro, Adjacent to Small Metros	**$3,317**	**$1,690**	**$5,007**	**-49%**	**$10,385**
Rural (nonmetro, not adj. to a metro)	**$2,081**	**$1,238**	**$3,319**	**-41%**	**$9,971**
County Economic Status					
Distressed	**$914**	**$587**	**$1,501**	**-36%**	**$8,565**
At-Risk	**$3,829**	**$2,112**	**$5,941**	**-45%**	**$12,230**
Transitional	**$20,645**	**$10,080**	**$30,725**	**-51%**	**$12,334**
Competitive	**$2,121**	**$932**	**$3,054**	**-56%**	**$12,102**
Attainment	**$1,753**	**$798**	**$2,551**	**-54%**	**$18,542**
Alabama	**$5,809**	**$3,089**	**$8,899**	**-47%**	**$12,895**
Appalachian Alabama	$3,871	$1,897	$5,768	*-51%*	$13,417
Non-Appalachian Alabama	$1,938	$1,192	$3,130	*-38%*	$11,963
Georgia	**$13,823**	**$10,190**	**$24,012**	**-26%**	**$10,810**
Appalachian Georgia	$4,130	$2,462	$6,592	*-40%*	$9,894
Non-Appalachian Georgia	$9,694	$7,727	$17,421	*-20%*	$11,253
Kentucky	**$4,839**	**$2,394**	**$7,233**	**-51%**	**$12,450**
Appalachian Kentucky	$894	$522	$1,416	*-42%*	$9,932
Non-Appalachian Kentucky	$3,945	$1,872	$5,818	*-53%*	$13,208
Maryland	**$9,207**	**$4,707**	**$13,915**	**-49%**	**$13,722**
Appalachian Maryland	$310	$137	$446	*-56%*	$15,253
Non-Appalachian Maryland	$8,897	$4,571	$13,468	*-49%*	$13,674

PPP Dollar Lending	2020 Lending (in $ millions)	2021 (in $ millions)	2020 and 2021 Total (in $ millions)	YOY Growth (2020-2021)	PPP Lending per SMB (2020)
Mississippi	**$2,963**	**$2,159**	**$5,122**	**-27%**	**$10,493**
Appalachian Mississippi	$656	$516	$1,172	*-21%*	$11,699
Non-Appalachian Mississippi	$2,308	$1,643	$3,951	*-29%*	$10,195
New York	**$34,737**	**$20,368**	**$55,104**	**-41%**	**$15,164**
Appalachian New York	$923	$486	$1,409	*-47%*	$11,936
Non-Appalachian New York	$33,814	$19,881	$53,695	*-41%*	$15,277
North Carolina	**$11,666**	**$5,213**	**$16,879**	**-55%**	**$10,934**
Appalachian North Carolina	$2,132	$922	$3,053	*-57%*	$10,260
Non-Appalachian North Carolina	$9,534	$4,291	$13,826	*-55%*	$11,097
Ohio	**$17,128**	**$8,352**	**$25,481**	**-51%**	**$16,178**
Appalachian Ohio	$2,123	$990	$3,114	*-53%*	$13,268
Non-Appalachian Ohio	$15,005	$7,362	$22,367	*-51%*	$16,696
Pennsylvania	**$18,939**	**$9,088**	**$28,026**	**-52%**	**$16,377**
Appalachian Pennsylvania	$7,417	$3,565	$10,983	*-52%*	$15,842
Non-Appalachian Pennsylvania	$11,522	$5,522	$17,044	*-52%*	$16,742
South Carolina	**$5,399**	**$2,842**	**$8,241**	**-47%**	**$10,638**
Appalachian South Carolina	$1,496	$634	$2,130	*-58%*	$11,199
Non-Appalachian South Carolina	$3,903	$2,208	$6,110	*-43%*	$10,438
Tennessee	**$8,334**	**$4,246**	**$12,579**	**-49%**	**$11,804**
Appalachian Tennessee	$3,185	$1,366	$4,551	*-57%*	$11,763
Non-Appalachian Tennessee	$5,149	$2,879	$8,028	*-44%*	$11,829
Virginia	**$11,746**	**$5,412**	**$17,158**	**-54%**	**$13,517**
Appalachian Virginia	$510	$278	$788	*-45%*	$9,482
Non-Appalachian Virginia	$11,236	$5,134	$16,370	*-54%*	$13,784
West Virginia (entire state)	**$1,621**	**$760**	**$2,381**	**-53%**	**$13,519**

Source: U.S. Small Business Administration, Paycheck Protection Program, 2020 – 2021.

Note: Small Business data is not available for 2021.

Figure 4.6.3.4: Paycheck Protection Program (PPP) Number of Loans, Total and per 10,000 Small Business in Appalachia, 2020 – 2021

PPP Number of Loans	2020	2021	2020 and 2021 Total	YOY Growth (2020-2021)	# of loans per 10,000 SMB (2020)
United States	**4,947,230**	**6,241,894**	**11,189,124**	**26%**	**1,408**
Appalachian Region	**308,515**	**375,796**	**684,311**	**22%**	**1,305**
Appalachia as a % of U.S.	**6.2%**	**6.0%**	**6.1%**	**-**	**-**
Subregions					
Northern Appalachia	**90,398**	**80,121**	**170,519**	**-11%**	**1,368**
North Central Appalachia	**23,185**	**23,109**	**46,294**	**0%**	**1,307**
Central Appalachia	**19,110**	**35,314**	**54,424**	**85%**	**1,403**
South Central Appalachia	**59,188**	**55,260**	**114,448**	**-7%**	**1,199**
Southern Appalachia	**116,632**	**181,992**	**298,624**	**56%**	**1,302**
County Types					
Large Metros (pop. 1 million +)	**92,865**	**129,260**	**222,125**	**39%**	**1,383**
Small Metros (pop. <1 million)	**127,064**	**126,238**	**253,302**	**-1%**	**1,305**
Nonmetro, Adjacent to Large Metros	**21,006**	**24,143**	**45,149**	**15%**	**1,104**
Nonmetro, Adjacent to Small Metros	**39,620**	**48,828**	**88,448**	**23%**	**1,241**
Rural (nonmetro, not adj. to a metro)	**27,958**	**47,327**	**75,285**	**69%**	**1,340**
County Economic Status					
Distressed	**11,242**	**22,737**	**33,979**	**102%**	**1,053**
At-Risk	**44,140**	**69,242**	**113,382**	**57%**	**1,410**
Transitional	**211,725**	**243,287**	**455,012**	**15%**	**1,265**
Competitive	**20,717**	**21,946**	**42,663**	**6%**	**1,182**
Attainment	**20,689**	**18,584**	**39,273**	**-10%**	**2,188**
Alabama	**65,794**	**99,476**	**165,270**	**51%**	**1,460**
Appalachian Alabama	41,677	57,558	99,235	*38%*	836
Non-Appalachian Alabama	24,117	41,918	66,035	*74%*	2,573
Georgia	**163,067**	**383,096**	**546,163**	**135%**	**1,275**
Appalachian Georgia	49,629	84,484	134,113	*70%*	2,718
Non-Appalachian Georgia	113,438	298,612	412,050	*163%*	576
Kentucky	**47,945**	**77,068**	**125,013**	**61%**	**1,234**
Appalachian Kentucky	11,042	24,230	35,272	*119%*	4,102
Non-Appalachian Kentucky	36,903	52,838	89,741	*43%*	370
Maryland	**81,955**	**103,411**	**185,366**	**26%**	**1,221**
Appalachian Maryland	2,909	2,736	5,645	*-6%*	38,920
Non-Appalachian Maryland	79,046	100,675	179,721	*27%*	45
Mississippi	**45,692**	**89,722**	**135,414**	**96%**	**1,618**
Appalachian Mississippi	10,146	23,491	33,637	*132%*	6,344
Non-Appalachian Mississippi	35,546	66,231	101,777	*86%*	448
New York	**331,497**	**384,600**	**716,097**	**16%**	**1,447**
Appalachian New York	9,580	9,290	18,870	*-3%*	41,642

Non-Appalachian New York	321,917	375,310	697,227	*17%*	43
North Carolina	**121,890**	**129,732**	**251,622**	**6%**	**1,142**
Appalachian North Carolina	23,777	19,796	43,573	*-17%*	4,722
Non-Appalachian North Carolina	98,113	109,936	208,049	*12%*	277
Ohio	**140,642**	**201,566**	**342,208**	**43%**	**1,328**
Appalachian Ohio	19,612	21,996	41,608	*12%*	7,563
Non-Appalachian Ohio	121,030	179,570	300,600	*48%*	218
Pennsylvania	**162,820**	**166,049**	**328,869**	**2%**	**1,408**
Appalachian Pennsylvania	66,445	55,627	122,072	*-16%*	2,058
Non-Appalachian Pennsylvania	96,375	110,422	206,797	*15%*	965
South Carolina	**63,224**	**83,396**	**146,620**	**32%**	**1,246**
Appalachian South Carolina	15,182	16,458	31,640	*8%*	3,596
Non-Appalachian South Carolina	48,042	66,938	114,980	*39%*	406
Tennessee	**94,224**	**129,870**	**224,094**	**38%**	**1,335**
Appalachian Tennessee	34,816	38,122	72,938	*9%*	2,194
Non-Appalachian Tennessee	59,408	91,748	151,156	*54%*	800
Virginia	**107,782**	**93,966**	**201,748**	**-13%**	**1,240**
Appalachian Virginia	6,838	6,161	12,999	*-10%*	18,765
Non-Appalachian Virginia	100,944	87,805	188,749	*-13%*	84
West Virginia (entire state)	**16,867**	**14,875**	**31,742**	**-12%**	**1,407**

Source: Small Business Administration, Paycheck Protection Program, 2020 – 2021.

Note: State data is organized by the state a company is registered in – not the company's headquarter address – while other data is organized by company address, which is why state totals are slightly different from Appalachian totals. Note: SMB data is not available for 2021.

4.7 Government, Philanthropic and Community Capital

The research has demonstrated that small businesses in Appalachia face challenges in accessing the available supply of lending capital and obtaining equity investments, and that there is a gap in available supply. Government, philanthropic, and community funding sources can step in to support not only the direct gaps in lending and business support, but to financial institutions in building balance sheets and widening access to capital markets. This section outlines common ways these resources support small business capital in Appalachia to cover gaps and provide concessionary capital.

FEDERAL AND REGIONAL PROGRAMS

Federal agencies like the Appalachian Regional Commission and the U.S. Department of Agriculture (USDA) target the Region with grants aimed at infrastructure improvement, workforce development, and overall economic development. There are several ongoing programs and initiatives in the Appalachian Region that aim to support the Region's entrepreneurial capital and economic development ecosystems. Critical to many of these was the pandemic emergency response American Rescue Plan Act (ARPA), which authorized and expanded small business programs (among many other stimulus initiatives) across the United States.

The American Rescue Plan Act (ARPA) and The State Small Business Credit Initiative (SSBCI)

The State Small Business Credit Initiative (SSBCI) is a program that was reauthorized and expanded by the American Rescue Plan Act (ARPA) to provide $10 billion in funding to support small businesses and enable accessing capital needed to invest in job-creating opportunities as the country emerges from the pandemic. The program provides funds to states and Tribal governments to promote American entrepreneurship, support small business ownership – especially in historically underserved communities – and is designed to catalyze up to $10 of private investment for every $1 of SSBCI capital funding. Through SSBCI, jurisdictions provide funding to small businesses through equity or venture capital programs, loan participation programs, loan guarantee programs, collateral support programs, and capital access programs tailored to local market conditions. In addition, Treasury, recipient jurisdictions (most often states), and the Minority Business Development Agency at the U.S. Department of Commerce will support technical assistance to improve access to capital, including for traditionally underserved entrepreneurs.

The re-energized SSBCI programs are gaining momentum at the time of this report writing in 2023 and will merit an examination of successful programs at a later date. Currently, programs underway in Appalachia include (but are not limited to) CDFI loan participation programs in Tennessee and the INVEST TN program, as well as supplier financing, technical assistance infrastructure expansion, and a jumpstart to three venture capital programs in Ohio. Stakeholders involved in this sampling of programs note that building capacity and potentially reconsidering matching funds requirements for CDFIs will be critical to address for states to deliver on program outcomes.

STATE AND LOCAL FISCAL RECOVERY FUNDS (SLFRF) PROGRAM AND RURAL ASSISTANCE PROGRAMS

The Coronavirus State and Local Fiscal Recovery Funds (SLFRF) program authorized by ARPA was passed to deliver $350 billion to state, territorial, local, and Tribal governments across the country to support their response to and recovery from the COVID-19 public health emergency.

The Emergency Capital Investment Program (ECIP) was created in 2021 to encourage low- and moderate-income community financial institutions to augment their efforts to support small businesses and consumers in their communities. Under the program, Treasury is providing up to $9 billion in capital directly to depository institutions that are certified CDFIs or minority depository institutions (MDIs). Among other things, these funds are designed to support low- and moderate-income community financial institutions in providing loans, grants, and forbearance for small businesses, minority-owned businesses, and consumers, especially in low-income and underserved communities that were disproportionately impacted by the economic effects of the COVID-19 pandemic.[83] Through a rate reduction mechanism, ECIP incentivizes participating depository institutions to increase their lending and other investments in low- and moderate-income, rural and minority communities.

While the program has the potential to have continued effect to increase the capacity of CDFIs to loan to small businesses, it is not only focused on small businesses lending. As of October 2023, only eight Appalachian institutions received distributions. Mississippi received the highest number of distributions, though only three institutions are located in Appalachian Mississippi. Though many of the larger entities would be able to provide support for Appalachian parts of their states even if they are not headquartered there, this highlights the need for specific rural carve-outs in Federal programs like ECIP and for a targeted consideration of accessibility.

Specific assistance programs targeted to rural communities present important opportunities for Appalachia to leverage Federal programming. The USDA's Rural Business Investment Company (RBIC) licensing program is one example. The RBIC program is modeled after the widespread Small Business Investment Company license (SBIC) and has the potential to attract more venture capital (VC) and investment activity to the Region's rural communities. To qualify for a license, a minimum of 75% of funds must be invested in rural areas with a population of 50,000 or less, and a minimum of 50% of funds must be invested in smaller enterprises. To date, a total of thirteen investment companies have been licensed, and only four are in Appalachian states, with only one residing in Appalachia (Greenville, South Carolina).

83 "Emergency Capital Investment Program," U.S. Department of the Treasury, October 5, 2023, https://home.treasury.gov/policy-issues/coronavirus/assistance-for-small-businesses/emergency-capital-investment-program.

REVOLVING LOAN FUNDS

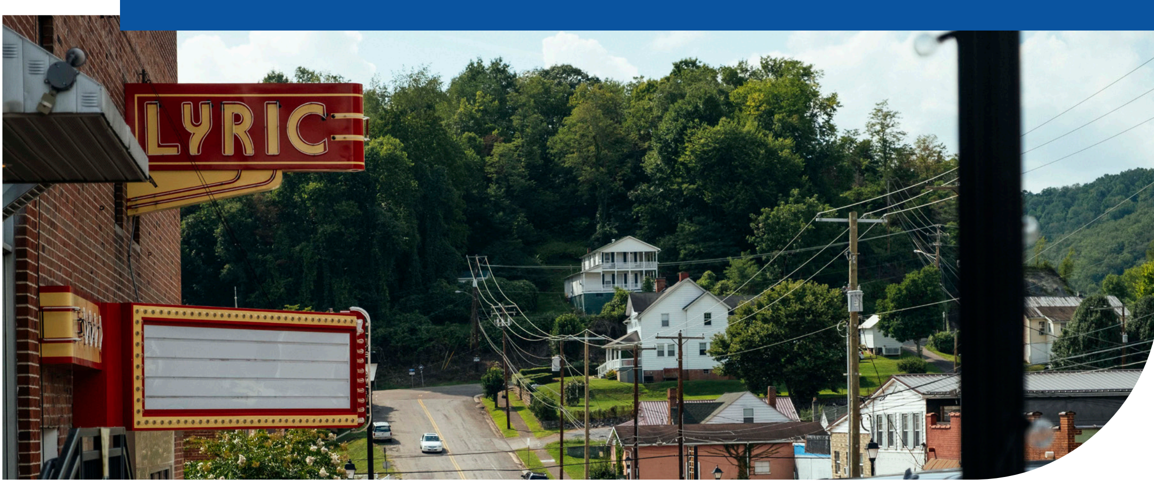
A Revolving Loan Fund (RLF) is a pool of public- and private-sector funds that recycles money as loans are repaid. Federal entities will provide funding by either a grant or long-term and low-interest loan that enables the launch, replenishing, and expansion of the fund. RLFs are attractive because they are intended to be self-renewing, make credit more available, lend to high-risk borrowers, and provide benefits to local communities that exceed the cost of the assistance. Because RLFs are best suited to provide financing when credit access is a challenge, the application may be more apt in rural locations rather than urban centers. For small business owners, RLF loans are often appealing because of their flexibility and more competitive rates.

Since 1977, ARC provided grants to business development revolving loan funds (RLFs) and other investment capital to make loans and investments to local businesses to create and retain jobs. Since ARC awarded the first RLF grants through 2023, ARC-supported RLFs and investment funds have disbursed nearly $540 million in 3,101 loans, resulting in 131,832 jobs created or retained and leveraging $1.84 billion in private investment for the Appalachian Region.

Utilizing funds from its Partnerships for Opportunity and Workforce and Economic Revitalization (POWER) initiative – which targets federal resources to help regions that have been impacted by job losses in coal mining, power plant operations, and coal-related supply chain industries – ARC forged transformative partnerships and made sustainable community investments as a response to the COVID-19 pandemic. Notably, in 2020, ARC approved $6 million for six different lending organizations in West Virginia to recapitalize their revolving loan funds, invested $1 million for a revolving loan fund in North Carolina for COVID-19 rapid recovery loans, and teamed up with Appalachian Community Capital to strengthen CDFIs and RLFs by covering operational costs and offsetting lost income from borrower payments during the pandemic.

Invest Appalachia was created and supported by a grant from ARC and recently launched a $19M debt fund. The grant included first loss capital, essentially functioning as balance sheet equity. Invest Appalachia complements existing forms of community investment, and most investments are intended to be in partnership with place-based lenders or funders.

Another program is the Appalachian Regional Initiative for Stronger Economies (ARISE), which is a new ARC initiative that aims to drive large-scale, regional economic transformation through multi-state collaborative projects across Appalachia. This initiative seeks to create a supportive environment for entrepreneurs, spur local and regional economic development, and help the region diversify its economy, create jobs, and increase the flow of capital, finance, goods, and services into communities.



PHILANTHROPY IN APPALACHIA

Philanthropic and foundation giving serves a vital and complex role in Appalachia, bridging crucial gaps in traditional financing and tackling unique regional challenges. Typically, foundations channel their financial support for small businesses through intermediaries such as CDFIs, governmental agencies, universities, or accelerators, rather than providing grants directly to small businesses. Foundations may focus their giving to specific geographic areas, or specific priority subject matter areas. Further augmenting this philanthropic landscape are corporate giants such as Walmart and Chevron that, through Corporate Social Responsibility initiatives, distribute grants focusing on investing in skills and community projects (though not directly impacting small business owners, such initiatives can indirectly boost the potential for success in the small business landscape).

Between 2015 and 2022, Appalachia received a relatively modest share of total foundation giving intended for small business support (which could include foundation giving to organizations, repayable loan capital, and program-related investments) ranging from 3.0% to 5.2% of the total in the United States. This giving amount includes resources covering a range of sectors that are directly related to small business capital support, and adjacent areas that support ecosystems and related financial infrastructure. [84]

Figure 4.7.1: Foundation Giving in Appalachia, Value of Grants, CAGR, 2015 – 2022

	2015	2019	2020	2021	2022	Pre-COVID CAGR (2015-2019)	COVID CAGR (2019-2021)	7-Year CAGR (2015-2022
United States	$4.6B	$6.6B	$8.4B	$9.3B	$5.2B	*9.4%*	*18.7%*	*1.8%*
Appalachia	$239.6M	$325.3M	$253.9M	$345.8M	$195.5M	*7.9%*	*3.1%*	*-2.9%*
Appalachia as % of U.S.	*5.2%*	*4.9%*	*3.0%*	*3.7%*	*3.8%*	-	-	-

Source: Foundation Maps, accessed August 2023.

Figure 4.7.2: Foundation Giving in Appalachia, Number of Grants from 2015 – 2022

	2015	2019	2020	2021	2022	Pre-COVID CAGR (2015-2019)	COVID CAGR (2019-2021)	7-Year CAGR (2015-2022)
United States	58,340	74,195	82,040	78,521	34,557	*6.2%*	*2.9%*	*-7.2%*
Appalachia	3,321	4,282	3,636	3,827	1,906	*6.6%*	*-5.5%*	*-7.6%*
Appalachia as % of U.S.	*5.7%*	*5.8%*	*4.4%*	*4.9%*	*5.5%*	-	-	-

Source: Foundation Maps, accessed August 2023.

84 Note: Foundation Maps was used to pull details around philanthropic support towards the small business landscape in Appalachia using the following subjects: business and industry, economic development, financial services, business promotion, construction, corporate social responsibility, entrepreneurship, manufacturing, mining and resource extraction, real estate, job creation and workforce development, rural development, banking, credit unions, development finance, financial counseling.

While the United States saw a significant increase in grant funding during the COVID-19 pandemic, with an annualized increase of 18.7% from 2019 to 2021, Appalachia's compounded growth rate was comparatively slower at 3.1%, with total giving rising from $325.3 million in 2019 to $345.8 million in 2021. Moreover, while the United States experienced a 2.9% annualized growth in the number of grants from 2019 to 2021, Appalachia faced an annualized decreases of -5.5% during the same period. This data highlights the delayed influx of philanthropic dollars into Appalachia compared to the broader United States, a trend particularly exacerbated during the pandemic. The cause for this disparity is not readily available in the data; however, stakeholders note the general challenges existing across Appalachia with economic structures and disparate priorities across state lines, which may contribute to perceived challenges to receive and effectively deploy large amounts of philanthropic capital.

This decline could be attributed to national and regional philanthropic focus shifts. In Appalachia, almost 90% of grant funding originates locally, either from within the Region itself or the non-Appalachian portions of Appalachian States, such as New York City. Local foundations often align their giving with community-oriented goals, such as job creation or increased access to vital services. Institutions like the Claude Worthington Benedum Foundation and the Mary Reynolds Babcock Foundation target distinct subregions within Appalachia. Yet, they converge on a shared mission: to catalyze economic and societal transformation. These foundations spearhead various programs, notably those aimed at pivoting the Region from an economy focused on extractive industries (like coal mining) toward more diversified and sustainable industries. Further augmenting this philanthropic fabric are corporate giants such as Walmart and Chevron. Through their Corporate Social Responsibility initiatives, these companies offer grants that indirectly uplift small businesses by investing in skills development and community projects in Appalachia.

However, the COVID-19 pandemic exposed a tendency among philanthropic organizations to prioritize their immediate localities over other regions. For instance, the Foundation for Appalachian Ohio noted that their region has 90% fewer philanthropic assets per capita than the rest of the state. Broadly, while 47% of foundations issuing grants that support (indirectly or directly) small businesses in Appalachia were based within the Region, more than half were located elsewhere, indicating a potential misalignment between funding sources and areas of critical need.

Across a longer analysis period, both the United States and the Appalachia Region experienced a decline in their 7-year annualized growth rates from 2015 to 2022. Specifically, the United States witnessed annualized decreases of 7.2%, while Appalachia experienced a slightly larger decline of 7.6%. This decline may suggest a potential shift in the philanthropic focus of foundations, resulting in reduced support for small businesses and an increased emphasis on other areas of interest such as health and human services, arts and culture, and education, all of which are also vital to holistic development of the Region.

Philanthropic support is deployed in various forms through nonprofit organizations, community organizations, and associations, playing a crucial role in fostering business and community advancement. Two categories outlined below capture a wider range of recipients that often directly and indirectly affect the small business capital landscape.

Universities and Education Centers, such as the University of Pittsburgh, Carnegie Mellon, and Cornell University, play a pivotal role in offering research opportunities, education, training, and new skill sets (and industries) to entrepreneurs in the Region. They serve as innovative hubs and incubators for startups; some examples are listed below:

- The Semiconductor Research Corporation (SRC) allocated $6.4 million in 2019 and $6.9 million in 2021 to support Carnegie Mellon University's research in the semiconductor/technology industry. This sector is gaining prominence among small businesses in the Region, fostering innovation and supporting startups.
- In 2021, Wake Forest University received $2.5 million from The Kern Family Foundation Inc. to facilitate faculty development training for those with an entrepreneurial mindset.
- Various foundations, including the Muscular Dystrophy Association, National Science Foundation Employees Association, and Hudson-Alpha Institute for Biotechnology (a genome sequencing center), are contributing to the growth of the biotechnology industry in Appalachia.

pandemic and the subsequent national spotlight on historically underinvested communities, **community financial institutions have received support from philanthropy to increase their vital roles** supporting small businesses through loans, grants, and technical assistance. Some examples include:

- Access to Capital for Entrepreneurs received significant funding, including $5.2 million directed towards enhancing their technological infrastructure, staff resources, and other strategies aimed at bolstering their capacity to track data and deliver innovative solutions for small business owners. Additionally, they received $300,000 from PeopleFund in Austin, Texas in 2022 to support lending and educational services for underserved small businesses. In 2020, they secured $5 million from Mackenzie Scott, which is aiding underserved small businesses across 68 counties in Georgia in their recovery from the economic impact of COVID-19. Furthermore, a $500,000 grant was provided by the Local Initiative Support Group (LISC) in 2021. LISC allocates project grants to community development efforts nationwide, supporting community-based organizations, businesses, and individuals in transforming distressed communities within the urban and rural areas they serve.
- The Mountain Association for Community Economic Development received several grants to sustain their small business support and lending programs. Notably, they secured $1 million from the Rockefeller Philanthropy Advisors in 2021 and $500,000 from the James Graham Brown Foundation in the same year.

Figure 4.7.3: Top 25 Foundations Supporting Small Business Giving in Appalachia, by Value of Grants from 2015 – 2022

Funder	Location	Value of Grants	Number of Grants
Richard King Mellon Foundation	Pittsburgh, PA	$238,439,896	401
The Heinz Endowments	Pittsburgh, PA	$140,431,906	389
National Christian Charitable Foundation Inc	Alpharetta, GA	$76,793,493	1,355
Bill & Melinda Gates Foundation	Seattle, WA	$73,893,520	17
Hillman Family Foundations	Pittsburgh, PA	$62,961,500	274
National Science Foundation Employees Association	Alexandria, VA	$57,592,732	255
Center for Workforce Inclusion Inc	Silver Spring, MD	$46,834,676	94
HudsonAlpha Foundation	Huntsville, AL	$36,742,664	6
The Big Ten Conference Inc	Des Plaines, IL	$32,429,680	1
Claude Worthington Benedum Foundation	Pittsburgh, PA	$31,836,670	245
West Virginia University Research Corporation	Morgantown, WV	$29,417,042	5
Mount Nittany Medical Center	State College, PA	$27,194,429	4
McCune Foundation	Pittsburgh, PA	$26,499,230	79
Central Pennsylvania Workforce Development Corporation	Lewisburg, PA	$21,533,353	13
SRC	Durham, NC	$21,029,435	6
Westmoreland-Fayette Workforce Investment Board	Youngwood, PA	$20,664,581	54
Foundation for the Carolinas	Charlotte, NC	$19,574,123	11
PA IRC Network Foundation	Williamsport, PA	$19,220,469	24
Allegheny Conference on Community Development	Pittsburgh, PA	$17,941,300	14
Northwest North Carolina Community Foundation	Winston Salem, NC	$17,935,000	5
The Golden Leaf Inc	Rocky Mt, NC	$16,340,750	13
The Signatry	Overland Park, KS	$14,738,877	48
The Harvest Foundation	Martinsville, VA	$14,440,377	18
The Pittsburgh Foundation	Pittsburgh, PA	$14,358,254	795

Source: Foundation Maps accessed August 2023.

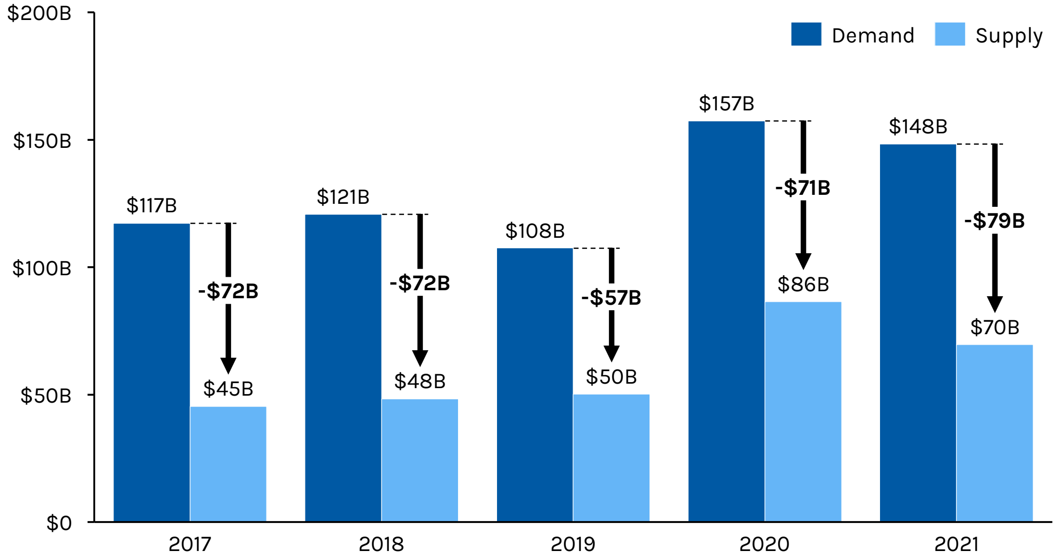
In an encouraging development, 2022 and 2023 marked a renewed national interest in Appalachia, focusing especially on the conservation of its vital natural resources. For example, the Nature Conservancy (TNC) recently garnered a $4.25 million grant from the Richard King Mellon Foundation. This infusion of funds serves dual objectives: preserving the Region's unique natural assets while stimulating local economies and fostering small business growth.[85] Concurrently, there's a growing emphasis on equity and inclusion, highlighted by the Ford Foundation's $10 million investment in Appalachian Community Capital in support of small business loans to spur job creation and economic growth in the Region,[86] a move that aligns with PayPal's $530 million commitment to support minority-owned businesses in 2020. Amidst these shifts, entrepreneurs and funders envision a more sustainable future for Appalachia, exploring greener avenues of economic activity in a region historically anchored to extractive industries.

85 "Nature Conservancy Receives $4.25 Million from R.K. Mellon Foundation," Candid, March 13, 2023, https://philanthropynewsdigest.org/news/nature-conservancy-receives-4.25-million-from-r.k.-mellon-foundation.
86 "Ford Commits $10 Million for Small Business Loans in Appalachia," Candid, December 12, 2022, https://philanthropynewsdigest.org/news/ford-commits-10-million-for-small-business-loans-in-appalachia.

5. Unmet Demand

Taken all together, the capital supply for small business and entrepreneurs in Appalachia has concentrated in bank lending. **Appalachian small businesses face a financial shortfall, defined here as aggregate capital demand outweighing aggregate capital supply. This shortfall is calculated at around $70 billion during the period analyzed, ranging from as low as $57 billion in 2019 and as high as $79 billion in 2021.** As demand for small business capital outpaces the available supply, Appalachian small business owners, particularly those in economically distressed and historically underserved communities, face multifaceted obstacles to accessing essential capital.

Figure 5.1: Unmet Small Business Capital Demand in Appalachia, 2017 – 2021[87]



Source: Next Street research and analysis of aggregate capital demand and capital supply data sources.

Across the United States, a significant driver of the capital demand gap is firm applications for capital being rejected. According to the 2022 report from the Board of Governors of the Federal Reserve,[88] 27% of national nonemployer firms and 36% of employer firms have yet to receive financing they sought in 2021. The Board of Governors notes that businesses not receiving sought-after capital typically do not meet lenders' requirements (e.g., requisite revenue history, possession of collateral, required credit score).

87 Note: Differences in capital shown by the arrows may not perfectly add up due to rounding.
88 Availability of Credit to Small Businesses." Board of Governors of the Federal Reserve System, October 2022. https://www.federalreserve.gov/publications/2022-october-availability-of-credit-to-small-businesses.htm.

The report also notes that businesses have often discovered they are not the types of firms that financial institutions prefer lending to (anecdotally, this often includes restaurants or businesses without physical real estate collateral). It is typically not because these businesses have already secured some capital and are seen as overleveraged, which can be a common misconception. Access to capital studies and surveys are currently available only at the aggregate national level and Appalachian Region-specific data is not available at this time.

Post-pandemic patterns reveal a shift toward larger loans to fewer small businesses in Appalachia, as well as potential gaps in available funding between $100,000 and $250,000, and microloans under $10,000. Research by the SBA's Office of Advocacy confirms this shift in lending patterns in rural areas following the 2008 financial crisis; specifically, banks are extending fewer small dollar loans and fewer larger loans in rural areas after the 2008 financial crisis.[89] The report concedes that the exact cause of this decline, whether due to a reduced number of banks or the largest banks exiting the small business loan market, remains uncertain, but Appalachian stakeholders agree on a microloan gap and suggest injecting more patient capital and smaller-size investments. Some stress the need for risk-tolerant funding, underlining the importance of sub-$5,000 projects transitioning from ideation to launch – a crucial yet slower-returning segment. Stakeholders point to a misalignment whereby businesses aim to support family and communities, prioritizing sustainability over extensive growth, heavy expansion, and debt.

89 Cole, Rebel A. Rep. Bank Lending to Rural vs. Urban Firms in the United States Before, During, and After the Great Financial Crisis. Delray Beach, FL: U.S. Small Business Administration, 2020.

6. Access to Available Capital

6.1 Geographic Dynamics in Appalachia

This study delineates the capital supply landscape and unmet requirements of small businesses in Appalachia, revealing a history of consistent underinvestment and an overabundance of capital in already well-resourced locations. As the research shows, **while aggregate supply has increased over time, particularly during the COVID-19 pandemic, the distribution of capital in Appalachia has not.** The Region's varied geographic attributes and population concentration patterns present structural dynamics directly influencing entrepreneurs' ability to access the available capital supply.

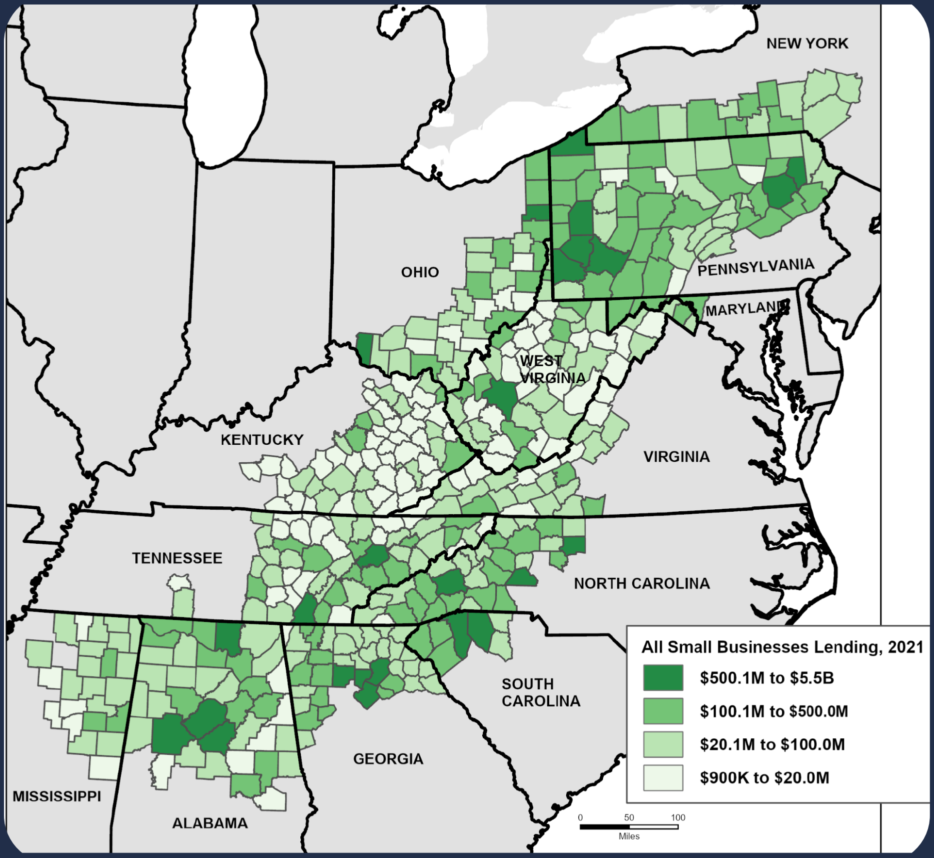


Figure 6.1: Distribution of Small Business Lending in Appalachia, 2021

Source: CDFI Fund Data Releases, 2021; Federal Financial Institutions Examination Council, Community Reinvestment Act Data Products, 2021; National Credit Union Administration, Call Report Quarterly Data, 2021; Pitchbook, Venture Capital and Private Equity Deals, 2021.

A primary challenge for accessing the available capital stems from the Region's limited financial infrastructure, [90] compounded over time by historical underinvestment. Limited accessibility is further strained by a nationwide trend of regional banks consolidating into larger national entities, leading to a decline in physical bank branches in Appalachia. Internet connectivity creates additional barriers, often limiting access to investors and banking resources to physical locations where broadband access is a challenge. Moreover, there is a "digital divide" in the Region between urban and rural areas. For example, 15.1% of households in Rural counties did not have a computer device in the 2017 to 2021 period compared to 7.5% in Large Metros.[91] Analyzing the geographic concentration and density of available capital providers across Appalachia provides additional context to the aggregate supply outcomes outlined in previous sections. (Reference Figure 4.3.1 in the "Credit Union Landscape in Appalachia" section for a breakdown of the capital provider institutions and their respective total counts in Appalachia and the United States.)

Limited financial infrastructure presents a critical challenge in the Region because successfully obtaining lending capital from a financial institution is made more accessible by a strong relationship with lenders and investors, access to a physical location, and a product match meeting the need. According to a recent survey by the Wall Street Journal, "banks have long favored customers with deposits and other relationships, but those factors have taken on even greater weight, bankers and business owners say."[92] This is particularly pertinent in the community-oriented setting of Appalachia, where small, local banks and community-based financial providers play a crucial role in fostering relationships, stimulating capital demand, and deterring entrepreneurs from seeking higher-interest alternatives like personal loans. However, the decline in financial institutions, by headquarters and physical bank branches, makes it increasingly difficult to cultivate these vital relationships in the Region.

Recently, the macroeconomic environment has posed an additional barrier to accessing capital. Lenders, who may already be tightening credit standards due to liquidity concerns, are doing so in the midst of a challenging interest rate environment, which began when the Federal Reserve started raising rates in mid-2022 to combat inflation. With rising interest rates, banks are paying depositors more while imposing higher costs on borrowers, resulting in a slowdown in loan growth. Additionally, small businesses tend to borrow from small banks and are less likely to secure loans from larger banks.[93] Larger regional banks are still reeling from the turmoil caused by the collapse of Silicon Valley Bank and First Republic in 2023, and risk appetites are therefore reduced. Lenders consider businesses in economically distressed areas as riskier investments due to the potential challenges these businesses face, such as lower demand for goods and services, limited local economic diversity, and limited asset ownership. Though median household income increased 9.5% from 2012 to 2016 and 2017 to 2021 in Appalachia, it still lags the United States' median income. In 2021, the median income in Appalachia was $56,780 compared to $69,021 in the United States.

90 Note: Defined here as physical bank and credit union branches, community financial institutions, and the presence of the largest global financial institutions.

91 "Computer and Broadband Access in Appalachia," Appalachian Regional Commission, June 8, 2023, https://www.arc.gov/about-the-appalachian-region/the-chartbook/computer-and-broadband-access-in-appalachia/, 5.

92 Ruth Simon, "Banks Raise Roadblocks to Small Business Loans," The Wall Street Journal, June 1, 2023, https://www.wsj.com/articles/new-borrowing-hurdles-leave-small-businesses-in-limbo-89cf1ea3, 23.

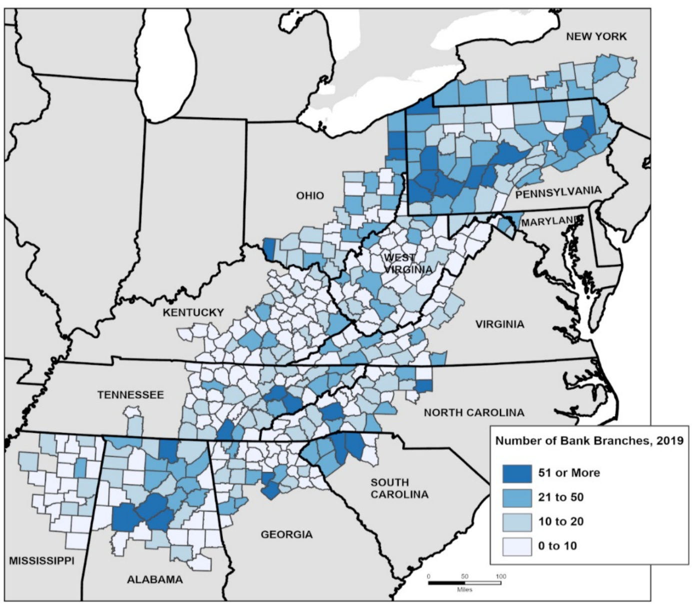
93 Ibid, 18.

GEOGRAPHIC CORRELATION

SBA lending and total bank lending are increasingly clustered, indicating that capital access is more concentrated within specific physical geographies. **In 2022, existing bank branches in Appalachia were primarily concentrated in Northern and Southern Appalachia, aligning with the most abundant capital supply, population concentration, and concentration of small businesses.**

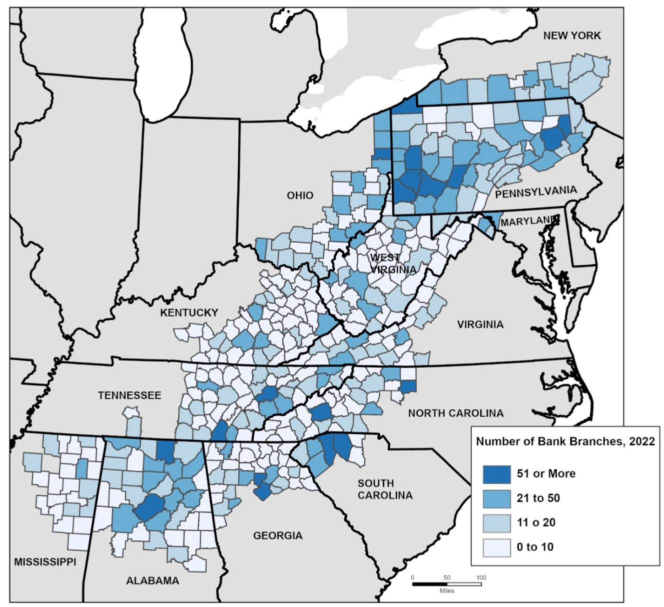
This concentration also exists specifically **within the Appalachian portion of the states of Pennsylvania, Tennessee, and Alabama.**

Figure 6.1.1: Number of Bank Branches in Appalachia, 2019



Source: FFEIC Community Reinvestment Act (CRA), 2022.

Figure 6.1.2: Number of Bank Branches in Appalachia, 2022



Source: FFEIC Community Reinvestment Act (CRA), 2022.

While this correlation may directly tie to the greater concentration of physical bank locations, there is not a straightforward assessment of causation. For example, Paycheck Protection Program (PPP) loans are not clustered in particular geographies (e.g., not only in large metro areas), indicating a more equitable distribution of capital across the Region.

Additional consideration of the details of physical location and concentration of capital providers follows.

6.2 Access to Bank Lending

When assessing the density of FDIC institution headquarters per 10,000 small businesses, **Appalachia had a higher concentration compared to the broader United States in 2020. This elevated figure in Appalachia can likely be attributed to the prevalence in the Region of smaller, community-oriented banks with assets less than $1 billion, in contrast to large banks that are more common nationally.** While small and mid-sized banks have been and will remain an important part of how small businesses access capital in the Appalachian Region, in general, an increased presence of larger regional banks would further support the success of its small businesses; larger banks have connections to credit markets that can further support balance sheets and thus enable more lending.

An assessment of the bank branch concentration clearly reveals a consistent trend of declining numbers, as the growth rates up to 2022 indicate a decrease in branch count across every geographical division of the Region.

Density analysis also reveals additional detail on geographic access to bank capital. While the number of bank branches per 10,000 small businesses is calculated to be higher in Appalachia than in the broader United States, a closer look at county type, economic status, and state-level nuance shows this is not a straightforward takeaway. The drivers of this comparison are primarily the branches located in Metro and Metro-adjacent areas, largely coinciding with higher levels of economic development. As noted previously, the banking provider landscape in Appalachia has evolved over time to contain largely mid-sized banks and small banks, though the mix has also seen the presence of some large banks increase since 2015. Rural counties are more likely to have small and mid-sized bank branches, or none at all, which hinders access to the available capital supply for small businesses.

Figure 6.2.1: Number of Bank Branches in Appalachia, CAGR, 2015, 2019, 2020, 2022

Total Number of Bank Branches in the United States and Appalachia	2015		2019		2020		2022	2015 – 2019 CAGR (branches)	2019 – 2022 CAGR (branches)
	Number	Number/ 10,000 SMB	Number	Number/ 10,000 SMB	Number	Number/ 10,000 SMB	Number		
United States	**93,272**	**29**	**86,392**	**25**	**84,982**	**24**	**79,224**	**-2%**	**-2%**
Appalachian Region	**8,771**	**40**	**8,052**	**34**	**7,962**	**34**	**7,415**	**-2%**	**-2%**
Subregions									
Northern Appalachia	**2,973**	**45**	**2,728**	**41**	**2,678**	**41**	**2,442**	**-2%**	**-3%**
North Central Appalachia	**937**	**51**	**866**	**48**	**847**	**48**	**796**	**-2%**	**-2%**
Central Appalachia	**859**	**62**	**813**	**59**	**806**	**59**	**774**	**-1%**	**-1%**
South Central Appalachia	**1,662**	**36**	**1,469**	**30**	**1,455**	**29**	**1,330**	**-3%**	**-3%**
Southern Appalachia	**2,340**	**30**	**2,176**	**25**	**2,176**	**24**	**2,073**	**-2%**	**-2%**
County Types									
Large Metros (pop. 1 million +)	**14,772**	**248**	**13,474**	**204**	**13,238**	**197**	**12,101**	**-2%**	**-3%**
Small Metros (pop. <1 million)	**9,755**	**107**	**8,846**	**92**	**8,709**	**89**	**8,004**	**-2%**	**-3%**
Nonmetro, Adjacent to Large Metros	**1,694**	**92**	**1,548**	**81**	**1,525**	**80**	**1,417**	**-2%**	**-3%**
Nonmetro, Adjacent to Small Metros	**3,165**	**100**	**2,942**	**92**	**2,901**	**91**	**2,737**	**-2%**	**-2%**
Rural (nonmetro, not adj. to a metro)	**1,794**	**86**	**1,692**	**80**	**1,674**	**80**	**1,599**	**-1%**	**-2%**
County Economic Status									
Distressed	**1,425**	**127**	**1,339**	**123**	**1,311**	**123**	**1,226**	**-2%**	**-2%**
At-Risk	**3,496**	**113**	**3,256**	**104**	**3,197**	**102**	**2,987**	**-2%**	**-2%**
Transitional	**16,330**	**104**	**14,929**	**90**	**14,723**	**88**	**13,615**	**-2%**	**-3%**
Competitive	**4,937**	**329**	**4,572**	**269**	**4,499**	**257**	**4,192**	**-2%**	**-2%**
Attainment	**4,992**	**638**	**4,406**	**477**	**4,317**	**457**	**3,838**	**-3%**	**-4%**
Alabama	**1,530**	**36**	**1,455**	**33**	**1,452**	**32**	**1,381**	**-1%**	**-1%**
Appalachian Alabama	968	36	927	32	927	32	886	*-1%*	*-1%*
Non-Appalachian Alabama	562	37	528	33	525	32	495	*-2%*	*-2%*
Georgia	**2,482**	**23**	**2,251**	**18**	**2,257**	**18**	**2,066**	**-2%**	**-3%**
Appalachian Georgia	748	22	666	17	664	16	616	*-3%*	*-3%*
Non-Appalachian Georgia	1,734	23	1,585	19	1,593	18	1,450	*-2%*	*-3%*
Kentucky	**1,696**	**46**	**1,594**	**41**	**1,570**	**40**	**1,500**	**-2%**	**-2%**
Appalachian Kentucky	530	58	505	56	500	56	489	*-1%*	*-1%*
Non-Appalachian Kentucky	1,166	42	1,089	36	1,070	36	1,011	*-2%*	*-2%*

Maryland	**1,618**	**26**	**1,445**	**22**	**1,431**	**21**	**1,247**	**-3%**	**-4%**
Appalachian Maryland	77	39	76	38	74	36	67	*0%*	*-2%*
Non-Appalachian Maryland	1,541	26	1,369	21	1,357	21	1,180	*-3%*	*-4%*
Mississippi	**1,154**	**43**	**1,128**	**39**	**1,112**	**39**	**1,068**	**-1%**	**-1%**
Appalachian Mississippi	266	49	264	47	265	47	267	*0%*	*0%*
Non-Appalachian Mississippi	888	41	864	38	847	37	801	*-1%*	*-1%*
New York	**5,267**	**24**	**4,792**	**20**	**4,631**	**20**	**4,265**	**-2%**	**-3%**
Appalachian New York	320	40	294	37	289	37	258	*-2%*	*-3%*
Non-Appalachian New York	4,947	23	4,498	20	4,342	20	4,007	*-2%*	*-3%*
North Carolina	**2,525**	**27**	**2,249**	**21**	**2,220**	**21**	**2,060**	**-3%**	**-3%**
Appalachian North Carolina	588	30	507	24	498	24	447	*-4%*	*-4%*
Non-Appalachian North Carolina	1,937	26	1,742	21	1,722	20	1,613	*-3%*	*-3%*
Ohio	**3,835**	**38**	**3,525**	**33**	**3,441**	**33**	**3,132**	**-2%**	**-3%**
Appalachian Ohio	774	48	705	44	685	43	618	*-2%*	*-3%*
Non-Appalachian Ohio	3,061	36	2,820	31	2,756	31	2,514	*-2%*	*-3%*
Pennsylvania	**4,389**	**40**	**4,009**	**34**	**3,907**	**34**	**3,562**	**-2%**	**-3%**
Appalachian Pennsylvania	2,169	46	1,992	42	1,960	42	1,802	*-2%*	*-3%*
Non-Appalachian Pennsylvania	2,220	35	2,017	29	1,947	28	1,760	*-2%*	*-3%*
South Carolina	**1,324**	**31**	**1,194**	**24**	**1,199**	**24**	**1,147**	**-3%**	**-2%**
Appalachian South Carolina	358	32	319	25	320	24	304	*-3%*	*-2%*
Non-Appalachian South Carolina	966	30	875	24	879	24	843	*-2%*	*-2%*
Tennessee	**2,186**	**35**	**2,033**	**29**	**2,020**	**29**	**1,932**	**-2%**	**-2%**
Appalachian Tennessee	973	39	875	33	869	32	810	*-3%*	*-3%*
Non-Appalachian Tennessee	1,213	32	1,158	27	1,151	26	1,122	*-1%*	*-1%*
Virginia	**2,518**	**33**	**2,220**	**26**	**2,208**	**25**	**1,930**	**-3%**	**-4%**
Appalachian Virginia	344	64	315	59	312	58	283	*-2%*	*-3%*
Non-Appalachian Virginia	2,174	30	1,905	24	1,896	23	1,647	*-3%*	*-4%*
West Virginia (entire state)	**656**	**53**	**607**	**50**	**599**	**50**	**568**	**-2%**	**-2%**

Source: FDIC, Summary of Deposits Download, 2015 – 2022.

6.3 Access to Credit Union Lending

Similarly, credit union consolidation and decline has also continued in Appalachia. State-and-county-level density analysis in Figure 6.3.1 reveals specific differences in the geographical dynamics at play for credit unions, which directly affects the ability of small businesses in those areas to access services. Despite the consolidation of credit unions, in 2020 (the latest data available for this calculation), Appalachia had a higher density of credit unions than the national average, with 2.63 credit unions per 10,000 small businesses, compared to 1.45 for the United States.

Figure 6.3.1: Number of Credit Unions in Appalachian States by Asset Size per 10,000 Small Businesses, 2020

Number of Credit Unions per 10,000 Small Businesses	Total	Less than $2M	$2M to $10M	$10M to $50M	$50M to $100M	$100M to $600M	Greater than $600M
United States	**1.45**	**0.10**	**0.23**	**0.44**	**0.20**	**0.33**	**0.16**
Appalachian Region	**2.63**	**0.19**	**0.56**	**0.91**	**0.37**	**0.48**	**0.11**
Subregions							
Northern Appalachia	**4.66**	**0.33**	**1.06**	**1.70**	**0.70**	**0.77**	**0.11**
North Central Appalachia	**4.85**	**0.39**	**0.90**	**2.14**	**0.56**	**0.85**	**-**
Central Appalachia	**2.13**	**0.44**	**0.73**	**0.44**	**0.07**	**0.15**	**0.29**
South Central Appalachia	**1.82**	**0.08**	**0.26**	**0.61**	**0.36**	**0.38**	**0.12**
Southern Appalachia	**1.22**	**0.07**	**0.27**	**0.32**	**0.15**	**0.30**	**0.11**
County Types							
Large Metros (pop. 1M+)	**2.53**	**0.24**	**0.69**	**0.89**	**0.27**	**0.36**	**0.09**
Small Metros (pop. <1M)	**3.01**	**0.12**	**0.54**	**1.04**	**0.47**	**0.64**	**0.20**
Nonmetro, Adj. to Large Metros	**2.73**	**0.11**	**0.58**	**0.95**	**0.42**	**0.63**	**0.05**
Nonmetro, Ad to Small Metros	**2.07**	**0.28**	**0.44**	**0.56**	**0.34**	**0.41**	**0.03**
Rural (nonmetro, not adj.)	**1.96**	**0.29**	**0.43**	**0.86**	**0.24**	**0.14**	**-**
Economic Status							
Distressed	**1.97**	**0.56**	**0.47**	**0.56**	**-**	**0.37**	**-**
At-Risk	**3.07**	**0.32**	**1.05**	**0.89**	**0.32**	**0.45**	**0.03**
Transitional	**2.86**	**0.17**	**0.54**	**1.05**	**0.45**	**0.51**	**0.14**
Competitive	**1.25**	**0.06**	**0.23**	**0.29**	**0.17**	**0.46**	**0.06**
Attainment	**0.42**	**-**	**-**	**-**	**-**	**0.32**	**0.11**
Alabama	**2.13**	**0.11**	**0.49**	**0.62**	**0.20**	**0.47**	**0.24**
Appalachian Alabama	2.22	0.10	0.52	0.55	0.21	0.55	0.28
Non-Appalachian Alabama	1.98	0.12	0.43	0.74	0.19	0.31	0.19
Georgia	**0.74**	**0.07**	**0.14**	**0.20**	**0.09**	**0.19**	**0.05**
Appalachian Georgia	0.53	0.05	0.10	0.14	0.07	0.12	0.05
Non-Appalachian Georgia	0.84	0.08	0.16	0.22	0.09	0.22	0.06
Kentucky	**1.60**	**0.08**	**0.26**	**0.59**	**0.26**	**0.28**	**0.13**
Appalachian Kentucky	1.22	0.11	0.44	0.33	-	0.22	0.11
Non-Appalachian Kentucky	1.71	0.07	0.20	0.67	0.33	0.30	0.13
Maryland	**1.13**	**0.04**	**0.13**	**0.31**	**0.10**	**0.36**	**0.18**
Appalachian Maryland	3.94	-	-	0.49	0.98	2.46	-
Non-Appalachian Maryland	1.05	0.05	0.14	0.31	0.08	0.29	0.18

Number of Credit Unions per 10,000 Small Businesses	Total	Less than $2M	$2M to $10M	$10M to $50M	$50M to $100M	$100M to $600M	Greater than $600M
Mississippi	**2.41**	**0.25**	**0.64**	**0.92**	**0.21**	**0.35**	**0.04**
Appalachian Mississippi	1.78	0.18	0.71	0.71	0.18	-	-
Non-Appalachian Mississippi	2.56	0.27	0.62	0.97	0.22	0.44	0.04
New York	**0.29**	**0.01**	**0.02**	**0.07**	**0.07**	**0.07**	**0.04**
Appalachian New York	2.46	-	0.26	0.91	0.39	0.65	0.26
Non-Appalachian New York	0.21	0.01	0.01	0.05	0.06	0.05	0.03
North Carolina	**2.93**	**0.34**	**0.43**	**1.03**	**0.36**	**0.52**	**0.25**
Appalachian North Carolina	1.64	-	0.24	0.67	0.14	0.39	0.19
Non-Appalachian North Carolina	3.25	0.42	0.48	1.12	0.41	0.56	0.27
Ohio	**1.83**	**0.14**	**0.28**	**0.60**	**0.30**	**0.42**	**0.09**
Appalachian Ohio	2.37	0.37	0.56	0.56	0.25	0.56	0.06
Non-Appalachian Ohio	1.74	0.10	0.23	0.60	0.31	0.39	0.10
Pennsylvania	**3.01**	**0.30**	**0.63**	**0.97**	**0.47**	**0.46**	**0.18**
Appalachian Pennsylvania	5.17	0.36	1.24	1.94	0.83	0.75	0.04
Non-Appalachian Pennsylvania	1.54	0.26	0.22	0.31	0.22	0.26	0.28
South Carolina	**1.08**	**-**	**0.16**	**0.26**	**0.22**	**0.26**	**0.20**
Appalachian South Carolina	0.97	-	0.07	0.22	0.22	0.45	-
Non-Appalachian South Carolina	1.12	-	0.19	0.27	0.21	0.19	0.27
Tennessee	**1.91**	**0.11**	**0.28**	**0.69**	**0.31**	**0.35**	**0.16**
Appalachian Tennessee	2.55	0.07	0.37	0.81	0.55	0.48	0.26
Non-Appalachian Tennessee	1.52	0.14	0.23	0.62	0.16	0.28	0.09
Virginia	**1.27**	**0.12**	**0.20**	**0.26**	**0.18**	**0.31**	**0.20**
Appalachian Virginia	1.49	0.56	0.37	0.19	0.19	0.19	-
Non-Appalachian Virginia	1.25	0.09	0.18	0.27	0.18	0.32	0.21
West Virginia (entire state)	**7.01**	**0.83**	**1.58**	**3.17**	**0.67**	**0.75**	**-**

Source: NCUA, Federally Insured Credit Unions, 2020.

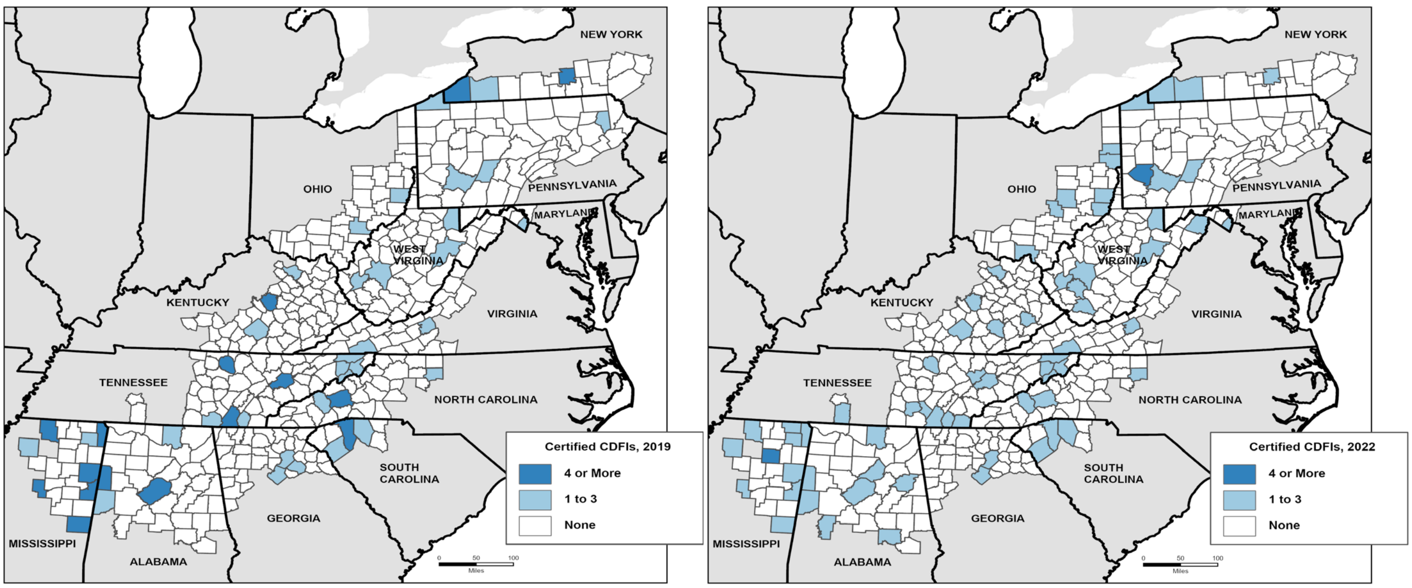
The subregions of Northern Appalachia and North Central Appalachia have the highest density of credit unions in the Region, with 4.66 and 4.85 credit unions per 10,000 small businesses, respectively. These subregions also have more credit unions in the $10M to $50M asset size category than any other subregion. In states like New York and Pennsylvania, which include large metropolitan areas such as New York City and Philadelphia, the Appalachian portions of these states have a significantly higher ratio of credit unions to 10,000 small businesses.

As noted in Section 4.3, Rural counties historically have had the fewest number of credit unions. Small Metros had the highest density of credit unions per 10,000 business. Across all county types, credit unions with assets from $10M to $50M had the highest representation per business. Counties in the Appalachian Region that are classified as Distressed, At-Risk, or Transitional have a higher density of credit unions per 10,000 small businesses compared to counties that are classified as Competitive or Attainment. This indicates that credit unions play a crucial role in providing financial services to communities that are economically disadvantaged or rural, and opportunity exists to elevate their ability to meet unmet small business capital demand.

6.4 Access to Community Investment Financial Institution Lending

The concentration of lending through banks creates challenges for small business to access capital, as becoming "bankable" is a common barrier for small businesses to obtain funding. Community Investment Financial Institution (CDFI) loan funds can play a key role in serving those small businesses who might otherwise not quality for bank lending. Appalachia's CDFI landscape mirrors population concentration, similar to bank and credit union lending. However, CDFIs alone are not able to provide resources at scale to match demand and to replace the historical lending capacity of traditional banks.

Figure 6.4.1: Concentration of CDFIs in Appalachia, 2019 and 2022



Source: CDFI Fund, 2019 and 2022.

DENSITY OF CDFIS PER SMALL BUSINESS

Examining the number of CDFIs per small business in 2019 and 2020 provides some insight into small business access. In total, CDFI density per small business in Appalachia mirrors that of the United States. Within Central Appalachia, the ratio of CDFIs per 10,000 businesses is 0.59, signifying a greater density of these institutions in comparison to other subregions. Central Appalachia has the highest percentage of At-Risk and Distressed counties, at nearly 92%. Rural counties likewise displayed a significant pattern, boasting the highest proportion of CDFIs per 10,000 businesses, registering 0.72 in 2020, outpacing other county types.

While the available data showing year-over-year change is limited, generally the density of CDFIs per 10,000 small businesses increased across Appalachia, with some exceptions. As new business applications increased in total from 2019 to 2020 (see Section 3, Figure 3.1.5) the year-over-year increases highlight the evolving landscape of CDFIs and their increasing engagement with small businesses across different subregions. Yet, the overall coverage of CDFIs in Appalachia illustrate the gap many stakeholders in the Region have noted; for example, one interviewed Appalachian philanthropic organization noted that while western North Carolina likely has more active CDFIs than other parts of the Region, it still does not scratch the surface of replacing lending capacity (both in dollars and geographic density) that community banks and regional banks would have.[94]

94 Next Street stakeholder analysis.

Figure 6.4.2: Total Number of Community Development Financial Institutions (CDFIs) in Appalachia per 10,000 Small Businesses, 2019 and 2020[95]

Number of CDFIs per 10,000 Small Businesses	2019	2020	% Change YOY
United States	**0.29**	**0.30**	**3.8%**
Appalachian Region	**0.29**	**0.30**	**3.6%**
Subregions			
Northern Appalachia	**0.22**	**0.24**	**8.7%**
North Central Appalachia	**0.28**	**0.28**	**1.7%**
Central Appalachia	**0.59**	**0.59**	**0.3%**
South Central Appalachia	**0.33**	**0.34**	**5.0%**
Southern Appalachia	**0.29**	**0.29**	**0.9%**
County Types			
Large Metros (pop. 1 million +)	**0.17**	**0.19**	**16.3%**
Small Metros (pop. <1 million)	**0.33**	**0.35**	**5.3%**
Nonmetro, Adjacent to Large Metros	**0.31**	**0.26**	**-16.5%**
Nonmetro, Adjacent to Small Metros	**0.16**	**0.16**	**0.0%**
Rural (nonmetro, not adj. to a metro)	**0.71**	**0.72**	**0.8%**
County Economic Status			
Distressed	**0.46**	**0.56**	**22.2%**
At-Risk	**0.64**	**0.64**	**0.2%**
Transitional	**0.23**	**0.25**	**6.9%**
Competitive	**0.29**	**0.23**	**-22.3%**
Attainment	**0.00**	**0.00**	**-**
Alabama	**0.34**	**0.36**	**5.4%**
Appalachian Alabama	0.14	0.21	48.3%
Non-Appalachian Alabama	0.69	0.62	-10.4%
Georgia	**0.19**	**0.16**	**-11.6%**
Appalachian Georgia	0.08	0.05	-36.2%
Non-Appalachian Georgia	0.24	0.22	-7.6%
Kentucky	**0.26**	**0.28**	**10.3%**
Appalachian Kentucky	0.55	0.56	1.1%
Non-Appalachian Kentucky	0.17	0.20	20.0%
Maryland	**0.21**	**0.21**	**-0.8%**
Appalachian Maryland	0.00	0.00	-
Non-Appalachian Maryland	0.22	0.22	-0.8%
Mississippi	**2.09**	**2.20**	**4.9%**
Appalachian Mississippi	2.48	2.50	0.8%
Non-Appalachian Mississippi	2.00	2.12	6.1%
New York	**0.33**	**0.34**	**4.0%**
Appalachian New York	0.63	0.65	3.4%

95 Note: Does not include outliers.

Non-Appalachian New York	0.32	0.33	4.1%
North Carolina	**0.19**	**0.21**	**8.5%**
Appalachian North Carolina	0.19	0.19	-0.1%
Non-Appalachian North Carolina	0.19	0.21	10.7%
Ohio	**0.23**	**0.25**	**4.8%**
Appalachian Ohio	0.12	0.12	1.1%
Non-Appalachian Ohio	0.25	0.27	5.1%
Pennsylvania	**0.26**	**0.28**	**4.8%**
Appalachian Pennsylvania	0.19	0.21	13.3%
Non-Appalachian Pennsylvania	0.32	0.32	1.2%
South Carolina	**0.26**	**0.26**	**-3.1%**
Appalachian South Carolina	0.31	0.30	-4.6%
Non-Appalachian South Carolina	0.25	0.24	-2.6%
Tennessee	**0.35**	**0.38**	**10.6%**
Appalachian Tennessee	0.45	0.48	6.0%
Non-Appalachian Tennessee	0.28	0.32	15.0%
Virginia	**0.21**	**0.22**	**2.8%**
Appalachian Virginia	0.38	0.37	-1.3%
Non-Appalachian Virginia	0.20	0.21	3.4%
West Virginia (entire state)	**0.41**	**0.42**	**1.9%**

Source: United States Department of the Treasury, CDFI Lending, 2019 – 2020.

6.5 Access to Private Equity and Venture Capital

The distribution of venture capital investments in Appalachia predominantly aligns with population centers and is most concentrated in the Northern and Southern subregions of Appalachia. More specifically, equity investments have been highly concentrated in a few counties that, in some years, received a majority of the equity funding in the Region: Jefferson, Alabama; Gwinnett, Georgia; and, especially, Allegheny, Pennsylvania. Further, within these counties, venture capital activity is concentrated within specific cities. In Jefferson, Alabama that city is Birmingham; in Gwinnett, Georgia, that city is Norcross; in Allegheny, Pennsylvania, that city is Pittsburgh. Much like venture capital activity in the West Coast concentrates in knowledge clusters like Silicon Valley, venture capital in Appalachia is concentrated around universities and innovation centers. In Pittsburgh, the Energy Innovation Center Pittsburgh and Swartz Center for Entrepreneurship, a startup incubator at Carnegie Mellon University, are anchor institutions that stimulate new innovative activity, that, in turn, encourages venture capital investment. In Georgia, Gwinnett County is placing a large long-term bet on life sciences research and innovation, including a 2,000-acre, 18,000-job hub for medicine, agriculture, and environmental research that is the largest research park in the United States and is set to serve as a global destination for advanced research and discovery.[96]

96 Sicurella, Savannah. "Gwinnett County's Long-Term Bet on Life Sciences Research and Innovation." Atlanta Business Chronicle, December 1, 2022. https://www.bizjournals.com/atlanta/news/2022/12/01/gwinnett-countys-optimism-for-life-sciences.html?j=29861080&senddate=2022-12-01&utm_campaign=ae&utm_content=AT&utm_medium=en&utm_source=st.

Figure 6.5.1: Aggregate Equity Funding Dollar Amounts to Small Businesses in Appalachia, CAGR 2017 – 2020

Total Equity Funding (in millions of $)	2017	2018	2019	2020	CAGR
United States	**$26,795,441**	**$42,351,223**	**$42,858,094**	**$48,631,833**	**22.0%**
Appalachian Region	**$3,953,539**	**$2,989,807**	**$8,046,323**	**$4,934,645**	**7.7%**
Subregions					
Northern Appalachia	**$7,806,777**	**$3,935,543**	**$19,919,223**	**$10,198,954**	**9.3%**
North Central Appalachia	**$66,208**	**$1,555,800**	**$27,728**	**$2,347,884**	**228.5%**
Central Appalachia	**$1,693,876**	**$5,478,812**	**$14,930,550**	**$943,410**	**-17.7%**
South Central Appalachia	**$1,826,204**	**$3,858,701**	**$2,418,011**	**$3,550,453**	**24.8%**
Southern Appalachia	**$3,261,444**	**$1,636,769**	**$2,590,879**	**$2,934,204**	**-3.5%**
County Types					
Large Metros (pop. 1 million +)	**$11,172,070**	**$3,955,952**	**$21,863,177**	**$10,924,634**	**-0.7%**
Small Metros (pop. <1 million)	**$1,918,918**	**$3,744,850**	**$4,480,583**	**$3,728,620**	**24.8%**
Nonmetro, Adjacent to Large Metros	**$743,637**	**$1,195,912**	**$154,061**	**$2,200,332**	**43.6%**
Nonmetro, Adjacent to Small Metros	**$286,852**	**$318,211**	**$41,466**	**$385,240**	**10.3%**
Rural (nonmetro, not adj. to a metro)	**-**	**$2,282,334**	**$347,506**	**$751,833**	-
County Economic Status					
Distressed	**$46,633**	**$2,071,171**	**$330,272**	**$5,110,251**	**378.5%**
At-Risk	**$1,687,004**	**$3,288,280**	**$8,495,539**	**$2,485,085**	**13.8%**
Transitional	**$4,890,334**	**$2,990,511**	**$9,406,360**	**$5,756,223**	**5.6%**
Competitive	**$3,596,764**	**$4,450,474**	**$3,172,433**	**$3,976,878**	**3.4%**
Attainment	**$191,731**	**$340,692**	**$111,288**	**$79,321**	**-25.5%**
Alabama	**$2,125,639**	**$1,424,157**	**$2,262,783**	**$3,278,580**	**15.5%**
Appalachian Alabama	$3,206,320	$2,217,156	$3,507,226	$5,119,386	16.9%
Non-Appalachian Alabama	$217,623	$9,580	$40,690	$0	-100.0%
Georgia	**$11,194,330**	**$8,842,053**	**$14,301,693**	**$15,710,044**	**12.0%**
Appalachian Georgia	$4,151,303	$917,573	$1,883,569	$1,607,553	-27.1%
Non-Appalachian Georgia	$14,484,584	$12,577,811	$20,216,578	$22,543,398	15.9%
Kentucky	**$1,790,241**	**$3,714,409**	**$9,924,653**	**$6,721,011**	**55.4%**
Appalachian Kentucky	$2,486,408	$8,264,918	$22,437,038	$1,222,603	-21.1%
Non-Appalachian Kentucky	$1,573,737	$2,315,096	$6,115,974	$8,377,191	74.6%
Maryland	**$8,525,147**	**$20,362,377**	**$12,445,931**	**$17,154,197**	**26.2%**
Appalachian Maryland	$924,147	-	-	$1,181,684	8.5%
Non-Appalachian Maryland	$8,771,868	$21,011,807	$12,836,244	$17,652,775	26.3%
Mississippi	**-**	**-**	**$3,140**	**$12,039**	**-**
Appalachian Mississippi	-	-	$15,937	$60,684	-
Non-Appalachian Mississippi	-	-	$0	$0	-
New York	**$47,959,613**	**$59,283,313**	**$93,906,881**	**$73,243,968**	**15.2%**
Appalachian New York	$1,812,390	$7,318,686	$2,679,963	$3,029,395	18.7%
Non-Appalachian New York	$49,639,710	$61,127,890	$97,117,131	$75,696,224	15.1%
North Carolina	**$9,958,507**	**$25,610,831**	**$12,538,038**	**$28,050,976**	**41.2%**
Appalachian North Carolina	$1,327,647	$5,137,171	$765,944	$2,540,082	24.1%
Non-Appalachian North Carolina	$12,151,241	$30,717,268	$15,429,527	$34,220,004	41.2%

Total Equity Funding (in millions of $)	2017	2018	2019	2020	CAGR
Ohio	**$3,744,810**	**$10,945,290**	**$8,134,575**	**$9,658,272**	**37.1%**
Appalachian Ohio	$388,597	$1,656,215	$200,875	$6,569,180	156.6%
Non-Appalachian Ohio	$4,360,773	$12,621,845	$9,552,907	$10,208,289	32.8%
Pennsylvania	**$11,093,358**	**$13,013,509**	**$30,735,009**	**$20,425,709**	**22.6%**
Appalachian Pennsylvania	$10,553,560	$4,230,420	$27,573,020	$12,476,144	5.7%
Non-Appalachian Pennsylvania	$11,473,658	$19,086,259	$32,902,102	$25,833,903	31.1%
South Carolina	**$2,262,767**	**$3,753,553**	**$2,794,520**	**$2,960,311**	**9.4%**
Appalachian South Carolina	$2,157,497	$3,293,766	$3,897,128	$3,564,804	18.2%
Non-Appalachian South Carolina	$2,299,399	$3,913,843	$2,408,786	$2,744,333	6.1%
Tennessee	**$3,650,587**	**$4,592,823**	**$7,402,518**	**$6,873,668**	**23.5%**
Appalachian Tennessee	$1,567,772	$3,083,332	$1,589,887	$3,731,785	33.5%
Non-Appalachian Tennessee	$4,968,456	$5,536,733	$10,990,287	$8,827,771	21.1%
Virginia	**$9,295,824**	**$16,601,364**	**$12,941,991**	**$12,677,317**	**10.9%**
Appalachian Virginia	$3,768,536	$46,755	$11,297,733	$4,346,210	4.9%
Non-Appalachian Virginia	$9,684,674	$17,735,382	$13,052,066	$13,227,109	10.9%
West Virginia (entire state)	**$51,491**	**$448,096**	**$20,457**	**$25,435**	**-21.0%**

Source: Pitchbook, Venture Capital and Private Equity Deals, 2017 – 2023.

Figure 6.5.2: Number of Equity Funding Deals per 10,000 Small Businesses in Appalachia, CAGR, 2017 – 2020

Number of Equity Funding Deals per 10,000 SMBs	2017	2018	2019	2020	CAGR
United States	**3.51**	**3.63**	**3.87**	**3.83**	**3.0%**
Appalachian Region	**0.73**	**0.77**	**0.82**	**0.92**	**8.3%**
Subregions					
Northern Appalachia	**1.42**	**1.32**	**1.41**	**1.79**	**8.0%**
North Central Appalachia	**0.17**	**0.33**	**0.17**	**0.28**	**19.5%**
Central Appalachia	**0.15**	**0.07**	**0.29**	**0.22**	**14.7%**
South Central Appalachia	**0.49**	**0.69**	**0.59**	**0.63**	**8.9%**
Southern Appalachia	**0.52**	**0.57**	**0.70**	**0.68**	**9.7%**
County Types					
Large Metros (pop. 1 million +)	**1.64**	**1.54**	**1.67**	**1.86**	**4.4%**
Small Metros (pop. <1 million)	**0.60**	**0.69**	**0.74**	**0.83**	**11.7%**
Nonmetro, Adjacent to Large Metros	**0.27**	**0.21**	**0.16**	**0.16**	**-16.0%**
Nonmetro, Adjacent to Small Metros	**0.06**	**0.13**	**0.06**	**0.13**	**25.7%**
Rural (nonmetro, not adj. to a metro)	**-**	**0.19**	**0.29**	**0.24**	**-**
County Economic Status					
Distressed	**0.09**	**0.37**	**0.28**	**0.56**	**83.4%**
At-Risk	**0.23**	**0.16**	**0.22**	**0.19**	**-5.2%**
Transitional	**0.88**	**0.92**	**0.98**	**1.11**	**8.1%**
Competitive	**0.94**	**0.92**	**1.06**	**1.14**	**6.6%**
Attainment	**0.12**	**0.23**	**0.22**	**0.11**	**-3.6%**

Number of Equity Funding Deals per 10,000 SMBs	2017	2018	2019	2020	CAGR
Alabama	**0.47**	**0.62**	**0.65**	**0.69**	**13.9%**
Appalachian Alabama	0.66	0.93	0.95	1.07	17.9%
Non-Appalachian Alabama	0.13	0.06	0.13	-	-100.0%
Georgia	**1.19**	**1.03**	**1.11**	**1.14**	**-1.5%**
Appalachian Georgia	0.38	0.31	0.40	0.24	-14.5%
Non-Appalachian Georgia	1.57	1.37	1.44	1.58	0.1%
Kentucky	**0.71**	**0.88**	**1.00**	**0.98**	**11.4%**
Appalachian Kentucky	0.11	0.11	0.44	0.11	0.2%
Non-Appalachian Kentucky	0.89	1.12	1.17	1.24	11.5%
Maryland	**1.82**	**2.00**	**1.83**	**1.86**	**0.7%**
Appalachian Maryland	1.00	-	-	0.49	-21.1%
Non-Appalachian Maryland	1.85	2.07	1.89	1.91	1.0%
Mississippi	**-**	**-**	**0.03**	**0.04**	**-**
Appalachian Mississippi	-	-	0.18	0.18	-
Non-Appalachian Mississippi	-	-	-	-	-
New York	**4.04**	**4.43**	**5.05**	**5.11**	**8.1%**
Appalachian New York	0.74	1.74	0.88	1.03	11.6%
Non-Appalachian New York	4.16	4.53	5.20	5.25	8.1%
North Carolina	**1.25**	**1.34**	**1.28**	**1.49**	**6.1%**
Appalachian North Carolina	0.50	0.78	0.39	0.72	13.2%
Non-Appalachian North Carolina	1.44	1.48	1.50	1.68	5.2%
Ohio	**1.06**	**1.25**	**1.08**	**1.04**	**-0.7%**
Appalachian Ohio	0.25	0.31	0.12	0.31	7.9%
Non-Appalachian Ohio	1.21	1.42	1.25	1.17	-1.2%
Pennsylvania	**1.95**	**1.75**	**2.05**	**2.32**	**6.0%**
Appalachian Pennsylvania	1.79	1.55	1.82	2.26	8.2%
Non-Appalachian Pennsylvania	2.06	1.89	2.21	2.35	4.5%
South Carolina	**0.85**	**0.91**	**1.02**	**0.77**	**-3.2%**
Appalachian South Carolina	0.84	0.82	1.33	1.42	19.1%
Non-Appalachian South Carolina	0.85	0.94	0.91	0.53	-14.3%
Tennessee	**1.23**	**1.15**	**1.31**	**1.10**	**-3.4%**
Appalachian Tennessee	0.43	0.61	0.76	0.44	1.1%
Non-Appalachian Tennessee	1.73	1.49	1.65	1.52	-4.3%
Virginia	**1.55**	**1.88**	**1.91**	**1.60**	**1.0%**
Appalachian Virginia	0.56	0.19	0.19	1.12	26.0%
Non-Appalachian Virginia	$2	$2	$2	$2	0.2%
West Virginia (entire state)	**0.08**	**0.16**	**0.16**	**0.25**	**46.0%**

Source: Pitchbook, Venture Capital and Private Equity Deals, 2017 - 2023.

Insights from stakeholder interviews and a review of current literature indicate that small cities in Appalachia are garnering growing capital investments. These Small Metro areas serve as “living laboratories” for fostering innovative ideas and generating dynamic economies, offering enhanced economic opportunities, especially as growth becomes increasingly concentrated in Large Metro regions.[97] Several small cities outperformed their peers and many Large Metros on measures of dynamism[98] and wage growth in industries such as logistics and distribution, showcasing rates of entrepreneurship above national averages. Many of these small cities have built from the significant asset of a university or anchor institution bolstering a thriving tech economy, while others have sustained a robust manufacturing industry. This advantage and positive trend for the Region reveals the structural dynamic of capital flow to locations with high population and readily available resources.

97 Michael Hogan et al., “Southern Small City Resilience: How Small Cities Are Driving Dynamic Economic Growth,” RTI International, September 2021, https://www.rti.org/sites/default/files/resilient_small_cities_final_final.pdf.
98 Note: Dynamism typically includes both the entry of new businesses and the exit of existing businesses.

7. Access to Capital and Credit in Appalachia for Entrepreneurs and Small Business Owners: Recommended Solutions Set

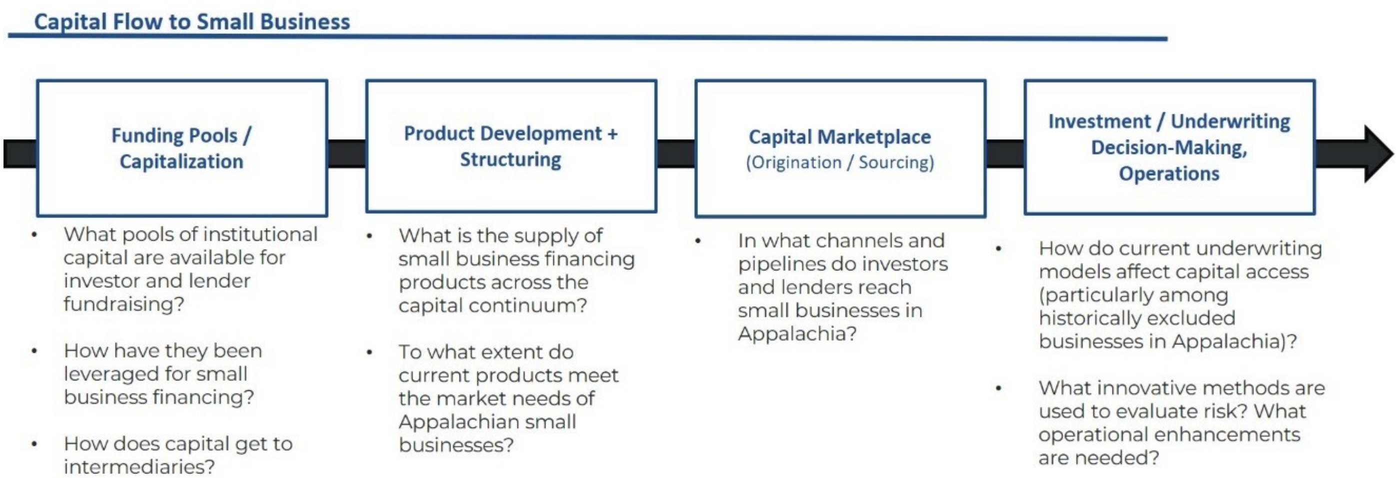
The research in this study culminated in a set of solutions designed to improve opportunity for Appalachia by strengthening the Region's entrepreneurs and small businesses. The available supply and access to capital and credit must be holistically addressed to strengthen existing small businesses and grow entrepreneurs in Appalachia. Based on the findings of this study, this solution set utilizes the entire chain of capital flow to identify policy and programmatic solutions for Appalachia.

Figure 7.1: Recommended Solutions

Start at the Source:	Provide Innovative Products:	Mobilize the Marketplace:	Open the Door for Operations:
Increase lenders' ability to access and structure capital for small business lending	Consider loan size and credit needs, plan for emerging industries with innovative products	Address existing channels and create new channels to ensure connections	Couple capacity-building with capital for efficient operations and local involvement

The solutions presented were generated within four components in the capital flow framework below and present opportunities for policymakers, Appalachian leaders, capital providers, and community stakeholders to enact change. Some solutions are recommendations for increased support for already existing, successful initiatives. Others present innovation opportunities for the Region to improve its capital landscape, by leveraging the important existing assets in the Region such as many historic downtowns, numerous national and state parks, proximity to Large Metro regions with anchor institutions, and Appalachia's deep, locally rooted cultures. These recommendations are tailored to leverage Appalachia's distinct strengths and assets, acknowledging that a one-size-fits-all approach will not be successful.

Figure 7.1.1: Questions to Generate Capital Access Solutions in Appalachia



To address the gaps and barriers to access outlined in this report, it will take many stakeholders to activate and own this set of comprehensive solutions. Different leaders from different types of organizations across Appalachia will be required to advance access to capital in different ways. Details for each recommended solution follows.

7.1 Funding Pools and Capitalization

Starting at the source for capital and credit providers, capital formation is critical to ensure that funding pools are available for institutions to engage in small business lending and investment. As identified in the research, large national bank branches have consolidated and closed over time, and few community lenders and venture capitalists invest throughout the Region. In light of these dynamics, stakeholders are pushing for the enhancement of lending capabilities for community financial institutions and regional banks. This involves boosting lenders' access to their capital for small business loans and advocating for policy changes that offer more favorable terms.

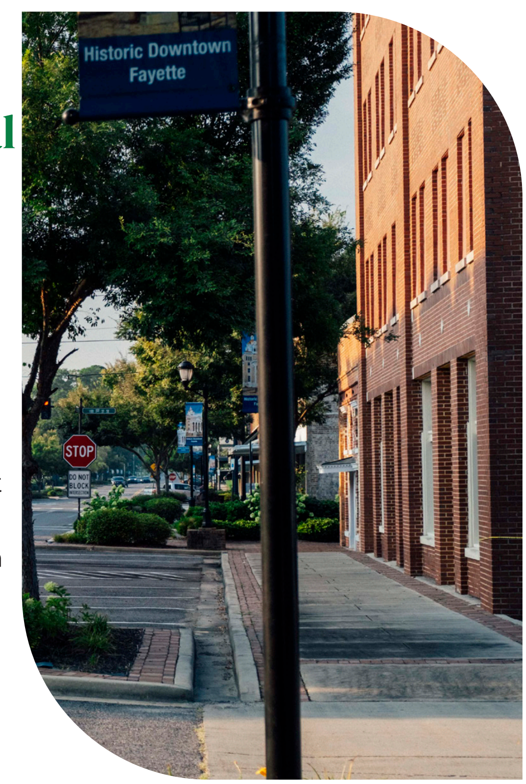
National banks of greater scale possess larger balance sheets, resulting in more substantial capital resources and streamlined access to global capital markets. Meanwhile, for those institutions more commonly operating in Appalachia with close local ties to their communities (regional banks, credit unions, and CDFIs), expanding their balance sheets with available capital for lending is a significant addressable need. These smaller banks hold an advantage in their localized lending market. For instance, when assessing loans for physical spaces, they are better equipped to underwrite the loan. Community and regional banks are more willing to take risks on business owner segments, such as startups, which are traditionally overlooked by larger commercial banks. Facilitating access to the capital markets for these institutions and de-risking small business activity for community lenders would help to increase aggregate capital supply.

Addressable core needs in Appalachia:

- Capital demand outpaces supply, and resources are required to enable community financial institutions and local investors to engage in small business lending and investing.
- Appalachia's unique regional dynamics merit intentional place-based approaches to capital programs and capacity-building.

SOLUTION:

Provide large pools of institutional capital to support the balance sheets of smaller Appalachian financial institutions and provide liquidity.



Community development financial institutions lack access to secondary markets (whereby they can bundle and sell loans), restricting activity and scalability. Expanding upon programs that have previously utilized public funding pools, like the Emergency Capital Investment Program (ECIP), which provided capitalization for credit unions and community-based depository institutions and considering the Commission's track record of managing revolving loan funds, policymakers should consider harnessing Federal and state funds to bolster lending institutions. While these efforts exist broadly, structuring capital pools for small business lending outcomes and reducing barriers for community lenders to access capital is not a widespread practice. Specifically, reduced matching requirements for pools such as revolving loan funds will allow organizations and local governments to leverage more flexible capital for small business lending. Creating loan loss reserve guarantee funds would provide incentives and a backstop for lenders. Such guarantees would encourage investors to deploy products traditionally considered risky, such as small dollar loans (microlending) and lending for supply chain contract needs in emerging industries. Providing first-loss capital, such as ARC's existing programs with Invest Appalachia, is a valuable foundation to build from for initiatives that may not be otherwise supported by the traditional capital markets. It is crucial to align favorable terms with the capital resources integrated into any of these capital solutions. The means of dispersal and covenants attached to the capital should meet the needs of the smaller lenders and support the market realities of lending in Appalachia. For example, at time of publication, new regulations for the Community Reinvestment Act (CRA) have just been released. As lenders plan for implementation of the new CRA rules, it is crucial that the covenants for lending activity are considered along with compliance and reporting requirements.

SOLUTION:

Take a place-based approach to capital formation.

The highest concentration of CDFIs in Appalachia currently sits in the Southern Appalachia subregion following the Region's population concentration. While CDFI lending activity often is deployed across community and state lines from where the organization is physically located, regional knowledge and understanding of specific community needs of each CDFI's location are distinct advantages for small business lending through CDFIs. Intentionally supporting CDFIs in other subregions, particularly Central Appalachia, through targeted funding pools will increase CDFI small business activity across the entire Region. Additionally, advocating for and administering designated set-asides built into Federal, Appalachian, and state programs intended for specific pipelines in rural communities can also address the supply and access gaps in rural Appalachia already exacerbated by the closure of physical bank branches.

SOLUTION:

Create a facility for financial institutions to access capital markets and direct resources at scale.

This credit facility would lead to the standardization of products and allow community investment institutions and local financial institutions to originate or sell whole or partial loans into the facility and thus enable smaller institutions to scale. Providing securitization, bundling, and trading CDFI loans, and facilitating access between the primary market and originators, would build CRA credits for bank lending and expand access for CDFIs. As a result, CDFIs would not need to hold all lending on balance sheets. In its most basic form, such a facility would allow for the bundling of loans, which expands beyond addressing the needs of individual lenders across Appalachia. And, especially at this moment in time when corporations and other private investors have made public commitments to supporting underserved communities all across the country, the potential for a public-private partnership is even more attractive. The Commission and other organizations well-versed in policy needs are positioned to play a crucial role in resource allocation for such a facility. The research also shows that while credit unions are more numerous in various parts of Appalachia, small business activity is not. Depending on this new facility's legal structure, it may be possible to support credit unions in building capacity to serve more small businesses and entrepreneurs in Appalachia.

While there are several examples of new initiatives with this intention (for example, Scalelink), a national facility supported by both public and private dollars would likely require legislation to establish a new type of chartered holding facility. Such a facility would need a type of liquidity and resources at scale not currently available in the community lending space, requiring engagement with both policymakers and lawmakers.

SOLUTION:

Expand the resources available for the USDA's Rural Business Investment Company (RBIC) licensing program.

This program has the potential to attract more investment activity to the Region's rural communities (to qualify for such a license, a minimum of 75% of invested funds must be directed to rural areas with a population of 50,000 or less, and 50% must be invested in smaller enterprises). The research indicates that equity capital is not flowing to Appalachia, and in parallel, investors appear to choose not to enter the market. Creating conditions that are attractive to investors can stimulate both increasing the number of providers and the overall supply in the Region, particularly in rural areas lacking existing VC.

7.2 Product Development and Structuring

Once a lender or investor has capital available, the products available for small businesses and entrepreneurs must match the needs and unique challenges in Appalachia. Main Street businesses are essential to the Region's economy and culture, and along with Supplier businesses, these types of business owners often seek operating capital, rather than expansion and growth capital. Similarly, physical collateral is often unavailable for new business starts and entrepreneurial startups, and collateral is usually required for business loans, which presents a barrier for many small businesses regardless of industry or intended use of capital.

> *"You can always get a loan when you do not need a loan."*
> *– Interviewed Appalachian investor-focused leader*

Addressable core needs in Appalachia:

- Small business owners and entrepreneurs currently strive to meet outmoded requirements to access capital. Opportunities exist for innovative thinking and the development of products that cater to the demands of small businesses and entrepreneurs in Appalachia.
- There is a mismatch between small businesses' needs and the loan sizes provided in the market.
- Emerging growth potential in climate, infrastructure, and manufacturing industries indicates a need for specifically targeted products to support these types of businesses.

SOLUTION:

Create loan capital products to address gaps in the market for loan size, and product design.

> *"Debt is a blunt instrument; important, but well-served for only certain businesses with solid assets, good credit scores, collateral. In order to produce positive outcomes for the Region, we need to deploy different types of linked capital and it needs to be catalytic."*
> *- Interviewed Appalachian investor-focused leader*

The aggregate supply analysis shows that bank lending is still by far the most prevalent source of existing capital supply for Appalachian small businesses. As this is unlikely to change anytime soon, despite the current interest rate environment, lenders should consider different products and terms that meet the needs of small businesses and address the gaps in the market. This study highlights gaps in microlending for amounts less than $50,000 and between $100,000 and $250,000, and expansion capital in the $500,000 to $1 million range. The research indicates an upward trend in loan sizes, although many businesses in Appalachia may be in need of something different. Lending products with relationship-based underwriting standards, flexible payments, and re-borrowing terms, combined with revolving lines of credit to support liquidity and innovative products such as revenue-based financing, will support the sustainability of Main Street and Supplier businesses in Appalachia. Capital providers should also consider specific needs of the industries most prevalent in Appalachia and plan for the emerging growth of new and innovative industries.

SOLUTION:

Encourage the design and funding of coordinated programs and investment products specifically addressing supply-chain financing for emerging industries.

> *"If I were at the head of a state's tech apparatus, I would be focusing on building tech locally through the manufacturing supply chain."*
> *– Interviewed Appalachian business support organization*

Appalachia is positioned to differentiate itself in emerging industries in infrastructure, clean energy, and manufacturing sectors. With the increased national attention on infrastructure, climate, and advanced manufacturing, investors can partner with accelerators that are incubating and supporting entrepreneurs in these areas to offer startup capital post-accelerator graduation. Lenders can also offer products targeted to aspiring supply chain businesses; innovative products such as revenue-based financing options would enable suppliers to meet their contractual obligations and position them to be competitive in procurement and supply chain bids.

7.3 Capital Marketplace

Ensuring that investors and lenders are connected to small businesses and entrepreneurs in the market is the next step in the capital flow. Even as capitalization and product issues are addressed, if the Appalachian small business ecosystem is not intentional about how capital reaches small businesses, access challenges will remain the same. As shown in the research, demand outpaces available supply, but there are also access challenges for existing programs and capital supply and providers themselves. Channels for entrepreneurs to access capital can be restricted by physical location and geographical features, broadband access challenges, and information asymmetry. As the small business landscape continues to shift throughout Appalachia to respond to emerging industries, and existing Main Street businesses endure a challenging interest rate environment, ensuring entrepreneurs are connected to the right resources will be crucial.

Addressable core needs in Appalachia:

- Access is hindered by lack of connection and awareness between development opportunities, investors, and small businesses.
- Access is hindered by geographical constraints and bank consolidation.

SOLUTION:

Develop intentional connections and pipelines between community development opportunities, investors, and investments available to small businesses and entrepreneurs.

> *"We should leverage assets, which are likely empty buildings in cool little historic downtowns. This is a longer-term strategy...Physical infrastructure is overlooked often as an important piece for small business success. Downtowns are ripe for investment. Revitalizing them and making it possible for food and beverage entrepreneurs, tourism, everyone, is important."*
> *– Interviewed Appalachian small business owner and developer*

Stakeholders are quick to reference the historic downtowns that are unique assets of Appalachia. Tenants and property owners can make or break a community's economic outlook, even as communities prioritize general economic development efforts. Facilitating direct and intentional connections between physical community development efforts (through both community development corporations and for-profit developers) and the support of small businesses provides opportunity to leverage resources and available programs for both areas of economic development.

> *"Stabilize the structures, and then look at their next lifecycle. Purchase some buildings and allow for reduced rent for a while until you can charge full market rates."*
> *– Interviewed Appalachian community developer*

One opportunity exists within the SBA 504 loan program. This report outlines the minimal lending through this program in Appalachia; building capacity for Appalachian CDFIs and local banks to better leverage the program in alignment with Appalachian small business owner needs, tailored to the local market and coordinated with local developers will allow for ownership and expansion of real estate where needed. Recognizing that the existing challenge in Appalachia is identifying the businesses that can take advantage of such a program, efforts should be made to ensure local governments and community planners, as well as lenders, are aware and informed of the SBA 504 loans as a tool for community development. Positioning the SBA 504 program as a community investment tool also allows these local stakeholders and lenders to consider how to pair directly with New Market Tax Credit allocations. There is also potential for lenders to create and offer "504-like" products, with similar intentions and structure as the existing SBA program. Such innovation would spur development without some of the challenges stakeholders have noted around loan approvals.

Additionally, complementary grant programs to support small business storefront development would allow for specialized support for local developers working with entrepreneurs and small business owners. Likewise, philanthropic impact investments could be channeled into such programs, with focused communication strategies and avenues for creating an impact within their designated regions.

SOLUTION:

Encourage the design and funding of coordinated programs specifically addressing contractor and supplier development for emerging industries.

With increased national attention on infrastructure, the green economy, and advanced manufacturing, investors can partner with accelerators incubating and supporting entrepreneurs in these areas. Stakeholders note that robust coordination and strategy formation across state lines for clean energy and manufacturing industries throughout the Region would support the flow of capital to these entrepreneurs. Stakeholders also acknowledge the importance of risk-sharing, while highlighting challenges stemming from fragmented coordination, limited ecosystem gatherings, and fractured deal-making. This solution also addresses stakeholder concerns about the lack of private investment in the Region resulting from the perceived lack of investible deals. Supporting the ecosystem to create a pipeline and making it attractive to angel investors looking to capitalize on emerging industries will elevate the equity capital landscape in Appalachia. For example, electric vehicle (EV) charging infrastructure supply chains pose opportunities for the Appalachian portion of states with EV mandates (at the time of report writing: Maryland, New York, and Virginia[99]) or with growth in the adoption of electric vehicles (as noted by global ratings firm S&P in Georgia, Maryland, New York, North Carolina, Pennsylvania, Tennessee, and Virginia[100]).

SOLUTION:

Attract impact investors, venture capital and other investors to the Region and support them to make informed decisions and understand regional developments.

> *"The educational component is very important for both investors and the entrepreneurs. We're working on the lack of appetite to invest after one failed investment."*
> *– Interviewed Appalachian philanthropic leader*

It is crucial to devise solutions to generate equity funding and, in turn, attract investors with a mix of risk-return profiles. For investors who are already in the Region, stakeholders in Appalachia have noted mismatched risk-return expectations for venture capitalists who seek high returns with few risks. Creating clear pathways and de-risking potential investments through efforts such as an intentional focus on partnerships with local investors, designated allocations of New Market Tax Credits,

99 Scott Shad et al., "U.S. States Jump Start Electric Vehicle Charging Infrastructure," S&P Global Ratings, September 21, 2023, https://www.spglobal.com/ratings/en/research/articles/230921-u-s-states-jump-start-electric-vehicle-charging-infrastructure-12856397.
100 Ibid.

and the above-recommended expansion of the RBIC program, will enable investors to understand the attractiveness of the Region. Specifically, these efforts should seek to expand sourcing pipelines and address knowledge gaps based on past biases about the Region, which could include compiling deal books for and facilitating direct connections via industry-specific networking and other events. Additionally, attracting impact investors to the Region to invest in specific growth areas, which will not immediately provide the types of returns venture capital requires, would provide an additional source of risk-adjusted capital.

Economic development initiatives can bundle in targeted efforts to connect small businesses and adjacent development projects with investors seeking high community impact.

Additionally, stakeholders noted a gap in available capital immediately after entrepreneurs graduate from an accelerator or a start-up incubator. Regional policymakers can intentionally implement the above efforts to address this gap by designating resources for accelerators and startup incubators to forge pipelines with capital providers and investors. Business support organizations, more numerous across Appalachia than accelerators or incubators, will also benefit from similar resources.

SOLUTION:

Support the implementation of an online capital marketplace.

It is commonly noted that geographic attributes contribute to barriers to access across the Region, particularly in rural places. While increasing the capacity and capability of existing capital providers will serve the small businesses best positioned to access these institutions, it will still leave an underserved segment of Appalachian small businesses without solutions in place. An online capital marketplace that can connect entrepreneurs and small businesses with capital resources, and linked to other types of business services, would provide the connectivity and access for those without easy physical and geographic options. Ensuring there is focus on local and regional capital providers, as well as opening the door to national capital providers who do not otherwise have a presence in Appalachia, would create opportunities for providers to reach small businesses.

Successful adoption of an online resource across the Region, however, necessitates the continued prioritization of internet connectivity and bandwidth improvement initiatives. This is already an important priority for ARC and regional stakeholders broadly and such efforts should be aligned with communication and shared resources.

7.4 Decision-making and Operations

Implementing these recommendations would be straightforward if resources and capacity were boundless, and investors and financial institutions had access to comprehensive information. Unfortunately, while Appalachia has many successful examples of community lending and investment, the capital landscape is not robust enough to handle demand and increase access as it stands. Capacity-building, coupled with capital formation, is the last piece of the framework for improving the efficacy of capital flow to small businesses and entrepreneurs.

Addressable core needs in Appalachia:

- Local governments, community groups/agencies, and capital providers alike require additional capacity to improve back-office efficiency, execute initiatives, and increase small business activity.
- Innovative policy and product and resource allocation decisions require robust data collection and information sharing.

SOLUTION:

Provide unrestricted capacity-building resources to local lenders, community development institutions, and chambers of commerce.

Simply put, local banks, credit unions, CDFIs, and development organizations are under-resourced. Capacity-building resources could include innovation grants and unrestricted operating funds, enabling underwriting innovations for lenders, support back-office skills development for technical assistance development and capital product creation, and create operational efficiency. For example, community lenders and business support organizations in Appalachia have noted that communication and marketing resources in particular are necessary to ensure small businesses are aware of the many options available to them, and thus reducing access barriers posed by geography. Additionally, as noted in the research, the longevity of Appalachian small business ownership indicates a challenge for succession planning and poses a need for technical assistance to business owners on this specific topic.

Resources are also needed because the cost of making loans and investing in community projects is elevated, not solely due to the high cost of capital in the current interest rate climate. The operational expenses associated with disbursing microloans, or even loans ranging from $500,000 to $1 million, are equivalent to those incurred when originating a $5 million investment. As seen in the research, loan sizes are trending higher. For smaller capital amounts to become feasible to offer, costs must be addressed.

Additionally, regulatory compliance and reporting requirements often burden small organizations. Indeed, an emerging use case of recent SSBCI funds in Tennessee targets operational support to counter the reporting burden required by the Treasury for loan participation programs.[101] Additional support is clearly needed for small Appalachian institutions that want to increase their capacity and capability to lend and invest.

101 Next Street stakeholder analysis..

SOLUTION:

Support ecosystem information-sharing and increased data collection on entrepreneur capital needs, access, and supply. This should include codifying and educating financial institutions on the lessons learned from deploying PPP.

As noted in this report, publicly available data on small businesses and entrepreneurs, especially at the community level, is not often widely available. For Appalachia to continue to design programs and track progress, increasing data collection efforts (beyond just at the aggregate level) will be critical. In the meantime, there is an opportunity for increased information sharing throughout local ecosystems and Region-wide. In particular, business support organizations and community support organizations, such as chambers of commerce and community planning groups, can ensure their constituents and clients are well-informed about products, investment opportunities, and changes in regional priorities. And they can act as conduits to capital providers and investors to articulate needs. Building and maintaining cross-state information resources will be critical to ensure up-to-date information sharing for support organizations, keeping small businesses and investors informed.

Information sharing should also be tied to increasing co-investment and deal sharing opportunities. Larger and riskier investments often require multiple investors with different products and return expectations. To compile an appropriate capital stack, communication and coordination is required. One way to address this is to pursue a centralized investment opportunity marketplace, perhaps tied to an online capital marketplace for small business owners.

In the distribution of PPP loans during the pandemic in 2021, CDFIs were more effective in lending to Distressed and At-Risk counties compared to other financial institutions. For capital providers to increase access for underserved populations in Appalachia, the pandemic is a learning opportunity for identifying best practices to implement in future deployment strategies. The codification and broad sharing of lessons learned have the potential to be a foundation from which Appalachia positions changes to capital supply and access.

SOLUTION:

Expand and sustainably support the infrastructure for ecosystem coordination across state lines.

Main Street organizations and local governments often take on the responsibility to bring benefits, resources, and an organized voice to business owners and residents. However, local governments in Appalachia are often understaffed and need more capacity to implement their existing grant programs deployed as support for small businesses, let alone stand-up new ones. Providing sustainable support for coordination across state lines for SSBCI programs is one way to ensure gaps are covered while historic funding flows to the Region.

> *"Everyone was jazzed about Opportunity Zones: we had all these round tables, and everyone heard all the things about the great new programs but then nothing made its way to the actual investors who would be interested in it."*
> *– Interviewed Appalachian stakeholder*

Sustaining such coordination requires a commitment from a centrally organized body to ensure ecosystems are linked and communicating across Appalachia and presents an opportunity for ARC to continue to lead in this space.

SOLUTION:

Support local investors to invest in their own communities.

Stakeholders and literature review sources are clear that hyper-local, community-owned initiatives are successful in Appalachia. In tandem with creating capital and investment products, there is an opportunity for supporting place-based investment pools aligned with local real estate development efforts, property financing, and project support for local developers working directly with small businesses. Expanding the support for high-performing local development district RLFs, and the SEDA Council of Governments (for example), to support individual communities will result in homegrown local efforts for investment. Angel investors and venture capitalists do not only have to come from outside of the Region; local investors represent a significantly underutilized resource that should be nurtured. This can take the form of seeding local investment funds and recruiting developers and others interested in development acting as direct investors.

CONCLUSION

Through small business, Appalachians can address the Region's economic challenges and foster inclusive development. Small businesses are frequently perceived as riskier investments and have difficulty obtaining capital, impeding their success and, in many cases, their survival. The removal of capital access barriers, though stemming from structural challenges, is attainable with strong collaboration across Appalachia and with real resources put behind the solutions. Stakeholders in the Region must collaborate to create environments supporting Appalachia's continued economic development through small business and entrepreneurship by creating more available and efficient access to capital.

Policymakers, Federal, State, and community leaders, entrepreneur support organizations, capital providers of all types and investors must all consider adjusting the structures and systems long in place, to better fuel Appalachia's small businesses and entrepreneurs with the financing they need to grow and thrive.

Figure 7.4.2: Summary of Solutions Set by Potential Owners

	Leaders	Core Needs	Solutions	Existing Efforts (to build from or model)
Solutions Serving Regional and Local Communities	Appalachian Regional Commission Small Business Administration U.S. Department of Agriculture Federal, State, and regional policymakers	Appalachia's unique regional dynamics merit intentional place-based approaches. Innovation requires information and data sharing.	Take a place-based approach to capital formation. Expand the resources available for the USDA's Rural Business Investment Company (RBIC) licensing program. Support ecosystem information-sharing and data collection, including across state lines. Attract investors to the Region, support them informed decision-making	Rural Business Investment Company (RBIC) licensing program SEDA Council of Governments Rural carve outs in Farm Bill legislation (as examples)
Solutions Serving Financial Institutions and Investors	Appalachian Regional Commission Small Business Administration U.S. Department of Agriculture New Market Tax Credit recipients Incubators and Accelerators Policymakers	Capital demand outpaces supply.	Provide large pools of institutional capital for balance sheet liquidity. Create a facility for financial institutions to access capital markets and direct resources at scale. Create programs and products for supplier development and supply-chain financing. Develop pipelines between community development opportunities, investors, and investments available to small businesses. Provide unrestricted capacity-building resources to capital providers and business support organizations. Support implementing an online capital marketplace.	State Small Business Credit Initiative (SSBCI) programs in individual states Emergency Capital Investment Program Main Street programs NYC Funds Finder online capital marketplace
Solutions Serving Entrepreneurs and Small Business Owners Directly	Philanthropic organizations CDFIs, business support organizations Regional and local banks, credit unions Chambers of commerce Incubators and Accelerators	Capital access is hindered by lack of connection and awareness, geographic constraints, and bank consolidation.	Create loan capital products to address gaps in the market for loan size, and product design. Support local investors to invest in their own communities.	The many community organizations and capital providers interviewed for this work have created individual programs.

8. Appendix

About Us

APPALACHIAN REGIONAL COMMISSION

The Appalachian Regional Commission (ARC, the Commission) is a regional economic development agency representing a unique partnership of federal, state, and local governments. Established by an act of Congress in 1965, the Commission is composed of the governors of the 13 Appalachian states and a federal co-chair. ARC's mission is to innovate, partner, and invest to build community capacity and strengthen economic growth in Appalachia.

NEXT STREET

Next Street Financial, LLC is a B-Corporation with the mission to help every small business realize their potential. We do that by designing and developing solutions to connect entrepreneurs and small business owners with the right resources at the right time. We have a comprehensive view of the needs of small businesses, and a focus on promoting inclusivity and developing equitable solutions, and our integrated teams deliver high quality advice and solutions based on cutting edge research and proprietary knowledge.

Research Parameters

STAKEHOLDER INTERVIEWS

Next Street conducted outreach to 61 local and national stakeholders and completed 24 interviews with lenders, equity providers, business support organizations, and thought leaders / subject matter experts. Interviewees spanned across a variety of geographic reaches, demographic priorities, and business stages supported:

Stakeholder Name	Organization	Title
Grace Fricks	Access to Capital for Entrepreneurs	President & CEO
Larry Fisher	ACE Networks	Executive Director
Donna Gambrell	Appalachian Community Capital	CEO
Geoff Marietta	Appalachian Impact Fund	Executive Director
Scott Ewing	Appalachian Investors Alliance	Principal Business Analyst
Neill Wright	Bronze Valley	President, CEO
Anthony Pipa	Brookings Center for Sustainable Development	Senior Fellow
Tighe Bullock	Bullock Properties	Owner
Sarah Thompson	Dogwood Health Trust	VP, Economic Opportunity
Kelly Morman	Foundation for Appalachian Ohio	Director of Local Impact
Andrew Crosson	Invest Appalachia	Founder & CEO
Caitlin Cain	LISC	VP, Rural LISC Director
Deb Markley	Locus Impact Investing	SVP
Ketaki Bhattacharyya	Mountain Association	Manager, Business Support Program
Matt Raker	Mountain BizWorks	Executive Director
Ray Daffner	Opportunity Appalachia	Program Manager
Marten Jenkins	Partner Community Capital	President & CEO

Stakeholder Name	Organization	Title
Clint Gwin	Pathway Lending	President
Jesse Fripp	Shining Rock Ventures	CEO
Brendan Buttimer	South Carolina Community Loan Fund	Senior Loan Officer
Heath Guinn	Sync Space	President
Emma Wyatt	The Innovate Fund	Program Manager
Michele O'Connor	West Virginia Jobs Investment Trust	Investment Manager
Dave Clark	Woodlands Development & Lending	Executive Director

YEARS OF DATA ANALYSIS

The timeline of data analysis in this report varies depending on the dataset, primarily guided by data availability. Generally, we leveraged the earliest available data starting from 2015 and extended it to the most recent available year, up to 2022. Below is a breakdown of the specific years for each dataset.

For selected datasets, especially those undergoing mapping, we opted for the years 2019 and 2021/2022 (the latest year available) to facilitate a meaningful comparison before and after the COVID-19 pandemic.

Source	Data Set	Years
Federal Financial Institutions Examination Council (FFIEC)	Community Reinvestment Act (CRA) Bank Lending	2015 – 2021
Federal Deposit Insurance Corporation (FDIC)	Banks and Institutions by Asset Size	2015, 2019, 2022
FDIC	Bank Branches	2015, 2019, 2022
National Credit Union Administration	Call Report Quarterly Data	2015, 2019, 2022
U.S. Department of the Treasury	CDFI Lending	2015 – 2022
Small Business Administration (SBA)	7(a) Loan Program	2015 – 2022
SBA	504 Loan Program	2015 – 2022
SBA	Paycheck Protection Program (PPP)	2020 – 2021
Angel Capital Association	Angel Investors in Appalachia	2023
PolicyMap	Foundation Giving in Appalachia Region	2015 - 2022
Pitchbook	Venture Equity Monitor Data	2017 – 2023
United States Census Bureau	American Community Survey	2015 – 2020
United States Census Bureau	Annual Business Survey	2018 – 2020
United States Census Bureau	Business Formation Statistics	2017 – 2022
United States Census Bureau	County Business Patterns	2015 – 2021
United States Census Bureau	Nonemployer Statistics	2015 – 2020
United States Census Bureau	Quarterly Workforce Indicators, Longitudinal Employer-Household Dynamics	2014 – 2018

DATA CAVEATS

During the data analysis phase of Next Street's research, our team thoroughly examined the nuances and limitations of the available datasets. The table below outlines limitations that should be considered while assessing the outcomes of this study.

Dataset	How is "Small Business" Defined?	Data Caveats/Limitations
FFIEC CRA Bank Lending	SBA Size Standards	No caveats / limitations.
FDIC Banks/Institutions by Asset Size	N/A	Focus of analysis was on bank's main offices; all other branches were excluded to avoid double-counting of assets managed. • Small banks = assets of less than $250 million. • Mid-size banks = assets of between $250 million and $1 billion. • Large banks = assets over $1 billion.
Credit Unions Branches	N/A	Note: headquarters were also considered a "branch."
Credit Unions by Asset Size	N/A	Only includes main branches.
Credit Union Lending	N/A	The following fields were used to calculate small business lending: • The number of Member Commercial and Industrial loans granted or acquired Year-to-Date. • The dollar amount of Member Commercial and Industrial loans granted or acquired Year-to-Date. This methodology, while valuable for the purpose of this report, may not encompass the complete scope of credit union small business lending activities. Therefore, it's essential to interpret the findings within the context of this data limitation, recognizing that there may be additional facets of credit union lending not covered by the presented analysis.
CDFI Lending	SBA Size Standards	• Excludes Nonprofits. • Only loans with listed purpose for "Business" and "Micro" included. • Used "Date Closed" to categorize year of loan. • Data is self-reported, estimated to only be 75% of actual CDFI lending.
CDFI by Asset Size	N/A	There was not a comprehensive source for this data series, so CDFI asset size was determined through: 1) FFEIC CRA Data, 2) NCUA Credit Union Data, and 3) CDFI Fund website.

Dataset	How is "Small Business" Defined?	Data Caveats/Limitations
CDFIs by Type	N/A	• Only includes main branches; any potential side branches are not included. • Created two tables, one that includes outliers (Depository Institution Holding Company, Bank Holding Company, and Venture Capital) and one table that does not. • Some zip codes had to be corrected to match actual CDFI addresses.
SBA 7a Lending	SBA Size Standards	• Excluded loan deals that were classified as "Canceled" by the SBA in the "Loan Status" column.
SBA 504 Lending	SBA Size Standards	• Excluded loan deals that were classified as "Canceled" by the SBA in the "Loan Status" column.
SBA PPP Lending	SBA Size Standards .	• County designation is based off company address. • Nonprofits were excluded from dataset. • PPP loans were administered from March 2020 to May 2021.

Venture Capital Lending (Pitchbook)	<500 employees	• Excluded deals that have locations in the "SiteLocation" column that are unaccounted for (these deal rows only had the state names available):
		  ◦ 24 in New York
		  ◦ 8 in Pennsylvania
		  ◦ 6 in Virginia
		  ◦ 5 in Georgia
		  ◦ 3 in Maryland
		  ◦ 3 in North Carolina
		  ◦ 2 in Ohio
		  ◦ 1 in Tennessee
		• Excluded deals of Acquisition financing, Recapitalization, and blanks from deal type.
		• Excluded deals of Debt and Private Equity from deal class.
		• Excluded deals classified as other than "Completed" in the deal status.
		• Made assumption that blanks in "employees" column are businesses with <500 employees (deals with >= 500 employees were removed)

SMB Landscape (Census CBP and NES Data)	<500 employees	• 2020 is most recent year for Nonemployer Statistics; 2021 is the most recent year for Employer Statistics. • Microbusinesses defined as companies with fewer than 10 employees.

Dataset	How is "Small Business" Defined?	Data Caveats/Limitations

SMB Demographic Landscape (Census Annual Business Survey)	< 500 employees	• For the Annual Business Survey (Demographics), we are not counting assignments of "Unclassifiable" within Sex, Ethnicity, Race, and Veteran categories in our analysis. Male, Non-Hispanic, and Veteran categories include businesses with equal male/female, Hispanic/Non-Hispanic, and veteran/nonveteran ownership representation.
		  • Because data is only available from state and MSA level, we subtracted the MSA numbers of non-Appalachian portions from the state-level numbers.
		  • Only employer statistics from 2018 – 2020 are included in the demographic breakdown. The most recent data release was for FY 2020.

Foundation Maps Grant Funding (PolicyMap)	N/A	• Filtered on grants awarded with subject, "Community and economic development: business and industry."
		• Filtered on key support strategies (i.e., purpose of the grants given), including:
		  • Capacity-building and technical assistance
		  • Capital and infrastructure
		  • Continuing support
		  • Financial sustainability
		  • Excluded:
		    ▪ Individual development, board development, professorships, volunteer development, convening, donor collaborations, exchange programs, grantee relations, nonprofit collaborations, online engagement, participatory grantmaking, policy, advocacy & systems reform, regranting
		• Included 2015-2023 YTD, but both 2022 and 2023 represented incomplete data, so analysis was only done for through 2022

Angel Investors in Appalachia		Sourced from Angel Capital Association. Note: As they do not share personal information of their members, if a person is an independent member but located in one of the thirteen Appalachian states, they are included as Individual Member.

Capital Demand Methodology

The approach to creating a demand model and sizing the market is outlined in detail below.

Detailed Methodology*

Capital Demand for 2022 and 2023 are projections based on 2017-2021 data and follows the below calculation method:

Number of Businesses (Employer and Non-employer) in Appalachia X
Precent of Firms in Different Employment Size & Industry Subgroups X
Precent of Firms that Apply for Capital by Employment Size and Industry X
Avg Amount of Financing Sought by Employment Size and Industry +
Demand for PPP $ (2020 & 2021 only)

Number of Nonemployer and employer businesses in Appalachia

METHODOLOGY:

- The number of employer businesses in Appalachia from 2017-2021 was determined using the County Business Pattern Census Data (CPB) for employer businesses.[102]
- The number of nonemployer businesses in Appalachia was calculated using a few methods:
    - Nonemployer firms in Appalachia from 2017-2020 was determined from the nonemployer Statistics (NES) Census Data[103]; NES data for 2021-2023 has not yet been released.
    - The number of nonemployer businesses in Appalachia in 2021 was estimated using the linear trend of the previous years and applying that year-over-year correlation to 2021. In other words, this model uses the linear regression from 2016 to 2020 to project forward the number of nonemployer businesses for 2021.

ASSUMPTIONS:

1. The trend for nonemployer businesses in Appalachia from 2016 through 2020 continued for 2021. From 2016 through 2020, the number of nonemployer businesses in Appalachia consistently increased at a similar rate, despite the unique circumstances and increased nonemployer new business application rates in 2020 (which was likely offset by an increase in business closures). Therefore, the model projects this linear relationship forward for 2021 with a high degree of confidence.

102 "United States Census Bureau County Business Patterns." Washington, D.C., 2015 – 2020.
103 "United States Census Bureau Nonemployer Statistics." Washington, D.C., 2015 – 2020.

Percent of firms in different industry and employment size subgroups
(60 subgroups in total listed below)

METHODOLOGY:
The employment size ranges, and industry classifications were identified using the Federal Reserve's Small Business Credit Survey (SBCS).[104]

- The percentage of firms within all employer subgroups from 2017-2021 was determined using the United States Census County Business Patterns data.
- The percentage of firms within the nonemployer subgroups was determined through these methods:
    - The percentage of firms within nonemployer subgroups from 2017-2020 was determined using the United States Census Nonemployer Statistics data.
    - The percentage of firms within nonemployer subgroups for 2021 was estimated by applying the trends for the previous years in a linear fashion.

ASSUMPTIONS:

2. The trend for nonemployer subgroups in Appalachia from 2016 through 2020 continued for 2021. From 2016 through 2020, the number of firms in nonemployer subgroups in Appalachia followed a similar trajectory. This model assumes that this trajectory can be applied forward for 2021 to estimate the number of nonemployer subgroups in Appalachia.

NOTES:
Sixty Employment and Industry Subgroups are made from the cross-matching of the following groups:

- **Employment Size Classifications (6):**
    - Nonemployer
    - 1 to 4 employees
    - 5 to 9 employees
    - 10 to 19 employees
    - 20 to 49 employees
    - 50 to 499 employees

- Industry Classifications (10):
- Business support and Consumer Services
- Finance and Insurance
- Healthcare and Education
- Leisure and Hospitality
- Manufacturing
- Nonmanufacturing Goods and Services
- Professional Services and Real Estate
- Retail
- Mining
- Construction

104 "Federal Reserve Bank Small Business Credit Survey: Report on Employer Firms." Cleveland, OH, 2015-2021.

Percent of Firms that Applied for Capital by Employment Size and Industry
=National average % of firms applying for financing* **X** Employment Size Index **X** Industry Index

NOTES:

- * The national average for employer firms and nonemployer firms are different.
- ^Nonemployer national average was used for zero employee employment size. Employer national average was used for all other employment sizes.
- ^^Industry indexes for employer firms and nonemployer firms were different given differences in national average.

METHODOLOGY:

The national average percentage of firms applying for financing was determined by the following:

- The percentage of employer firms that applied for financing between 2017 and 2021 was determined using data from the SBCS around employers' demand for financing.
- The percentage of nonemployer firms that applied for financing was determined using two methods:
    - The percentage of nonemployer firms applying for financing in 2017, 2018, 2020, 2021 was taken from the SBCS around nonemployers' demand for financing.
    - The percentage of nonemployer firms applying for financing in 2019 was estimated using an average of all other years.
- Employment size indexes for percentage of firms applying for financing for 2017-2021 were calculated using the Employer and Nonemployer SBCS.

$$\textit{Employment Size Index} = \frac{\textit{\% of firms applying for financing by employment size}}{\textit{National avg \% of firms applying for financing \^{}}}$$

- Industry indexes for percentage of firms applying for financing was determined by the following:
    - Industry indexes for percentage of firms applying for financing for employer businesses for 2017 to 2021 were calculated using the Employer SBCS.
    - Industry indexes for percentage of firms applying for financing for nonemployer firms was determined by the following:
        - Industry indexes for nonemployer firms for 2018, 2020, and 2021 were calculated using the Nonemployer SBCS.
        - Industry indexes for nonemployer firms for 2019 were estimated using average of 2020 and 2018 nonemployer industry indexes.
        - Industry indexes for nonemployer firms for 2017 were estimated by multiplying 2018 nonemployer industry indexes by the change in employer industry indexes from 2018 to 2017.

$$\textit{Industry Index} = \frac{\textit{\% of firms applying for financing by industry}}{\textit{National avg \% of firms applying for financing \^{}\^{}}}$$

ASSUMPTIONS:

3. Employment size and industry are significant factors that mostly operate independently when influencing capital demand. Therefore, in order to estimate the capital demand in Appalachia, one can examine the distribution of companies across these specific subcategories (or "buckets") related to employment size and industry.
4. The percentage of businesses applying by industry*, relative to the national average, remains relatively stable from year to year. This assumption allows us to fill in the blanks for years where the data is missing (e.g., 2019 Nonemployers).
    - *This is a model of explicit capital demand; therefore, businesses who required financing but chose not to apply are excluded from the analysis.

Average Amount of Financing Sought by Employment Size and Industry
= National average amount of financing sought* **X** Employment Size Index **X** Industry Index

NOTES:

- * The national average for employer firms and nonemployer firms are different.
- ^Nonemployer national average was used for zero employee employment size. Employer national average was used for all other employment sizes.

METHODOLOGY:

National average amount of financing sought was determined by the following:

- Average amount of financing sought by employer firms from 2017 to 2021 was taken from the Employer SBCS question, "How much total financing was your business seeking in the last 12 months?"
    - Responses to this question were given in ranges; midpoints of ranges were used in model.
- Average amount of financing sought by nonemployer firms was determined by the following:
    - Average amount of financing sought by nonemployer firms in 2017, 2018 & 2020 was taken from the nonemployer SBCS question, "How much total financing was your business seeking in the last 12 months?"
        - Responses were given in ranges; midpoints of ranges were used in model.
    - Average amount of financing sought by nonemployer firms in 2019 was estimated by taking the average of 2020, 2018, and 2017 average amount of financing sought by nonemployer firms.
    - Average amount of financing sought by nonemployer firms in 2021 was estimated via multiplication of 2020 average amount of financing sought by nonemployers by the CAGR in average amount of financing sought by nonemployers from 2018 to 2020.
- Employment size indexes for average amount of financing sought for 2017-2021 were calculated using the Employer and Nonemployer SBCS.

$$\textit{Employment Size Index} = \frac{\textit{Amt of financing sought by employment size}}{\textit{National avg of amt of financing sought}\ ^{\wedge}}$$

- Industry indexes for average amount of financing sought were determined by the following:

$$\textit{Industry Index} = \frac{\textit{Amt of financing sought by industry}}{\textit{National avg of amt of financing sought}^{\wedge}}$$

- Amount of financing sought by industry for 2017-2021 were calculated using the Employer SBCS
- Nonemployer industry indexes were determined by the following:
    - Nonemployer industry indexes for 2018 and 2020 were calculated using the Nonemployer SBCS.
- Nonemployer industry indexes for 2017, 2019, and 2021 were determined by the following:
    - 2017 via average of 2018 nonemployer industry indexes and 2017 & 2018 employer industry indexes;
    - 2019 via average of 2018 & 2020 nonemployer indexes;
    - 2021 via average of 2020 nonemployer industry indexes and 2020 & 2021 employer industry indexes.

ASSUMPTIONS:

5. On average, respondents in the SBCS seek financing that falls at the midpoint of the range they selected as a response to "How much total financing was your business seeking in the last 12 months?".
6. The financing amount sought by each industry, relative to the national average, remains relatively stable from year to year. This assumption allows us to fill in the blanks for years where the data is missing (e.g., 2019 Nonemployers)

Demand for PPP $ *(2020 & 2021 only)*

METHODOLOGY:

- As PPP loans were specifically distributed as emergency assistance during the COVID pandemic, calculations for demand were limited to the years 2020 and 2021.
- 2021 Demand for PPP Dollars
    - The demand for PPP loan amount in 2021 was determined by utilizing publicly available SBA data on PPP loan amounts for that year. [105] The estimation of demand followed similar steps as the rest of the model, but with the following caveats in mind:
        - The percentage of firms that applied for PPP loans was determined using the percentage of firms that applied for PPP loans for emergency assistance from the Nonemployer and Employer SBCS.
        - Average loan size by employment size range was calculated using average loan size from SBA data, broken down between firms with fewer than ten employees versus firms with 10 or more employees and national numbers of firms at these two sizes.
        - Created scale where average loan size increased with each employment size range based on the average dollars per loan per employee to estimate average loan amount.

105 "Paycheck Protection Program (PPP) Report," U.S. Small Business Administration, March 28, 2021, https://www.sba.gov/sites/default/files/2021-03/PPP_Report_Public_210328-508.pdf.

    - Average loan size by industry
        - Used SBA data on average PPP loan size by industry.
        - Used ratio of average loan size of nonemployer firms vs. employer firms to estimate loan sizes for nonemployer subgroups vs. employer subgroups.
    - 2020 Demand for PPP Dollars
        - Given lack of organized publicly available data for 2020 PPP dollars, utilized ratio of actual number of PPP loan dollars given in 2021 to demand for PPP dollars in 2021 to estimate demand in 2020.

ASSUMPTIONS:

7. When answering questions about financing needs, survey respondents did not consider the demand for PPP loans.
8. The average size of a PPP loan is directly correlated with the number of employees at a firm, and this correlation remains consistent as the number of employees increases.
9. The ratio in average PPP loan size between employer firms and nonemployer firms in Appalachia in the same industry is consistent with the ratio at the national level.
10. A similar percentage of applications for different PPP loan amounts were accepted in both 2020 and 2021.

Total Capital Demand for 2017-2021

METHODOLOGY:

To obtain the total capital demand for the years 2017 to 2021, the capital demands of each of the sixty industry and employment size subgroups were summed. For the years 2020 and 2021, demand for PPP loans were added as well.

ASSUMPTIONS:

11. In a given year, the subgroups are mutually exclusive and cover all possibilities comprehensively. This means that businesses cannot fall into multiple employment sizes and/or industries, and there are no businesses that do not fit into any employment size or industry category.

Projected Capital Demand for 2022

METHODOLOGY:

- A linear regression model of capital demand was used for 2017-2021 to project for 2022 with following adjustments to 2019-2021 data:
    - PPP dollars were excluded since COVID prompted PPP lending did not continue into 2022.
    - The application rate for financing was kept constant from 2018 to 2021, as the unique events from 2019 to 2021 suppressed application rates, which is assumed to have returned to expected levels in 2022.

- Calculated correlation as well as standard error create 95% confidence interval of estimate using graph of capital demand for 2017-2021.

ASSUMPTIONS:

12. Capital demand for 2017-2021 is predictive of capital demand for 2022 (see assumption #1 for further explanation – the continuation of trends for nonemployer businesses in Appalachia).
13. Events that led to PPP $ lending and lower financing application rates are unlikely to reoccur in 2022.

Note: The rates of capital financing applications only reflect businesses that are actively seeking funds and do not include all businesses that may actually need financing. In other words, the application rates capture only a subset of the overall demand for capital.

EMPLOYMENT AND INDUSTRY SUBGROUPS INCLUDE THE FOLLOWING:

Employment Size Ranges:

- Non-employer
- 1 to 4 employees
- 5 to 9 employees
- 10 to 19 employees
- 20 to 49 employees
- 50 to 499 employees

Industry Classifications:

- Business support and Consumer Services
- Finance and Insurance
- Healthcare and Education
- Leisure and Hospitality
- Manufacturing
- Nonmanufacturing Goods and Services
- Professional Services and Real Estate
- Retail
- Mining
- Construction

Appalachian Landscape

Figure A1: Appalachian Subregions Landscape

Subregion	# Counties	% of counties
Central	82	19.39%
North Central	63	14.89%
Northern	86	20.33%
South Central	87	20.57%
Southern	105	24.82%
Total	**423**	**100%**

Small Business Landscape

Figure A2: Number of Small Business Establishments in Appalachian States, by Industry Groupings in 2020

Number of Small Business Establishments by Industry, 2020	Business Support	Finance & Insurance	Health-care & Education	Leisure & Hospitality	Manu-fact-uring	Nonmanufacturing Goods Production	Professional Services & Real Estate	Retail	Mining	Construction
United States	6,555,585	1,222,615	3,796,246	2,711,914	631,088	4,513,508	8,581,744	3,298,124	84,637	3,628,899
Appalachian Region	507,456	76,931	231,047	168,623	53,232	247,788	474,492	266,058	6,895	314,632
Subregions										
Northern Appalachia	117,879	22,535	70,279	52,797	18,894	74,863	138,055	79,776	3,432	78,872
North Central Appalachia	35,473	5,430	19,648	13,577	3,437	17,906	33,922	22,277	1,829	21,253
Central Appalachia	32,580	3,815	13,031	6,562	2,634	14,194	19,690	18,239	1,127	21,294
South Central Appalachia	109,049	16,150	47,777	37,283	10,564	42,725	103,754	55,169	169	67,759
Southern Appalachia	212,475	29,001	80,312	58,404	17,703	98,100	179,071	90,597	338	125,454
County Types										
Large Metros (pop. 1M+)	140,348	23,185	65,255	48,296	12,024	78,651	149,861	63,495	1,087	87,701
Small Metros (pop. <1M)	205,827	33,259	101,702	73,792	21,141	95,747	208,658	110,294	1,372	117,537
Nonmetro, Adj. to Large Metros	41,740	5,262	17,198	12,669	5,608	20,093	31,304	23,804	833	30,114
Nonmetro, Adj. to Small Metros	71,801	8,925	27,792	21,540	8,905	31,904	52,551	41,263	1,966	48,178
Rural (nonmetro, not adj. to metro)	47,740	6,300	19,100	12,326	5,554	21,393	32,118	27,202	1,637	31,102
County Economic Status										
Distressed	26,073	2,827	11,061	5,906	1,904	11,173	14,686	14,056	1,337	14,659
At-Risk	72,039	9,282	30,150	20,237	7,978	32,494	49,695	39,163	1,207	46,594
Transitional	355,373	55,249	164,478	123,365	37,599	177,030	342,016	185,500	4,154	220,575
Competitive	35,686	6,015	16,959	12,764	4,285	17,827	41,611	18,515	159	21,083
Attainment	18,285	3,558	8,399	6,351	1,466	9,264	26,484	8,824	38	11,721
Alabama										
Appalachian Alabama	68,619	63,498	27,396	19,618	5,927	28,187	59,218	32,389	209	35,654
Non-Appalachian Alabama	41,729	38,756	15,871	10,933	2,811	16,528	31,932	17,042	99	18,049
Georgia										
Appalachian Georgia	98,816	92,237	35,203	25,812	7,646	50,310	82,386	37,440	80	66,291
Non-Appalachian Georgia	202,036	188,074	93,211	68,023	11,699	105,016	192,680	77,009	90	79,975

Number of Small Business Establishments by Industry, 2020	Business Support	Finance & Insurance	Health-care & Education	Leisure & Hospitality	Manu-fact-uring	Nonmanufcaturing Goods Production	Professional Services & Real Estate	Retail	Mining	Construction
Kentucky										
Appalachian Kentucky	21,216	20,169	8,817	4,241	1,652	9,424	12,920	12,270	841	14,082
Non-Appalachian Kentucky	60,867	54,910	30,056	21,620	5,510	34,240	65,834	31,596	394	35,550
Maryland										
Appalachian Maryland	3,934	3,281	2,276	1,581	425	2,413	3,931	2,695	12	2,317
Non-Appalachian Maryland	111,617	97,218	87,971	47,743	6,935	91,245	167,489	52,711	57	65,664
Mississippi										
Appalachian Mississippi	14,597	13,812	5,366	3,503	1,210	6,076	7,965	6,730	26	7,424
Non-Appalachian Mississippi	55,960	52,788	25,631	15,111	3,310	24,003	39,136	23,652	1,207	27,352
New York										
Appalachian New York	13,412	10,968	8,924	7,294	2,194	7,725	16,072	10,112	258	8,889
Non-Appalachian New York	327,166	271,072	259,005	208,452	29,341	334,541	608,283	187,630	365	181,002
North Carolina										
Appalachian North Carolina	45,919	40,541	20,012	16,507	4,770	17,161	45,035	21,766	44	29,455
Non-Appalachian North Carolina	183,812	164,320	87,569	61,341	14,151	95,444	201,058	82,731	97	102,199
Ohio										
Appalachian Ohio	32,064	27,885	15,763	11,103	5,279	18,539	27,360	19,279	1,080	23,596
Non-Appalachian Ohio	162,405	141,815	101,451	69,708	21,214	119,347	209,285	87,109	586	92,917
Pennsylvania										
Appalachian Pennsylvania	81,562	66,131	49,937	37,391	12,563	53,407	102,018	55,457	2,510	54,125
Non-Appalachian Pennsylvania	109,334	89,626	80,926	54,856	14,343	93,145	174,592	67,135	130	68,634
South Carolina										
Appalachian South Carolina	30,443	27,726	12,347	9,471	2,920	13,527	29,502	14,038	23	16,085
Non-Appalachian South Carolina	83,913	76,083	36,394	28,275	5,667	38,939	86,352	38,158	71	40,777
Tennessee										
Appalachian Tennessee	60,896	55,860	26,097	18,906	5,543	24,929	53,891	30,746	156	38,343
Non-Appalachian Tennessee	96,006	89,213	43,414	44,458	6,469	48,403	92,917	41,144	43	46,069

Number of Small Business Establishments by Industry, 2020	Business Support	Finance & Insurance	Health-care & Education	Leisure & Hospitality	Manu-fact-uring	Nonmanuf-acturing Goods Production	Profes-sional Services & Real Estate	Retail	Mining	Construc-tion
Virginia										
Appalachian Virginia	**11,638**	**10,269**	**4,962**	**3,761**	**1,108**	**4,686**	**10,593**	**7,435**	**120**	**6,326**
Non-Appalachian Virginia	**145,322**	**124,426**	**88,868**	**60,906**	**9,795**	**104,919**	**214,657**	**78,452**	**72**	**84,779**
West Virginia (entire state)	**24,340**	**20,727**	**13,947**	**9,435**	**1,995**	**11,404**	**23,601**	**15,701**	**1,536**	**12,045**

Source: United States Census Bureau, County Business Patterns, 2020; United States Census Bureau, Nonemployer Statistics, 2020.

Figure A3: Number of Small Business Establishments in Appalachia by Employee Size, 2015 – 2021

Employee Size	2015	2016	2017	2018	2019	2020	2021
No employees	1,675,361	1,693,931	1,731,410	1,764,673	1,800,491	1,818,454	Not available
1 to 5 employees	275,414	275,144	277,743	276,622	277,767	279,456	291,364
5 to 9 employees	111,338	112,029	111,878	111,185	111,868	110,021	110,950
10 to 19 employees	72,665	73,214	74,429	74,835	74,338	74,026	72,886
20 to 49 employees	49,935	51,073	51,714	52,429	52,991	52,942	51,387
50 to 99 employees	16,465	16,828	16,745	16,825	17,037	16,826	15,615
100 to 249 employees	9,155	9,244	9,226	9,413	9,484	9,411	8,816
250 to 499 employees	2,476	2,466	2,329	2,373	2,416	2,408	2,319

Source: United States Census Bureau, County Business Patterns, 2015 – 2021; United States Census Bureau, Nonemployer Statistics, 2015 – 2021.

Figure A4: Number of Small Business Employees in Appalachia, 2015 – 2018[106]

Total Number of Small Business Employees	2015	2016	2017	2018	3-year Employee Growth Rate	Population (2018)	Small Business Employees Per 1,000 people (2018)
United States	**56,466,747**	**57,487,036**	**58,196,094**	**58,805,752**	**1.4%**	**327,167,434**	**180**
Appalachian Region	**3,953,740**	**3,982,481**	**3,998,057**	**4,048,402**	**0.8%**	**25,663,257**	**158**
Subregions							
Northern Appalachia	**1,460,789**	**1,458,348**	**1,445,976**	**1,458,797**	**0.0%**	**8,166,629**	**179**
North Central Appalachia	**367,239**	**358,141**	**353,107**	**360,474**	**-0.6%**	**2,396,063**	**150**
Central Appalachia	**210,984**	**205,930**	**204,218**	**207,320**	**-0.6%**	**1,861,973**	**111**
South Central Appalachia	**765,919**	**782,898**	**790,551**	**804,962**	**1.7%**	**4,905,863**	**164**
Southern Appalachia	**1,148,809**	**1,177,164**	**1,204,205**	**1,216,849**	**1.9%**	**8,332,729**	**146**
County Types							
Large Metros (pop. 1M +)	**982,464**	**998,884**	**1,002,051**	**1,020,577**	**1.3%**	**6,136,895**	**166**
Small Metros (pop. <1M)	**1,747,012**	**1,760,365**	**1,768,928**	**1,789,981**	**0.8%**	**10,876,129**	**165**
Nonmetro, Adj. to Large Metros	**316,940**	**321,321**	**321,022**	**324,559**	**0.8%**	**2,201,560**	**147**
Nonmetro, Adj. to Small Metros	**549,205**	**550,366**	**550,517**	**555,030**	**0.4%**	**3,953,172**	**140**
Rural (nonmetro, not adj. to metro)	**358,119**	**351,545**	**355,539**	**358,255**	**0.0%**	**2,495,501**	**144**
County Economic Status							
Distressed	**170,255**	**163,839**	**161,417**	**163,995**	**-1.2%**	**3,133,777**	**149**
At-Risk	**537,975**	**536,659**	**532,750**	**540,870**	**0.2%**	**1,754,094**	**151**
Transitional	**2,880,779**	**2,905,517**	**2,919,149**	**2,953,076**	**0.8%**	**10,519,475**	**150**
Competitive	**263,685**	**271,126**	**277,561**	**279,612**	**2.0%**	**3,284,939**	**136**
Attainment	**101,046**	**105,340**	**107,180**	**110,849**	**3.1%**	**7,234,536**	**156**
Alabama	**703,639**	**716,035**	**720,109**	**724,925**	**0.7%**	**4,468,402**	**153**
Appalachian Alabama	449,314	456,331	459,153	462,357	*0.7%*	1,163,748	115
Non-Appalachian Alabama	254,325	259,704	260,956	262,568	*0.7%*	3,304,654	166
Georgia	**1,435,106**	**1,475,413**	**1,527,471**	**1,558,447**	**2.3%**	**6,042,718**	**178**
Appalachian Georgia	395,541	408,059	426,306	439,266	*3.1%*	251,064	176
Non-Appalachian Georgia	1,039,565	1,067,354	1,101,165	1,119,181	*2.0%*	5,791,654	179
Kentucky	**655,502**	**666,910**	**673,985**	**676,900**	**0.8%**	**2,986,530**	**140**
Appalachian Kentucky	134,800	136,598	133,375	132,325	*-0.6%*	625,041	143
Non-Appalachian Kentucky	520,702	530,312	540,610	544,575	*1.1%*	2,361,489	139
Maryland	**1,028,422**	**1,044,138**	**1,063,339**	**1,073,808**	**1.1%**	**19,542,209**	**197**
Appalachian Maryland	42,974	43,721	44,885	44,111	*0.3%*	1,022,915	159
Non-Appalachian Maryland	985,448	1,000,417	1,018,454	1,029,697	*1.1%*	18,519,294	199
Mississippi	**400,697**	**408,792**	**414,445**	**418,319**	**0.7%**	**10,383,620**	**158**
Appalachian Mississippi	83,152	86,192	87,077	90,258	*1.2%*	1,767,341	182
Non-Appalachian Mississippi	317,545	322,600	327,368	328,061	*0.6%*	8,616,279	153
New York	**3,707,159**	**3,762,015**	**3,812,117**	**3,853,141**	**0.7%**	**11,689,442**	**184**
Appalachian New York	163,041	163,068	163,530	162,625	*-0.2%*	1,993,819	154
Non-Appalachian New York	3,544,118	3,598,947	3,648,587	3,690,516	*0.8%*	9,695,623	190

106 Note: employe data goes up to 2018.

Total Number of Small Business Employees	2015	2016	2017	2018	3-year Employee Growth Rate	Population (2018)	Small Business Employees Per 1,000 people (2018)
North Carolina	**1,503,793**	**1,541,926**	**1,583,017**	**1,611,458**	**2.0%**	**12,807,060**	**191**
Appalachian North Carolina	297,846	307,091	312,754	316,438	*1.5%*	5,666,957	187
Non-Appalachian North Carolina	1,205,947	1,234,835	1,270,263	1,295,020	*2.2%*	7,140,103	194
Ohio	**2,054,764**	**2,100,727**	**2,125,723**	**2,133,959**	**0.8%**	**5,084,127**	**157**
Appalachian Ohio	295,168	301,377	304,621	302,101	*0.6%*	1,288,972	166
Non-Appalachian Ohio	1,759,596	1,799,350	1,821,102	1,831,858	*0.9%*	3,795,155	154
Pennsylvania	**2,343,542**	**2,384,599**	**2,399,271**	**2,407,721**	**0.8%**	**6,770,010**	**158**
Appalachian Pennsylvania	1,041,359	1,062,072	1,056,898	1,048,086	*-0.1%*	2,913,462	150
Non-Appalachian Pennsylvania	1,302,183	1,322,527	1,342,373	1,359,635	*1.5%*	3,856,548	164
South Carolina	**722,148**	**742,160**	**768,789**	**786,373**	**2.6%**	**8,517,685**	**171**
Appalachian South Carolina	192,932	198,227	204,628	212,324	*2.7%*	745,390	136
Non-Appalachian South Carolina	529,216	543,933	564,161	574,049	*2.5%*	7,772,295	174
Tennessee	**984,334**	**1,007,411**	**1,032,404**	**1,056,190**	**2.1%**	**1,805,832**	**146**
Appalachian Tennessee	405,251	414,640	424,545	428,939	*1.8%*	**327,167,434**	180
Non-Appalachian Tennessee	579,083	592,771	607,859	627,251	*2.2%*	**25,663,257**	158
Virginia	**1,375,651**	**1,404,279**	**1,430,068**	**1,443,682**	**1.1%**	**8,517,685**	**171**
Appalachian Virginia	100,010	100,799	101,650	100,972	*0.3%*	8,166,629	179
Non-Appalachian Virginia	1,275,641	1,303,480	1,328,418	1,342,710	*1.2%*	2,396,063	150
West Virginia	**272,431**	**275,565**	**263,059**	**258,255**	**-1.6%**	1,861,973	**111**

Source: Longitudinal Employer-Household Dynamics, Quarterly Workforce Indicators, 2014 – 2018; United States Census Bureau, American Community Survey, 2018.

Figure A5: Number of Small Business Establishments in Appalachia, CAGR 2015 – 2020

Total Number of Small Business Establishments	2015	2016	2017	2018	2019	2020	Annualized Growth Rate (2015 – 2020)
United States	**32,001,772**	**32,575,396**	**33,563,720**	**34,392,270**	**35,058,619**	**35,148,794**	**1.9%**
Appalachian Region	**2,212,809**	**2,233,929**	**2,275,474**	**2,308,355**	**2,346,392**	**2,363,544**	**1.3%**
Subregions							
Northern Appalachia	**660,674**	**664,527**	**670,780**	**672,071**	**672,944**	**660,583**	**0.0%**
North Central Appalachia	**181,976**	**180,572**	**181,630**	**180,872**	**180,321**	**177,381**	**-0.5%**
Central Appalachia	**137,892**	**137,342**	**136,964**	**136,891**	**136,646**	**136,208**	**-0.3%**
South Central Appalachia	**458,887**	**464,121**	**473,108**	**480,238**	**488,064**	**493,835**	**1.5%**
Southern Appalachia	**773,380**	**787,367**	**812,992**	**838,283**	**868,417**	**895,537**	**3.0%**
County Types							
Large Metros (pop. 1M+)	**594,510**	**606,270**	**623,600**	**641,633**	**660,440**	**671,264**	**2.5%**
Small Metros (pop. <1M)	**909,817**	**919,662**	**937,253**	**949,873**	**965,223**	**973,867**	**1.4%**
Nonmetro, Adj. to Large Metros	**185,109**	**185,230**	**187,832**	**188,977**	**190,835**	**190,344**	**0.6%**
Nonmetro, Adj. to Small Metros	**315,436**	**315,119**	**317,518**	**318,028**	**319,538**	**319,379**	**0.3%**
Rural (nonmetro, not adj. to metro)	**207,937**	**207,648**	**209,271**	**209,844**	**210,356**	**208,690**	**0.1%**
County Economic Status							
Distressed	**111,828**	**110,242**	**109,793**	**109,117**	**108,698**	**106,711**	**-0.9%**
At-Risk	**308,353**	**307,759**	**310,847**	**311,429**	**313,747**	**313,108**	**0.3%**
Transitional	**1,564,551**	**1,581,134**	**1,610,925**	**1,635,852**	**1,661,453**	**1,673,872**	**1.4%**
Competitive	**149,882**	**154,013**	**159,155**	**163,901**	**170,211**	**175,301**	**3.1%**
Attainment	**78,195**	**80,781**	**84,754**	**88,056**	**92,283**	**94,552**	**3.9%**
Alabama	**419,855**	**423,824**	**429,609**	**435,881**	**444,982**	**450,520**	**1.4%**
Appalachian Alabama	266,854	270,470	274,267	279,305	285,239	288,524	*1.6%*
Non-Appalachian Alabama	153,001	153,354	155,342	156,576	159,743	161,996	*1.2%*
Georgia	**1,094,156**	**1,104,834**	**1,146,937**	**1,189,827**	**1,237,547**	**1,278,779**	**3.2%**
Appalachian Georgia	341,616	348,812	365,200	381,202	399,277	417,387	*4.1%*
Non-Appalachian Georgia	752,540	756,022	781,737	808,625	838,270	861,392	*2.7%*
Kentucky	**371,963**	**376,323**	**381,468**	**385,844**	**389,656**	**388,673**	**0.9%**
Appalachian Kentucky	91,306	90,790	90,492	90,745	90,930	89,972	*-0.3%*
Non-Appalachian Kentucky	280,657	285,533	290,976	295,099	298,726	298,701	*1.3%*
Maryland	**611,891**	**625,148**	**635,716**	**649,284**	**665,865**	**670,965**	**1.9%**
Appalachian Maryland	19,701	19,779	19,986	20,068	20,247	20,310	*0.6%*
Non-Appalachian Maryland	592,190	605,369	615,730	629,216	645,618	650,655	*1.9%*
Mississippi	**270,164**	**273,167**	**278,282**	**280,805**	**286,618**	**282,412**	**0.9%**
Appalachian Mississippi	54,021	54,194	54,830	55,414	56,474	56,028	*0.7%*
Non-Appalachian Mississippi	216,143	218,973	223,452	225,391	230,144	226,384	*0.9%*
New York	**2,223,745**	**2,250,106**	**2,296,035**	**2,348,924**	**2,351,479**	**2,290,752**	**0.6%**
Appalachian New York	80,326	79,874	80,656	80,521	79,935	77,305	*-0.8%*
Non-Appalachian New York	2,143,419	2,170,232	2,215,379	2,268,403	2,271,544	2,213,447	*0.7%*
North Carolina	**944,629**	**968,885**	**992,614**	**1,021,408**	**1,052,653**	**1,066,960**	**2.5%**
Appalachian North Carolina	194,501	197,157	201,092	203,899	207,571	207,769	*1.3%*
Non-Appalachian North Carolina	750,128	771,728	791,522	817,509	845,082	859,191	*2.8%*

Total Number of Small Business Establishments	2015	2016	2017	2018	2019	2020	Annualized Growth Rate (2015 – 2020)
Ohio	**1,013,582**	**1,019,490**	**1,037,104**	**1,052,437**	**1,066,805**	**1,058,769**	**0.9%**
Appalachian Ohio	159,652	158,795	160,823	160,909	161,792	160,023	*0.1%*
Non-Appalachian Ohio	853,930	860,695	876,281	891,528	905,013	898,746	*1.0%*
Pennsylvania	**1,109,890**	**1,131,674**	**1,149,710**	**1,165,298**	**1,173,698**	**1,156,400**	**0.8%**
Appalachian Pennsylvania	467,108	471,446	475,205	476,349	477,289	468,195	*0.1%*
Non-Appalachian Pennsylvania	642,782	660,228	674,505	688,949	696,409	688,205	*1.4%*
South Carolina	**432,609**	**444,849**	**459,785**	**473,353**	**491,673**	**507,520**	**3.3%**
Appalachian South Carolina	110,889	113,891	118,695	122,362	127,427	133,598	*3.8%*
Non-Appalachian South Carolina	321,720	330,958	341,090	350,991	364,246	373,922	*3.1%*
Tennessee	**628,071**	**642,881**	**660,820**	**677,024**	**694,063**	**706,007**	**2.4%**
Appalachian Tennessee	248,555	250,886	256,088	260,475	264,897	270,725	*1.7%*
Non-Appalachian Tennessee	379,516	391,995	404,732	416,549	429,166	435,282	*2.8%*
Virginia	**772,015**	**795,220**	**817,639**	**834,035**	**846,414**	**868,946**	**2.4%**
Appalachian Virginia	53,525	53,952	53,741	53,470	53,108	53,794	*0.1%*
Non-Appalachian Virginia	718,490	741,268	763,898	780,565	793,306	815,152	*2.6%*
West Virginia (entire state)	**124,755**	**123,883**	**124,399**	**123,636**	**122,206**	**119,914**	**-0.80%**

Source: United States Census Bureau, County Business Patterns, 2015 – 2020; United States Census Bureau, Nonemployer Statistics, 2015 – 2020.

Figure A6: Number of Nonemployer Establishments in Appalachia, CAGR 2015 – 2020

Total Number of Nonemployer Establishments	2015	2016	2017	2018	2019	2020	Annualized Growth Rate (2015 – 2020)
United States	**24,330,194**	**24,813,048**	**25,701,671**	**26,485,532**	**27,104,006**	**27,151,987**	**2.22%**
Appalachian Region	**1,675,361**	**1,693,931**	**1,731,410**	**1,764,673**	**1,800,491**	**1,818,454**	**1.65%**
Subregions							
Northern Appalachia	**475,207**	**479,388**	**486,140**	**488,678**	**490,073**	**480,239**	**0.21%**
North Central Appalachia	**133,436**	**132,330**	**133,499**	**133,381**	**132,859**	**130,360**	**-0.47%**
Central Appalachia	**107,164**	**107,072**	**107,417**	**107,500**	**107,478**	**107,535**	**0.07%**
South Central Appalachia	**352,528**	**356,686**	**363,792**	**370,591**	**377,589**	**382,796**	**1.66%**
Southern Appalachia	**607,026**	**618,455**	**640,562**	**664,523**	**692,492**	**717,524**	**3.40%**
County Types							
Large Metros (pop. 1M+)	**456,599**	**466,952**	**482,461**	**499,613**	**517,268**	**527,178**	**2.92%**
Small Metros (pop. <1M)	**678,867**	**687,247**	**702,580**	**715,612**	**730,005**	**738,779**	**1.71%**
Nonmetro, Adj. to Large Metros	**141,203**	**141,301**	**143,749**	**145,175**	**146,980**	**146,952**	**0.80%**
Nonmetro, Adj. to Small Metros	**240,264**	**239,888**	**242,217**	**242,949**	**244,327**	**244,814**	**0.38%**
Rural (nonmetro, not adj. to metro)	**158,428**	**158,543**	**160,403**	**161,324**	**161,911**	**160,731**	**0.29%**
County Economic Status							
Distressed	**86,601**	**85,390**	**85,622**	**85,236**	**84,954**	**83,422**	**-0.75%**
At-Risk	**235,216**	**234,918**	**238,002**	**239,100**	**241,647**	**241,765**	**0.55%**
Transitional	**1,177,578**	**1,191,916**	**1,218,530**	**1,243,701**	**1,267,620**	**1,280,519**	**1.69%**
Competitive	**114,546**	**118,088**	**122,370**	**126,750**	**132,540**	**137,034**	**3.65%**
Attainment	**61,420**	**63,619**	**66,886**	**69,886**	**73,730**	**75,714**	**4.27%**
Alabama	**322,025**	**324,994**	**329,993**	**336,445**	**345,095**	**350,480**	**1.71%**
Appalachian Alabama	204,575	207,536	210,911	216,032	221,688	224,896	1.91%
Non-Appalachian Alabama	117,450	117,458	119,082	120,413	123,407	125,584	1.35%
Georgia	**870,897**	**877,908**	**915,043**	**955,621**	**1,000,184**	**1,035,889**	**3.53%**
Appalachian Georgia	276,694	282,483	296,623	311,525	328,236	344,733	4.50%
Non-Appalachian Georgia	594,203	595,425	618,420	644,096	671,948	691,156	3.07%
Kentucky	**280,835**	**285,053**	**291,230**	**295,814**	**299,477**	**298,841**	**1.25%**
Appalachian Kentucky	71,365	71,217	71,585	71,884	72,091	71,391	0.01%
Non-Appalachian Kentucky	209,470	213,836	219,645	223,930	227,386	227,450	1.66%
Maryland	**475,518**	**487,540**	**497,161**	**510,744**	**527,410**	**532,290**	**2.28%**
Appalachian Maryland	13,847	13,955	14,126	14,194	14,402	14,532	0.97%
Non-Appalachian Maryland	461,671	473,585	483,035	496,550	513,008	517,758	2.32%
Mississippi	**211,955**	**214,804**	**219,596**	**222,159**	**228,123**	**224,163**	**1.13%**
Appalachian Mississippi	41,977	42,131	42,757	43,354	44,372	43,969	0.93%
Non-Appalachian Mississippi	169,978	172,673	176,839	178,805	183,751	180,194	1.17%
New York	**1,685,636**	**1,708,374**	**1,751,378**	**1,804,188**	**1,806,664**	**1,755,995**	**0.82%**
Appalachian New York	58,623	58,288	59,180	59,239	58,882	56,781	-0.64%
Non-Appalachian New York	1,627,013	1,650,086	1,692,198	1,744,949	1,747,782	1,699,214	0.87%
North Carolina	**722,639**	**742,858**	**760,638**	**787,883**	**816,089**	**827,713**	**2.75%**
Appalachian North Carolina	149,884	152,063	154,916	157,295	160,709	160,438	1.37%
Non-Appalachian North Carolina	572,755	590,795	605,722	630,588	655,380	667,275	3.10%

Total Number of Nonemployer Establishments	2015	2016	2017	2018	2019	2020	Annualized Growth Rate (2015 – 2020)
Ohio	**763,418**	**768,858**	**785,833**	**802,331**	**817,642**	**810,769**	**1.21%**
Appalachian Ohio	121,673	120,834	122,946	123,396	124,338	123,090	0.23%
Non-Appalachian Ohio	641,745	648,024	662,887	678,935	693,304	687,679	1.39%
Pennsylvania	**811,890**	**831,951**	**849,036**	**865,041**	**872,647**	**856,626**	**1.08%**
Appalachian Pennsylvania	332,724	337,210	341,307	343,244	344,298	336,687	0.24%
Non-Appalachian Pennsylvania	479,166	494,741	507,729	521,797	528,349	519,939	1.65%
South Carolina	**329,431**	**339,739**	**351,453**	**363,971**	**380,729**	**395,185**	**3.71%**
Appalachian South Carolina	83,780	86,305	90,271	93,612	98,196	103,926	4.40%
Non-Appalachian South Carolina	245,651	253,434	261,182	270,359	282,533	291,259	3.46%
Tennessee	**495,703**	**508,596**	**524,081**	**539,987**	**555,566**	**566,444**	**2.70%**
Appalachian Tennessee	193,405	195,088	199,383	203,843	207,775	213,389	1.99%
Non-Appalachian Tennessee	302,298	313,508	324,698	336,144	347,791	353,055	3.15%
Virginia	**576,070**	**597,135**	**617,046**	**632,995**	**644,341**	**666,288**	**2.95%**
Appalachian Virginia	38,678	39,150	39,062	38,905	38,607	39,531	0.44%
Non-Appalachian Virginia	537,392	557,985	577,984	594,090	605,734	626,757	3.12%
West Virginia (entire state)	**88,136**	**87,671**	**88,343**	**88,150**	**86,897**	**85,091**	**-0.70%**

Source: United States Census Bureau, Nonemployer Statistics, 2015 – 2020.

Figure A7: Number of Employer Establishments in Appalachia, CAGR 2015 – 2020

Total Number of Employer Establishments	2015	2016	2017	2018	2019	2020	Annualized Growth Rate (2015 – 2020)
United States	**7,671,578**	**7,762,348**	**7,862,049**	**7,906,738**	**7,954,613**	**7,996,807**	**0.83%**
Appalachian Region	**537,448**	**539,998**	**544,064**	**543,682**	**545,901**	**545,090**	**0.28%**
Subregions							
Northern Appalachia	**185,467**	**185,139**	**184,640**	**183,393**	**182,871**	**180,344**	**-0.56%**
North Central Appalachia	**48,540**	**48,242**	**48,131**	**47,491**	**47,462**	**47,021**	**-0.63%**
Central Appalachia	**30,728**	**30,270**	**29,547**	**29,391**	**29,168**	**28,673**	**-1.37%**
South Central Appalachia	**106,359**	**107,435**	**109,316**	**109,647**	**110,475**	**111,039**	**0.86%**
Southern Appalachia	**166,354**	**168,912**	**172,430**	**173,760**	**175,925**	**178,013**	**1.36%**
County Types							
Large Metros (pop. 1M+)	**137,911**	**139,318**	**141,139**	**142,020**	**143,172**	**144,086**	**0.88%**
Small Metros (pop. <1M)	**230,950**	**232,415**	**234,673**	**234,261**	**235,218**	**235,088**	**0.36%**
Nonmetro, Adj. to Large Metros	**43,906**	**43,929**	**44,083**	**43,802**	**43,855**	**43,392**	**-0.24%**
Nonmetro, Adj. to Small Metros	**75,172**	**75,231**	**75,301**	**75,079**	**75,211**	**74,565**	**-0.16%**
Rural (nonmetro, not adj. to metro)	**49,509**	**49,105**	**48,868**	**48,520**	**48,445**	**47,959**	**-0.63%**
County Economic Status							
Distressed	**25,227**	**24,852**	**24,171**	**23,881**	**23,744**	**23,289**	**-1.59%**
At-Risk	**73,137**	**72,841**	**72,845**	**72,329**	**72,100**	**71,343**	**-0.50%**
Transitional	**386,973**	**389,218**	**392,395**	**392,151**	**393,833**	**393,353**	**0.33%**
Competitive	**35,336**	**35,925**	**36,785**	**37,151**	**37,671**	**38,267**	**1.61%**
Attainment	**16,775**	**17,162**	**17,868**	**18,170**	**18,553**	**18,838**	**2.35%**
Alabama	**97,830**	**98,830**	**99,616**	**99,436**	**99,887**	**100,040**	**0.45%**
Appalachian Alabama	62,279	62,934	63,356	63,273	63,551	63,628	0.43%
Non-Appalachian Alabama	35,551	35,896	36,260	36,163	36,336	36,412	0.48%
Georgia	**223,259**	**226,926**	**231,894**	**234,206**	**237,363**	**242,890**	**1.70%**
Appalachian Georgia	64,922	66,329	68,577	69,677	71,041	72,654	2.28%
Non-Appalachian Georgia	158,337	160,597	163,317	164,529	166,322	170,236	1.46%
Kentucky	**91,128**	**91,270**	**90,238**	**90,030**	**90,179**	**89,832**	**-0.29%**
Appalachian Kentucky	19,941	19,573	18,907	18,861	18,839	18,581	-1.40%
Non-Appalachian Kentucky	71,187	71,697	71,331	71,169	71,340	71,251	0.02%
Maryland	**136,373**	**137,608**	**138,555**	**138,540**	**138,455**	**138,675**	**0.34%**
Appalachian Maryland	5,854	5,824	5,860	5,874	5,845	5,778	-0.26%
Non-Appalachian Maryland	130,519	131,784	132,695	132,666	132,610	132,897	0.36%
Mississippi	**58,209**	**58,363**	**58,686**	**58,646**	**58,495**	**58,249**	**0.01%**
Appalachian Mississippi	12,044	12,063	12,073	12,060	12,102	12,059	0.02%
Non-Appalachian Mississippi	46,165	46,300	46,613	46,586	46,393	46,190	0.01%
New York	**538,109**	**541,732**	**544,657**	**544,736**	**544,815**	**534,757**	**-0.12%**
Appalachian New York	21,703	21,586	21,476	21,282	21,053	20,524	-1.11%
Non-Appalachian New York	516,406	520,146	523,181	523,454	523,762	514,233	-0.08%
North Carolina	**221,990**	**226,027**	**231,976**	**233,525**	**236,564**	**239,247**	**1.51%**
Appalachian North Carolina	44,617	45,094	46,176	46,604	46,862	47,331	1.19%
Non-Appalachian North Carolina	177,373	180,933	185,800	186,921	189,702	191,916	1.59%

Total Number of Employer Establishments	2015	2016	2017	2018	2019	2020	Annualized Growth Rate (2015 – 2020)
Ohio	**250,164**	**250,632**	**251,271**	**250,106**	**249,163**	**248,000**	**-0.17%**
Appalachian Ohio	37,979	37,961	37,877	37,513	37,454	36,933	-0.56%
Non-Appalachian Ohio	212,185	212,671	213,394	212,593	211,709	211,067	-0.11%
Pennsylvania	**298,000**	**299,723**	**300,674**	**300,257**	**301,051**	**299,774**	**0.12%**
Appalachian Pennsylvania	134,384	134,236	133,898	133,105	132,991	131,508	-0.43%
Non-Appalachian Pennsylvania	163,616	165,487	166,776	167,152	168,060	168,266	0.56%
South Carolina	**103,178**	**105,110**	**108,332**	**109,382**	**110,944**	**112,335**	**1.72%**
Appalachian South Carolina	27,109	27,586	28,424	28,750	29,231	29,672	1.82%
Non-Appalachian South Carolina	76,069	77,524	79,908	80,632	81,713	82,663	1.68%
Tennessee	**132,368**	**134,285**	**136,739**	**137,037**	**138,497**	**139,563**	**1.06%**
Appalachian Tennessee	55,150	55,798	56,705	56,632	57,122	57,336	0.78%
Non-Appalachian Tennessee	77,218	78,487	80,034	80,405	81,375	82,227	1.26%
Virginia	**195,945**	**198,085**	**200,593**	**201,040**	**202,073**	**202,658**	**0.68%**
Appalachian Virginia	14,847	14,802	14,679	14,565	14,501	14,263	-0.80%
Non-Appalachian Virginia	181,098	183,283	185,914	186,475	187,572	188,395	0.79%
West Virginia (entire state)	**36,619**	**36,212**	**36,056**	**35,486**	**35,309**	**34,823**	**-1.00%**

Source: United States Census Bureau, County Business Patterns, 2015 – 2020.

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Figure A8:Aggregate Equity Funding Amounts to Businesses in the Appalachian Region, 2017 – 2022

Equity Funding (in millions of $)	2017	2018	2019	2020	2021	2022
United States	**$89,936**	**$145,656**	**$150,255**	**$170,935**	**$345,959**	**$246,280**
Appalachian Region	**$899.6**	**$690.2**	**$1,888.0**	**$1,166.3**	**$1,529.3**	**$1,444.0**
Appalachia as % of the U.S.	*1.00%*	*0.47%*	*1.26%*	*0.68%*	*0.44%*	*0.59%*
Subregions						
Northern Appalachia	**$523.7**	**$264.5**	**$1,340.5**	**$673.7**	**$794.7**	**$751.4**
North Central Appalachia	**$1.2**	**$28.1**	**$0.5**	**$41.6**	**$7.3**	**$10.1**
Central Appalachia	**$23.2**	**$75.0**	**$204.0**	**$12.9**	**$10.5**	**$0.1**
South Central Appalachia	**$86.4**	**$185.3**	**$118.0**	**$175.3**	**$169.9**	**$244.6**
Southern Appalachia	**$265.2**	**$137.2**	**$225.0**	**$262.8**	**$546.9**	**$437.8**
County Types						
Large Metros (pop. 1 million +)	**$696.7**	**$253.8**	**$1,443.9**	**$733.3**	**$648.0**	**$974.8**
Small Metros (pop. <1 million)	**$179.9**	**$355.7**	**$432.5**	**$363.1**	**$575.9**	**$435.5**
Nonmetro, Adj. to Large Metros	**$14.0**	**$22.6**	**$2.9**	**$41.9**	**$125.8**	**$16.8**
Nonmetro, Adj. to Small Metros	**$9.1**	**$10.1**	**$1.3**	**$12.3**	**$151.9**	**$16.2**
Rural (nonmetro, not adj. to metro)	**-**	**$47.9**	**$7.3**	**$15.7**	**$27.7**	**$0.7**
County Economic Status						
Distressed	**$0.5**	**$22.6**	**$3.6**	**$54.5**	**$10.2**	**$0.6**
At-Risk	**$52.4**	**$102.4**	**$266.5**	**$77.8**	**$29.9**	**$21.1**
Transitional	**$787.8**	**$489.2**	**$1,562.8**	**$963.5**	**$1,247.4**	**$1,305.7**
Competitive	**$57.2**	**$72.9**	**$54.0**	**$69.7**	**$237.2**	**$106.5**
Attainment	**$1.6**	**$3.0**	**$1.0**	**$0.8**	**$4.6**	**$10.0**
Alabama	**$91.3**	**$62.1**	**$100.7**	**$147.7**	**$150.6**	**$281.3**
Appalachian Alabama	$87.9	$61.9	$100.0	$147.7	$138.8	$276.1
Non-Appalachian Alabama	$3.4	$0.2	$0.7	-	$11.8	$5.1
Georgia	**$1,283.9**	**$1,052.1**	**$1,769.9**	**$2,009.0**	**$3,731.1**	**$2,411.5**
Appalachian Georgia	$151.6	$35.0	$75.2	$67.1	$184.1	$51.1
Non-Appalachian Georgia	$1,132.3	$1,017.1	$1,694.7	$1,941.9	$3,547.0	$2,360.4
Kentucky	**$68.3**	**$143.3**	**$386.7**	**$261.2**	**$235.4**	**$75.2**
Appalachian Kentucky	$22.5	$75.0	$204.0	$11.0	$3.5	$0.1
Non-Appalachian Kentucky	$45.8	$68.3	$182.7	$250.2	$231.9	$75.2
Maryland	**$542.0**	**$1,322.1**	**$828.7**	**$1,151.0**	**$1,891.9**	**$1,420.3**
Appalachian Maryland	$1.8	-	-	$2.4	$1.0	$5.9
Non-Appalachian Maryland	$540.1	$1,322.1	$828.7	$1,148.6	$1,890.9	$1,414.3
Mississippi	**-**	**-**	**$0.1**	**$0.3**	**$0.3**	**$0.3**
Appalachian Mississippi	-	-	$0.1	$0.3	$0.3	$0.3
Non-Appalachian Mississippi	-	-	-	-	-	-
New York	**$11,012**	**$13,925**	**$22,082**	**$16,778**	**$43,810**	**$27,134**
Appalachian New York	$14.6	$58.9	$21.4	$23.4	$147.5	$57.6
Non-Appalachian New York	$10,997	$13,866	$22,061	$16,755	$43,662	$27,076

Equity Funding (in millions of $)	2017	2018	2019	2020	2021	2022
North Carolina	**$988.5**	**$2,615.9**	**$1,319.8**	**$2,992.9**	**$3,649.6**	**$4,113.6**
Appalachian North Carolina	$26.7	$104.7	$15.9	$52.8	$116.1	$109.2
Non-Appalachian North Carolina	$961.8	$2,511.2	$1,303.9	$2,940.2	$3,533.6	$4,004.4
Ohio	**$388.4**	**$1,151.9**	**$867.8**	**$1,022.6**	**$2,160.7**	**$2,073.3**
Appalachian Ohio	$6.2	$26.6	$3.3	$105.1	$121.3	$5.7
Non-Appalachian Ohio	$382.1	$1,125.3	$864.6	$917.5	$2,039.4	$2,067.5
Pennsylvania	**$1,275.4**	**$1,516.5**	**$3,607.4**	**$2,362.0**	**$5,020.6**	**$4,542.8**
Appalachian Pennsylvania	$501.5	$201.5	$1,316.0	$584.1	$526.2	$682.4
Non-Appalachian Pennsylvania	$773.9	$1,314.9	$2,291.3	$1,777.9	$4494.4	$3,860.4
South Carolina	**$104.0**	**$177.7**	**$137.4**	**$150.2**	**$376.1**	**$632.2**
Appalachian South Carolina	$25.6	$40.3	$49.7	$47.6	$223.8	$110.2
Non-Appalachian South Carolina	$78.4	$137.4	$87.7	$102.6	$152.3	$522.0
Tennessee	**$241.2**	**$310.9**	**$513.8**	**$485.3**	**$1,058.6**	**$769.8**
Appalachian Tennessee	$40.1	$80.3	$42.1	$101.0	$49.1	$122.2
Non-Appalachian Tennessee	$201.1	$230.6	$471.7	$384.3	$1,009.5	$647.5
Virginia	**$760.1**	**$1,384.6**	**$1,095.4**	**$1,101.6**	**$2,360.5**	**$3,045.3**
Appalachian Virginia	$20.3	$0.3	$60.0	$23.4	$4.8	$13.2
Non-Appalachian Virginia	$739.8	$1,384.4	$1,035.4	$1,078.2	$2,355.8	$3,032.1
West Virginia (entire state)	**$0.6**	**$5.5**	**$0.3**	**$0.3**	**$13.1**	**$9.8**

Source: Pitchbook, Venture Capital and Private Equity Deals, 2017 – 2022.

Figure A9: Total Equity Funding in Dollar Amounts to the United States and Appalachia by Series, 2018 – 2022

	2018		2019		2020		2021		2022	
	U.S.	App	U.S.	App	U.S.	App	U.S.	App	U.S.	App
Seed Round	6.8%	16.3%	6.8%	7.7%	6.6%	11.0%	5.4%	14.3%	9.0%	13.1%
Series A and B	28.6%	37.9%	30.0%	44.8%	25.9%	19.2%	25.3%	38.0%	29.0%	37.1%
Series C and D	44.8%	19.4%	39.1%	15.7%	41.3%	1.1%	42.8%	20.9%	39.3%	0.9%
Other	19.8%	27.9%	24.1%	23.1%	26.3%	72.0%	26.5%	30.2%	22.7%	47.8%

Source: Pitchbook, Venture Capital and Private Equity Deals, 2018 – 2022.

Figure A10: Total Equity Funding in Dollar Amounts to Small Businesses by Series in Appalachia, CAGR 2017 – 2022

Series	2017	2018	2019	2020	2021	2022	Annualized Growth Rate (2017 – 2020)	Annualized Growth Rate (2019 – 2022)	Annualized Growth Rate (2017 – 2022)
Seed Round	$132,875,845	$112,771,172	$145,302,266	$127,770,084	$218,355,424	$189,591,529	4.6%	9.3%	7.4%
Series A	$112,702,721	$171,702,702	$198,063,095	$146,714,727	$427,565,600	$350,756,008	32.6%	21.0%	25.5%
Series B	$228,580,564	$137,483,681	$165,242,172	$296,078,648	$139,485,906	$246,028,809	-15.0%	14.2%	1.5%
Series C	$100,114,929	$100,021,286	$5,786,700	$204,402,537	$13,024,994	$263,246,524	-76.0%	257.0%	21.3%
Series D	$74,637,529	$8,609,995	$15,000,000	$39,703,820	$0	$14,396,987	-55.2%	-1.4%	-28.0%
Other	$250,705,868	$159,564,715	$1,358,588,641	$351,655,320	$730,908,624	$379,970,329	132.8%	-34.6%	8.7%

Source: Pitchbook, Venture Capital and Private Equity Deals, 2017 – 2022.

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Figure A11: FDIC Banks Headquartered in Appalachia per 10,000 Small Businesses, 2020

FDIC Headquarters	Total		Less than $250M		$250M to $1B		$1B to $10B		Greater than $10B	
	#	#/10,000 SMB	#	#/10,000 SMB	#	#/10,000 SMB	#	#/10,000 SMB	#	#/10,000 SMB
United States	**5,076**	**1.44**	**2,408**	**0.69**	**1,757**	**0.50**	**760**	**0.22**	**151**	**0.04**
Appalachian Region	**474**	**2.01**	**201**	**0.85**	**192**	**0.81**	**70**	**0.30**	**11**	**0.05**
Subregions										
Northern Appalachia	**112**	**1.70**	**27**	**0.41**	**52**	**0.79**	**29**	**0.44**	**4**	**0.06**
North Central Appalachia	**74**	**4.17**	**42**	**2.37**	**22**	**1.24**	**9**	**0.51**	**1**	**0.06**
Central Appalachia	**90**	**6.61**	**46**	**3.38**	**36**	**2.64**	**8**	**0.59**	**0**	**0.00**
Subregions										
South Central Appalachia	**67**	**1.36**	**29**	**0.59**	**24**	**0.49**	**14**	**0.28**	**0**	**0.00**
Southern Appalachia	**131**	**1.46**	**57**	**0.64**	**58**	**0.65**	**10**	**0.11**	**6**	**0.07**
County Types										
Large Metros (pop. 1 million +)	**71**	**1.06**	**26**	**0.39**	**34**	**0.51**	**7**	**0.10**	**4**	**0.06**
Small Metros (pop. <1 million)	**141**	**1.45**	**53**	**0.54**	**55**	**0.56**	**32**	**0.33**	**1**	**0.01**
Nonmetro, Adjacent to Large Metros	**47**	**2.47**	**15**	**0.79**	**25**	**1.31**	**7**	**0.37**	**0**	**0.00**
Nonmetro, Adjacent to Small Metros	**122**	**3.82**	**60**	**1.88**	**43**	**1.35**	**16**	**0.50**	**3**	**0.09**
Rural (nonmetro, not adj. to a metro)	**93**	**4.46**	**47**	**2.25**	**35**	**1.68**	**8**	**0.38**	**3**	**0.14**
County Types										
Distressed	**66**	**6.18**	**42**	**3.94**	**23**	**2.16**	**1**	**0.09**	**0**	**0.00**
At-Risk	**127**	**4.06**	**67**	**2.14**	**41**	**1.31**	**18**	**0.57**	**1**	**0.03**
Transitional	**256**	**1.53**	**86**	**0.51**	**111**	**0.66**	**49**	**0.29**	**10**	**0.06**
Competitive	**16**	**0.91**	**5**	**0.29**	**9**	**0.51**	**2**	**0.11**	**0**	**0.00**
Attainment	**9**	**0.95**	**1**	**0.11**	**8**	**0.85**	**0**	**0.00**	**0**	**0.00**
Alabama	**110**		**60**		**40**		**7**		**3**	
Appalachian Alabama	73	2.53	31	1.07	32	1.11	7	0.24	3	0.10
Non-Appalachian Alabama	37	2.28	29	1.79	8	0.49	0	0.00	0	0.00
Georgia	**155**		**85**		**55**		**11**		**4**	
Appalachian Georgia	27	0.65	11	0.26	14	0.34	1	0.02	1	0.02
Non-Appalachian Georgia	128	1.49	74	0.86	41	0.48	10	0.12	3	0.03
Kentucky	**133**		**67**		**50**		**16**		**0**	
Appalachian Kentucky	56	6.22	32	3.56	21	2.33	3	0.33	0	0.00
Non-Appalachian Kentucky	77	2.58	35	1.17	29	0.97	13	0.44	0	0.00
Maryland	**38**		**8**		**20**		**9**		**1**	
Appalachian Maryland	2	0.98	0	0.00	1	0.49	1	0.49	0	0.00
Non-Appalachian Maryland	36	0.55	8	0.12	19	0.29	8	0.12	1	0.02
Mississippi	**70**		**29**		**29**		**8**		**4**	
Appalachian Mississippi	20	3.57	11	1.96	6	1.07	1	0.18	2	0.36
Non-Appalachian Mississippi	50	2.21	18	0.80	23	1.02	7	0.31	2	0.09

FDIC Headquarters	Total		Less than $250M		$250M to $1B		$1B to $10B		Greater than $10B	
	#	#/10,000 SMB	#	#/10,000 SMB	#	#/10,000 SMB	#	#/10,000 SMB	#	#/10,000 SMB
New York	**140**		**30**		**48**		**47**		**15**	
Appalachian New York	12	1.55	4	0.52	5	0.65	2	0.26	1	0.13
Non-Appalachian New York	128	0.58	26	0.12	43	0.19	45	0.20	14	0.06
North Carolina	**47**		**20**		**15**		**9**		**3**	
Appalachian North Carolina	11	0.53	5	0.24	4	0.19	2	0.10	0	0.00
Non-Appalachian North Carolina	36	0.42	15	0.17	11	0.13	7	0.08	3	0.03
Ohio	**176**		**101**		**46**		**22**		**7**	
Appalachian Ohio	53	3.31	28	1.75	17	1.06	8	0.50	0	0.00
Non-Appalachian Ohio	123	1.37	73	0.81	29	0.32	14	0.16	7	0.08
Pennsylvania	**138**		**29**		**61**		**43**		**5**	
Appalachian Pennsylvania	80	1.71	17	0.36	37	0.79	23	0.49	3	0.06
Non-Appalachian Pennsylvania	58	0.84	12	0.17	24	0.35	20	0.29	2	0.03
South Carolina	**45**		**19**		**21**		**5**		**0**	
Appalachian South Carolina	11	0.82	4	0.30	6	0.45	1	0.07	0	0.00
Non-Appalachian South Carolina	34	0.91	15	0.40	15	0.40	4	0.11	0	0.00
Tennessee	**136**		**56**		**57**		**21**		**2**	
Appalachian Tennessee	61	2.25	27	1.00	22	0.81	12	0.44	0	0.00
Non-Appalachian Tennessee	75	1.72	29	0.67	35	0.80	9	0.21	2	0.05
Virginia	**69**		**16**		**27**		**19**		**7**	
Appalachian Virginia	21	3.90	7	1.30	9	1.67	5	0.93	0	0.00
Non-Appalachian Virginia	48	0.59	9	0.11	18	0.22	14	0.17	7	0.09
West Virginia (entire state)	**47**	**3.92**	**24**	**2.00**	**18**	**1.50**	**4**	**0.33**	**1**	**0.08**

Source: FDIC, Summary of Deposits Download, 2020.

Figure A12: Total SBA 7(a) Loan Dollar Amounts by Industry Groupings in Appalachia, 2015 – 2022

Industry	2015	2019	2021	2022
Business Support & Consumer Services	$103,013,200	$148,694,000	$209,488,400	$166,179,500
Finance & Insurance	$14,222,600	$13,791,500	$42,339,900	$23,617,300
Healthcare & Education	$118,392,500	$106,070,500	$195,037,700	$125,894,400
Leisure & Hospitality	$324,819,900	$304,969,900	$504,212,100	$377,875,300
Manufacturing	$112,935,100	$113,813,500	$180,190,700	$134,891,500
Nonmanufacturing Goods Production and Associated Services	$248,497,900	$88,442,000	$214,747,000	$159,274,100
Professional Services and Real Estate	$104,129,500	$75,875,500	$200,220,000	$118,084,900
Retail	$156,060,700	$172,278,300	$313,565,900	$176,580,200
Mining	$967,000	$10,941,500	$3,452,900	$10,435,000
Construction	$51,392,900	$56,972,200	$109,595,500	$105,661,200

Source: SBA, 7(a) Loan Program, 2015 - 2022.

Figure A13: Growth Rates for Total SBA 7(a) Loan Dollar Amounts by Industry Groupings in Appalachia, CAGR 2015 – 2022

Industry	Annualized Growth Rate (2015-2019)		Annualized Growth Rate (2019-2022)	
	U.S.	Appalachia	U.S.	Appalachia
Business Support & Consumer Services	5.0%	9.6%	3.8%	3.8%
Finance & Insurance	3.3%	-0.8%	3.4%	19.6%
Healthcare & Education	0.5%	-2.7%	2.6%	5.9%
Leisure & Hospitality	3.5%	-1.6%	2.3%	7.4%
Manufacturing	-3.2%	0.2%	0.2%	5.8%
Nonmanufacturing Goods Production and Associated Services	-7.2%	-22.8%	8.6%	21.7%
Professional Services and Real Estate	-1.3%	-7.6%	7.8%	15.9%
Retail	-1.5%	2.5%	6.9%	0.8%
Mining	7.2%	83.4%	2.5%	-1.6%
Construction	4.9%	2.6%	14.0%	22.9%

Source: SBA, 7(a) Loan Program, 2015 - 2022.

Figure A14: SBA 7(a) Total Number of Loans by Industry Groupings in Appalachia, 2015 – 2022

Industry	2015	2019	2021	2022
Business Support & Consumer Services	389	337	421	431
Finance & Insurance	50	37	71	59
Healthcare & Education	252	202	253	254
Leisure & Hospitality	509	485	485	515
Manufacturing	236	181	199	209
Nonmanufacturing Goods Production and Associated Services	456	287	323	358
Professional Services and Real Estate	298	194	287	269
Retail	441	356	408	308
Mining	9	14	5	7
Construction	320	285	298	384

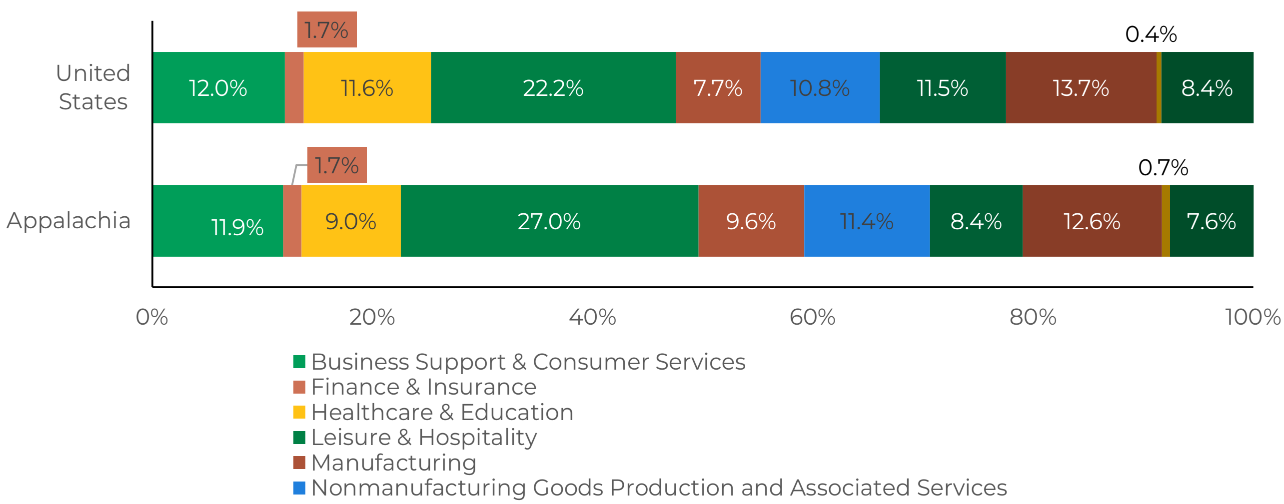
Source: SBA, 7(a) Loan Program, 2015 - 2022.

Figure A15: Growth Rates for Total SBA 7(a) Number of Loans by Industry Groupings in Appalachia, CAGR 2015 – 2022

Industry	Annualized Growth Rate (2015-2019)		Annualized Growth Rate (2019-2022)	
	U.S.	Appalachia	U.S.	Appalachia
Business Support & Consumer Services	-3.2%	-3.5%	-1.6%	8.5%
Finance & Insurance	-1.5%	-7.3%	1.5%	16.8%
Healthcare & Education	-4.6%	-5.4%	-0.2%	7.9%
Leisure & Hospitality	-0.6%	-1.2%	-5.1%	2.0%
Manufacturing	-7.0%	-6.4%	-3.2%	4.9%
Nonmanufacturing Goods Production and Associated Services	-6.9%	-10.9%	1.4%	7.6%
Professional Services and Real Estate	-7.0%	-10.2%	-0.6%	11.5%
Retail	-6.1%	-5.2%	-2.5%	-4.7%
Mining	-4.9%	11.7%	-4.2%	-20.6%
Construction	-2.6%	-2.9%	0.5%	10.4%

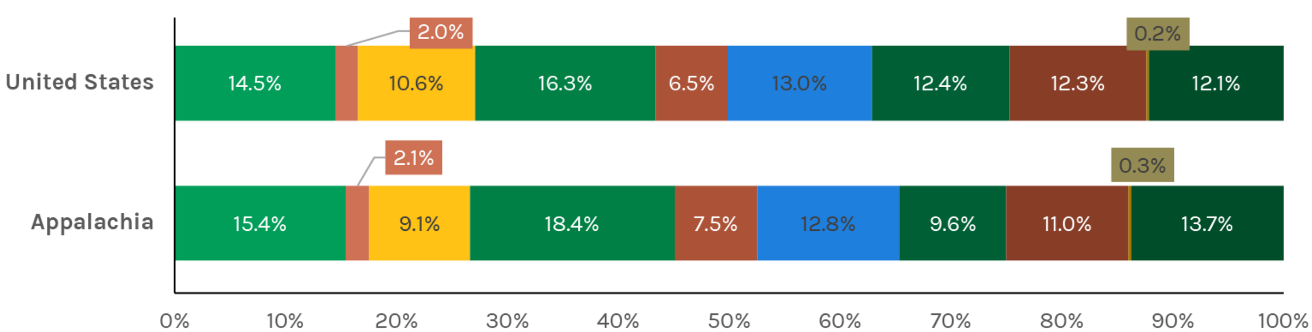
Source: SBA, 7(a) Loan Program, 2015 - 2022.

Figure A16: Percent Share of SBA 7(a) Loan Dollar Amounts by Industry Groupings in Appalachia and the United States, 2022



Source: SBA, 7(a) Loan Program, 2022.

Figure A17: Percent Share of SBA 7(a) Loan Numbers by Industry Groupings in Appalachia and the United States, 2022



Source: SBA, 7(a) Loan Program, 2022.

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Appalachian Regional Commission

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