Department of Revenue

# Iowa Angel Investor Tax Credit

# Tax Credit Evaluation Study

## December 2024

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## Preface

Iowa Code Section 2.48 directs the Department of Revenue to review certain tax expenditures it administers. The review shall consist of evaluating the tax credit and assess its equity, simplicity, competitiveness, public purpose, adequacy, and extent of conformance with the original purpose of the legislation that enacted the tax expenditure, as those issues pertain to taxation in Iowa. The schedule provided in this section requires a review in 2024 of the Angel Investor Tax Credit, known as the Investments Qualifying Businesses Tax Credit in Iowa Code, authorized by Iowa Code Sections 15E.41-46. This is the Department of Revenue's third evaluation study completed for this expenditure. Prior studies of were completed in 2014 and 2019.

As part of the evaluation, an advisory panel was convened to provide input and advice on the study's scope and analysis. We wish to thank the members of the panel:

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| Lisa Connell, JD | Iowa Economic Development Authority |
| David Frisvold, PhD | University of Iowa |
| Liz Keehner | Next Level Ventures |
| Mary Kelly | Iowa Economic Development Authority |
| Curtis Nelson | Iowa Venture Capital Association |

The assistance of an advisory panel implies no responsibility for the content and conclusions of the evaluation study. This report was also reviewed by Robin Anderson, Ph.D., State Chief Economist and Division Administrator of the Research and Policy Division. This study and other evaluations of Iowa tax credits can be found in the evaluation study web page on the Iowa Department of Revenue website.

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## Executive Summary

The Investments Qualifying Businesses Tax Credit, which is more commonly known as the Angel Investor Tax Credit, is a tax credit allowed for equity investments in qualifying Iowa businesses. The Angel Investor Tax Credit was enacted in 2002 with the intent to incentivize investments in early-stage business venture development and growth.

The major highlights of the study are below:

### Angel Investor Tax Credit Program Description, Provisions, and Background

- An Angel Investor Tax Credit is equal to 25.0 percent of an equity investment made into a qualified business approved by the Iowa Economic Development Authority (EDA). To be certified by the EDA as a qualified business that taxpayers are eligible to receive a tax credit for investing in, businesses must satisfy a series of criteria at the time an investment is made.
- The tax credit may be claimed against various tax types, including individual income tax, corporation income tax, franchise tax, insurance premium tax, and moneys and credits tax. Tax credits are not transferable. A tax credit issued to a partnership, limited liability company, S corporation, estate or trust is issued to the individual owners based on a pro rata share of the individual's earnings from the entity. Since fiscal year (FY) 2016, tax credit claims against individual income tax are refundable.
- When the tax credit program began, it had an overall lifetime award cap of $10.0 million. When this was reached in 2008, no tax credit certificates were issued for the program for FY 2009 and FY 2010 until the tax credit program was renewed by the 2011 General Assembly. Effective FY 2011, the annual award cap was $2.0 million per fiscal year.
- When the tax credit was enacted in 2002, taxpayers were required to wait three years after the investment was made and tax credit certificate was awarded before claiming the tax credit. This wait period for claims was removed in 2015.

### Iowa and State by State Comparison

- In 2002, two separate tax credits, besides the Angel Investor Tax Credit, encouraging venture capital investments in Iowa became available. These included the Iowa Fund of Funds Tax Credit and the Venture Capital Funds Tax Credit. In addition, Iowa currently offers one other tax credit incentivizing venture capital investments, the Innovation Fund Tax Credit.
- The EDA currently administers five other programs intended for early-stage or innovative ventures. Each program is structured as a royalty or low interest loan awarded at the discretion of the EDA Board. To be eligible for any of the four programs, businesses must be in advanced manufacturing, bioscience, or information technology. Businesses must also be Iowa based with fewer than 500 employees.
- There are 22 states, including Iowa, which have 23 active programs encouraging the growth of venture capital through the use of tax credits. Eleven states have had one or more similar programs that have either been allowed to sunset or that have been repealed.

- The amount of funds each state sets aside to be issued for investment tax credits varies widely. All states, but North Dakota's Angel Investor Investment Credit, administer their funding caps on an annual basis. New Jersey has the largest annual cap at $35.0 million and Utah has the smallest annual cap at $300,000 a year. Of the states with annual funding caps, the average cap is $9.5 million per year. The median is $5.0 million per year.
- Including Iowa, there are 11 states that offer a tax credit rate of 25.0 percent of the qualified investment. Only three states offer a base tax credit rate lower than 25.0 percent of the qualified investment. Kansas and Virginia offer the highest base tax credit rates of 50.0 percent of a qualified investment. Many states offer 5.0 percent to 17.0 percent increases to their base tax credit rates if taxpayers make investments in qualified investments. These investments may meet certain specialized criteria for qualified businesses, such as those owned by women, minorities, veterans, persons with disabilities, etc., or those qualified businesses located in certain designated areas.
- In addition to Iowa, Maine, Maryland, Minnesota, and New Jersey offer tax credits that are refundable. However, only Iowa and Minnesota limit refundability to individual income tax returns. Eight states require a minimum investment in a qualified business to qualify for a tax credit. These minimum investments can range from $7,500 to $25,000 a year.

**Angel Investor Tax Credit Awards, Claims, and Investments**

- From the period between FY 2002, when the tax credit program began, and FY 2023, the Angel Investor Tax Credit has awarded tax credits totaling $26.9 million. Between FY 2002 and FY 2024, $18.5 million tax credit claims have been made, which is $8.3 million, or 31.1 percent, below the tax credit program award total. Between tax years 2005 and 2023, 6,522 tax credit claims have been made. The average tax credit claim between tax years 2005 and 2023 was $2,840.
- Between investment years 2002 and 2021, 3,982 tax credit awards totaling $21.3 million have been made to Iowa resident taxpayers. Residency is based on the taxpayer address provided on the tax credit application and taxpayers include both natural persons and corporations, banks, credit unions, and other entities. There have been 726 tax credit awards for $5.6 million made to nonresidents.
- Most tax credit awards have been issued to individual income taxpayers. These account for 89.2 percent of the number of tax credits awarded. The average tax credit awarded to individual income taxpayers is $5,474. Corporation income taxpayers account for the next largest share, but represent just 5.2 percent of the number of tax credits awarded. The average tax credit awarded to corporate taxpayers is $4,845. Insurance companies received 34 awards, or just less than 1.0 percent of the number of awards, but had an average tax credit award of $23,641.
- Individual income taxpayers represent the majority of tax credit claims. Since the beginning of the tax credit, these account for 96.9 percent of the number of tax credits claimed and 95.2 percent of claim amounts. The average tax credit amount claimed by individual income taxpayers is $2,791. Corporation income taxpayers account for the next largest share. The average tax credit claim by corporate taxpayers is $2,547.

Insurance companies have only made eight claims, or just less than 1.0 percent of the number of claims, but had an average claim amount of $38,122.

- Almost half, or 47.0 percent, of qualified businesses received investments for only one year. Yet, these qualified businesses only account for 23.4 percent of investments made throughout the lifetime of the tax credit program. Instead, qualified businesses which received investments for two years account for 35.1 percent of investments made throughout the lifetime of the tax credit program. Qualified businesses which received investments for six years, the longest amount of time possible allowed in the program, account for the least, or 5.8 percent.

**Economic Analysis of the Angel Investor Tax Credit**

- It is not possible to evaluate whether and to what extent the Angel Investor Tax Credit has incentivized investment quasi-experimental methods. Thus, it is not possible to definitively establish that the tax credit leads to investment that, in the absence of the tax credit, would not occur. Nevertheless, using available data and analytical methods, it is possible to elucidate these matters. The present analysis offers evidence on whether firms that have received investment through the Angel Investor Tax Credit program experience different levels of overall investment and different outcomes with respect to longevity and exit.
- Data concerning investments in start-up companies and other pertinent information about those firms was obtained for this analysis from Crunchbase. Crunchbase is a proprietary, open-contribution and AI-powered database with a focus on capital investment in start-ups. The data set used for this analysis was downloaded from Crunchbase in the summer of 2024. This dataset includes Iowa firms, for within state comparisons, and other states, for cross-state comparisons.
- Between 2009 and 2024, the 33 Iowa qualified businesses identified in Crunchbase received $43.68 million in early-stage funding, or 23.0 percent of the amount reported for all firms. This represented a disproportionately high share of early-stage funding. It was almost three times more than the comparison firms and almost a quarter of all early-stage funding for all firms in the data file, despite representing only 12.3 percent of the Iowa firms in the data file. It also should be noted that, the qualified businesses were able to achieve a higher average return of $727,994 per round during early-stage funding rounds when compared to the comparison group, which averaged $399,658 per round. All other Iowa firms averaged $529,480 per round.
- Qualified businesses received $183.63 million in growth-stage funding during the period whereas the 33 comparison firms received about $100.0 million less, or $83.38 million in total. When the comparison firms are considered in combination with all other Iowa firms, the group, as a whole, accounted for 2.3 percent more than their proportionate share of growth-stage funding, as reported in Crunchbase. Thus, while the qualified businesses can demonstrate a higher average return of funding in the early-stage funding round, there is no marked funding advantage or disadvantage when compared to the rest of Iowa firms after the early-stage funding rounds.

- According to the analysis data file, five qualified businesses were acquired during the analysis period. This compares to four comparison firms, or 12.1 percent of firms founded since 2009, that exited in this way.
- Iowa firms, as a whole, represented 6.7 percent of all firms in the data file, and received a 2.0 percent less than a proportional share of early-stage funding round investments, or 4.5 percent. Iowa's identified 33 qualified businesses for the 2009-2024 analysis timeframe, represented 0.8 percent of all firms in the data file and received 1.0 percent of all early-stage funding round investments reported for all firms. This represented a slightly higher share of early-stage funding. It also should be noted that, the Iowa qualified businesses were able to achieve a higher average return of per round during early-stage funding rounds than Missouri and Nebraska firms as a whole, which cumulatively represented 28.3 percent of firms in the data file.

# I. Introduction

The Investments Qualifying Businesses Tax Credit, which is more commonly known as the Angel Investor Tax Credit, is a tax credit allowed for equity investments in qualified Iowa businesses. With a particular focus on early-stage business development and growth, this tax credit program is intended to create wealth and accelerate the creation of new ventures that are in the process of bringing their initial products or services to the markets and developing their customer base. This evaluation study describes and analyzes the economic aspects of the tax credit with attention to its state-level policy implications. The evaluation study is comprised of six sections.

Section I of this report provides a program description of the tax credit, including its purpose, provisions, limitation, eligibility requirements, tax credit rates, funding, and administration. It also includes a brief history of the tax credit.

Section II provides an overview of additional Iowa tax credits incentivizing venture capital and tax credits similar to the Angel Investor Tax Credit among the 50 states.

Section III provides a review of literature concerning investment tax credits, including reports of academic research as well as other published information.

Section IV provides an overview of descriptive statistics concerning the Angel Investor Tax Credit; these pertain to basic program parameters such as awards, claims, and investments.

Section V provides an analysis of the economic effects of the Angel Investor Tax Credit, with particular attention to evidence on whether firms that have received investment through the Angel Investor Tax Credit program experience different levels of overall investment and different outcomes with respect to longevity and exit.

Section VI provides a brief discussion of the evaluation study conclusions.

## A. Program Description and Provisions

According to its enabling legislation (Iowa Code Sections 15E.41-46), the purpose of the Angel Investor Tax Credit is to stimulate job growth, create wealth, and accelerate the creation of new ventures to incentivize the transfer of capital from investors to entrepreneurs, particularly during early-stage growth.

An Angel Investor Tax Credit is equal to 25.0 percent[1] of an equity investment made into a qualified business approved by the Iowa Economic Development Authority (EDA).[2] To be certified by the EDA as a qualified business that taxpayers are eligible to receive a tax credit for investing in, businesses must satisfy the following criteria at the time an investment is made:

- the business's principal operations must be located in Iowa;
- the business must have been in operation for six years or less;

[1] Prior to July 1, 2015 the rate for investments was 20.0 percent.
[2] Prior to 2015, the tax credit was also allowed for investments in community-based seed capital funds.

- business principals must participate in an entrepreneurial assistance program[3] or have other applicable experience;[4]
- the business cannot be primarily engaged in retail sales, real estate, health care, or other services requiring a professional license;
- the business's net worth must be no more than $10.0 million;
- the business must have secured at least two investors and total equity financing or binding investment commitments of at least $500,000.

For their part, in order to be eligible to receive tax credits, taxpayer investors must make investments in the form of cash for equity and must have less than a 70.0 percent ownership, membership, or shareholder stake in the qualified business. The tax credit may be claimed against various tax types, including individual income tax, corporation income tax, franchise tax, insurance premium tax, and moneys and credits tax. Tax credits are not transferable to any other person or entity. A tax credit issued to a partnership, limited liability company, S corporation, estate or trust is issued to the individual owners based on a pro rata share of the individual's earnings from the entity. Since fiscal year (FY) 2016, tax credit claims against individual income tax are refundable.[5] This means that tax credits are refunded, i.e., paid, to the taxpayer to the extent that the credit amount exceeds tax liability. However, tax credits are nonrefundable when claimed against corporation income, franchise, insurance premium, and moneys and credits taxes, but these types of nonrefundable unused credits may be carried forward. Nonrefundable tax credits in excess of tax liability may be carried forward for up to three years.[6]

Limits to the tax credit apply to the overall program, to investors, and to businesses receiving investments for which the tax credit is awarded. Caps applicable at these respective levels have varied since 2002, the first year of the tax credit. At the level of the individual investor, tax credit awards are capped at $100,000 per calendar year, including awards to the investor's spouse or dependents. Caps also apply at the qualified business level. Total tax credits awarded for investments in any single qualified business in a year are limited to $500,000. Since 2012 and at the current program level, tax credit awards are capped at $2.0 million per year. According to the EDA, the tax credit program is "oversubscribed". Meaning, each year, the $2.0 million tax credit program cap is reached with a demand that exceeds funds. To address this, for several years, the EDA would create waitlists for tax credit applications that created administrative burdens and award delays. Thus, after enacting an administrative rule change, the EDA ceased accepting tax credit applications as of April 1, 2022 and no longer maintains a waitlist for applications received after that date. After the current outstanding waitlist has been awarded (expected after July

[3] The "entrepreneurial assistance program" or "entrepreneur investment awards program" is administered by the EDA. It supports resource providers that offer technical and financial assistance to entrepreneurs and startup companies seeking to create, locate or expand a business in Iowa. The entrepreneurial resource providers offer services that include, but are not limited to, corporate development, business model development, business planning, marketing, financial strategies and management, mentoring and management coaching,
and networking.

[4] The EDA may waive this requirement if a business establishes that its owners, directors, officers, and employees have an appropriate level of experience such that participation in an entrepreneurial assistance program would not materially change the prospects of the business.

[5] Prior to 2015, the tax credit was not refundable if claimed against individual income tax.

[6] Prior to 2015, the carryforward period was five years.

1, 2025), the EDA will announce designated filing windows for applications on its website. Applications that are received outside the filing window or exceed the available annual allocation will be denied by the EDA Board.

B. Background

The Angel Investor Tax Credit program went into effect, retroactively from its February 2002 enactment, on January 1, 2002 (see Appendix 1. Timeline of Major Program Changes by Effective Date). Initially, the tax credit was equal to 20.0 percent of an equity investment made in quailed businesses and community-based seed capital funds. Yet, these taxpayers were required to wait three years after the investment was made and tax credit certificate was awarded before claiming the tax credit. For example, a taxpayer who made a qualified investment in January 2002 could not claim the tax credit until the 2005 tax year. The purpose of this requirement was to delay the initial fiscal impact of the tax credit which was enacted during the early 2000s recession that followed the dotcom bubble burst[7] and September 11, 2001 terrorist attacks.

The tax credit was capped at $3.0 million annually for investments made in qualified businesses and community-based seed capital funds during 2002 and 2003. It was capped at $4.0 million for investments made in 2004. An overall, lifetime program cap of $10.0 million was set for the tax credit, which was expected to be exhausted by 2005. However, by the end of FY 2005, only $1.8 million of the tax credit program's aggregate $10 million award cap was utilized. Thus, legislation was passed in 2005 that allowed the tax credit to exist beyond its projected three years and until the overall award cap of $10.0 million was reached.

In addition, in 2005, changes were enacted to allow qualified businesses to be in operation six years or less (compared to three years or less previously) and to have a net worth of $10.0 million or less (compared to $3.0 million or less previously) to be eligible for the tax credit. Finally, changes were made for community-based seed capital funds to allow the fund up to 48 months (compared to 36 months previously) to invest 33.0 percent of its capital in one or more qualified businesses.

The tax credit continued to be awarded until January 2008 when the last of the $10.0 million program cap was finally awarded to investors. When this was reached in 2008, no tax credit certificates were issued for the program for FY 2009 and FY 2010 until the tax credit program was renewed by the 2011 General Assembly. Effective FY 2011, the annual award cap was $2.0 million per fiscal year.

Effective January 1, 2015, tax credits issued for an equity investment in a qualified business were no longer required to wait three years before claiming the award. However, awards

[7] The dotcom bubble was a rapid rise in US technology stock equity valuations fueled by investments in internet-based companies during the late 1990s. The dotcom bubble grew out of a combination of the presence of speculative investing, the abundance of venture capital funding for startups, and the failure of dotcoms to turn a profit. Start-ups were in a race to grow quickly and companies without any proprietary technology abandoned fiscal responsibility by spending more on marketing to establish brands that would set them apart from the competition than any real product. The bubble ultimately burst between 2001 and 2002, leaving many investors facing steep losses and several internet companies failing. (Hays, 2024)

for a qualified equity investment made on or after January 1, 2014 could not be claimed prior to January 1, 2016. Further, community-based seed capital funds were eliminated as eligible investments under the program and the rate for investments made on or after July 1, 2015 was increased from 20.0 percent to its current 25.0 percent. In addition, the tax credit was made refundable if claimed against the individual income tax and the carryforward period for nonrefundable credits claimed against other tax types was reduced to three years. A $100,000 annual award cap was introduced for each taxpayer, and a $500,000 annual award cap was introduced for investments made in each qualified business.

At its inception, the tax credit program was administered by the newly created Iowa Capital Investment Board (ICIB)[8] with the assistance of the Iowa Department of Revenue (IDR). Those investments made in qualified businesses or community-based seed capital funds were approved by the ICIB. Investors submitted applications to ICIB for tax credit awards based on their amount of investment, the tax credit certificates were then issued by the ICIB with the administrative help of IDR. The ICIB transferred these responsibilities to the Iowa Economic Development Authority (EDA) in 2012.[9]

## II. Iowa and State by State Comparison

### A. Other Iowa Tax Credits and Programs Incentivizing Venture Capital

In 2002, two separate tax credits, besides the Angel Investor Tax Credit, encouraging venture capital investments in Iowa became available. These included the Iowa Fund of Funds Tax Credit and the Venture Capital Funds Tax Credit:

- The discontinued Iowa Fund of Funds Tax Credit was repealed in 2017. This tax credit initially had an aggregate contingent tax credits cap of $100.0 million. This was reduced to $60.0 million in FY 2010. This tax credit program offered a contingent tax credit for investments made into the Iowa Fund of Funds[10]. The tax credit was allowed to the extent that the actual rate of return on these investments did not meet a rate of return guaranteed to investors. During the 2013 session, legislation was enacted to sunset the program. The Iowa Fund of Funds program will be repealed upon the expiration or termination of the Iowa Fund of Funds Agreement or December 31, 2027, whichever is later.
- The discontinued Venture Capital Funds Tax Credit was repealed in 2010. This tax credit was equal to 6.0 percent of equity investments made in venture capital funds that had been certified by the Iowa Capital Investment Board. It had an aggregate tax credit cap of $5.0 million; just over half of that cap was awarded before the

[8] The Iowa Capital Investment Board ("Board") was established in 2002 (2002 House File 2078) as a state governmental board. The purpose of the Board was to mobilize venture equity capital for investment that would result in a significant potential to create jobs and to diversify and stabilize the economy of the State. The Board administered the tax credit for ten years.

[9] Note: No awards were issued for FY 2014 and FY 2015 while the EDA transitioned and established administration of the tax credit program.

[10] The Iowa Capital Investment Corporation (ICIC) (Iowa Code 15E.64) manages the Iowa Fund of Funds (Iowa Code 15E.65), which is charged with bringing venture equity capital and venture expertise to Iowa entrepreneurs by investing in carefully selected venture capital funds. Each fund works in the state of Iowa with Iowa entrepreneurs with the goal to bring expertise, networks, capital, and good investing practices to local firms.

program's end.

Currently, in addition to the Angel Investor Tax Credit, Iowa offers one other tax credit incentivizing venture capital investments, the Innovation Fund Tax Credit, which is the successor to the two previous tax credits above. This tax credit became available effective January 1, 2011. It offers a nonrefundable 25.0 percent tax credit for investments in an innovation fund certified by the EDA and has an award cap of $8.0 million per fiscal year, but there is no taxpayer award cap or limit on the amount of investment that a single early-stage company can receive through certified innovation funds. This tax credit is a nonrefundable, transferrable tax credit. Unused tax credits can be carried forward against future tax liability for up to five years. The businesses receiving investments from the innovation fund are at the discretion of the innovation fund.

The EDA currently administers five other programs intended for early-stage or innovative ventures. Each program is structured as a royalty or low interest loan awarded at the discretion of the EDA Board. To be eligible for any of the five programs, businesses must be in advanced manufacturing, bioscience, or information technology. Businesses must also be Iowa based with fewer than 500 employees. The programs include:

- The Proof of Commercial Relevance (POCR) program is designed to define and articulate the opportunity for businesses that demonstrate a proof-of-concept for innovative technology. The maximum assistance available is $25,000 per award with a 1:2 private to public match required. Applicants must have two cofounders or principals actively engaged in the business. Funds can be used for validation of market potential through beta testing activities that focus on validation of the technology or product, business model, and marketing or distribution strategy. Further, funds can also be used for intellectual property development and evaluation, extended competitive analysis, and furthering translational development of a scientific discovery.
- The Demonstration Fund program is designed to aid businesses with market-ready innovative technologies or products that have a clear potential for commercial viability. The maximum assistance available is $175,000 per award with a 1:2 private to public match required. Among other uses, funds can be used for acquiring management or marketing expertise, purchasing equipment, developing and executing marketing strategies, creating marketing materials, and validating a business model.
- The Innovation Acceleration Propel program promotes formation and growth of businesses that engage in the transfer of technology to competitive, profitable companies that create high-paying jobs. Funds are designed to accelerate the pace of market development, leverage private investment and industrial expansion efforts that result in significant capital investment. The program is split into two separate funds that award $250,000 to $500,000 to businesses based on their stage of growth. Funding requires a 1:1 private to public match. Funds can be used for a variety of purposes, including advanced intellectual property development and evaluation, product focus group research, recruitment and hiring of key personnel, purchasing of equipment, or financing construction costs.
- The Innovation Acceleration Expansion program is charged with the same goals as the Innovation Acceleration Propel program, but with a focus on encouraging expansion of product lines in companies that have a complete management

infrastructure, a demonstrated historical profitability and an established customer base. The maximum assistance available is $1.0 million per award. Funds can be used for the same purposes as the Innovation Acceleration Propel program.

- The State Small Business Credit Initiative (SSBCI) is a one-time $96.0 million investment in growing small Iowa-based businesses, including venture start-ups, among other types of businesses owned by veterans and individuals from diverse backgrounds. The funding is available through the U.S. Treasury Department's SSBCI, a small business aid program that was expanded through the Federal 2021 American Rescue Plan Act. Funding focuses on encouraging venture capital and investment in scalable innovation companies through grants, loans, and additional funding of current EDA small business and venture capital programs.

It should be noted that there is overlap among tax credits and programs incentivizing venture capital and start-ups for investors and businesses in Iowa. Meaning, investors and businesses may engage with or benefit from more than one tax credit and program at a time in the lifecycle of an investment or business.

B. Angel Investor Tax Credits Around the United States

There are 22 states, including Iowa, which have 23 active programs encouraging the growth of venture capital through the use of tax credits (see Table 1. Angel Investor Tax Credits by State).[11] Eleven states have had one or more similar programs that have either been allowed to sunset or that have been repealed.[12] Founded in 1989, the Maine Seed Capital Tax Credit Program is the oldest tax credit program still active, while the Massachusetts Angel Investor Tax Credit, founded in late 2017, is the newest. Similar to Iowa's Angel Investor Tax Credit Program, founded in 2002, most active programs, or 56.5 percent, were founded between 2000 and 2010.

The amount of funds each state sets aside to be issued for investment tax credits varies widely. All states, but North Dakota's Angel Investor Investment Credit[13], administer their funding caps on an annual basis. Some states, like Iowa, operate on a fiscal year basis and other states operate on a calendar or tax year basis. As noted above, Iowa appropriates $2.0 million a year for its tax credit program, which ties with the New Mexico Angel Investment Tax Credit Program as the third lowest annual program cap, in front of the New York Qualified Emerging Technology Company Tax Credit ($1.0 million a year) and the Utah Life Science and Technology Tax Credit ($300,000 a year). New Jersey has the largest annual cap at $35.0 million. Wisconsin follows closely with a $30.0 million annual program cap for their Qualified New Business Venture Program. Of the states with annual funding caps, the average cap is $9.5 million per year. The median is $5.0 million per year.

The state of New York, which currently has a minimum tax credit rate of 10.0 percent of the qualified investment, has the lowest tax rate offered among all active programs.[14] New

[11] Note: Alaska, Florida, Nevada, South Dakota, Tennessee, Texas, and Wyoming do not levy state income taxes. Thus, incentivizing venture capital through the use of tax credits is not possible in these states.
[12] Georgia, Hawaii, Michigan, Nebraska, North Carolina, Ohio, Oklahoma, Rhode Island, South Carolina, Vermont, and West Virginia.
[13] The North Dakota's Angel Investor Investment Credit does not have an annual program cap, but annual reports on the program demonstrate awards to be an annual average of $7.0-$12.0 million a year.
[14] Note: In rare cases, the New York minimum tax credit rate can increase to 20.0 percent if the taxpayer

Jersey and Massachusetts have a tax credit rate of 20.0 percent. New Jersey offers an additional 5.0 percent tax credit for a total of 25.0 percent tax credit when a qualified investment is made in a business that is minority-owned or located in a designated opportunity zone. Massachusetts offers an additional 10.0 percent tax credit for a total of 30.0 percent tax credit when a qualified investment is made to a business that located in a "gateway municipality".

There are 11 states that offer a tax credit rate of 25.0 percent of the qualified investment: Colorado, Connecticut, Illinois, Indiana, Iowa, Kentucky, Louisiana, Minnesota, New Mexico, North Dakota, and Wisconsin. Colorado offers an additional 10.0 percent tax credit for a total of 35.0 percent when the equity investment is made to a business that is in a rural or economically distressed area. Illinois offers an additional 10.0 percent tax credit for a total of 35.0 percent tax credit when a qualified investment is made to a business that is minority-owned, women-owned, person-with-a-disability-owned, or in a qualified rural area. Indiana offers an additional 10.0 percent tax credit for a total of 35.0 percent tax credit when a qualified investment is made to a business that is minority- or women-owned. Louisiana offers an additional 10.0 percent tax credit for a total of 35.0 percent tax credit when a qualified investment is made to a business that is in a qualified opportunity zone. In the 2021 legislative session, the Connecticut Angel Investor Tax Credit Program was expanded to allow 40.0 percent of a qualified investment in an approved cannabis business. However, this was repealed two years later and now all base credits are 25.0 percent.

Arizona offers a base tax credit rate of 30.0 percent of a qualified investment. However, the state provides 5.0 percent to the base credit for a total of 35.0 percent when the investment is made in a rural area or bioscience company. Maryland, Arkansas, and Tennessee offer a base tax credit rate of 33.3 percent, but Maryland provides for up to 42.0 percent to the base credit of 33.0 percent for a total of 75.0 percent when then investment is made in a biotechnology company in a designated opportunity enhancement zone. Tennessee provides for up to 17.0 percent for a total of 50.0 when the investment is made in designated areas. Kansas and Virginia offer the highest base tax credit rates of 50.0 percent of a qualified investment.

In addition to Iowa, Maine, Maryland, Minnesota, and New Jersey offer tax credits that are refundable. However, only Iowa and Minnesota limit refundability to individual income tax returns. In Maine, the Seed Capital Tax Credit Program is refundable for investments made by private venture capital funds. For all other investments, the tax credit in Maine is nonrefundable.

Iowa's Angel Investor Tax Credit allows for the credit to be carried forward five years. Seven states also have five-year carryforward periods: Colorado, Connecticut, Illinois, Indiana, New Mexico, and Tennessee. North Dakota allows its seed capital tax credit to be carried forward for a period of four years. Arizona and Massachusetts have a carryforward period of three years. Only Maryland, Minnesota, and Utah prohibit the carryforward of tax credits.[15] Only Kansas and New York allow carryforward periods with no restriction on the number

can certify that they will not sell or transfer their investment for nine years.

[15] Note: New Jersey allows corporate taxpayers one year to carryforward tax credits in special circumstances, such as when a business is acquired or sold. All other tax types are not allowed to carryforward.

of years a tax credit can be carried forward. Maine, Kentucky, Virginia and Wisconsin have fifteen-year carryforward provisions. Louisiana has a ten-year carryforward period.

Eight states require a minimum investment in a qualified business to qualify for a tax credit. These minimum investments can range from Minnesota's $7,500 a year, if for women/minority/veteran-owned managed businesses, to $25,000 a year, as is the case for the Arizona, Connecticut, and Maryland tax credit programs. Some states limit the amount of tax credits individual taxpayers can be awarded each year, as does Iowa. Some states do not impose any limit on the tax credits that can be received by the taxpayer making the investment, but impose limits on the amount of tax credits that can be awarded for investment in each business. For example, in Louisiana, only $720,000 of investments in each business can qualify for credits in a given year. Overall years, each business is limited to a total of $1.44 million in investments for which tax credits can be received.

## III. Literature Review

This review of relevant angel investor tax credit literature explores the concept of government interventions in start-up business environments. Also, it examines relevant evaluations, audits, and studies done by other states for their specific tax credit programs.

Lerner (2002) identifies two rationales for public intervention in the venture capital market. The first of these is the "certification hypothesis," which supposes that venture capital markets operate in a haze of imperfect information. Under the hypothesis, the public certification of businesses for investment authenticates them as safe investments and offers a kind of seal of approval. Thus, some kind of public certification helps businesses overcome problems of information asymmetry.

The second rationale identified by Lerner concerns the positive externalities produced by public intervention; meaning, value created by tax credit investments can have positive spillovers that benefit the broader community, including other firms. According to this rationale, which is applicable to a range of publicly-supported endeavors, the optimum benefit available from investment is unlikely to be captured by private investors only, and for this reason, public subsidies are warranted. Fazio, Guzman, Stern (2020) expand upon this foundation in a broader sense. They cite a justification for lower rates of taxation as a general source of encouragement for entrepreneurship that results in the formation of growth-oriented ventures. However, it is Denes, Howell, Wang (2023) that concretely classify why tax credits have been the preferred tool for public intervention in venture capital markets. First, angel investor tax credits remove the need for a government to "pick winners". Thus, policymakers are removed from political corruption that could be a result of being informed about firm quality or having a stake in a firm's outcome. Therefore, the tax credit is a tool that retains market incentives, but only investors, not policymakers, have interests tied to outcomes. Second, the administrative burden of tax credits is relatively low compared to more intricately involved government programs designed to enhance entrepreneurship and business enhancement. Finally, angel investor tax credits are a more precise tool than broad cuts to capital gains taxes that offer attractive flexibility.

While the rationale for public intervention in the venture capital market and the identification of tax credits to be a meaningful public policy to address this rationale exists, a there is a

fundamental and relevant question: Do these tax credit programs meant to encourage venture capital investment are intended to even solve a problem? White, Lockwood, and Miles (2009) address whether investment tax credits lead to investments that would not otherwise occur. Although, interestingly, these authors seem to acknowledge that this objective on its own may be inadequate as a policy goal, such as if a given program were to incentivize unwise or excessively risky investment. However, they do not deeply examine such concerns. Instead, the authors address the question of investment incentivization in abstract terms. Rather than evaluating these questions empirically, their research calculates the impact of a proposed federal investment tax credit known as Access to Capital for Entrepreneurs, or ACE, on angel investors' potential rate of return. Specifically, "the internal rate of return on informal venture investments is evaluated in a scenario where the business angel can benefit from the financial effect of the ACE" (p. 26). White, Lockwood, and Miles assert that for a $1.0 million investment with a 10.0 percent probability of a maximum return of $20.0 million in five years, the internal rate of return would be 14.8 percent. They calculate that the same investment, subsidized by a 25.0 percent investment tax credit, would yield an internal rate of return of 21.7 percent. They observe that the rate of return with the tax credit is 47.0 percent higher than the rate of return without it. In addition, they note that this increased return does not reflect an increase in the prospective project's risk.

Their analysis asserts that a tax credit structured along these lines, and in this way similar to Iowa's Angel Investor Tax Credit, would make a prospective investment more economically attractive and would lead to increased investment and economic activity. As to whether this type of tax credit leads to investments in bad deals, they argue that it would create no disincentive for investor due diligence if, as with Iowa's Angel Investor Tax Credit, it is capped at 25.0 percent and the amount of the investment that is eligible for a credit is limited. Their calculations that the ACE reduces downside risk is purely an accounting identity, rather than empirical observation. Their observation that this necessarily stimulates additional investment is simply an assertion of the price elasticity of demand for investment.

Similarly, Bell and Woodmansee (2016) acknowledge that whether investment tax credits encourage investment that would not otherwise have occurred remains an open question. They nevertheless concur with White, Lockwood, and Miles that venture capital tax credits encourage and reward investment by both reducing risk and increasing return. Bell, Blair, Martin, and Hendon (2011) analyzed published data from several state angel tax credit programs to identify credits claimed since respective program inceptions verse those invested. The purpose was to identify if the potential elimination of risk associated with an angel investor tax credit increased investment in small businesses waiting for venture capital funding. During the period they studied, it was determined that businesses which received the angel funding associated with the tax credits received four times the amount recovered in tax credits. Thus, they concluded that there could be a correlation between reduced risk in investment and increased investment.

A subset of this literature, more specific to the topic at hand, concerns state tax credits for angel investments. While some of these studies pertain to state tax credits in more general terms, most concern particular tax credits in one or more states. A study by the Economic Development Research Group (2014) combined data from various sources to provide an overall program description of the Minnesota Angel Tax credit, a tax credit that is similar to

Iowa's. To address the question of whether the Minnesota tax credit led to investments that would not have otherwise occurred, the authors used information obtained from surveys of investors who made qualified investments in 2010 through 2012. They found that 48.0 percent, or nearly half, of respondents reported that they would not have made their qualified investments if the tax credit had not existed. An additional 34.0 percent, or one third, of respondents said that, because of the tax credit, they made larger investments than they would have in its absence. However, the remaining 18.0 percent of respondents reported, that the tax credit had no effect on their decision to make a qualified investment. Also, of note, the study found that qualified investments by respondent investors represented just 1.7 percent of their total investments during the period. Finally, the study of the Minnesota Angel Tax Credit found that half of respondents were what its authors termed "inside investors." These include qualified business founders, executives, principals, board members, and their immediate family members.[16]

Tuomi and Boxer (2015) employ the same kind of modeling techniques used by the Economic Development Research Group for Minnesota's tax credit to assess the economic impacts of Wisconsin's Qualified New Business Venture (QNBV) Program. Tuomi and Boxer utilized RIMS II, a regional input–output modeling system developed and maintained by the U.S. Bureau of Economic Analysis. The authors used this tool to evaluate and compare the net economic impacts of the states' tax credit program. They found that the tax credit in Wisconsin, compared to other states, "can result in a substantial boost in leveraged capital, local employment, and earnings [and that] generated revenue more than covers the credit outlay" (p. 6). These authors warned, too, that these positive results were largely attributable to the design and management of the particular programs in question, suggesting that different program characteristics may lead to inferior outcomes. Interestingly, one of the state's used in their comparison to Wisconsin was Maryland, which reached the opposite conclusion in its own internal evaluation of their tax credit. A 2023 analysis provided by the Maryland Department of Legislative Services concerning the state's Innovation Investment Incentive Tax Credit (IIITC) concluded that only 6.0 percent of small businesses that sought external financing sought equity investments. They state the following:

> "External financing through equity investments has some drawbacks, such as dilution of business ownership, sacrifice of some control over the company, and being potentially more expensive than borrowing, making it less than an ideal option for companies to pursue. Since the IIITC program requires an equity investment, the program limits itself to a narrow subset of companies, since only approximately 3.0 percent of small and emerging businesses seek external financing through equity investments. Thus, the IIITC program is not the most efficient way to increase the number of companies developing innovative technologies in Maryland" (p. 10).

[16] Note: In addition to surveys of investors, the study employed economic modeling tools "to estimate the full range of economic impacts in Minnesota attributable to the ATC program" (p. 37). Such tools are used to estimate the economic impacts of program investments. In the case of the Minnesota study, the modeling methodology was developed by and the analysis was conducted by Regional Economic Models, Inc. (REMI). Factors assessed in the analysis included direct employment and non-payroll spending by qualified businesses themselves, business-to-business purchasing from Minnesota firms, and the induced spending by employees of those other Minnesota firms.

The Kansas Legislative Division of Post Audit (2024) undertook a large survey-based study of qualified businesses and angel investor tax credit investors between 2015 and 2022 to assess how the state's tax credit program affected both business and investor behaviors. The study found that most investors said the tax credit was very or extremely important to their investment decisions. However, investors also said other factors, such as the quality of a firm's management team, product or services, and expected return on investment, were more important in their decision-making process than the Angel Investor Tax Credit. However, of those surveyed, 58.0 percent said they would have invested less and 27.0 percent said they would not have invested at all in the absence of the tax credit. Only 10.0 percent said they would not have done anything different in the absence of the tax credit. Of the participating qualified businesses, most responded that their firms would have started even if the Angel Investor Tax Credit did not exist. However, 56.0 percent said their firm would have hired fewer employees, 44.0 percent said their firm would have had to use less desirable financing, and 13.0 percent said their firm would have started later.

A decade old study by Bell, Wilbanks, and Hendon (2013) provides an analysis comparing the effects of angel investor tax credit programs across states. These authors used Kauffman Foundation data to evaluate whether entrepreneurial activity in a state is related to the presence of tax credits. They found that angel tax credit programs are associated with an increase entrepreneurial activity on a state level. However, to date, the most expansive study of angel investor tax credit tax programs across states has been conducted by Denes, Howell, Mezzanotti, and Wang (2023) using a combination of data from Crunchbase, Thomson Reuters VentureXpert, Dow Jones, Venture Source, and from D filings available through the U.S. Securities and Exchange Commission matched to data from the National Establishment Time-Series (NETS) database. Howell et al. concluded that angel investor tax credits increase the number of angel investments by an average of 18.0 percent and the number of individual angel investors by 32.0 percent in states with tax credit programs. They state that this effect is increased when tax credit programs impose fewer administrative and program restrictions and when the supply of alternative startup capital is more limited. A side effect is that additional investments made through these programs flow to older firms, firms with low employment growth, and are often made to "serial" entrepreneurs, meaning firms founded by the same small group of individuals. Thus, they state an overall concern about the ability of angel investor tax credits to reach high-growth startups with significant impacts on local economies. Conversely, Howell et al. also provide a unique analysis based on a survey of 1,411 respondents regarding the type of investors utilizing angel investor tax credits. They conclude that investors receiving angel investor tax credits are primarily younger, local, and less experienced than the average angel investor. To understand why professional investors are less responsive than non-professional investors to angel investor tax credits, they built a stylized model by studying the return distributions of early-stage investments. They found that professional investors are less sensitive to angel investor tax credits because the marginal benefit of the subsidy, which is usually a fixed percentage of the investment across most state programs, decreases as the expected return increases. Thus, they suggest that the return distribution of potentially high-growth firms may limit the effectiveness of angel investor tax credits.

In summary, various state level academic assessments of angel investment programs had differing conclusions. A Wisconsin study found that overall angel investment tax credit programs led to more capital, local employment, and earnings. A multi-state study by Bell,

Wilbanks, and Hendon (2013) concurred. However, a Maryland tax credit study found its tax credit programs in the state were underutilized, caused dilution of business ownership, and the tax credit limited itself to a narrow group of qualified businesses. Several state studies suggested that owners decided to start their businesses with or without the credit but the credits may have benefited owners in other ways. A Kansas study found the following: the businesses that did participate in its angel investment tax credit program stated that they would have started their businesses nevertheless, but the tax credit investments allowed them hire more employees, start sooner, and avoid less desirable financing. The Minnesota study found that half of its angel investment tax credit program investors stated that they would not have invested in businesses were it not for the tax credit. One third said the tax credit made them invest more than they originally planned were it not for the tax credit. Conversely, while almost 60.0 percent of Kansas tax credit investors said the program was an important reason for their decision to invest, other factors were more important in their decision-making process. Yet, the same conclusion as the Minnesota study was reached in that, almost one third of the Kansas study investors agreed that the tax credit made them invest more than they would have in the absence of the tax credit. Finally, the Howell et al. study concluded that angel investor tax credits increase the number of angel investments by an average of 18.0 percent and the number of individual angel investors by 32.0 percent in states with tax credit programs. Further, investors receiving angel investor tax credits are primarily younger, local, and less experienced than the average angel investor.

## IV. Angel Investor Tax Credit Awards, Claims, and Investments

From the period between FY 2002, when the tax credit program began, and FY 2023, the Angel Investor Tax Credit has awarded tax credits totaling $26.9 million (see Table 2: Awards and Claims by Fiscal Year). As noted above, when the program was initially enacted, it was subject to a cumulative program award cap of $10.0 million; it reached this cap in FY 2008. Tax credits were capped at $3.0 million per year in 2002 and 2003 and at $4.0 million beginning in 2004. In fiscal year 2012 and subsequent years, tax credits are capped at $2.0 million per year. The program was substantially undersubscribed through FY 2015. Beginning in the next fiscal year, 2016, the credit was made refundable if claimed against the individual income tax. In that year, program awards began to approach annual caps.

Between FY 2002 and FY 2024[17], $18.5 million tax credit claims have been made, which is $8.3 million, or 31.1 percent, below the tax credit program award total of $26.8 million (see Table 2: Awards and Claims by Fiscal Year). Between tax years 2005 and 2023, 6,522 tax credit claims have been made (see Table 3: Claims by Tax Year). For periods of the program's history, tax credit claims were far below tax credit awards. In part, this reflects the program's requirement that, until 2015, taxpayers were required to wait three years before claiming an awarded tax credit. However, this requirement only delayed claims. Yet, by the end of FY 2011, when the program has reached its FY 2008 $10.0 cumulative award cap, and delayed claims were submitted after the three-year waiting period, only 42.0 percent of awards had been claimed. However, since FY 2017, total claims have more closely aligned with awards. Prior to FY 2016, when the tax credit was made refundable

[17] Note: FY 2024 data is incomplete.

when claimed against individual income tax, taxpayers typically had insufficient tax liability to fully utilize an award in the first year they were eligible. In addition, the claiming rate for the tax credit was so low that the author of the IDR's 2014 evaluation study theorized that, because of the three-year waiting period, before awarded credits could be claimed, many awardees simply forgot to claim them (Gullickson, 2014). In support of this possibility, an analysis included in that study exhibited that 700 tax credit recipients who did file an Iowa tax return in the first year their tax credit could be claimed did not claim it. There were an additional 360 tax credits issued to taxpayers who did not file a tax return in the first year that the tax credit could be claimed. These investors may have made a qualified investment despite either never intending to claim the tax credit or whose tax situation had changed in the interim such that they were no longer subject to Iowa income tax by the time they could claim the credit. The average tax credit claim between tax years 2005 and 2023 is $2,840 (see Table 3: Claims by Tax Year).

Between investment years 2002 and 2021, 3,982 tax credit awards totaling $21.3 million have been made to Iowa resident taxpayers. Residency is based on the taxpayer address provided on the tax credit application and taxpayers include both natural persons and corporations, banks, credit unions, and other entities. There have been 726 tax credit awards for $5.6 million made to nonresidents (see Table 4. Resident and Nonresident Investments and Awards by Investment Year). Most tax credit awards have been issued to individual income taxpayers. These account for 89.2 percent of the number of tax credits awarded and 87.5 percent of award amounts issued. The average tax credit awarded to individual income taxpayers is $5,474. Corporation income taxpayers account for the next largest share, but represent just 5.2 percent of the number of tax credits awarded and 4.5 percent of award amounts issued. The average tax credit awarded to corporate taxpayers is $4,845. Insurance premium taxpayers received 34 awards, or just less than 1.0 percent of the number of awards, but had an average tax credit award of $23,641 (see Table 5: Awards by Tax Type).

As with tax credit awards, individual income taxpayers represent the majority of tax credit claims. Since the beginning of the tax credit, these account for 96.9 percent of the number of tax credits claimed and 95.2 percent of claim amounts. The average tax credit amount claimed by individual income taxpayers is $2,791. Corporation income taxpayers account for the next largest share, but represent just 2.3 percent of the number of tax credits claimed and 2.1 percent of claim amounts. The average tax credit claim by corporate taxpayers is $2,547. Insurance premium tax payers have only made eight claims, or just less than 1.0 percent of the number of claims, but had an average claim amount of $38,122 (see Table 6: Claims by Tax Type).

Since its beginning in 2002, the tax credit program has provided tax credits for investments to 77 unique new qualified businesses for a total of $129.1 million in qualified investments made by taxpayers. Qualified investments reached almost $19.0 million in 2006 then fell sharply, reaching zero in years 2008 through 2010.[18] Qualified investments resumed in 2011 and reached $16.0 million in 2018. For 2020, the most recent complete calendar year, qualified investments were $15.3 million. The number of qualified businesses receiving

[18] The tax credit reached its $10.0 million program cap in January 2008. Therefore, no tax credit certificates were issued for the program until FY 2011.

investments in any one year has ranged from zero, in 2008, 2009, and 2010, to 17 in 2006. Similarly, the number of *new* qualified businesses receiving investments in any one year has ranged from zero, in 2008, 2009, 2010, and 2021, to 10 in 2006 (see Table 7: Investments and Awards by Investment Year).[19] Almost half, or 47.0 percent, of qualified businesses received investments for only one year. Yet, these qualified businesses only account for 23.4 percent of investments made throughout the lifetime of the tax credit program. Instead, qualified businesses which received investments for two years account for 35.1 percent of investments made throughout the lifetime of the tax credit program. Qualified businesses which received investments for six years, the longest amount of time possible allowed in the program, account for the least, or 5.8 percent (see Table 8: Qualified Businesses Years of Investment).

## V. Economic Analysis of the Angel Investor Tax Credit

In addition to descriptions of awards, claims, and investments, this evaluation study provides an economic analysis of the Angel Investor Tax Credit. As noted above, Iowa Code specifies the tax credit's purposes to include: stimulating job growth, creating wealth, and accelerating the creation of new ventures by incentivizing investment during early-stage growth. Because the tax credit is awarded for investment, however, promoting investment is assumed to be the program's most essential undertaking for the purposes of this economic analysis.

Thus, this economic analysis is concerned with whether and to what extent the Angel Investor Tax Credit has incentivized investment. It is not possible to evaluate these questions using quasi-experimental methods in a way that would identify the relationship between the tax credit and the outcomes that are assessed. Therefore, it is not possible to definitively establish that the tax credit leads to investment that, in the absence of the tax credit, would not occur. Nevertheless, using available data and analytical methods, it is possible to elucidate these matters. The present analysis offers evidence on whether firms that have received investment through the Angel Investor Tax Credit program experience different levels of overall investment and different outcomes with respect to longevity and exit.

### A. Economic Analysis Dataset

Angel investments are difficult to systematically observe in the U.S. because there are no comprehensive datasets about them. Much of what is known about the size of the angel market relies on survey estimates. To overcome this challenge, data concerning investments in start-up companies and other pertinent information about those firms was obtained for this analysis from Crunchbase. Crunchbase is a proprietary, open-contribution and AI-powered database with a focus on capital investment in start-ups. Crunchbase is a highly regarded source of information for the venture capital industry. Although numerous

[19] Note: Between 2002 and 2014, the tax credit program has provided tax credits for investments made to ten unique community-based seed capital funds totaling $9.5 million in qualified investments made by taxpayers. However, since the tax credit has not been allowed for investments in community-based seed capital funds since 2015 and no new data is available for analysis during the period of its offering, community-based seed capital funds are not specifically discussed in this section's analysis.

data resources are available concerning the activities of publicly-traded companies, Crunchbase is one of just a handful of resources that provide information about start-ups. It should be noted that Crunchbase was utilized as the primary data resource for the 2019 tax credit evaluation study. However, because of the availability of new data in more recent years and refinement or correction of previously reported data, data sets used in this analysis may conflict at times with what was reported and used in the 2019 tax credit evaluation.

The data analysis file includes information about various types of venture funding.

What would be considered an "early-stage" round of funding includes: angel, pre-seed, seed, grant, equity crowdfunding, product crowdfunding, convertible note, and non-equity assistance funding (see Appendix 2: Definition of Firm Funding Round Types). Based on these definitions, funding that would qualify for the Angel Investor Tax Credit is assumed to include funding from early-stage funding rounds' sources.

- An angel round is typically a small round of funding designed to get a new company off the ground. Investors in an angel round include individual angel investors, angel investor groups, friends, and family.
- The pre-seed round is a pre-institutional seed round that either has no institutional investors or is a very low amount, often below $150,000. Seed rounds are among the first rounds of funding a firm will receive. Generally, these rounds are while the firm is young and gaining traction. Seed round sizes range between $10,000 to $2.0 million, though larger seed rounds have become more common in recent years.
- The remaining forms of funding round types in the early-stage funding category can be found in angel rounds, any point of early-stage growth, or can bleed into "growth-stage" funding rounds, much like funding round categories in other stages of funding overlap.

A "growth-stage" funding round is assumed to include venture funding, general funding, and Series A, B, C rounds and onwards, are later stage funding rounds that take place as a younger firm becomes more established. These rounds can range between $1.0 million to $30.0 million-plus. It can also include private equity and corporate funding rounds.

Later series rounds are for more mature firms and are considered to be involved in "late-stage" funding rounds, which include debt financing, secondary market, initial coin offering, and various post-IPO offerings as defined by the Crunchbase data source.

The data set used for this analysis was downloaded from Crunchbase in the summer of 2024. This dataset includes Iowa firms, for within state comparisons, and other states, for cross-state comparisons. It includes all firms reported as based in Iowa and five other Midwest states[20] founded in 2009 or after. The five Midwestern states were selected because they were the five out of a 12-state region that do not have angel investor tax credit programs. Comparing State of Iowa qualified businesses to start-ups in states without similar tax credit programs offers the opportunity to analyze evidence on whether the Iowa

[20] For the purposes of this study, "Midwest states" are determined in accordance the US Census definition, which includes Illinois, Indiana, Michigan, Ohio, Wisconsin, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota.

qualified business firms that have experienced different levels of overall investment and different longevity and exit outcomes. Of these, 3,981 were reported as having received funding during the 15-year period of 2009 through 2024[21]. There were 6,995 funding rounds, including early-growth, growth-stage, and late-stage funding rounds, reported for these firms totaling $84.9 billion (see Table 9. Crunchbase Data File Overview).

As noted above, the data set included firms founded in 2009 or after. There were 268 such firms based in Iowa. Cumulative early-stage funding reported for these firms was $190.32 million. Total funding reported for Iowa firms for the 15-year period 2009 through 2024 was $2.3 billion. These Iowa based firms represented just 6.7 percent of the start-ups in the six Midwest regional states in the data file, with 4.5 percent of the early-stage funding. Iowa ranked fourth with respect to early-stage funding reported for the six states which, it must be said, includes several more populous and more urbanized states.

Information about the number of start-ups, number of funding rounds, and amount of funding provides valuable context and a sense of the scope of the Angel Investor Tax Credit relative to the entire start-up market in Iowa. As noted earlier in this report, during the period covered in the analysis, 47[22] out of the 77 start-ups were founded between 2009 and 2024 that received funding through the Angel Investor Tax Credit program. Investors in these firms were awarded $17.4 million in tax credits for investments totaling $85.4 million in 2009 through 2024. Bearing in mind that, according to the Crunchbase data file, 235 Iowa-based firms received early-stage funding during the same period, the 47 start-ups receiving Angel Investor Tax Credit investment during this period thus represented 17.5 percent of all start-ups in the state as reflected in Crunchbase. In addition, 268 Iowa start-ups received a reported $1.6 billion in early-stage funding. The $85.4 million of investment incentivized through the Angel Investor Tax Credit program represents 5.3 percent of the amount of reported investments in start-ups in Iowa over the period. It must be emphasized here, however, that these percentages are very approximate. As discussed in more detail below, the Crunchbase data analysis file does not include data for all start-ups. Nevertheless, these comparisons provide a useful approximation of the tax credit program's scope relative to the start-up market in the state more broadly.

As context, it must be remembered that there were more than 4,000 new business applications in Iowa each quarter over at least the last 15 years and more than 7,000 each quarter between the beginning of 2022 and the first quarter of 2024, according to U.S. Census Bureau data.[23] Thus, Crunchbase represents a very small fraction of all firms in Iowa, and the Angel Investor Tax Credit reaches an even smaller share of them.

### B. Analysis of Iowa Angel Investment Tax Credit Qualified Businesses & Iowa Comparison Firms

The following section describes an analysis that compares early-stage funding and firm longevity of qualified businesses receiving Angel Investor Tax Credit investments to

[21] Note: Calendar year 2024 was measured between January 1, 2024 through July 31, 2024.
[22] Note: For this economic analysis, 33 of the 47 start-ups that were founded between 2009 and 2024 that received funding through the Angel Investor Tax Credit program were identified in Crunchbase.
[23] U.S. Census Bureau, Business Applications for Iowa [BUSAPPWNSAIA], retrieved from FRED, Federal Reserve Bank of St. Louis. Retrieved, September 11, 2024: https://fred.stlouisfed.org/series/BUSAPPWNSAIA

comparison firms that did not receive such investment. Of the total qualified businesses that received Angel Investment Tax Credit investments during the past 15 years, 33 were identified in the data file. Comparison companies for qualified businesses were identified on the basis of industry category group[24], approximate number of employees, and year of company founding. Specifically, with respect to the number of employees, comparison firms were matched to qualified businesses when the number of employees were matched within a range; e.g., qualified businesses with up to ten employees were matched to comparison firms with up to ten employees; qualified businesses with between ten and fifty employees were matched to comparison firms whose numbers of employees matched this range. Comparison firms were matched to qualified businesses when respective years of founding were within one year of each other. The analysis described here was limited to comparison firms based in Iowa Thirty-three such firms were identified. Thus, of the 268 Iowa firms in the analysis data file, 33 were qualified businesses that received Angel Investor Tax Credit investments, 33 were identified as comparison firms. There were 202 firms that were established during the same 15-year time period, but were dissimilar to qualified businesses in terms of the particular year of founding, industry category group, approximate number of employees, or any combination of these factors.

During the 15 years from 2009 through 2024, the 33 qualified businesses received $43.68 million in early-stage funding, or 23.0 percent of early-stage funding, reported for all firms (see Table 11. Funding to Iowa Qualified Businesses and Comparison Businesses). This represented a disproportionately high share of early-stage funding. It was almost three times more than the comparison firms and almost a quarter of all early-stage funding for all firms in the data file despite representing only 12.3 percent of the Iowa firms in the data file. It also should be noted that, the qualified businesses were able to achieve a higher average return[25] of $727,994 per round during early-stage funding rounds when compared to the comparison group, which averaged $399,658 per round, and all other Iowa firms, which averaged $529,480 per round.

Iowa qualified businesses received $183.63 million in growth-stage funding during the period whereas the 33 comparison firms received over $100.0 million less, or $83.38 million in total. When the comparison firms are considered in combination with all other Iowa firms, the group, as a whole, accounted for 2.3 percent less than their proportionate share of growth-stage funding, as reported in Crunchbase. Thus, while the qualified businesses can demonstrate a higher return of funding in the early-stage funding round, there is no marked funding advantage or disadvantage when compared to Iowa firms outside of the comparison group when analyzed as a whole after the early-stage funding rounds.

These cumulative totals pertain to funding over the period as a whole. That is, for all 15 years combined, total early-stage and growth-stage funding to qualified businesses that received Angel Investor Tax Credit investments was much greater than funding for comparison businesses (see Table 12. Iowa Firm Early-Stage and Growth-Stage Funding

[24] Note: Many firms are represented in one or more industry group. For example, a firm can be equally an agricultural and farming, data analytics, and financial services firm. For a breakdown of all industry groups represented for Iowa qualified businesses, comparison firms, and all other Iowa firms see Table. 10. CrunchBase Iowa Firms Industry Groups Data File Overview.

[25] For the purposes of this study, an “average return” is defined as the average amount of funding raised per funding round.

by Year). However, this is not true for each year of the period. Qualified businesses received more funding than comparison firms in the majority of the years during the period analyzed. Often, funding peaks, such as the one realized by qualified businesses in 2019, are attributable to a handful of firms completing multiple funding rounds in one year. Comparison firms received similar funding to qualified businesses in the first six years and had a funding peak in 2022 that outpaced the qualified businesses (see Figure 1. Early-Stage Funding to Iowa Qualified Businesses and Comparison Businesses). Nevertheless, qualified businesses that received Angel Investor Tax Credit Investments received more funding per year and overall in more years than did comparison firms.

Finally, qualified businesses and comparison firms were assessed with respect to exit and closure (see Table 13. Iowa Firm Founding, Exit, and Closure by Year). For this analysis, exit refers only to an acquisition and is separate from firm closure, which refers to a firm ceased operations. According to the analysis data file, five qualified businesses, or 15.2 percent of those founded since 2009, were acquired during the analysis period. This compares to four comparison firms, or 12.1 percent of firms founded since 2009, that exited in this way. All acquired qualified businesses and comparison firms were purchased by businesses headquartered outside of Iowa. However, interestingly, while only one acquired comparison firm has active employees remaining in Iowa, all but one of the five acquired qualified businesses have active employees in Iowa or remote position offerings. Even still, the one acquired qualified business that has no employment opportunities in Iowa was relocated to Sioux Falls, South Dakota, an Iowa border city. Of the remaining Iowa firms, nine firms, or 4.5 percent of firms founded since 2009, were acquired during the analysis period.

### C. Analysis of Iowa Angel Investment Tax Credit Qualified Businesses, Iowa, and Five Midwest States without Angel Investment Programs

Over the 15 years between 2009 and 2024, start-ups in Iowa and the five Midwest states that do not have angel investor tax credit programs in the data analysis file received $4.2 billion in early-stage funding and 38.0 billion in growth-stage funding. As a whole, early-stage funding averaged $847,626 per round and growth-stage funding averaged $21.0 million per round for the six states.

Iowa firms, as a whole, represented 6.7 percent of all firms in the data file, and received a 2.0 percent less than a proportional share of early-stage funding round investments, or 4.5 percent (see Table 14. Funding to Iowa Qualified Businesses, Iowa, and Five Midwest States without Angel Investor Credits). However, Iowa's identified 33 qualified businesses for the 2009-2024 analysis timeframe, represented 0.8 percent of all firms in the data file, and received 1.0 percent of all early-stage funding round investments reported for all firms. This represented a slightly higher share of early-stage funding. It also should be noted that, the Iowa qualified businesses were able to achieve a higher average return of per round during early-stage funding rounds than Missouri and Nebraska firms as a whole, which cumulatively represented 28.3 percent of firms in the data file. Only South Dakota received a proportional share of early-stage funding round investments when compared to each state's representation of firms in the data file, while Michigan received a disproportionately high share of early-stage funding, or 43.0 percent, when compared to its representation in the data file, 27.9 percent. However, this could be attributed to the state being one of the

most populated (10.1 million residents as of the 2020 U.S. Census[26]) and urbanized state among the six analyzed for the purposes of this study.

Iowa's qualified businesses received 0.5 percent of the proportionate share of growth-stage funding during the period, which was nearly proportional to these firm's 0.8 percent representation in the data file. However, for the State as a whole, Iowa received 4.9 in growth-stage funding, less than the State's representation in the data file. However, Iowa ranked above Missouri, Nebraska, and Ohio, whose growth-stage funding received was 4.5 percent to 12.2 percent less than the three state's representation in the data file. Again, as with above, only Michigan received a disproportionately high share of growth-stage funding, or 28.7 percent above its representation in the data file. South Dakota received 0.4 percent of all growth-stage funding in the data file, when compared to its representation of 1.1 percent of all firms in the data file.

Finally, with respect to exit and closure, the Iowa qualified businesses, state of Michigan, and state of Nebraska were the only entities in the analysis that had a rate of firm exit due to acquisition proportionately higher than their share of firm representation (see Table 15. Iowa Qualified Businesses, Iowa, and Five Midwest States without Angel Investor Credits: Firm Founding, Exit, and Closure). The Iowa qualified businesses, state of Missouri, and state of Ohio had the lowest proportional rate of firm exit due to closure, but the Iowa qualified businesses ranked last behind the two states.

## VI. Conclusion

Iowa tax credit-qualified business firms received more overall investment than other firms in Iowa that were similar in terms of year of founding, industry group, and number of employees. Further, qualified business firms were able to achieve a higher average return per round during early-stage funding rounds when compared to the comparison group and all other firms in Iowa as a whole. However, beyond early-stage funding for qualified businesses, there is no identifiable advantage in the growth-stage funding rounds for these firms. Thus, there is no marked funding advantage or disadvantage when compared to Iowa firms outside of the comparison group when analyzed as a whole after the early-stage funding rounds.

When compared to Midwest states that do not have angel investor tax credit programs, Iowa tax credit-qualified business firms received a proportional share of early-stage round funding. This study does not speak to whether this is because firms that participated in the tax credit program during the period under analysis were simply better situated to raise capital or, conversely, because the tax credit program gave a boost to raising capital. These findings do suggest, however, that either or both of these propositions may be true. It may be the case that, in Iowa, the tax credit program helps those companies that are more prospectively profitable than weaker companies, motivating additional investment into firms that would be attractive investments even in the absence of the program. This study also does not speak to unknown limitations in the economic analysis, such as overlaps in government programs incentivizing venture capital and start-ups for investors and businesses for Iowa discussed in Chapter Two, Section A, and other states in the analysis.

[26] U.S. Census Bureau, Data Commons, Michigan. Retrieved, September 11, 2024: https://datacommons.org/place/geoId/26?utm_medium=explore&mprop=count&popt=Person&hl=en

Further, there are unique considerations for respective state's individual start-up cultures that cannot be considered in the economic analysis that are limitations.

## References


Bell, J., Blair, B., Martin, D., & Hendon, J. (2011) *Angel Investment Tax Credits: Implementation and Effectiveness in a Sample of States Representative of Differing Geographical Areas of the United States*. Small Business Institute National Conference Proceedings Competitive Papers.

Bell, J. R., Wilbanks, J. E., & Hendon, J. R. (2013). *Examining the Effectiveness of State Funded Angel Investor Tax Credits: Initial Empirical Analysis.* Small Business Institute Journal, 9(2), pp. 23-28.

Denes, M., Howell, S. T., Mezzanotti, F., Wang, X., & Xu, T. (2023). *Investor Tax Credits and Entrepreneurship: Evidence from US States*. The Journal of Finance, 78(5), 2621-2671.

Economic Development Research Group. (2014). *Evaluation of the Minnesota Angel Tax Credit Program 2010-2012*. 1-71. Minnesota Department of Revenue. Retrieved August 9, 2024 from: https://www.revenue.state.mn.us/sites/default/files/2014-02/evaluation_of_the_mn_angel_tax_credit_program.pdf

Fazio, C., Guzman, J., & Stern, S. (2020). *The impact of state-level research and development tax credits on the quantity and quality of entrepreneurship.* Economic Development Quarterly, 34(2), 188-208.

Hays, Adam (May, 2024). *Dotcom Bubble Definition*. Investopedia. Retrieved July 11, 2024: https://www.investopedia.com/terms/d/dotcom-bubble.asp

Kansas Legislative Division of Post Audit. (February 2024). *Evaluation the Angel Investor Tax Credit Program. Kansas Legislature*. Retrieved August 14, 2024: https://www.kslpa.gov/audit-report-library/evaluating-the-angel-investor-tax-credit-program/

Lerner, J. (February 2002). *When Bureaucrats Meet Entrepreneurs: The Design of Effective Public Venture Capital Programmes*. The Economic Journal, Vol. 112, pp. 73-84.

Maryland Department of Legislative Services. (December 2023). *Innovation Investment Incentive Tax Credit (IIITC) Evaluation*. Maryland General Assembly. Retrieved August 9, 2024 from: https://dls.maryland.gov/pubs/prod/TaxFiscalPlan/Review-of-the-Innovation-Investment-Incentive-Tax-Credit.pdf

Tuomi, K. & Boxer, b. (2015) *The Costs and Benefits of Early-Stage Business Tax Credits: A Case Atudy of Two US States.* Venture Capital, 17(3), pp. 263-270 (DOI: 10.1080/13691066.2015.1051757)

White, J. B., Lockwood, J. M., & Miles, M. P. (2009). *The Access to Capital for Entrepreneurs Act of 2007: An Extension of The Impact of Tax Policy on Informal Venture Investing.* The Entrepreneurial Executive, Vol. 14, pp. 25-30.

# Iowa Angel Investor Tax Credit

# Tax Credit Evaluation Study

# Appendix, Tables, and Figures

## Appendix 1. Timeline of Major Program Changes by Effective Date[27]

| | |
|---|---|
| January 1, 2002 | The 2002 General Assembly enacted House File 2271, or the "Investments Tax Credits-Qualified Businesses-Community Based Seed Capital Funds" law, which first made the Investments in Qualified Businesses tax credit available to be awarded for equity investments in qualified businesses and community-based seed capital funds. The tax credit was equal to 20.0 percent of an equity investment. Credits were subject to an overall, three-year program cap of $10.0 million, allocated by year of investment as follows:<br>• $3.0 million in aggregate for investments made in 2002;<br>• $3.0 million for investments made in 2003;<br>• $4.0 million for investments made in 2004.<br>Tax credit awards were subject to a three-year waiting period before they could be claimed. Awards to individual investors were limited to five different investments in five different businesses, with each award limited to $50,000. |
| July 1, 2005 | The tax credit was extended until the overall program cap of $10.0 million was reached and required qualified businesses to be in operation six years or less (compared to three years or less previously) with a net worth of $10.0 million or less (compared to $3.0 million or less previously) to be eligible for the tax credit (2005 House File 831). |
| June 30, 2008 | The overall program cap of $10.0 million was reached. New tax credits ceased to be issued. |
| January 1, 2011 | The tax credit program received funding that was capped in the aggregate at $2.0 million per fiscal year (2011 Senate File 517). New tax credits started to be awarded again. |
| July 1, 2015 | The tax credit was no longer allowed for community-based seed capital funds. The maximum amount of tax credits for an investor was capped at $100,000 per year, including awards to the investor's spouse or dependents. The maximum amount of tax credits awarded for investments in a qualified business in a year were limited to $500,000. The amount of the tax credit was set to be equal to 25.0 percent of the taxpayer's equity investment. Further, the three-year waiting period before awards may be claimed was repealed and it became refundable when claimed against individual income tax (2015 Senate File 510). No awards were issued for FY 2014 and FY 2015 while the tax credit transitioned to EDA administration. |

[27] Note: Many technical, administrative, and substantive changes have been enacted related to the Investments in Qualifying Businesses Tax Credit. However, this timeline only highlights the substantive changes.

## Appendix 2. Definition of Firm Funding Round Types[28]

### Early-Stage funding

**Angel:** An angel round is typically a small round designed to get a new company off the ground. Investors in an angel round include individual angel investors, angel investor groups, friends, and family.

**Pre-Seed:** A Pre-Seed round is a pre-institutional seed round that either has no institutional investors or is a very low amount, often below $150,000.

**Seed:** Seed rounds are among the first rounds of funding a company will receive, generally while the company is young and working to gain traction. Round sizes range between $10,000 to $2.0 million, though larger seed rounds have become more common in recent years. A seed round typically comes after an angel round (if applicable) and before a company's Series A round.

**Grant:** A grant is when a company, investor, or government agency provides capital to a company without taking an equity stake in the company.

**Equity Crowdfunding:** Equity crowdfunding platforms allow individual users to invest in companies in exchange for equity. Typically, on these platforms the investors invest small amounts of money, though syndicates are formed to allow an individual to take a lead on evaluating an investment and pooling funding from a group of individual investors.

**Product Crowdfunding:** In a product crowdfunding round, a company will provide its product, which is often still in development, in exchange for capital. This kind of round is also typically completed on a funding platform.

**Convertible Note:** A convertible note is an 'in-between' round funding to help companies hold over until they want to raise their next round of funding. When they raise the next round, this note 'converts' with a discount at the price of the new round. You will typically see convertible notes after a company raises, for example, a Series A round but does not yet want to raise a Series B round.

**Non-Equity Assistance:** A non-equity assistance round occurs when a company or investor provides office space or mentorship and does not get equity in return.

### Growth-Stage funding

**Venture-Series Unknown:** Venture funding refers to an investment that comes from a venture capital firm and describes Series A, Series B, and later rounds. This funding type

[28] Source: Crunchbase, "*Glossary of Funding Types*". Retrieved June 11, 2024: https://support.crunchbase.com/hc/en-us/articles/115010458467-Glossary-of-Funding-Types

is used for any funding round that is clearly a venture round but where the series has not been specified.

**Series A and Series B rounds:** Funding rounds for earlier stage companies and range on average between $1.0 million to $30.0 million.

**Series C rounds and onwards:** Later stage funding for more established companies. These rounds are usually $10.0 million-plus and are often much larger.

**Private Equity:** A private equity round is led by a private equity firm or a hedge fund and is a late stage round. It is a less risky investment because the company is more firmly established, and the rounds are typically upwards of $50.0 million.

**Corporate Round:** A corporate round occurs when a company, rather than a venture capital firm, makes an investment in another company. These are often, though not necessarily, done for the purpose of forming a strategic partnership.

**Funding Round:** "Funding round" is the general term used for a round when information regarding a more specific designation of the funding type is unavailable.

**Late-Stage funding**

**Debt Financing:** In a debt round, an investor lends money to a company, and the company promises to repay the debt with added interest.

**Secondary Market:** A secondary market transaction is a fundraising event in which one investor purchases shares of stock in a company from other, existing shareholders rather than from the company directly. These transactions often occur when a private company becomes highly valuable and early stage investors or employees want to earn a profit on their investment, and these transactions are rarely announced or publicized.

**Initial coin offering (ICO):** An initial coin offering (ICO) is a means of raising money via crowdfunding using cryptocurrency as capital. A company raising money through an ICO holds a fundraising campaign, and during this campaign, backers will purchase a percentage of a new cryptocurrency (called a "token" or "coin"), often using another cryptocurrency like bitcoin to make the purchase, in the hopes that the new cryptocurrency grows in value.

**Post-IPO Equity:** A post-IPO equity round takes place when firms invest in a company after the company has already gone public.

**Post-IPO Debt:** A post-IPO debt round takes place when firms loan a company money after the company has already gone public. Similar to debt financing, a company will promise to repay the principal as well as added interest on the debt.

**Post-IPO Secondary:** A post-IPO secondary round takes place when an investor

purchases shares of stock in a company from other, existing shareholders rather than from the company directly, and it occurs after the company has already gone public.

## Table 1. Angel Investor Tax Credits by State

| | State | Tax Credit | Effective Date | Expiration/Repeal Date | Annual Program Cap | Min Investment | Min Credit % of Qualifying Investment | Max Credit % of Qualifying Investment | Qualifying Tax Types I: Individual Income C: Corporation Income F: Franchise O:Other | Refundable | Transferable | Carry-forward | Carry Forward Yrs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Arizona | Angel Investment Program | July 1, 2006 | June 30, 2031 | $2.5 million | $25,000 | 30.0% | 35.0% | I, C, O | N | N | Y | 3 |
| 2 | Arkansas | Equity Investment Incentive Program | January 1, 2007 | January 1, 2028 | $6.25 million | N | 33.0% | 33.0% | I, C | N | Y | Y | 9 |
| 3 | Colorado | Advanced Industry Investment Tax Credit | July 1, 2014 | January 1, 2029 | $4.0 million | $10,000 | 25.0% | 35.0% | I, C, O | N | N | Y | 5 |
| 4 | Connecticut | Angel Investor Tax Credit Program | July 1, 2010 | June 30, 2028 | $5.0 million | $25,000 | 25.0% | 25.0% | I, C | N | N | Y | 5 |
| 5 | Illinois | Angel Investment Tax Credit Program | January 1, 2011 | December 31, 2026 | $15.0 million | $10,000 | 25.0% | 35.0% | I, C | N | N | Y | 5 |
| 6 | Indiana | Venture Capital Investment Tax Credit | July 1, 1999 | None | $20.0 million | N | 25.0% | 35.0% | I, C | N | Y | Y | 5 |
| 7 | Iowa | Angel Investor Tax Credit | January 1, 2002 | None | $2.0 million | N | 25.0% | 25.0% | I, C, F | Y | N | Y | 5 |
| 8 | Kansas | Angel Investor Tax Credit | January 1, 2005 | January 1, 2027 | $7.0 million | N | 50.0% | 50.0% | I, C | N | Y | Y | Unlimited |
| 9 | Kentucky | Investment Fund Act Tax | January 1, 1998 | None | $3.0 million | $10,000 | 25.0% | 25.0% | I, C, F, O | N | Y | Y | 15 |
| 10 | Louisiana | Angel Investor Tax Credit | July 1, 2011 | July 1, 2030 | $7.2 million | N | 25.0% | 35.0% | I, C | N | Y | Y | 10 |
| 11 | Maine | Seed Capital Tax Credit | July 1, 1989 | None | $13.5 million | N | 40.0% | 40.0% | I, C, F | Y | N | Y | 15 |
| 12 | Maryland | Biotechnology Investment Incentive Tax Credit | July 1, 2006 | None | $12.0 million | $25,000 | 33.0% | 75.0% | I, C | Y | N | N | NA |
| 13 | Massachusetts | Angel Investor Tax Credit | August 1, 2017 | None | $25.0 million | N | 20.0% | 30.0% | I | N | N | Y | 3 |
| 14 | Minnesota | Angel Investment Tax Credit | April 1, 2010 | January 1, 2025 | $5.0 million | $7,500 | 25.0% | 25.0% | I | Y | N | N | NA |
| 15 | New Jersey | Angel Investor Tax Credit | January 1, 2012 | January 1, 2012 | $35.0 million | N | 20.0% | 25.0% | I, C | Y | N | Y | 1 |
| 16 | New Mexico | Angel Investment Tax Credit | January 1, 2007 | December 31, 2030 | $2.0 million | N | 25.0% | 25.0% | I | N | N | Y | 5 |
| 17 | New York | Qualified Emerging Technology Company Tax Credit | January 1, 1999 | None | $1.0 million | N | 10.0% | 20.0% | I | N | N | Y | Unlimited |
| 18 | North Dakota | Seed Capital Tax Credit | January 1, 2002 | None | $3.5 million | N | 45.0% | 45.0% | I | N | N | Y | 4 |
| 18 | North Dakota | Angel Investor Investment Credit | January 1, 2017 | None | None | N | 25.0% | 35.0% | I, C | N | N | Y | 5 |
| 19 | Tennessee | Angel Tax Credit | January 1, 2017 | None | $5.0 million | $15,000 | 33.0% | 50.0% | I, C, F, O | N | N | Y | 5 |
| 20 | Utah | Life Science & Technology Tax Credit | January 1, 2006 | None | $300,000 | N | 35.0% | 35.0% | I, C | N | N | N | NA |
| 21 | Virginia | Qualified Equity and Subordinated Debt Credit | January 1, 2009 | None | $5.0 million | N | 50.0% | 50.0% | I, C, F | N | N | Y | 15 |
| 22 | Wisconsin | Qualified New Business Venture Program | January 1, 2005 | None | $30.0 million | N | 25.0% | 25.0% | I, C | N | Y* | Y | 15 |

*Y for early stage seed investments. N for angel investor tax credits.
Source: Various state tax websites.

## Table 2. Awards and Claims by Fiscal Year

| Fiscal Year | Award Amount | Claim Amount |
|---|---|---|
| 2002 | $407,430 | N/A |
| 2003 | $723,326 | N/A |
| 2004 | $817,869 | N/A |
| 2005 | $2,099,268 | N/A |
| 2006 | $1,638,306 | $176,274 |
| 2007 | $1,504,997 | $396,484 |
| 2008 | $2,872,722 | $495,052 |
| 2009 | $0 | $708,400 |
| 2010 | $0 | $1,175,567 |
| 2011 | $96,000 | $1,207,823 |
| 2012 | $521,289 | $608,730 |
| 2013 | $520,061 | $292,334 |
| 2014 | $0 | $176,252 |
| 2015 | $0 | $130,683 |
| 2016 | $1,233,007 | $658,652 |
| 2017 | $1,990,001 | $1,664,474 |
| 2018 | $2,145,954 | $2,047,284 |
| 2019 | $2,113,876 | $1,547,196 |
| 2020 | $2,055,727 | $1,532,969 |
| 2021 | $2,047,424 | $1,863,929 |
| 2022 | $1,999,994 | $1,251,922 |
| 2023 | $2,088,708 | $1,517,896 |
| 2024 | $0 | $1,071,773 |
| **Total** | $26,875,959 | $18,523,694 |

Source: Iowa Department of Revenue and Iowa Economic Development Authority
Note: FY 2024 award and claim data is incomplete
Note: While the annual award program cap is $2.0 million, some years program year amounts slightly exceed this funding cap in available program data. The EDA states it has never awarded over the program funding cap and the data can present as such due to calculation of certificate issue dates.

## Table 3. Claims by Tax Year

| Tax Year | Number of Claims | Amount of Claims | Average Claim |
|---|---|---|---|
| 2005 | 70 | $218,753 | $3,125 |
| 2006 | 290 | $456,233 | $1,573 |
| 2007 | 416 | $498,653 | $1,199 |
| 2008 | 493 | $749,824 | $1,521 |
| 2009 | 763 | $1,256,638 | $1,647 |
| 2010 | 966 | $1,138,852 | $1,179 |
| 2011 | 558 | $511,655 | $917 |
| 2012 | 245 | $268,205 | $1,095 |
| 2013 | 158 | $173,345 | $1,097 |
| 2014 | 136 | $271,263 | $1,995 |
| 2015 | 433 | $1,316,982 | $3,042 |
| 2016 | 578 | $2,106,560 | $3,645 |
| 2017 | 396 | $1,572,786 | $3,972 |
| 2018 | 265 | $1,583,063 | $5,974 |
| 2019 | 242 | $1,702,701 | $7,036 |
| 2020 | 238 | $1,655,523 | $6,956 |
| 2021 | 150 | $1,535,195 | $10,235 |
| 2022 | 81 | $1,129,819 | $13,948 |
| 2023 | 44 | $377,644 | $8,583 |
| Total | 6,522 | $18,523,694 | $2,840 |

Source: Iowa Department of Revenue

## Table 4. Resident and Nonresident Investments and Awards by Investment Year

| Investment Year | Iowa Residents | | | Nonresidents | | |
|---|---|---|---|---|---|---|
| | Number of Investors | Amount of Investments Received | Tax Credits Awarded | Number of Investors | Amount of Investments Received | Tax Credits Awarded |
| 2002 | 120 | $1,830,350 | $407,380 | * | * | * |
| 2003 | 294 | $3,510,491 | $729,090 | 22 | $68,929 | $5,786 |
| 2004 | 405 | $4,751,692 | $776,738 | 126 | $182,619 | $60,119 |
| 2005 | 525 | $9,947,006 | $1,928,344 | 132 | $1,211,313 | $228,970 |
| 2006 | 702 | $16,187,414 | $3,119,986 | 79 | $3,378,593 | $673,717 |
| 2007 | 856 | $11,566,164 | $2,042,294 | 22 | $547,467 | $91,494 |
| 2008 | 0 | $0 | $0 | 0 | $0 | $0 |
| 2009 | 0 | $0 | $0 | 0 | $0 | $0 |
| 2010 | 0 | $0 | $0 | 0 | $0 | $0 |
| 2011 | 103 | $3,206,222 | $435,304 | 20 | $373,412 | $67,074 |
| 2012 | 140 | $3,779,772 | $754,295 | 12 | $513,754 | $94,752 |
| 2013 | 55 | $1,609,210 | $283,583 | 10 | $273,689 | $102,851 |
| 2014 | 66 | $4,341,643 | $679,590 | * | * | * |
| 2015 | 37 | $1,303,260 | $241,275 | 17 | $1,731,827 | $460,444 |
| 2016 | 123 | $9,402,404 | $1,686,142 | 43 | $3,614,706 | $612,750 |
| 2017 | 112 | $7,640,714 | $1,463,232 | 59 | $2,192,498 | $457,986 |
| 2018 | 97 | $14,218,100 | $953,412 | 35 | $1,760,003 | $314,755 |
| 2019 | 103 | $6,551,668 | $1,666,191 | 34 | $4,058,477 | $354,665 |
| 2020 | 145 | $9,107,382 | $1,607,123 | 58 | $6,222,315 | $550,267 |
| 2021 | 99 | $2,341,920 | $1,021,713 | 57 | $1,183,760 | $978,281 |
| 2022 | ** | ** | $1,522,850 | ** | ** | $503,506 |
| Total | 3,982 | $111,295,412 | $21,318,542 | 726 | $27,313,362 | $5,557,417 |

*To avoid disclosing individual taxpayer data due to small data numbers, nonresident data for 2002 is combined with 2003 and nonresident data for 2014 is combined with 2015

**Due to being sorted by the year of investments made, investment data is not available past calendar year 2021

Source: Iowa Department of Revenue and Iowa Economic Development Authority

Note: While the annual award program cap is $2.0 million, some years program year amounts slightly exceed this funding cap in available program data. The EDA states it has never awarded over the program funding cap and the data can present as such due to calculation of certificate issue dates.

## Table 5. Awards by Tax Type

| Tax Type | Number of Awards | Percent of Awards | Amount of Awards | Percent of Award Amounts | Minimum Award | Maximum Award | Average Award |
|---|---|---|---|---|---|---|---|
| Individual Income Tax | 4,294 | 89.2% | $23,506,512 | 87.5% | $1 | $200,000 | $5,474 |
| Fiduciary Income Tax | 163 | 3.4% | $992,695 | 3.7% | $2 | $56,250 | $6,090 |
| Corporation Income Tax | 250 | 5.2% | $1,211,230 | 4.5% | $6 | $375,000 | $4,845 |
| Franchise & Moneys and Credits | 71 | 1.5% | $361,718 | 1.3% | $47 | $58,500 | $5,095 |
| Insurance Premium Tax | 34 | 0.7% | $803,804 | 3.0% | $47 | $100,000 | $23,641 |
| Total | 4,812 | 100.0% | $26,875,959 | 100.0% | $1 | $375,000 | $5,585 |

Source: Iowa Department of Revenue and Iowa Economic Development Authority

## Table 6. Claims by Tax Type

| Tax Type | Number of Claims | Percent of Claims | Amount of Claims | Percent of Claim Amounts | Minimum Claim | Maximum Claim | Average Claim |
|---|---|---|---|---|---|---|---|
| Individual Income Tax | 6,320 | 96.9% | $17,638,963 | 95.2% | $5 | $100,000 | $2,791 |
| Fiduciary Income Tax | 15 | 0.2% | $104 | 0.0% | $8 | $23 | $7 |
| Corporation Income Tax | 150 | 2.3% | $382,037 | 2.1% | $4 | $45,302 | $2,547 |
| Franchise & Moneys and Credits | 29 | 0.4% | $197,617 | 1.1% | $353 | $50,000 | $6,814 |
| Insurance Premium Tax | 8 | 0.1% | $304,973 | 1.6% | $12,377 | $100,000 | $38,122 |
| Total | 6,522 | 100.0% | $18,523,694 | 100.0% | $4 | $100,000 | $2,840 |

Source: Iowa Department of Revenue

## Table 7. Investments and Awards by Investment Year

| | Qualified Business Investments | | | |
|---|---|---|---|---|
| Investment Year | Number of Qualified Businesses (QB) Receiving Investments | Number of New QBs Receiving Investments | Amount of Investments Received | Tax Credits Awarded |
| 2002 | 6 | 6 | $1,248,150 | $290,933 |
| 2003 | 9 | 3 | $1,297,900 | $278,580 |
| 2004 | 8 | 2 | $2,596,243 | $369,241 |
| 2005 | 14 | 7 | $9,685,947 | $1,916,022 |
| 2006 | 17 | 10 | $18,984,334 | $3,677,269 |
| 2007 | 6 | 2 | $10,845,631 | $1,880,188 |
| 2008 | 0 | 0 | $0 | $0 |
| 2009 | 0 | 0 | $0 | $0 |
| 2010 | 0 | 0 | $0 | $0 |
| 2011 | 8 | 8 | $3,579,634 | $502,378 |
| 2012 | 7 | 3 | $3,911,359 | $753,482 |
| 2013 | 5 | 2 | $1,346,893 | $278,378 |
| 2014 | 7 | 3 | $4,298,970 | $671,794 |
| 2015 | 4 | 3 | $3,018,260 | $699,315 |
| 2016 | 9 | 5 | $13,017,110 | $2,298,892 |
| 2017 | 13 | 6 | $9,833,212 | $1,921,218 |
| 2018 | 12 | 5 | $15,978,103 | $1,268,167 |
| 2019 | 15 | 6 | $10,610,145 | $2,020,856 |
| 2020 | 13 | 6 | $15,329,697 | $2,157,390 |
| 2021 | 4 | 0 | $3,525,680 | $1,999,994 |
| 2022 | * | * | * | $2,026,356 |
| Sub-Total | 157 | 77 | $129,107,268 | $25,010,453 |
| | Community-Based Seed Capital Fund Investments | | | |
| Investment Year | Number of Community-Based Seed Capital Funds Receiving Investments | Number of New Funds Receiving Investments | Amount of Investments Received | Tax Credits Awarded |
| 2002 | 2 | 2 | $582,450 | $116,497 |
| 2003 | 5 | 3 | $2,281,270 | $456,246 |
| 2004 | 6 | 1 | $2,338,068 | $467,616 |
| 2005 | 6 | 2 | $1,472,372 | $241,292 |
| 2006 | 5 | 0 | $581,673 | $116,434 |
| 2007 | 2 | 1 | $1,268,000 | $253,600 |
| 2008 | 0 | 0 | $0 | $0 |
| 2009 | 0 | 0 | $0 | $0 |
| 2010 | 0 | 0 | $0 | $0 |
| 2011 | 0 | 0 | $0 | $0 |
| 2012 | 1 | 1 | $382,167 | $95,565 |
| 2013 | 1 | 0 | $536,006 | $108,056 |
| 2014 | 1 | 0 | $59,500 | $10,200 |
| Sub-Total | 29 | 10 | $9,501,506 | $1,865,506 |
| Total | 186 | 87 | $138,608,774 | $26,875,959 |

*Due to being sorted by the year of investments made, investment data is not available past calendar year 2021

Source: Iowa Department of Revenue and Iowa Economic Development Authority

## Table 8. Qualified Businesses Years of Investment

| Years of Investment | Qualified Businesses | Percent of Investments | Average Yearly Investment |
|---|---|---|---|
| One Year | 36 | 23.4% | $840,565 |
| Two Years | 22 | 35.1% | $1,030,263 |
| Three Year | 8 | 12.6% | $680,300 |
| Four Years | 7 | 9.8% | $451,663 |
| Five Years | 2 | 13.3% | $1,711,531 |
| Six Years | 2 | 5.8% | $618,854 |
| Total | 77 | 100.0% | $888,863 |

Note: Investment year 2021 investment and award data is incomplete
Source: Iowa Department of Revenue and Iowa Economic Development Authority

## Table 9. Crunchbase Data File Overview

| State | Number of Firms in Data File | Percent | Number of Funding Rounds | Total Funding 2009-2024 ($ Millions) |
|---|---|---|---|---|
| **Iowa** | **268** | **6.7%** | **319** | **$2,361.96** |
| Michigan | 1,110 | 27.9% | 2,197 | $31,869.68 |
| Missouri | 863 | 21.7% | 1,827 | $12,167.00 |
| Nebraska | 264 | 6.6% | 533 | $1,344.58 |
| Ohio | 1,433 | 36.0% | 2,034 | $36,707.57 |
| South Dakota | 43 | 1.1% | 85 | $402.21 |
| TOTAL | 3,981 | 100.0% | 6,995 | $84,852.99 |

Note: Total funding includes early-stage, growth-stage, and late-stage funding rounds
Source: Crunchbase

## Table 10. Crunchbase Iowa Firms Industry Groups Data File Overview

| Industry Groups | Iowa Qualified Businesses | Iowa Comparison Firms | All Other Iowa Firms |
|---|---|---|---|
| Advertising | 0.0% | 1.1% | 0.9% |
| Agriculture and Farming | 12.9% | 6.5% | 5.1% |
| Artificial Intelligence (AI) | 4.7% | 5.4% | 1.1% |
| Biotechnology | 3.5% | 1.1% | 4.3% |
| Blockchain and Cryptocurrency | 0.0% | 0.0% | 0.9% |
| Commerce and Shopping | 1.2% | 4.3% | 5.1% |
| Community and Lifestyle | 0.0% | 0.0% | 3.0% |
| Consumer Goods | 0.0% | 0.0% | 1.5% |
| Content and Publishing | 1.2% | 1.1% | 0.9% |
| Data and Analytics | 8.2% | 9.7% | 3.0% |
| Design | 0.0% | 2.2% | 1.7% |
| Education | 3.5% | 3.2% | 2.6% |
| Energy | 1.2% | 1.1% | 1.1% |
| Financial Services | 3.5% | 1.1% | 5.6% |
| Food and Beverage | 2.4% | 1.1% | 3.0% |
| Gaming | 0.0% | 0.0% | 0.4% |
| Government and Military | 0.0% | 0.0% | 0.6% |
| Hardware | 4.7% | 5.4% | 4.1% |
| Health Care | 8.2% | 7.5% | 7.7% |
| Information Technology | 9.4% | 3.2% | 5.3% |
| Lending and Investments | 0.0% | 0.0% | 0.4% |
| Manufacturing | 3.5% | 3.2% | 3.2% |
| Media and Entertainment | 1.2% | 3.2% | 2.6% |
| Payments | 0.0% | 0.0% | 1.1% |
| Privacy and Security | 0.0% | 0.0% | 0.9% |
| Real Estate | 0.0% | 0.0% | 3.6% |
| Sales and Marketing | 1.2% | 2.2% | 2.1% |
| Science and Engineering | 8.2% | 7.5% | 6.8% |
| Software/Apps | 20.0% | 24.7% | 17.9% |
| Sports | 1.2% | 2.2% | 0.9% |
| Transportation | 0.0% | 3.2% | 2.1% |
| Travel and Tourism | 0.0% | 0.0% | 0.6% |
| **TOTAL** | 100.0% | 100.0% | 100.0% |

Note: Firms self-select industry groups. Those firms represented in the data file can have one to six industry groups selected to describe the firm's industry.
Source: Crunchbase

## Table 11. Funding to Iowa Qualified Businesses and Comparison Businesses

| | Firms in the Data | | Early-Stage Funding | | | | Growth-Stage Funding | | | | **Total** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Firm Category | Number | Percent | Funding Rounds | Amount (Millions) | Percent | Average Return Per Round | Funding Rounds | Amount (Millions) | Percent | Average Return Per Round (Millions) | Funding Rounds | Amount (Millions) | Percent |
| Qualified Businesses | 33 | 12.3% | 60 | $43.68 | 23.0% | $727,994 | 39 | $183.63 | 10.0% | $4.71 | 99 | $227.31 | 11.2% |
| Comparison Firms | 33 | 12.3% | 41 | $16.39 | 8.6% | $399,658 | 21 | $83.38 | 4.5% | $3.97 | 62 | $99.77 | 4.9% |
| All Other Iowa Firms | 202 | 75.4% | 246 | $130.25 | 68.4% | $529,480 | 91 | $1,574.57 | 85.5% | $17.30 | 337 | $1,704.82 | 83.9% |
| **TOTAL** | **268** | **100.0%** | **347** | **$190.32** | **100.0%** | **$548,466** | **151** | **$1,841.58** | **100.0%** | **$12.20** | **498** | **$2,031.90** | **100.0%** |

Source: Crunchbase

## Table 12. Iowa Firm Early-Stage and Growth-Stage Funding by Year

| | Calander Year | Sum of Early-Stage Funding (Millions) | Sum of Growth-Stage Funding (Millions) | Percent of Total Early-Stage Funding | Percent of Total Growth-Stage Funding |
|---|---|---|---|---|---|
| **Qualified Businesses** | | | | | |
| | 2009 | $0.00 | $0.00 | 0.0% | 0.0% |
| | 2010 | $0.00 | $1.31 | 0.0% | 0.7% |
| | 2011 | $0.00 | $0.00 | 0.0% | 0.0% |
| | 2012 | $0.20 | $5.25 | 0.5% | 2.9% |
| | 2013 | $1.20 | $5.26 | 2.7% | 2.9% |
| | 2014 | $0.70 | $7.20 | 1.6% | 3.9% |
| | 2015 | $1.03 | $0.00 | 2.3% | 0.0% |
| | 2016 | $2.06 | $14.20 | 4.7% | 7.7% |
| | 2017 | $2.93 | $7.73 | 6.7% | 4.2% |
| | 2018 | $7.16 | $5.00 | 16.4% | 2.7% |
| | 2019 | $15.06 | $1.50 | 34.5% | 0.8% |
| | 2020 | $2.32 | $28.50 | 5.3% | 15.5% |
| | 2021 | $5.78 | $18.59 | 13.2% | 10.1% |
| | 2022 | $2.00 | $20.00 | 4.6% | 10.9% |
| | 2023 | $3.25 | $31.00 | 7.4% | 16.9% |
| | 2024 | $0.00 | $38.09 | 0.0% | 20.7% |
| | **Sub-Total** | **$43.68** | **$183.63** | **100.0%** | **100.0%** |
| **Comparison Firms** | | | | | |
| | 2009 | $0.20 | $0.00 | 1.2% | 0.0% |
| | 2010 | $0.00 | $0.00 | 0.0% | 0.0% |
| | 2011 | $0.00 | $0.00 | 0.0% | 0.0% |
| | 2012 | $0.00 | $0.00 | 0.0% | 0.0% |
| | 2013 | $0.38 | $0.00 | 2.3% | 0.0% |
| | 2014 | $1.00 | $5.50 | 6.1% | 6.6% |
| | 2015 | $0.50 | $0.00 | 3.1% | 0.0% |
| | 2016 | $0.23 | $1.83 | 1.4% | 2.2% |
| | 2017 | $0.82 | $9.00 | 5.0% | 10.8% |
| | 2018 | $0.23 | $2.25 | 1.4% | 2.7% |
| | 2019 | $4.55 | $1.73 | 27.8% | 2.1% |
| | 2020 | $1.15 | $40.00 | 7.0% | 48.0% |
| | 2021 | $1.78 | $3.80 | 10.9% | 4.6% |
| | 2022 | $5.56 | $0.00 | 33.9% | 0.0% |
| | 2023 | $0.00 | $16.77 | 0.0% | 20.1% |
| | 2024 | $0.00 | $2.50 | 0.0% | 3.0% |
| | **Sub-Total** | **$16.39** | **$83.38** | **100.0%** | **100.0%** |
| **Other Firms** | | | | | |
| | 2009 | $0.00 | $1.54 | 0.0% | 0.1% |
| | 2010 | $2.05 | $2.35 | 1.6% | 0.1% |
| | 2011 | $0.47 | $21.80 | 0.4% | 1.4% |
| | 2012 | $0.07 | $17.33 | 0.1% | 1.1% |
| | 2013 | $1.48 | $8.63 | 1.1% | 0.5% |
| | 2014 | $5.61 | $8.54 | 4.3% | 0.5% |
| | 2015 | $0.29 | $10.50 | 0.2% | 0.7% |
| | 2016 | $6.23 | $29.66 | 4.8% | 1.9% |
| | 2017 | $3.54 | $19.66 | 2.7% | 1.2% |
| | 2018 | $3.06 | $45.68 | 2.3% | 2.9% |
| | 2019 | $4.80 | $2.52 | 3.7% | 0.2% |
| | 2020 | $16.29 | $235.50 | 12.5% | 15.0% |
| | 2021 | $11.73 | $95.95 | 9.0% | 6.1% |
| | 2022 | $40.11 | $804.07 | 30.8% | 51.1% |
| | 2023 | $27.82 | $257.08 | 21.4% | 16.3% |
| | 2024 | $6.70 | $13.75 | 5.1% | 0.9% |
| | **Sub-Total** | **$130.25** | **$1,574.57** | **100.0%** | **100.0%** |
| **Total Firms** | | | | | |
| | 2009 | $0.20 | $1.54 | 0.1% | 0.1% |
| | 2010 | $2.05 | $3.66 | 1.1% | 0.2% |
| | 2011 | $0.47 | $21.80 | 0.2% | 1.2% |
| | 2012 | $0.27 | $22.58 | 0.1% | 1.2% |
| | 2013 | $3.06 | $13.89 | 1.6% | 0.8% |
| | 2014 | $7.31 | $21.24 | 3.8% | 1.2% |
| | 2015 | $1.81 | $10.50 | 1.0% | 0.6% |
| | 2016 | $8.52 | $45.69 | 4.5% | 2.5% |
| | 2017 | $7.30 | $36.39 | 3.8% | 2.0% |
| | 2018 | $10.45 | $52.93 | 5.5% | 2.9% |
| | 2019 | $24.41 | $5.75 | 12.8% | 0.3% |
| | 2020 | $19.76 | $304.00 | 10.4% | 16.5% |
| | 2021 | $19.29 | $118.34 | 10.1% | 6.4% |
| | 2022 | $47.67 | $824.07 | 25.0% | 44.7% |
| | 2023 | $31.07 | $304.84 | 16.3% | 16.6% |
| | 2024 | $6.70 | $54.34 | 3.5% | 3.0% |
| | **Total** | **$190.32** | **$1,841.57** | **100.0%** | **100.0%** |

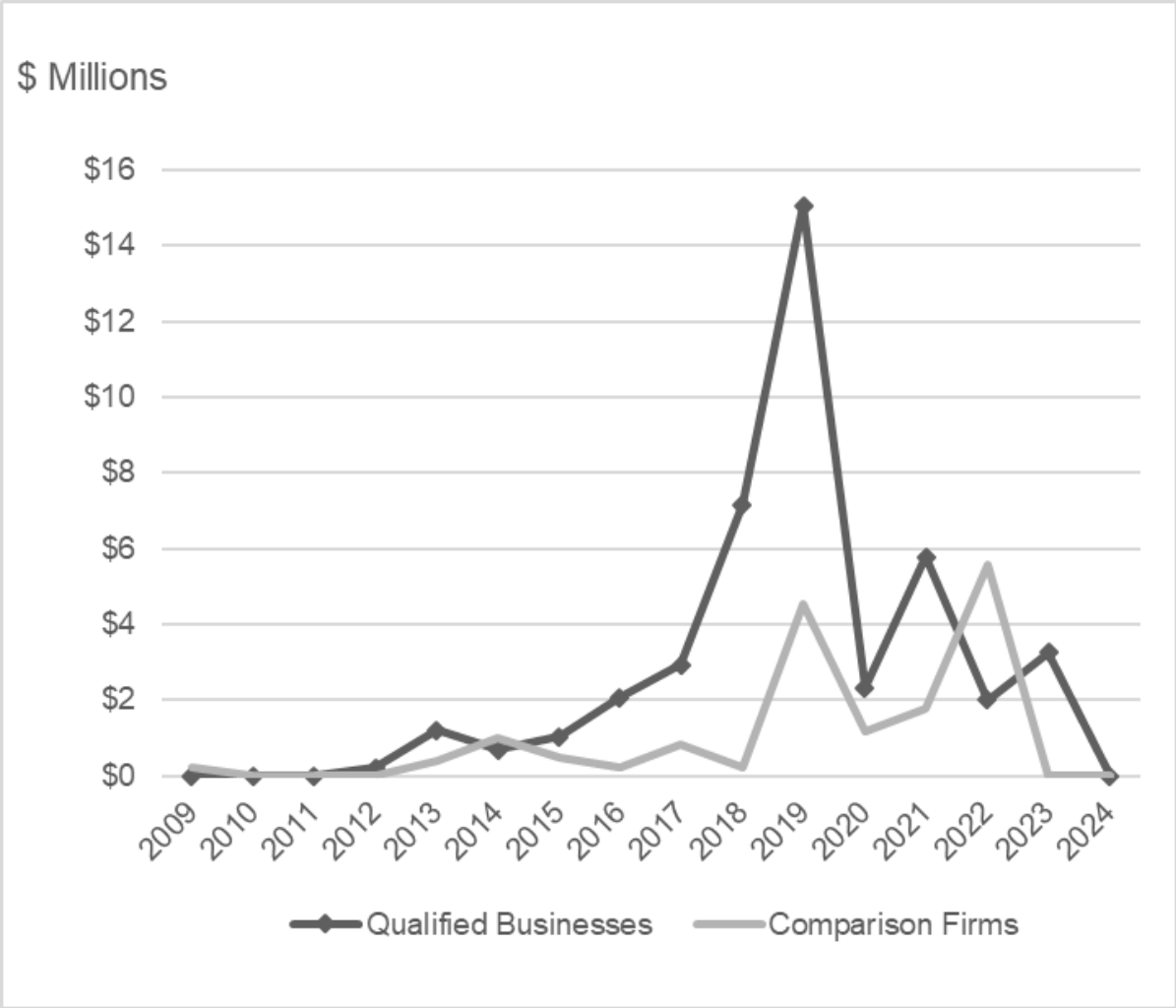
Source: Crunchbase

## Table 13. Iowa Firm Founding, Exit, and Closure by Year

| | Founded Year | Number of Firms Founded | Number of Active Frims: Original Form | Number of Active Frims: Acquired | Number of Firms that Closed |
|---|---|---|---|---|---|
| **Qualified Businesses** | | | | | |
| | 2009 | 4 | 4 | 0 | 0 |
| | 2010 | 1 | 1 | 0 | 0 |
| | 2011 | 1 | 1 | 0 | 0 |
| | 2012 | 1 | 0 | 1 | 0 |
| | 2013 | 3 | 3 | 0 | 0 |
| | 2014 | 7 | 3 | 3 | 1 |
| | 2015 | 6 | 5 | 1 | 0 |
| | 2016 | 3 | 3 | 0 | 0 |
| | 2017 | 3 | 3 | 0 | 0 |
| | 2018 | 1 | 1 | 0 | 0 |
| | 2019 | 2 | 2 | 0 | 0 |
| | 2020 | 1 | 1 | 0 | 0 |
| | 2021 | 0 | 0 | 0 | 0 |
| | 2022 | 0 | 0 | 0 | 0 |
| | 2023 | 0 | 0 | 0 | 0 |
| | 2024 | 0 | 0 | 0 | 0 |
| | **Sub-Total** | **33** | **27** | **5** | **1** |
| **Comparison Firms** | | | | | |
| | 2009 | 1 | 0 | 0 | 1 |
| | 2010 | 1 | 1 | 0 | 0 |
| | 2011 | 2 | 2 | 0 | 0 |
| | 2012 | 3 | 3 | 0 | 0 |
| | 2013 | 1 | 1 | 0 | 0 |
| | 2014 | 6 | 6 | 0 | 0 |
| | 2015 | 6 | 3 | 2 | 1 |
| | 2016 | 6 | 4 | 2 | 0 |
| | 2017 | 3 | 3 | 0 | 0 |
| | 2018 | 0 | 0 | 0 | 0 |
| | 2019 | 2 | 2 | 0 | 0 |
| | 2020 | 1 | 1 | 0 | 0 |
| | 2021 | 1 | 1 | 0 | 0 |
| | 2022 | 0 | 0 | 0 | 0 |
| | 2023 | 0 | 0 | 0 | 0 |
| | 2024 | 0 | 0 | 0 | 0 |
| | **Sub-Total** | **33** | **27** | **4** | **2** |
| **Other Firms** | | | | | |
| | 2009 | 6 | 3 | 1 | 2 |
| | 2010 | 7 | 3 | 2 | 2 |
| | 2011 | 9 | 6 | 1 | 2 |
| | 2012 | 16 | 11 | 1 | 4 |
| | 2013 | 10 | 7 | 1 | 2 |
| | 2014 | 14 | 8 | 0 | 6 |
| | 2015 | 17 | 13 | 2 | 2 |
| | 2016 | 20 | 17 | 0 | 3 |
| | 2017 | 12 | 11 | 0 | 1 |
| | 2018 | 19 | 19 | 0 | 0 |
| | 2019 | 13 | 12 | 0 | 1 |
| | 2020 | 22 | 20 | 1 | 1 |
| | 2021 | 16 | 16 | 0 | 0 |
| | 2022 | 13 | 13 | 0 | 0 |
| | 2023 | 7 | 7 | 0 | 0 |
| | 2024 | 1 | 1 | 0 | 0 |
| | **Sub-Total** | **202** | **167** | **9** | **26** |
| **Total Firms** | | | | | |
| | 2009 | 11 | 7 | 1 | 3 |
| | 2010 | 9 | 5 | 2 | 2 |
| | 2011 | 12 | 9 | 1 | 2 |
| | 2012 | 20 | 14 | 2 | 4 |
| | 2013 | 14 | 11 | 1 | 2 |
| | 2014 | 27 | 17 | 3 | 7 |
| | 2015 | 29 | 21 | 5 | 3 |
| | 2016 | 29 | 24 | 2 | 3 |
| | 2017 | 18 | 17 | 0 | 1 |
| | 2018 | 20 | 20 | 0 | 0 |
| | 2019 | 17 | 16 | 0 | 1 |
| | 2020 | 24 | 22 | 1 | 1 |
| | 2021 | 17 | 17 | 0 | 0 |
| | 2022 | 13 | 13 | 0 | 0 |
| | 2023 | 7 | 7 | 0 | 0 |
| | 2024 | 1 | 1 | 0 | 0 |
| | **Total** | **268** | **221** | **18** | **29** |

Source: Crunchbase

**Figure 1. Early-Stage Funding to Iowa Qualified Businesses and Comparison Businesses**




Source: Crunchbase

## Table 14. Funding to Iowa Qualified Businesses, Iowa, and Five Midwest States without Angel Investor Credits

| | Firms in the Data File | | Early-Stage Funding | | | | Growth-Stage Funding | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Firm Category | Number | Percent | Funding Rounds | Amount (Millions) | Percent | Average Return Per Round | Funding Rounds | Amount (Millions) | Percent | Average Return Per Round (Millions) |
| **Iowa** | | | | | | | | | | |
| Qualified Businesses | 33 | 0.8% | 60 | $43.68 | 1.0% | $727,994 | 39 | $183.63 | 0.5% | $4.71 |
| All Other Iowa Firms | 235 | 5.9% | 287 | $146.64 | 3.5% | $606,034 | 112 | $1,657.95 | 4.4% | $4.52 |
| **Iowa Total** | **268** | **6.7%** | **347** | **$190.32** | 4.5% | **$548,466** | **151** | **$1,841.58** | 4.9% | **$12.20** |
| Michigan | 1,110 | 27.9% | 1,463 | $1,806.33 | 43.0% | $1,234,678 | 603 | $21,469.23 | 56.6% | $35.60 |
| Missouri | 863 | 21.7% | 1,344 | $709.45 | 16.9% | $527,865 | 380 | $4,627.32 | 12.2% | $12.18 |
| Nebraska | 264 | 6.6% | 388 | $220.26 | 5.2% | $567,678 | 96 | $807.50 | 2.1% | $8.41 |
| Ohio | 1,433 | 36.0% | 1,361 | $1,224.83 | 29.2% | $899,947 | 550 | $9,035.23 | 23.8% | $16.43 |
| South Dakota | 43 | 1.1% | 51 | $47.95 | 1.1% | $940,192 | 27 | $158.49 | 0.4% | $5.87 |
| **TOTAL** | **3,981** | **100.0%** | **4,954** | **$4,199.14** | **100.0%** | **$847,626** | **1,807** | **$37,939.36** | **100.0%** | **$21.00** |

Source: Crunchbase

**Table 15. Iowa Qualified Businesses, Iowa, and Five Midwest States without Angel Investor Credits: Firm Founding, Exit, and Closure**

| State | Number of Firms Founded | Percent | Number of Active Frims: Original Form | Percent | Number of Active Frims: Acquired | Percent | Number of Firms that Closed | Percent |
|---|---|---|---|---|---|---|---|---|
| **Iowa** | | | | | | | | |
| Qualified Businesses | 33 | 0.8% | 27 | 0.8% | 5 | 1.7% | 1 | 0.3% |
| All Other Iowa Firms | 235 | 5.9% | 194 | 5.8% | 13 | 4.3% | 28 | 8.6% |
| **Iowa Total** | **268** | **6.7%** | **221** | **6.6%** | **18** | **6.0%** | **29** | **8.9%** |
| Michigan | 1,110 | 27.9% | 932 | 27.8% | 84 | 28.1% | 94 | 28.7% |
| Missouri | 863 | 21.7% | 735 | 21.9% | 63 | 21.1% | 65 | 19.9% |
| Nebraska | 264 | 6.6% | 198 | 5.9% | 24 | 8.0% | 42 | 12.8% |
| Ohio | 1,433 | 36.0% | 1,236 | 36.8% | 106 | 35.5% | 91 | 27.8% |
| South Dakota | 43 | 1.1% | 33 | 1.0% | 4 | 1.3% | 6 | 1.8% |
| **Total** | **3,981** | **100.0%** | **3,355** | **100.0%** | **299** | **100.0%** | **327** | **100.0%** |

Source: Crunchbase