Hello,

We are pleased to present the 11th MVCA Annual Research Report, which shows the performance of the venture capital community in Michigan. In this report, see how venture capital investment is fueling the growth of Michigan’s startups. Learn how Michigan compares nationally regarding capital availability, the number of venture capital firms, and investment in companies led by a diverse CEO. And, discover how Michigan is driving innovation by diversifying its economy and creating new sectors of growth.

We are incredibly grateful to our members, partners, and sponsors for their continued participation and support to make the 2018 MVCA Research Report a comprehensive reflection of investment activity in Michigan. MVCA is proud to continue to build upon our vision to increase the amount of capital and talent available for Michigan’s entrepreneurial and investment community, so we can continue to transform breakthrough ideas into new companies and industries that drive Michigan’s economic growth.

Sincerely,

Maureen Miller Brosnan
Executive Director, MVCA
Growth Stage Investing in the Great Lakes

BUSINESS
B2B product or service
Scalable technology
Strong IP/barriers to entry
Great Lakes presence

FINANCIAL
$1-10M+ revenue
20%+ growth rate
Capital efficient
Clear growth catalysts

STRUCTURE
Preferred equity or sub-debt
Minority-ownership (non-control)
Flexible capital
Active board role
At Brooks Kushman, we are committed to **INNOVATION**. Recognized as a leader in patent prosecution strategies, intellectual property litigation, and trademark protection, our attorneys and agents strive to meet our clients' evolving needs. The depth and technical background of our professionals allow us to deliver unprecedented IP strategies.

Unique. Just like your ideas.

Jaffe is recognized throughout the nation as a relationship-based, highly qualified, full-service business law firm with an outstanding reputation for providing sophisticated legal services and counsel to businesses of all sizes, family-owned enterprises, individuals and entrepreneurs.

We are proud to serve Michigan’s Entrepreneurial and Venture Capital Community.

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The following is a snapshot of Michigan’s entrepreneurial and investment community.

- **797** Angel Investors
- **134** Venture-Backed Companies in Michigan
- **29** Venture Capital Firms
- **87** Venture Capital Professionals
- **$179M** Venture Capital Invested in 68 Michigan Startups
- **$41M** Angel Capital Invested in 70 Michigan Startups
- **$3.9B** Total Capital Under Management
- **472** Venture Firms from Outside of Michigan have Invested in Michigan-based Startups
- **Every $1 Invested** in a Michigan Startup by a Michigan-Based Venture Capital Firm **Attracts $3.83** of Investment from Outside of Michigan
- **2018**
Michigan’s Investment Pipeline

Michigan’s community of university funds, economic development funds, and angel investors plays a critical role in building the entrepreneurial community in Michigan. Access to capital and mentorship at the earliest stages of development allows startup companies and their founders to successfully launch their companies and provides a pipeline of investment opportunities for the state’s venture capital investors.

University and Economic Development-Related Funds

- In Michigan, 37 startups raised over $20 million in pre-seed, seed, and convertible notes from university and economic development-related funds in 2017.
- For every $1 invested in these 37 Michigan startups by a university or economic development-related fund, $6.82 was raised from grants, angel investors, and other sources.
- In total, university and economic development-related funds have invested $24 million into 86 active Michigan portfolio companies.
  - 97% of investment by these funds has been in Michigan startup companies.
  - 41% of investment by these funds has been in seed stage companies.
  - 42% of companies receiving capital from these funds are life science companies and an additional 30% are information technology companies.
- Venture capital available for new investments in 2017 was $604 million. University and economic development-related funds estimate over $100 million of venture capital will be required to adequately fund the growth of their Michigan portfolio companies in the next two years.
- The median size of investment made by university and economic development-related funds in 2017 was $125,000.

Angel Investors

- In Michigan, 37 startups raised over $41 million from angel investors in 2017.
- Information technology companies made up nearly half of the companies receiving angel investment in 2017.
- In 2017, Michigan had 797 angel investors, a 229% increase over the course of the last five years. These investors either invested individually or alongside others in one of the state’s 11 angel groups.
- There are 507 people employed at the 70 Michigan startups that received angel investment in 2017.
- Angel investors support companies throughout Michigan. Approximately 30% of 2017 angel investment in Michigan was in companies located outside of the Ann Arbor Area, Wayne County, or West Michigan.
- The median size of an investment made by an individual angel investor in 2017 was $55,000.

- 23% Life Science
- 43% Information Technology
- 9% Mobility
- 14% Advanced Materials & Manufacturing
- 3% Consumer Products

1 Source: Michigan Angel Community - 2017 Annual Report

UNIVERSITY AND ECONOMIC DEVELOPMENT-RELATED FUNDS

- Biosciences Research & Commercialization Center (WMU)
- Invest Michigan
- Monroe-Brown Biomedical Seed Fund (UM)
- Red Cedar Ventures (MSU)

ANGEL ORGANIZATIONS

- Individual Angel Investors
- Ann Arbor Angels
- BELLE Michigan
- BlueWater Angels
- Capital Community Angels
- Grand Angels
- Great Lakes Angels
- Innovation Shore Angels
- Kalamazoo Angels
- Michigan Angel Fund
- Muskegon Angels
- Northern Michigan Angels
- Windsor Essex Capital Angel Network

ANGEL INVESTMENT IN 2017 by number of companies

Source: Michigan Angel Community - 2017 Annual Report
An In-Depth Analysis of Michigan’s Venture Capital Activity

There are 29 private venture firms operating in Michigan. Of the 29 venture firms, 21 are headquartered in Michigan and an additional eight are headquartered elsewhere with a Michigan office. In addition to venture firms, there are two fund of funds and five corporate venture funds in Michigan. Altogether, these firms employ a total of 112 investment professionals in the state.

**Michigan-Based Venture Capital Firms**

- Arboretum Ventures
- Augment Ventures
- Beringea
- BioStar Ventures
- Detroit Venture Partners
- eLab Ventures
- Fontinalis Partners
- Grand Ventures
- Hopen Life Science Ventures
- Huron River Ventures
- IncWell
- Invest Detroit Ventures
- Ludlow Ventures
- Michigan Accelerator Fund I
- North Coast Technology Investors
- Plymouth Growth Partners
- Resonant Venture Partners
- RPM Ventures
- Tamarind Hill
- Tappan Hill Ventures
- Wakestream Ventures

**Out-of-State Venture Capital Firms with a Michigan Presence**

- Arsenal
- Baird Capital
- Cultivian Sandbox Ventures
- Draper Triangle Ventures
- Mercury Fund
- MK Capital
- Three Leaf Ventures
- Venture Investors

**Michigan-Based Venture Capital Fund of Funds**

- Renaissance Venture Capital Fund
- Venture Michigan Fund

**Michigan-Based Corporate Venture Funds**

- Dow Venture Capital
- Eighteen94 Capital
- General Motors Ventures
- Kelly Services
- Spectrum Health Ventures
Capital Under Management

- Total venture capital under management among all firms operating in Michigan has grown by 5% in the last five years.
- Total venture capital funds under management in Michigan in 2017 was $3.9 billion, a decrease of 3% from the prior year.
- Total venture capital funds under management of firms headquartered in Michigan in 2017 was $2.2 billion, a decrease of 10% from the prior year.
- Out of the total $3.9 billion under management in Michigan, 73% of the capital has already been invested into companies, 11% is reserved for follow-on investments into existing companies, and 16% is available for new startups seeking venture capital.
- Capital available for new investments in 2017 was $604 million, an increase of 33% over the last five years and a 6% increase from the prior year.
- Approximately $403 million is reserved for follow-on financings for existing Michigan-based portfolio companies, a decrease of 5% from last year. MVCA survey respondents estimate $627 million of additional venture capital will be required to adequately fund the growth of Michigan’s 134 startup companies in the next two years.
2017 Venture Investment Activity

In Michigan, 68 startups received more than $179 million from venture capital firms in 2017.

**Advanced Materials and Manufacturing**
- AlSentis, LLC
- Micro-LAM Technologies
- MOVE Systems

**Business Services**
- ATLAS Space Operations, Inc.
- Elevada
- Impact Analytical
- Vayu, Inc.

**Consumer Products**
- Ash & Erie
- OXX Inc.

**Life Science / Healthcare**
- 3T Medical Solutions
- Ablative Solutions
- Akadeum Life Sciences
- Celsee, Inc.
- Cirius Therapeutics
- Delphinus Medical Technologies
- EVOQ Therapeutics
- HistoSonics
- Magnesium Development Company, LLC
- Metabolic Solutions Development Company
- NanoBio
- PreDxion
- Resonant Therapeutics
- Ripple Science
- Shoulder Innovations
- SteriDev
- Strata Oncology
- Swift Biosciences
- Tissue Regeneration Systems

**Mobility**
- Lunar Wireless
- May Mobility
- Techstars Mobility

**Information Technology**
- Above the Treeline
- AdAdapted
- Amplifinity
- Are You a Human
- Autobooks
- Blue Medora
- Change Dynamix
- Clinc
- Detroit Labs
- Floyd
- Foodstand
- Ginkgotree
- Give and Take
- Groundspeed
- HealthBridge Financial, Inc.
- HT Mobile Apps
- JOOL Health
- Larky
- Mi Padrino
- MySwimPro
- New Vital Signs
- Pixel Velocity
- Quikly
- reach l influence
- ShapeLog
- Sight Machine
- SkySpecs
- SkySync
- Social Proof
- SpellBound
- Sportsman Tracker
- The Student Loan Pro
- SU2 Systems
- Waymark
- Workit Health

**Media**
- Carbon Media Group
- Fuel, LLC

There are 134 venture-backed startup companies in Michigan, an increase of 26% over the last five years, that are strengthening Michigan’s economy by attracting and hiring talent in the state.

While Michigan venture funds invest in a wide variety of sectors, the life science and information technology sectors continued to be the focus of capital deployment in 2017. Of the startups that received venture funding in 2017, 27% were life science companies and 47% were information technology companies. Notably, information technology is the main sector of investment in 2017.

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**Number of Startups Receiving Capital in 2017**

<table>
<thead>
<tr>
<th>Sector</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Science/Healthcare</td>
<td>27%</td>
</tr>
<tr>
<td>Information Technology</td>
<td>47%</td>
</tr>
<tr>
<td>Alternative Energy</td>
<td>47%</td>
</tr>
<tr>
<td>Media</td>
<td>4%</td>
</tr>
<tr>
<td>Business Services</td>
<td>3%</td>
</tr>
<tr>
<td>Advanced Materials and Manufacturing</td>
<td>2%</td>
</tr>
<tr>
<td>Consumer Products</td>
<td>2%</td>
</tr>
<tr>
<td>Mobility</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
</tr>
</tbody>
</table>

**Amount Invested in 2017**

- **Life Science/Healthcare**: $179 million
- **Information Technology**: $282 million
- **Alternative Energy**: $222 million
- **Media**: $215 million
- **Business Services**: $204 million
- **Advanced Materials and Manufacturing**: $191 million
- **Consumer Products**: $191 million
- **Mobility**: $131 million
- **Other**: $120 million
- **Tissue Regeneration Systems**: $105 million

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**Number of Michigan Startups Receiving Venture Capital Investment Each Year**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>19</td>
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<td>2015</td>
<td>68</td>
</tr>
<tr>
<td>2016</td>
<td>74</td>
</tr>
<tr>
<td>2017</td>
<td>88</td>
</tr>
</tbody>
</table>
Diversity in Michigan’s Entrepreneurial & Investment Community

Since 2014, MVCA has studied the presence and roles of women, individuals identifying as LGBTQ+, and racial minorities within Michigan’s entrepreneurial and investment community. During that time, Michigan’s entrepreneurial community saw a 4% increase in the total number of venture-backed startups and a 24% decrease in the total number of venture capitalists.

Total Capital Invested in Michigan

In Michigan, 68 startups received nearly $179 million from venture capital firms in 2017. Of that, $11.4 million was invested in eight Michigan startup companies led by a diverse CEO.

• $2.3 million invested in women-led startups
• $9.1 million invested in racial minority-led startups
• $1.7 million invested in LGBTQ-led startups

Diversity in Michigan’s Entrepreneurial Community

There are currently 134 venture-backed startup companies in Michigan.

• 9% of Michigan venture-backed startups were led by a CEO who is a racial minority, compared to 4% of CEOs of Fortune 500 companies nationally. 39% of the U.S. population are racial minorities.¹
• 7% of Michigan venture-backed startups were led by CEO who is a woman, compared to 3% nationally. 50% of the U.S. population are women.¹ In the last year, Michigan has experienced a 33% decrease in the number of venture-backed startup companies led by a woman.
• 1% of Michigan venture-backed startups were led by a CEO who identifies as LGBTQ+. 4% of the U.S. population identifies as LGBTQ+.²

Diversity in Michigan’s Venture Capital Community

There are currently 87 venture capital professionals in Michigan.

• 6% of venture capital professionals in Michigan are racial minorities, compared to 22% of venture capital professionals nationally.³ 39% of the U.S. population are racial minorities.¹
• 8% of venture capital professionals in Michigan are women, compared to 29% of venture capital professionals nationally.³ 50% of the U.S. population are female.¹ In the last year, Michigan has experienced a 46% decrease in the number of female venture capital professionals.
• 0% of venture capital professionals in Michigan identify as LGBTQ+. 4% of the U.S. population identifies as LGBTQ+.²

¹ United States Census Bureau
² Gallup
³ NVCA-Deloitte Human Capital Survey Report

* If an individual falls into multiple categories, the total may be greater than 100%
Attracting Capital to Michigan

Michigan’s venture capital community plays a critical role in attracting and leveraging outside investment capital. Local firms are often the first to identify strong Michigan-based investment opportunities, and can then provide deal leadership and connections to potential out-of-state syndicate partners.

An estimated $627 million of additional venture capital will be required to adequately fund the growth of Michigan’s 134 startup companies in the next two years.

An estimated $403M is reserved for follow-on financing into existing portfolio companies across the United States.

Every $1 invested in a Michigan startup by a Michigan venture capital firm attracts $3.83 of investment from outside of Michigan.

There are 134 venture-backed startup companies in Michigan, an increase of 26% over the last five years, that are strengthening Michigan’s economy by attracting and hiring talent in the state.

Michigan venture capital firms contributed 26% of the total capital invested in Michigan startups in the last year. The remaining contributions came from venture capital firms outside of Michigan.

472 venture capital firms from outside of Michigan have invested in Michigan-based startups.
Diversifying Michigan’s Economy

Venture capital investors in Michigan support startup companies in a wide variety of sectors, stages, and backgrounds. As startup companies grow and expand, Michigan’s economy becomes increasingly diverse.

- The life science sector continues to be the focus of capital deployment with 40% of total capital invested. Healthcare services and medical device startups accounted for 53% of all investment made in the life science sector.
- The information technology sector received 31% of total capital invested. Software companies accounted for 91% of all investments made in the information technology sector.
- 57% of total capital invested by Michigan venture capital firms is in companies that are in the startup/early stage. Companies in this stage have a developed product or service they are selling to a target market. These startups fund activities with venture capital and are starting to earn revenues from operations, but are not yet cash flow positive.
Fundraising Analysis

- In the last year, Michigan-based venture firms managed 48 funds, while out-of-state firms with Michigan offices managed 17 funds. Together, these 65 funds had 550 active portfolio companies, a 36% increase over the last five years.
- The average venture capital fund size among Michigan-based firms is $50 million. If out-of-state funds with a Michigan office are included, the average fund size is $63 million.

DISTRIBUTION OF MICHIGAN VENTURE CAPITAL FUND SIZES

Fundraising Targets

- In 2017, venture firms with a presence in Michigan were targeting to raise a total of $369 million. The total amount reported to have been raised in 2017 was $202 million, 45% less than targeted.

Venture Firm Experience

- There are 87 venture capital professionals living, working and investing in Michigan, an increase of 23% over the last five years.
- Most venture capital firms in Michigan have managed three or fewer funds.
  - Venture firms with headquarters in Michigan have managed an average of 2.8 funds.
  - Venture firms with an office in Michigan but headquartered elsewhere have managed an average of 3.3 funds.

Sources of Capital for Michigan Venture Firms

- 11 of the existing venture firms in Michigan are currently targeting to raise $657 million in 2018. The average target fund size is just over $55 million.
- The most common sources of capital for venture firms in Michigan are individuals, small family offices, large family offices, fund of funds, and large corporations.

POPULAR SOURCES OF CAPITAL FOR THE 29 VENTURE FIRMS IN MICHIGAN
Michigan’s Role in the National Landscape

Michigan is driving innovation and we’ve successfully created an attractive environment for early-stage investing. In the last five years, Michigan’s venture capital community has demonstrated strong growth in key metrics while facing challenges in others.

<table>
<thead>
<tr>
<th>NATIONAL VENTURE CAPITAL STATISTICS1</th>
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<tbody>
<tr>
<td>2012</td>
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<tr>
<td>-------------------------------------</td>
</tr>
<tr>
<td>Number of VC Firms in Existence</td>
</tr>
<tr>
<td>Total Capital Under Management ($B)</td>
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<tr>
<td>Average Venture Capital Under Management per Firm ($M)</td>
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<tr>
<td>Average Venture Capital Fund Size ($M)</td>
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<tr>
<td># of Startups Receiving Venture Capital</td>
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<tr>
<td>Venture Capital Investment ($B)</td>
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1National Venture Capital Association 2018 Yearbook

<table>
<thead>
<tr>
<th>MICHIGAN VENTURE CAPITAL STATISTICS2</th>
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<tbody>
<tr>
<td>2012</td>
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<tr>
<td>Venture Capital Investment ($M)</td>
</tr>
</tbody>
</table>

2Venture Capital Firms Headquartered in Michigan

<table>
<thead>
<tr>
<th>FIVE YEAR TRENDS</th>
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</thead>
<tbody>
<tr>
<td>Michigan</td>
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<tr>
<td>National</td>
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<tr>
<td>Avg. Venture Capital Under Management per Firm</td>
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<tr>
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</table>
Michigan Venture Capital Association

MVCA Overview

The MVCA Board of Directors and staff are dedicated to expanding opportunities for the growth of Michigan’s entrepreneurial and investment community through the following programs, services and publications.

Research
MVCA develops and distributes an annual research report, which offers a comprehensive summary of venture capital investment activities across Michigan. MVCA works with the National Venture Capital Association, Pitchbook, the U.S. Census Bureau, and the Angel Capital Association to analyze Michigan’s entrepreneurial and investment activities relative to national trends. The annual research report is the critical source of quantitative information used to unite the Michigan entrepreneurial and investment community into a common voice to drive initiatives that encourage its growth in Michigan.

Advocacy
Core to MVCAs mission is serving as the statewide voice for Michigan’s growing entrepreneurial and investment community. To advance this objective, MVCA communicates with legislators, the media and the general public in order to promote education regarding the entrepreneurial investment opportunities, challenges, and successes in Michigan.

Events
MVCA facilitates the development of a strong network within the Michigan entrepreneurial and investment community and builds connections with out-of-state angel and venture investors through targeted meetings and events.

Outreach
MVCA broadens the reach of Michigan’s entrepreneurial and investment community by building relationships and educating national partners about opportunities and trends in Michigan.

Programs
MVCA provides program development assistance to Michigan’s entrepreneurial support organizations. In this role, MVCA provides research, direction, and feedback to help shape the ultimate goals and desired outcomes of the program so that they best suit the needs of Michigan’s entrepreneurial and investment community. In addition, MVCA offers several programs funded by the Michigan Economic Development Corporation, which have played a critical role in building Michigan’s entrepreneurial and investment landscape.

- **Venture Fellows**: MVCA aims to increase the number of venture professionals in Michigan and accelerate fundraising and deployment of capital into early-stage companies. Venture Fellows launch their venture capital careers at Michigan-based venture firms.
- **ExeConnect**: MVCA provides resources and connections to help organizations and executives navigate and engage with Michigan’s entrepreneurial and investment community. MVCA can coordinate introductions and immersion days with venture firms, entrepreneurial support organizations, and universities in Michigan as well as out-of-state partners.
- **Education & Outreach Initiative**: MVCA engages with venture firms, entrepreneurs, universities, and economic development organizations from across the country to educate people about the entrepreneurial and investment community in Michigan. In addition to promoting Michigan’s successes, MVCA provides research, direction, and feedback to entrepreneurial support organizations to help shape the ultimate goals and outcomes of their initiatives to better address the identified needs of Michigan’s entrepreneurial and investment community.
We are dedicated to providing tax, valuation, and investigative solutions to venture capital funds in their quest for maximum returns.

A changing world requires a different perspective.
Make the mark.

Serving 150+ investment funds, Plante Moran provides a wide range of services that help the entrepreneurial and investor community thrive:

- Tax
- Audit
- Due diligence
- Medical device consulting
- Operations commercialization
- Cybersecurity
- Transaction advisory services
- Investment structuring consulting
- Network security assessment

Chris Jenkins, Partner
Investment Funds Leader
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Visit us at wnj.com to learn more about our work with early stage businesses.