
INVESTING IN **MINNESOTA**

MAIRS & POWER

— Focused Long-term Investing —

EXECUTIVE **SUMMARY**

This White Paper describes what we at Mairs & Power have long known—Minnesota and the Upper Midwest present an opportunity-rich landscape for investors.

We are neither arguing for economic policy prescriptions nor are we beating the drum of regional boosterism. We are investors seeking to understand our investment environment and explain to our friends and clients both the foundations of our success and the soundness of our investment focus into the future.

INVESTING IN **MINNESOTA**

The Land of 10,000 Lakes enjoys a rich tradition where highly successful businesses can start in Minnesota, grow in Minnesota and thrive in Minnesota.

Among the states, Minnesota ranks 21st in population and 15th in GDP per capita.¹ With 16 Fortune 500 companies and seven of Forbes Largest Private Companies headquartered here, the North Star State boasts an out-sized presence as a welcoming home to large companies. Minnesota ranks 11th and 9th among the states respectively by those metrics. More significantly, calculating the number of companies per capita, Minnesota vaults to third for Fortune 500 companies and fourth for the largest private companies.²

The state's success over decades in nurturing great organizations has generated an enviable roster—3M, Ecolab, Fastenal, General Mills, Hormel, Mayo Clinic, Medtronic, Target, Toro, and UnitedHealth Group are just a few successful companies with deep roots in Minnesota. Each has not only significantly impacted the industry in which it competes, but many have become exemplars of excellence in management, operations and long-term financial success—including, for the public companies among them, returns to shareholders.

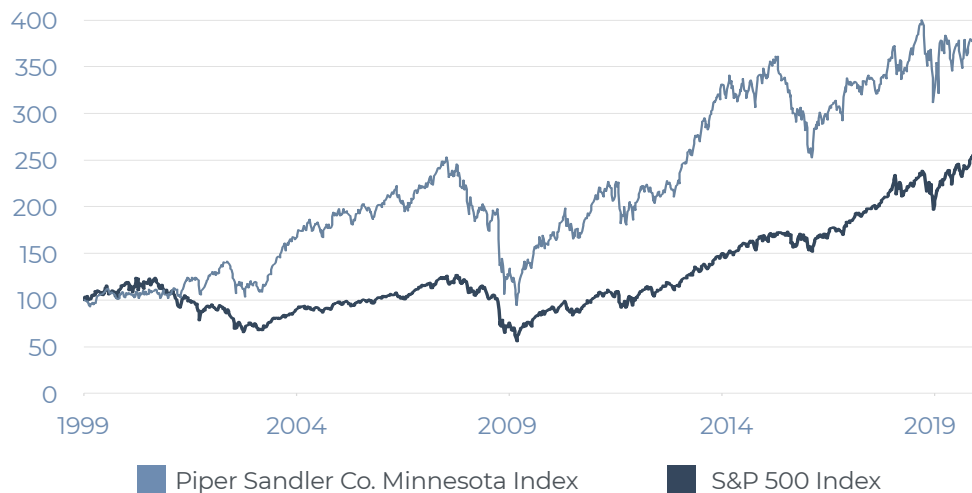
Many Minnesota success stories are outlined in the Appendix. Equally as exciting for us as investors, we continue to see innovative new companies choosing Minnesota as the place to begin their journey and hopefully enter the ranks of Minnesota-based legends.

As investors, we know past performance does not necessarily guarantee future success. But the evidence of Minnesota's robust business investment return environment has been demonstrated by comparing the S&P 500 with the 100 largest companies in Minnesota, compiled by the Star Tribune newspaper and Piper Sandler Co.³ In this white paper, we explore not only what makes Minnesota a great place to find great companies to invest in, we also ask ourselves if this opportunity-rich landscape is sustainable over time.

MINNESOTA: **AN ABUNDANCE OF INVESTABLE IDEAS**

The answer can be found by examining several characteristics of Minnesota, which create a virtuous cycle. Minnesota is home to a large number of corporate headquarters across multiple industries. On that solid foundation, the region is home to a highly skilled and well-educated workforce, world-class institutions of higher education with the University of Minnesota at the center. The state has a robust and well-maintained physical infrastructure, a healthy business environment, and a legacy of innovation, growth and success across multiple sectors of the economy. Finally, Minnesota's quality of life makes it an attractive place to live, work and raise a family, making it easier to attract highly skilled employees from elsewhere to work at corporate headquarters. This all adds up to Minnesota is a place where we continue to find an abundance of investable ideas.

HISTORICAL GROWTH OF PIPER SANDLER CO. MINNESOTA INDEX VS. S&P 500 as of 12/31/2019



Performance data quoted represents past performance and does not guarantee future results.

TWIN CITIES' HEADQUARTERS ECONOMY

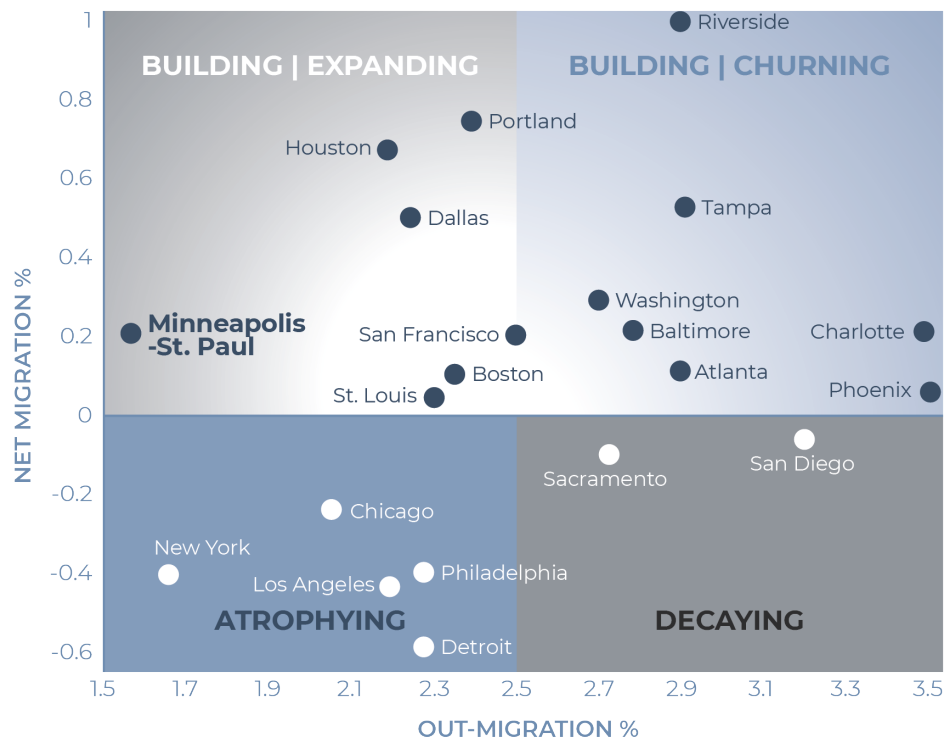
Minnesota's success is grounded in hard data and is the subject of detailed academic research and investigation. University of Minnesota Professor Myles Shaver has studied corporate expansion and location decisions. His recent book, *Headquarters Economy: Managers, Mobility, and Migration*⁴, is the result of years of research comparing location decisions within major metropolitan areas across the U.S.

The Twin Cities' ability to attract managerial talent over a long period of time stands in contrast to many other metropolitan areas, particularly in retaining the group he identifies as "Employed, Higher Income, College-Educated Professionals"—a highly attractive demographic for employers.

Shaver's chart on page 5 (with some added coloring) shows changes among this cohort across major metropolitan areas, charting Net Migration (In-Migration minus Out-Migration) on the vertical axis against Out-Migration along the horizontal axis. Shaver describes cities such as Charlotte, Phoenix and Atlanta, which experience high in-migration almost totally offset by out-migration, as growing their talent base through "churning." Cities such as Sacramento and San Diego, which he describes as "decaying," also see a high level of talent base churning but are falling behind, as out-migration exceeds in-migration. Most troubling are metro areas like New York that have low levels of in-migration insufficient to offset out-migration. These he describes as "atrophying."

Standing almost uniquely as an outlier is the Minneapolis-St Paul Metro region, expanding its managerial talent pool organically while also attracting a healthy level of in-migration, thus creating an important dynamic for the Twin Cities.

TALENT MIGRATION MAP HIGHLY EDUCATED, EMPLOYED AND HIGH EARNING



Source: Shaver, J. Myles. *Headquarters Economy*, 2018.

Shaver argues the Twin Cities' steadily expanding managerial expertise provides a talent pool for start-ups and established companies alike, which encourages cross-fertilization of knowledge and experience both within and across industries. On top of that, given the region's diverse employment opportunities, entrepreneurs contemplating a move to a start-up venture perceive lower risk. This set of factors create what Shaver describes as a "virtuous circle" of managerial human capital that can sustain and reinvent established businesses while nurturing new business startups as well.

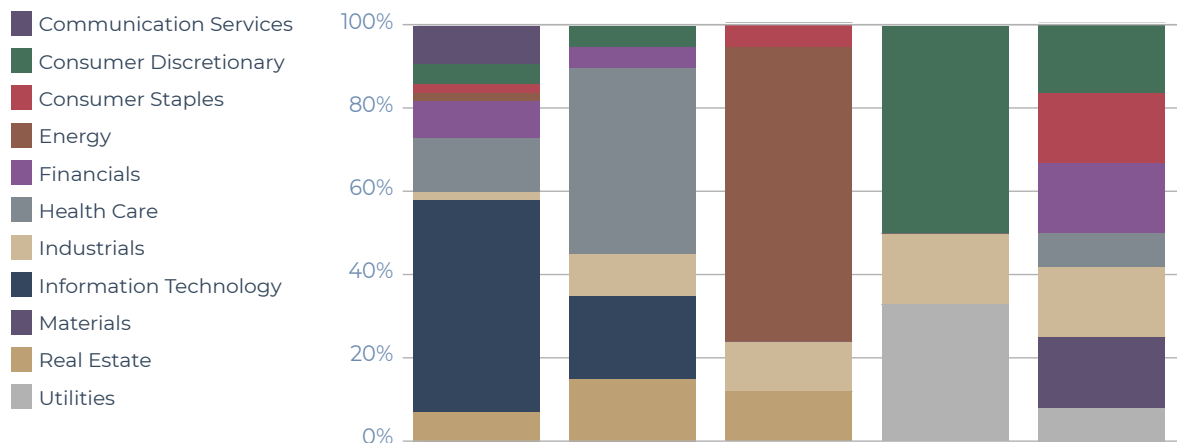
LAND OF DIVERSITY

Known as the land of 10,000 lakes, Minnesota's natural landscape is extremely diverse, ranging from eastern woodlands to boreal northern forests to prairie grasslands. The state's business landscape is equally diverse.

Minnesota's economy is not grounded in any one industry, which has made it resilient through up and down cycles. While Minnesota's non-farm employment is similar to the national employment profile by industry, significant differences include greater employment in

ECONOMIC DIVERSITY as of 12/31/2019

S&P 500 Sector Diversity by City



Data by City	San Fran.	Boston	Houston	Detroit	Minneapolis
# S&P 500 Companies	55	20	17	6	12
Metro Population (Millions)	9.7	8.3	7.2	5.4	4.0
S&P 500 per Million People	5.7	2.4	2.4	1.1	3.0

Source: Bloomberg

manufacturing (10.8% in MN vs. 8.4% across the U.S.) and healthcare (15.8% vs. 10.8%), less in leisure and hospitality (9.5% vs. 11.0%) and a greater tilt than is seen nationally toward professional management versus administration and support services. This describes an economy that is highly diverse and tilting toward higher paying jobs.

While investors have long relied on diversification in their portfolios to mitigate volatility, diversity similarly mitigates risk in a regional economy by providing a buffer against declines in any one sector. For more than three decades, Minnesota has maintained an average unemployment rate one percentage point or more below the national average and during the recent Great Recession Minnesota's unemployment rate began improving months before the nation as a whole.⁵ The lack of over-reliance on a narrow economic base can also enable relatively consistent long-term private and public investment in the region's vital infrastructure such as education, transportation, energy, housing, and health care along with amenities such as parks, recreational and cultural institutions.

Despite its reputation as a relatively homogeneous region, Minnesota mirrors national trends as it becomes increasingly ethnically diverse. The Minnesota State Demographic Center expects the percent of Minnesota's nonwhite or Latino population to increase to 25% of the state by 2035 from 14% in 2005.⁶ An independent analysis of U.S. Census data found that St. Paul and Minneapolis rank as the 22nd and 33rd most ethnically diverse among large cities, while a Twin Cities suburb

Brooklyn Park is 20th most diverse among small cities.⁷ The state has been proactive in identifying and encouraging workforce diversity and found that 71% of employers described their workforce as diverse while over half report proactive efforts to improve workforce diversity.⁸ The overwhelming reason given is “to attract the best applicants.” Needless to say, Minnesota’s inclusive business culture seeks to harness the skill, creativity and energy of the entire population, across ethnicity, race and gender alike.

MINNESOTA’S **HUMAN CAPITAL ADVANTAGES**

Minnesota offers a highly-skilled, motivated and well-educated workforce, providing an attractive talent pool for both current and prospective employers. Minnesota has consistently boasted the highest labor force participation rate in the country, currently around 70%, about 7% above the national average.⁹

Another characteristic that makes Minnesota’s workforce stand out is the active role women play in the economy. 66% of working age women (20–64) are in the labor force, the highest participation rate in the country. While the median weekly earnings of women in Minnesota is the 7th highest in the country only Maryland and Massachusetts boast similar top ten stats for both these metrics.¹⁰

Minnesota’s workforce is, for the most part, “homegrown” and therefore depends on a high-quality educational system. Here, state government has long recognized the critical role of education in sustaining Minnesota’s economic vitality, making it a key priority ensuring public school financing that provides a quality education across districts. As a result, Minnesota’s K-12 education system consistently rates among the Top 10 in the country, not only producing the workforce employers need, but also attracting workers in the child-rearing years—a highly prized demographic for employers.¹¹

Educational excellence extends to the region’s colleges and universities as well. More than 200 post-secondary public and private institutions call Minnesota home, making the state 9th (including the University-rich District of Columbia) in terms of the number of college students as a percent of population and number two among states with a population above five million.¹² The Minneapolis-St. Paul metro area ranks 10th nationwide for retaining students who graduate here and the state clearly benefits as a generator of higher income college graduates.¹³ The more than 170 post-secondary schools located in the neighboring states of Wisconsin, Iowa, and North and South Dakota, further creates an abundance of young people with a broad range of skills many of whom are attracted to the metro area post-graduation.

Notably, the Twin Cities area ranks as the second-best metro market for recent college grads to find employment.¹⁴

THE UNIVERSITY OF MINNESOTA: **ECONOMIC CORNERSTONE**

The University of Minnesota was established in 1851 and benefited from land grant status conferred later in the century. With its main campus in the heart of the Twin Cities, the U of M's location, places its research resources, students and faculty within a 25-mile radius of 15 Fortune 500 companies. This proximity of one of the country's ten largest university campuses by enrollment fosters collaboration across multiple disciplines and provides a ready pipeline of students into the workforce.

Over 60% of University of Minnesota graduates stay in the state after graduation, meaning the state reaps the majority of the benefits of its investment in educating Minnesota students. Over 6% of the state's population, 350,000 University of Minnesota alumni, live and work in the state. With over 10,000 undergraduate and over 5,000 graduate degrees conferred annually, this pipeline continues to support the growth of Minnesota's economy.¹⁵

The University of Minnesota boasts the 9th largest research budget among U.S. public institutions and 17th among all universities spending over \$900 million a year on research.¹⁶ It has built a world-renowned reputation spanning decades as a leader in medicine, engineering, sciences, business and economics. In addition to numerous Guggenheim and MacArthur fellows, 30 University faculty and alumni had been named Nobel laureates since 1900, eleven of them since 2000.¹⁷ The University's research prowess, evident in more than 1,500 current U.S. patents held by or affiliated with the University is difficult to ignore.¹⁸ Through a proactive effort at technology commercialization, University-sponsored research has a track record well above the national average, nurturing the formation of nearly 120 companies since 2006, three out of four based in Minnesota and 78% still active today.

A recent University of Minnesota study estimated that the combined direct and indirect economic impact of the University on the state was \$8.6 billion in 2017.¹⁹

Over decades, University of Minnesota research has led to major innovations across multiple disciplines. These range from development of high yield rice strains that spawned the green revolution, the first single and double lung transplants and the development of the Functional MRI to a thought-controlled robot, a highly effective medication in the treatment of AIDS, and introduction of more than 30 commercially successful apple varieties, including the popular Honeycrisp apple. In addition, the University sponsors the largest statewide startup competition in the country, supporting emerging entrepreneurs, as well as a resource and connection hub serving Minnesota's food and agriculture entrepreneurs, and a networking effort supporting women-led startups.²⁰

ROBUST **PHYSICAL INFRASTRUCTURE**

Ranked the 6th best state for overall infrastructure (energy, Internet and transportation) Minnesota's robust physical plant keeps business moving. In addition to a growing renewable energy supply, natural gas prices remain below the national average and commercial electricity

rates track costs nationally.²¹ The region's air, rail, highway and water transportation links connect the area to both national and global markets, earning Minnesota the 4th highest rank in 2019 for transportation infrastructure and the top spot for states over five million in population. In addition, the Twin Cities Metro boasts the fourth-lowest commute time to work among the 30 largest Metro areas in the U.S.²²

Though situated in the middle of the continent, Minnesota is truly a global business location. Ever since the arrival of railroads in the 19th Century connected Great Plains farmers and Minneapolis flour mills to global markets, Minnesota has fostered an export-oriented business culture. The region's air, rail, highway and water transportation links connect the area to both national and global markets, earning Minnesota the third highest rank in 2018 for transportation infrastructure.²³

This transportation infrastructure enables Minnesota-based companies to export goods to over 200 countries. The top export commodities are optical/medical products, machinery and electrical equipment. The state is ranked 4th for agricultural exports, 20th for total exports and was third fastest growing exporter from 2017 to 2018. Over the past two decades, Minnesota's export of manufactured goods has risen as a percent of total state GDP, from 5.4% to 6.2%, generally keeping pace with the overall rate of export growth nationwide. Exports from Minnesota grew 10%, to a new all-time high of \$23 billion in 2018, outpacing export growth in the U.S. as a whole.²⁴

MINNESOTA: **GOOD FOR BUSINESS, GOOD FOR PEOPLE**

Impartial observers have consistently placed Minnesota in the top business friendly states for years. The financial news outlet CNBC named Minnesota 7th best for business while 24/7 Wall St. noted that "Minnesota ranks as the best state for business in the Midwest" and 13th best overall.²⁵

With six business incubators and eight business accelerators launched around the state, often in partnership with established companies and non-profits, the North Star State provides a nurturing environment not just for established firms but for entrepreneurial startups as well.²⁶ The Kauffman Institute Report on Early State Entrepreneurship ranked Minnesota 3rd in startup early survival rates and 10th in early-state entrepreneurship.²⁷

Forbes Magazine named the Twin Cities one of the ten top rising metro areas for startups. Minneapolis St. Paul ranked 16th among the 132 largest metropolitan regions for venture capital (VC) activity while the state was ranked 15th for VC deals.²⁸

Minnesotans are proactive in maintaining this nurturing environment for both families and businesses with a forward-thinking civic culture. For instance, the regional government for the Twin Cities – the Metropolitan Council – requires each city and county within its jurisdiction to prepare a long-term plan extending out more than 20 years, covering land use, transportation, water resources, parks and trails, housing, resilience, and economic competitiveness.²⁹

Despite having relatively high-income taxes, Minnesota fares well in a recent study comparing business tax burdens among the states. While Minnesota's total effective business tax rate for

state and local taxes and taxes as a share of private sector gross state product are just below the national averages, Minnesota businesses pay the 4th lowest percentage share of total state and local taxes. Assuming that businesses share the benefits of public expenditures for education, public safety and transportation, the study calculates Minnesota is tied for 12th place among the states with a nearly one-to-one ratio of tax expense to benefits received.³⁰

Minnesota enjoys an additional attribute explaining why it remains home to so many successful companies – Minnesota is a place where people want to live, work and raise a family. The North Star State enjoys rich cultural, recreational, educational and natural resources, a healthy population and access to quality health care, a low crime rate, a strong tradition of local self-governance and an embrace of cultural and ethnic diversity. Looking at all these factors, U.S. News and World Report ranks Minnesota the third best state overall and CNBC ranks the state #3 in quality of life.³¹

MINNESOTA: **AN OPPORTUNITY RICH LANDSCAPE FOR INVESTORS**

Founded in 1931, Mairs & Power is Minnesota's oldest investment firm under continuous ownership and management and remains 100 percent employee-owned, giving us the freedom and flexibility to invest our clients' assets with a long-term horizon.

We believe that successful investing requires discipline, patience and a singular focus on what matters. Our success over more than eight decades has been built on delivering attractive long-term investment performance for our clients. While solid investment opportunities can be found in many places beyond the borders of Minnesota and the Upper Midwest, our firm's second president, George Mairs III, recognized he was surrounded by an abundance of opportunities close at hand.

We have attempted in this White Paper to demonstrate that his approach was built on a solid foundation that has enabled Mairs & Power and our clients to grow and prosper and aim to continue to do so far into the future.

APPENDIX

LEGACY OF BUSINESS SUCCESSES

Below are a few brief examples of several Minnesota-based companies across the two largest sectors in the state—Health Care and Industrials as well as a brief look at the state’s role in the birth of the Information Age and one innovative startup. They illustrate common threads of invention, operational excellence, market leadership and a strategic mindset, traits we find in the DNA of many Minnesota companies.

LEADERS IN HEALTH CARE INNOVATION

Minnesota is recognized for its leadership in both the bio-medical and medical device industries and is a hotbed of innovation. The state ranks first in concentration of health care sector employment as a percent of total employment and Minnesotans file more medical device patents per capita than any other state, trailing only California in absolute numbers on both counts.³² More than 500 organizations either directly engaged or as allied participants in these industries have come together in a consortium dubbed “Medical Alley” to foster continued growth of the region’s health science sector.³³

Here are a few of the many companies that make Minnesota a Health Care leader.

- In 1957, in collaboration with the University of Minnesota Medical Center, a small medical equipment repair shop called **Medtronic (MDT)** developed the first battery powered pacemaker. Today, the global giant, with 10,000 employees in Minnesota, is a recognized industry leader whose medical devices are used in the treatment of nearly 40 medical conditions.³⁴
- **United Healthcare (UNH)**, the largest private insurer with a growing market share in both private insurance and Medicare Advantage plans, covers over 43 million Americans. It has diversified into prescription benefits management and urgent care centers and has invested in data analytic technologies to harness its vast storehouse of claims experience, prescription usage, clinical outcomes and costs to assist providers and companies implement effective and efficient patient care and product development strategies. United Health, with about 18,000 Minnesota-based employees, is strategically well positioned to be part of the solution in health care, whatever the politics of the debate.³⁵
- **Mayo Clinic**, founded in Rochester, Minnesota, in 1889 cemented Minnesota’s early reputation as a leader in health care innovation. With a global reputation for outstanding clinical care and research, the private non-profit has helped launch dozens of startups in Minnesota in just the past five years. Building off a comprehensive strategic plan, in 2013 the state and local governments partnered with Mayo and other private investors committing more than \$5 billion over 20 years to establish the Mayo Clinic as a worldwide Destination Medical Center.³⁶
- Two small Twin Cities-based companies, **Bio-Techne (TECH)** and **Intricon (IIN)** are also making their mark. Bio-Techne offers a broad portfolio of proteins and antibodies used by academic and commercial research laboratories, to bring greater efficiencies to drug research, development and commercialization. Intricon has leveraged its expertise as a leading manufacturer of high-end hearing aids, expanding into the high growth market for lower cost, over-the-counter hearing aids and as a leading supplier of continuous glucose monitoring products for Medtronic.³⁷

FROM COMMODITIES TO VALUE-ADDED MANUFACTURING

Minnesota's 19th Century economy started as a commodity supplier of raw materials to a growing country – primarily timber and agricultural products. Today, the state boasts a roster of value-added manufacturers large and small, serving markets around the globe. One in eight jobs in Minnesota is tied to manufacturing. With an efficient multi-modal, globally connected transportation network and a skilled workforce, Minnesota is positioned to maintain its role as a place where things get made.³⁸ Here are a few of Minnesota's manufacturing success stories.

- During the mining boom at the turn of the 20th century, **Minnesota Mining and Manufacturing (MMM)** started operations in northern Minnesota. **3M** soon was manufacturing sandpaper, beginning a legacy of innovation and new product development that continues to the present. With a diversified product portfolio and global presence, “The Mining” remains a Minnesota fixture as a Fortune 500 and Dow 30 industrial bellwether, the company, with an estimated 10,000 Minnesota employees, boasts over 100,000 patents granted during its lifetime and continues to track the amount of revenue derived from new products as a key performance metric.³⁹
- **Donaldson Company (DCI)** traces its roots back to the early 20th century, with the invention of the first effective air filter for tractor engines. The company has built on this innovation to create filtration technologies across a wide array of industrial applications, serving customers across the globe while maintaining leadership in its core – engine filters for harsh operating conditions.⁴⁰
- Founded in 1926, **Graco's (GGG)** original product was an air-powered lubricating gun. The company built on that innovation and today provides a wide variety of products that move, measure, control, dispense, and apply fluids across multiple industries globally.⁴¹
- **Toro (TTC)**, founded as original equipment manufacturer of tractor engines, revolutionized the turf management space, where it remains a leading manufacturer of landscape management equipment, including in-ground sprinkler systems, lawn care, and snow removal.⁴²
- **Fastenal (FAST)**, an industrial fastener and parts distributor, has been investing in building in-store locations within its customers' factories, changing the competitive landscape to its advantage while boosting its return on invested capital.⁴³
- **Tennant Co. (TNC)**, the Minneapolis-based manufacturer of commercial and industrial floor scrubbers and sweepers, brought high tech solutions to cleaning floors by adding telemetry and robotics. These autonomous machines can run without an on-board operator, promising large cost savings that the market has begun to embrace.⁴⁴
- **Protolabs (PRLB)** started in a garage in 1999, as a developer of complex software that linked mills and presses, dramatically speeding up delivery of injection molded prototype parts. Today the company is an acknowledged global leader in 3D printing and the world's fastest manufacturer of custom prototypes and on-demand production parts with twelve manufacturing plants in five countries.⁴⁵

MINNESOTA'S ROLE IN THE BIRTH OF THE COMPUTER AGE

In the decades after WWII, Minnesota was home to major mainframe and high-performance computer companies – **Univac, Control Data, Honeywell, IBM, and Cray** all had major operations here (and most still do). This arguably marked Minnesota as the first “industrial district” in the computer age, well before the rise of Silicon Valley or Route 128 outside of Boston. While the computer industry has changed, Minnesota remains a significant player in Information Technology with 9.3% of state gross domestic product (GDP) derived from the sector, 15th among all the states. The leading sectors by employment are in manufacturing, information technology (IT) and software services, research and development (R&D) and testing, and telecommunications and Internet services.⁴⁶

- One small local company illustrates how Minnesota is still a place where the future is being created. **NVE Corp. (NVEC)** makes high-end sensors and couplers based on innovative “spintronic” nanotechnology that reads electron spin rather than electron charge to store data. This technology offers smaller size, more precision, higher speed, and greater durability than conventional devices, and today is used in a variety of applications such as pacemakers, hearing aids, industrial automation and Internet-of-things devices.⁴⁷

DISCLOSURES

All investments have risks, including the possible loss of principal.

The S&P 500 Index is an unmanaged index of 500 common stocks that is generally considered representative of the U.S. stock market. It is a market value weighted index.

The Piper Sandler Co. Minnesota Index is a price-weighted index designed to measure the performance of the Minnesota economy.

It is not possible to invest directly in an index.

Performance data quoted represents past performance and does not guarantee future results.

The statements and opinions expressed are those of the adviser, Mairs & Power, Inc., and are as of the date of the report. All information is historical and not indicative of future results and subject to change. This information is not a recommendation to buy or sell. Past performance does not guarantee future results.

Quasar Distributors, LLC. FINRA Member Firm is the distributor for the Mairs & Power funds.

ENDNOTES

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