IRONVINE
CAPITAL PARTNERS, LLC

Investors & Friends of Ironvine-

After steep declines in 2022, U.S. equity markets stamped out a second straight year of strong performance in 2024. The cap-weighted S&P 500 index returned 25% while equities in general—as measured by the equal-weighted S&P 1500 composite—returned just under 10% for the year.

As economists and market prognosticators turn their attention to 2025, the so-called and ever present "wall of worry" has shifted from last November's elections to whether or not the impending economic experiment outlined by incoming president Donald Trump will work.

Trump's pro-growth agenda is a cocktail of tax breaks, deregulation designed to reduce federal bureaucracy and encourage economic activity, and expansion of oil and gas production to lower industrial input prices and reach energy independence. His plan also aims to ignite a manufacturing renaissance by imposing hefty tariffs on imports, particularly from China, while implementing strict immigration policies.

Although we are largely in support of such a pro-business agenda, it isn't without its drawbacks, and execution is an entirely separate matter. Regardless, you won't see us getting dogmatic about economic policies or who's in charge in Washington. There's rarely any money in it. The real money is made in being optimistic about human ingenuity and the potential unleashed by innovation, commercialization of new products, and improved living standards. Capitalism has been the driving force behind America's economic prosperity that started in our colonies even before James Madison and his fellow delegates put pen to paper in 1787. We have full confidence this will remain the case.

When 4th quarter reporting season comes to a close, FactSet Research expects the S&P 500 constituents to have reported earnings growth of almost 10% for calendar year 2024—a healthy figure that sits atop the prior 10-year average of 8% (2014 – 2023). Analysts expect the S&P 500 to report nearly 15% earnings growth in calendar 2025, followed by another year of double-digit growth in 2026. Looking a layer deeper, it strikes us as more than wishful thinking on the part of consensus that growth drivers may broaden moving forward. While analysts expect the so-called "Magnificent 7" companies to report earnings growth of 21% in 2025, they expect the other 493 companies to grow 13%. The latter is a marked improvement from 4% in 2024—a year in which the "Mag 7" grew 33%, dominating earnings growth contributions (and equity returns).

Of course, forecasts of the future are rarely worth the paper they're printed on. Growth is rarely linear. By several measures, equity prices look rich. Paired with stubbornly high inflation, interest rates nearing their highest level since 2007, and a tense geopolitical climate, the causes for concern are understandable. As our investors and readers know well by now, we can't tell you where equity markets will be next month or next year. The best antidote to this uncertain future is to own a portfolio of high-quality businesses led by owner-operators who care deeply about the success of their companies and minority owners. Over many decades, stocks have generated higher returns than other asset classes. There's good reason for that. Unlike bonds, cash, or commodities, ownership interests in productive assets that reinvest cash flow to profitably expand their operations benefit from the wonders of compounding. We have full confidence this will remain the case as well.

We'll receive yearend operating results for our businesses over the course of the next several weeks. Assuming no major surprises during the final months of the year, our companies are expected to have grown their earnings collectively between 11% (Core) and 14% (Concentrated). While this rate of growth is higher than the cap-weighted S&P 500 index, the three large technology companies we own in size (Amazon, Microsoft, Alphabet) were similarly outsized contributors to 2024 earnings growth at Ironvine. What made this year unusual for us—and what makes us constructive about the next several years—is the number of businesses that *didn't* contribute much in the way of growth this past year. For example, our life sciences franchises saw only modest upticks to growth following two years of post-pandemic normalization, leading to flattish stock performance. CoStar Group's aggressive investment into Homes.com amidst near record low housing turnover weighed heavily (and, we believe, temporarily) on its reported earnings and stock price. Stiff competition and low reimbursement in Medicare Advantage led to below average growth at UnitedHealth Group. In all, roughly half of our owned businesses grew their earnings at mid-single digit rates or lower this year. Our best company-by-company thinking suggests a different and more constructive picture this coming year, and we're excited about several improvements we made to the portfolios during the fourth quarter.

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The semiconductor industry has been an area of increasing interest to us over the past several years. Clients will be familiar with our long-term investment in Analog Devices, which designs and manufactures a diverse range of chips used to convert real world inputs into digital signals. At our October investor day we discussed why we think there is also fertile ground in other areas of the semiconductor supply chain. As a brief refresher:

- Semiconductors are the fundamental unit from which nearly all technology is built,
- We expect technology will continue to further infiltrate our lives in coming decades, and
- A handful of best-of-breed companies will continue to lead their respective markets

Industry consolidation has created a host of competitively advantaged businesses that will benefit from these secular tailwinds, despite significant cyclicality over shorter time horizons. Investor sentiment often mirrors these near-term swings, shifting from despondent to euphoric, and vice versa, in a matter of weeks. Pairing this with idiosyncratic risks ranging from technological to geopolitical, we have waited patiently to build exposure to several niche industry leaders. Falling prices during the fourth quarter allowed us to establish new investments in three[1] semiconductor businesses—Taiwan Semiconductor Manufacturing Company (TSMC), Applied Materials, and Entegris.

Making semiconductors is arguably the most complicated thing human beings have accomplished at commercial scale. A little-known fact to those unfamiliar with this ecosystem is that most of the so-called "chip makers" such as Nvidia, AMD, Qualcomm, Broadcom, etc. do not actually "make" chips. They design them but outsource manufacturing to a third party (a "foundry" in industry parlance) due to practical constraints around the cost and complexity of the manufacturing process. **TSMC** was the first to recognize these constraints and pioneered the pure-play foundry model. It focuses solely on advancing manufacturing technology on behalf of its customers (the designers) to serve the industry's growing capacity needs. In this

[1] Two in the case of our Concentrated strategy (TSMC & Applied Materials)

role TSMC has established itself as one of the most vital and entrenched players in global technology advancement.

TSMC's competitive advantages can be boiled down to three parts: technology, scale, and customer trust. Semiconductor manufacturing is a business where if you're good, you get better, and if you're bad, you get worse. The cumulative learning of manufacturing previous generation technology is imperative to advancing to the next. Today, the features TSMC manufactures on a chip are thousands of times thinner than a single human hair, and billions of them are squeezed onto a chip the size of a fingernail. Accomplishing this level of precision economically requires substantial volume and capital. TSMC invests more than $30 billion annually in manufacturing capacity and ships more than twice the units of its closest peer. Finally, customer trust enables TSMC to expand these advantages in ways its competitors cannot. TSMC's model as a pure-play foundry ensures 100% alignment with customers, whereas Intel and Samsung, the two remaining companies attempting to build leading-edge chips, are conflicted by the need to serve their own design businesses. This trust is crucial for chip designers that handover their most important IP to a third-party manufacturer. Because TSMC serves effectively the whole industry, it is indifferent on where semiconductor growth comes from as long as it comes from somewhere. It has been able to ride the PC, mobile, cloud computing, and now artificial intelligence waves because of this agnosticism. The result is over 90% of leading-edge semiconductor chips are now manufactured by TSMC—a position we see as unlikely to change without substantial government intervention.

A key challenge in investing is finding a business that generates high returns on invested capital (ROIC) with the ability to invest substantial capital at those high returns. Typically, you get one or the other—low ROIC and high reinvestment rate, or high ROIC but limited runway to reinvest. TSMC is a rare example where both exist. Currently, much of this growth is being driven by artificial intelligence. We do not claim to know who will win the AI race, or how long that race will continue. However, we believe the winners are likely to manufacture at TSMC, and whenever the tide runs out on AI, there will be a new technology in its place reliant on a trusted, scaled, and dependable manufacturing partner.

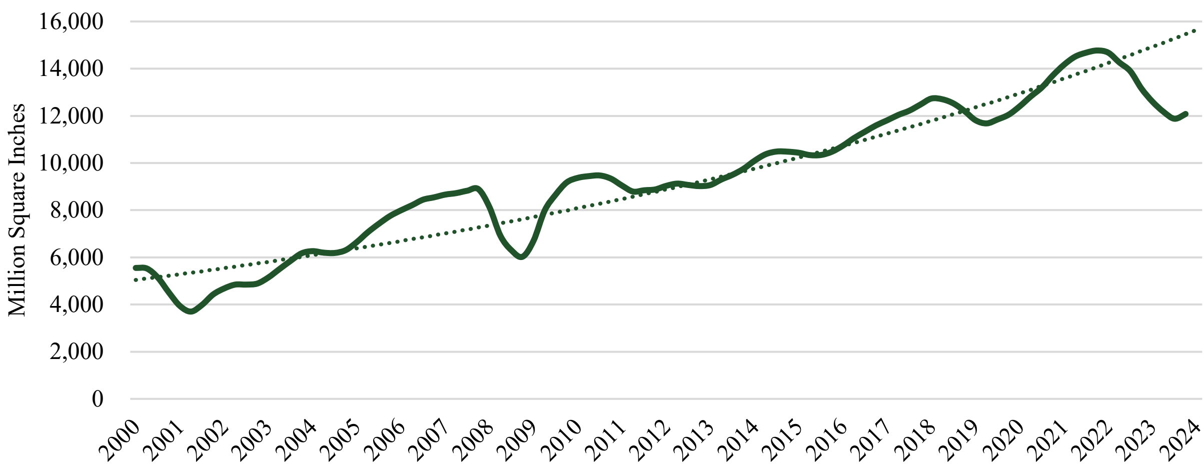
A portion of the capital TSMC expends on behalf of customers is on highly technical equipment used in the manufacturing process. Much like leading-edge foundries, the semiconductor capital equipment ("semicap") industry has gradually consolidated into a handful of global titans who have developed scale and expertise in the various stages of making chips. **Applied Materials** is arguably the broadest provider of such equipment, holding strong or dominant positions within technology used to deposit material onto silicon wafers (deposition), remove material from wafers (etch), clean wafer surfaces during manufacturing, and inspect for defects (process control).

Applied's strength rests in material sciences. As physics limits the ability to put transistors closer and closer together, leading-edge chips have generally become larger and more complex. This complexity requires new architectures, improved connectivity, an ability to manage power more efficiently, and novel ways to package groups of chips so they can work together. All of this results in more steps in the manufacturing process, which requires new and more precise equipment. Overall wafer fabrication equipment (WFE) spending has grown roughly 10% annually over the past decade, with Applied growing its revenue roughly two percentage points faster due to its strengths in materials engineering. We believe this secular increase in chip complexity will continue, allowing Applied to increase its installed base of 50,000+ instruments, deepen its customer relationships, and outgrow industry WFE expenditures over the next several years.

At its core, **Entegris** does three things. It manufactures chemicals and materials that go on semiconductor wafers, it makes filters used to purify said chemicals and materials before application, and it produces various products used to ensure the safe/clean transport of these chemicals, materials, and wafers. Most of what Entegris sells are consumable products used in the semiconductor manufacturing process, which results in substantial volume-driven revenue. In many ways, Entegris' business model holds similarities to our investments in aerospace parts and life science tools & diagnostics. Just as FAA and FDA regulations result in parts / tools being specified into customer processes for the life of programs in those industries, semiconductor manufacturers create processes of records (PORs) that embed suppliers into manufacturing recipes for the life of a given node due to the disruptions even minor changes can have on yields (the percentage of good chips that come off the line). This lock-in results in consistent market share for current products and keeps Entegris close to customers as they develop next-generation products.

Looking forward, increasingly complex chip architectures require new and ever more pure materials, creating the opportunity for Entegris to continue to outgrow semiconductor volumes. Despite torrid AI related demand, as we sit today semiconductor volumes are in one of the worst down-cycles in history as measured by either magnitude or duration. Over the long term we believe this trend will return to historical growth patterns. When it does, Entegris' expanded content will position it for strong earnings growth.

Silicon Wafer Shipments[2]



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We sell businesses primarily for two reasons. The first is because of a loss of confidence in management. The second reason arises when a company's economic position deteriorates. The former is pretty cut and dry—if we don't trust you, we're not going to invest alongside you. The latter is more nuanced, requiring astute observation to detect signs of structural decline before they fully materialize.

We began spotting such a shift affecting the dollar stores' economics approximately 18 months ago. Historically, both Dollar General (DG) and Dollar Tree thrived during periods of difficulty for the U.S. consumer. Low prices, broader selection, and convenient locations provided economical alternatives to pharmacies and c-stores for so-called "fill-in trips" between larger shopping trips. A collection of post-pandemic factors made the past couple of years different, however, and our assessment is that both dollar store models face structural headwinds that will make prior levels of profitability difficult to sustain. What changed? The list includes several factors, but the single biggest is the impact of persistently high inflation on both the core dollar store customer *and* the companies' operating costs. In short, the millions of customers who typically brought more of their paychecks to the dollar stores under budgetary pressure curtailed spending either out of necessity or because other formats provided equal or greater value and

[2] Source: SEMI (www.semi.org)

convenience (Walmart+, Amazon Prime same-day and one-day delivery, etc.). These factors combined with permanent wage inflation likely means lower earnings and lower capital efficiency going forward.

As our concerns around the impact of these challenges grew, we sold the entirety of our investment in Dollar General in our Concentrated strategy during the third quarter of 2023 and concluded selling DG in our Core strategy during the second quarter of 2024[3]. Dollar Tree was in the midst of executing a series of strategic initiatives at the time with some promising early results. As we began to see similar challenges offset trade down from middle class customers and the threat of fresh tariffs on Chinese imports increased, we elected to sell half of our Dollar Tree investment during the third quarter and completed the remainder during the fourth[4]. The journeys of these two discount retailers are not over, but we believe there are clearer paths to growing our capital. And while realizing losses on any investment is painful, we believe our investment in semiconductors offers us better and more durable future returns.

We sold the balance of our Adobe for similar reasons. In talking with large customers and users of Adobe's products, our list of questions around Adobe's competitive positioning has grown. Not surprisingly, our confidence in the business' ability to achieve the growth opportunity we first envisioned has not. The advent of generative AI is game-changing in creative software. Adobe has embedded AI features into its products, but the jury is still out on whether they will be able to monetize them. More concerning is Adobe's inability to gain traction with the non-professional market, which is a crucial leg to the company's growth ambitions. Adobe's Digital Experience Platform, which accounts for a quarter of company-wide revenue, enables large enterprises to connect with customers in real time. We have growing concerns that these solutions, assimilated via numerous acquisitions, fit together seamlessly enough to win against narrower, application-specific software. From the price we sold our shares the Digital Experience platform would need to reach substantial profitability for us to earn an acceptable rate of return on our investment. When combined with our lack of conviction in the Creative Cloud business we took advantage of pre-earnings strength to sell the rest of our shares at $545, recognizing a modest long-term gain.

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Thank you for your continued trust. As always, please reach out to any of us if you'd like to connect in more detail.

The Ironvine Team
January 16, 2025

[3] Weighted average DG sale prices were $155.26 and $143.65 in Concentrated and Core, respectively
[4] Weighted average Dollar Tree sale prices were $91.03 and $83.85 in Concentrated and Core, respectively

IRONVINE CAPITAL PARTNERS, LLC

CONCENTRATED EQUITY

		Annualized Returns as of 12/31/24				Cumulative
	1 Year	3 Year	5 Year	10 Year	Inception 04/01/12	Inception 04/01/12
Ironvine Concentrated (net)	10.46%	1.83%	9.65%	9.26%	11.14%	284.51%
S&P 500	25.02%	8.94%	14.53%	13.10%	13.99%	431.20%
Equities	9.72%	2.86%	10.26%	8.64%	10.26%	248.05%
Bonds	(0.70%)	(4.34%)	(1.37%)	0.74%	1.22%	16.68%
Cash	5.32%	3.98%	2.49%	1.75%	1.38%	19.14%

Performance reflects the results of the Ironvine Concentrated Equity Composite. Index returns are shown on a total return basis which assumes the reinvestment of dividends and interest income. Equities represent the total return of the S&P 1500 equal-weighted index. Bonds represent the returns of the Bloomberg US Treasury index with 7-10 years to maturity. Cash represents the returns of the Bloomberg 1-3 month Treasury Bill index. Indices are unmanaged, do not incur fees or other expenses, and are generally not available for investment. See the Important Disclaimers at the end of this document for additional pertinent information.

CORE EQUITY

	Annualized Returns as of 12/31/24				Cumulative
	1 Year	3 Year	5 Year	Inception 01/01/16	Inception 01/01/16
Ironvine Core (net)	10.20%	1.23%	10.56%	12.96%	199.48%
S&P 500	25.02%	8.94%	14.53%	14.49%	237.86%
Equities	9.72%	2.86%	10.26%	10.41%	144.09%
Bonds	(0.70%)	(4.34%)	(1.37%)	0.64%	5.87%
Cash	5.32%	3.98%	2.49%	1.95%	18.94%

Performance reflects the results of the Ironvine Core Equity Composite. Index returns are shown on a total return basis which assumes the reinvestment of dividends and interest income. Equities represent the total return of the S&P 1500 equal-weighted index. Bonds represent the returns of the Bloomberg US Treasury index with 7-10 years to maturity. Cash represents the returns of the Bloomberg 1-3 month Treasury Bill index. Indices are unmanaged, do not incur fees or other expenses, and are generally not available for investment. See the Important Disclaimers at the end of this document for additional pertinent information.

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Reported performance figures represent an average, or composite, of our progress. Individual returns will vary based on the timing of your investment with us, fee differentials, or other account-specific circumstances. Client reporting, including positioning and performance, is sent under separate cover.

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Ironvine Capital Partners, LLC (Ironvine) is an independent registered investment adviser registered with the United States Securities and Exchange Commission. The firm definition includes all assets that are managed by Ironvine.

The Ironvine Concentrated Equity Composite *includes all accounts over which Ironvine deems to have discretion and that follow the composite strategy. Ironvine Concentrated Equity seeks to earn above average returns by investing primarily in a concentrated portfolio of global issuers in all facets of capital structures, including and not limited to common and preferred stocks, debt instruments, convertibles etc.*

The Ironvine Concentrated Equity Composite was created on December 1, 2013, with an inception date of April 1, 2012. The strategy does not seek to directly track or compare itself to any particular equity benchmark, but the composite is compared against the total return of the S&P 500. The benchmark includes 500 stocks representing all major industries of the economy. Ironvine Concentrated Equity employs a total return strategy and the S&P 500 is provided as it is the most widely recognized alternative to any actively managed mandate amongst global investors. Past performance is not indicative of future results. All results are calculated in US Dollars and include reinvestment of dividends and other earnings.

Performance presented prior December 1, 2013 occurred while the Portfolio Management Team was affiliated with a prior firm and the Portfolio Management Team members were the only individual(s) responsible for selecting the securities to buy and sell. A review of the performance record for compliance with the portability requirements of the GIPS standards was completed by an independent accounting firm. The verification and performance examination report are available upon request.

Prior to October 2017 the composite was named "The Ironvine Composite."

The Ironvine Core Equity Composite *includes all accounts over which Ironvine deems to have discretion and that follow the composite strategy. Ironvine Core Equity seeks to earn above average long-term returns by investing primarily in a portfolio of common equity securities with a particular focus on companies that have the ability to generate high and sustainable returns on invested capital.*

The Ironvine Core Equity Composite was created on 12/29/2017, with an inception date of January 1, 2016. The strategy does not seek to directly track or compare itself to any particular equity benchmark, but the composite is compared against the total return of the S&P 500. The benchmark includes 500 stocks representing all major industries of the economy. Ironvine Core Equity employs a total return strategy and the S&P 500 is provided as it is the most widely recognized alternative to any actively managed mandate amongst global investors. Past performance is not indicative of future results. All results are calculated in US Dollars and include reinvestment of dividends and other earnings.

Performance presented prior January 1, 2017 occurred while the Portfolio Manager, Richard L. Jarvis, was affiliated with a prior firm. Mr. Jarvis was the only individual responsible for selecting the securities to buy and sell at the predecessor firm and was a primary decision maker in that capacity at Ironvine until his retirement on 12/31/20. This performance record was incorporated into the Ironvine Core Equity Composite in compliance with the portability requirements of the GIPS standards. A copy of the Portability report is available upon request.

Ironvine Capital Partners ("Ironvine") claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS® standards. Ironvine has been independently verified for the periods 12/1/13– 12/31/22. A firm that claims compliance with the GIPS® standards must establish policies and procedures for complying with all the applicable requirements of the GIPS® standards. Verification provides assurance on whether the firm's policies and procedures related to composite and pooled fund maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS® standards and have been implemented on a firm-wide basis. The Ironvine Concentrated Equity Composite has had a performance examination for the periods 12/1/13– 12/31/22. The Ironvine Core Equity Composite has had a performance examination for the periods 1/1/17– 12/31/22. The verification and performance examination reports are available upon request.

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Results are based on fully discretionary accounts under management, including those accounts no longer with the firm. To be included in the composite an account must have a minimum value of $25,000 at the beginning of a month. The U.S. Dollar is the currency used to express performance. Policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request. Returns are presented net of management fees and commissions and include the reinvestment of all income. Net of fee and commission performance was calculated using actual management fees and commissions. The investment management fee schedule for the composite is tiered, at 1.0% for relationships less than $10 million, 0.90% for relationships between $10 million - $25 million, 0.80% for relationships between $25 million - $50 million, 0.70% for relationships between $50 million - $100 million, and 0.60% for relationships above $100 million (each tier indicated as an annual percentage charged quarterly). Actual investment advisory fees incurred by clients may vary. The collection of fees produces a compounding effect on the total return net of fees. For example, a portfolio that earned 8% annually for ten years would result in a cumulative return of 115.9% before investment management fees and 96.7% net of such fees, assuming a 1.00% fee per year.

The firm's list of composite descriptions is available upon request. Effective 1/1/2017 Ironvine merged with Saddle Road Partners, LLC (Saddle Road). The surviving entity is Ironvine Capital Partners, LLC. For more information about any of the above contact Paul Penke at 402.916.1702 or ppenke@ironvinecapital.com. No part of this article may be reproduced in any form, or referred to in any other publication, without express written permission.

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