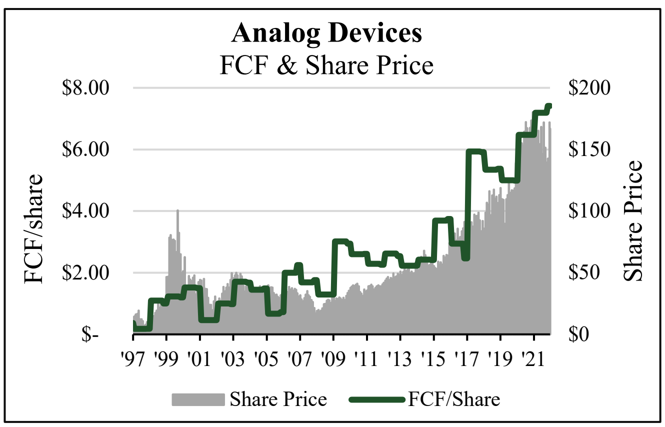
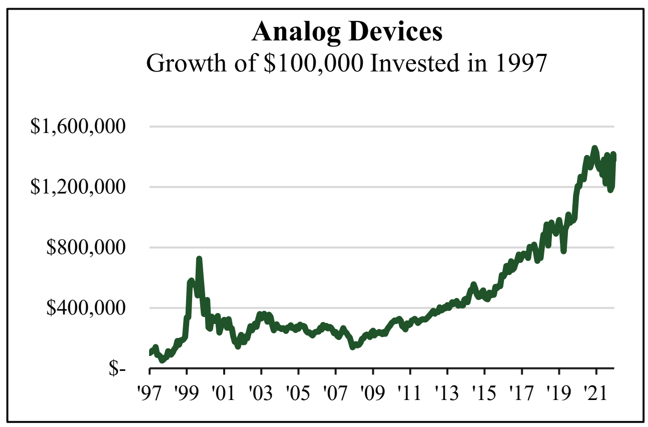
IRONVINE
CAPITAL PARTNERS, LLC

Investors & Friends of Ironvine-

As we pause to reflect on another year, it's helpful to return to some first principles. Since our founding in 2012, we've allocated most of Ironvine's resources to one task: studying the long-term progress of businesses with superior economics run by talented management teams. Each year this ongoing effort leads to some sharpening within our portfolios, but by and large, it serves as a reminder of one of the most proven tools for growing wealth over the course of human history. Patience.

We recently examined the 25-year performance record of Analog Devices (ADI), a company we first purchased in early 2019. ADI has many characteristics we prize in an investment (detailed here), but the principle we want to highlight is a timeless one: **in the long run, a company's value grows at roughly the same rate as its earning power.** The left chart below tracks ADI's profitability, measured by free cash flow (FCF) per share, along with its share price. As you can see, the stock's total return[1] and its FCF per share have grown at very similar annual rates, 12.3% and 12.8%, respectively, over the 25-year period ending in 2022. The result for the patient owner, shown on the right, is $100,000 of initial investment growing to $1.38 million.





This outcome isn't unique to Analog Devices. Of the businesses Ironvine holds that have been in existence for 25 years, the picture is similar. This historical consistency serves as the cornerstone of our approach to public equity investing. It also explains why our research efforts focus on a company's ability to maintain or improve its competitive position, which is essential given the long holding periods required to generate outsized returns.

Revisiting the chart on the left above, notice the volatility of the green line representing ADI's annual FCF/share. At many points along the way an investor fixated on near term growth rates or economic forecasts could have been convinced to sell based on current trends. Such an investor would then have been faced with the difficult decision of whether and when to reinvest, how much, and in what business(es). This single choice to sell—

[1] Source: Bloomberg. Total return including share price change and dividends reinvested.

presumably with the goal of avoiding a temporary drawdown in the stock price—introduces a host of other variables (and risks!) in reaching a sound outcome.

Think back to the news flow in 2008–2009 for our owner of Analog Devices. The global economy was in a tailspin induced by the U.S. housing crisis. Several large banks collapsed and required rescue financing from the government. Unemployment reached 10%. For two years, ADI's stock languished at prices not seen in a decade. Yet by yearend 2009 the investor who first purchased ADI in 1997 could have sold, relieved to have emerged from the Great Financial Crisis with 2.5 times his money. Not bad, and no risk of having to white knuckle it through another downturn. However, in doing so he would have truncated his total return by a factor of 11 times his original investment by yearend 2022.

While the environment today doesn't appear as grim as it did in '08-'09, a quick perusal of a week's worth of economic news provides plenty of reasons for concern. A recent Bloomberg Economics report put the chances of a recession this year at 100%. Deutsche Bank now expects US unemployment to reach 6%. And the Federal Reserve has taken a hard stance that it's not done raising interest rates. Good reasons for worry abound!

What none of us know is to what degree these headlines, along with countless others, are already reflected in current prices. Harkening back to the first letter we published in 2012—we wrote that regardless of the near-term economic outlook, *you won't see us attempting to time the general price level of the market, investing in turnarounds, or placing bets on macroeconomic outcomes. Instead, we will follow a narrow path of purchasing, at attractive prices, stakes in a small collection of outstanding businesses that generate returns on capital superior to those of the average enterprise.* Those words remain equally true today.

2022 wasn't an enjoyable year on paper, and plenty of near-term uncertainty remains. Yet our businesses grew earnings by approximately 4%, and we remain confident they will generate significantly more earnings five and 10 years from now. We expect the maxim illustrated above will once again hold, and that it will result in our capital positions growing in similar proportion.

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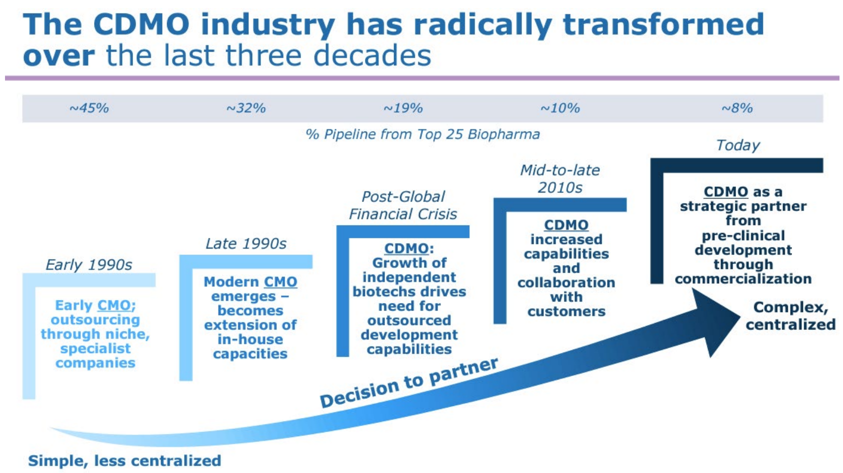
During the fourth quarter we increased our stake in contract drug manufacturer (CDMO) Catalent, initiating a new investment in our Concentrated strategy and expanding our position in Core by roughly 40%. Ironvine first purchased shares of Catalent in the spring of 2019, roughly nine months before the onset of the COVID-19 pandemic. As background, Catalent plays an integral role in helping biopharmaceutical and consumer businesses develop and manufacture medications and other health-related products. As one envisions the lifecycle of a typical prescription medicine, Catalent is often manufacturing for its customers from the earliest stages of research, through development, into clinical trials, upon commercialization, and following the loss of patent exclusivity.

We introduced the business in some detail during the second quarter of 2019 (here) and subsequently outlined the opportunity for attractive reinvestment as the biopharmaceutical industry continues to grow and outsource a greater degree of development and production work (here). Since our last written communication on the business, Catalent has invested aggressively in response to rising global demand, deploying ~$800 million toward internal capacity expansion and another $1.7 billion for acquisitions over the past 15 months. The chart below provides an overview of the multi-decade trend of utilizing scaled third-party manufacturers.



Catalent's 2017 acquisition of Indiana-based Cook Pharmica moved the company more deeply into biologic production, positioning it as a key domestic provider of "fill-finish" services for vaccine producers. In basic terms, a fill-finisher typically takes a customer's pharmaceutical ingredients and inserts them into a vial or syringe in significant volume at high speeds while avoiding even the slightest contamination. These production lines are costly to build, complex to operate, and highly regulated given the importance of both sterility and public trust.

The global pandemic created once-in-a-generation demand for vaccine production, providing an immediate boost to Catalent and others with fill-finish capabilities. Historically, Catalent boasted significant product and customer diversity. No single medicine represented more than 3% of company revenue and the 20 largest collectively represented only 21% of sales. Over the last two years, however, government-mandated COVID-19 work increased dramatically, reaching 27% of total revenue during fiscal 2022. Catalent recognized these activity levels were temporary, and thoughtfully invested the resulting profits to deepen its cell & gene therapy manufacturing capabilities and add two new delivery platforms in its Pharma & Consumer Health segment.

The slowdown in demand for pandemic-related vaccines, research, and medications is clearly positive for society. The difficulty for manufacturers has been predicting how quickly it would come and how sharply demand would contract when it did. At present, it appears these volumes will recede rapidly. The investments outlined above, however, are expected to enable Catalent to fully offset $750 million in COVID-driven revenue headwinds during the current fiscal year. Looking further ahead, the remaining $550 million of COVID-related revenue will eventually be replaced by the development and commercialization of treatments within current or future customer pipelines.

These headwinds have been joined by a collection of other real, but manageable near-term challenges. U.S. dollar strength is expected to mute reported growth by as much as 400-500 basis points this fiscal year. The company's consumer-related production (cough-cold medicines, vitamins, pain relief) is experiencing pressure from customers shifting to cheaper store-brand alternatives, leading retailers to draw down existing inventory instead of placing fresh orders. On the Biologics side of the business, early-stage development programs have slowed, driven in part by a tighter funding environment. Receivables from later-stage development programs have swelled as several key products near FDA milestones. And Catalent is still carrying $300-400mm of excess inventory as it sought to buffer customers from supply chain volatility over the past two years.

Returning to the concept of patience, we believe each of these challenges is likely to be resolved over the next 12 to 24 months. Our analysis suggests a return to high-single digit organic growth and more consistent free cash flow generation exiting 2023 as inventories normalize, its gene therapy programs continue to make progress, and demand recalibrates.

Stepping back, CDMOs like Catalent are important strategic assets. They are integral to—and stand to benefit from—the continued growth and maturation of biologic pipelines, emergence of new delivery modalities, and need for increased manufacturing efficiency. Drawn by the essential nature of the work, some of the largest and most successful global healthcare companies have made significant acquisitions in the field in recent years at prices ranging from 15 to 22 times trailing EBITDA[2]. For perspective, Catalent shares recently changed hands at 11x EBITDA, the lowest multiple the stock has traded at since coming public in 2014 and well below levels where strategic transactions have been consummated. As the team executes, pandemic-related work is replaced by newer programs, and the world gradually returns to normal, we believe Catalent's stock will more accurately reflect its present and future earnings power.

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We sold our entire investment in "Meta" early in the fourth quarter at $128/share. We've written at length about the company previously known as Facebook—some of us still don't accept the name change—but allow us to explain our thinking one last time.

Facebook built an incredibly powerful platform that connected billions of people across the globe and its commercial facing organization developed self-serve tools businesses could use to efficiently create and deliver ads to users' feeds. These tools were revolutionary in leveling the playing field for small and medium-sized businesses that couldn't afford to advertise through traditional means 10-15 years ago. As these ad tools evolved—with credit often given to the rollout of App Event and Value Optimization campaign strategies in 2017—Facebook's ad-targeting and conversion measurement chops were becoming particularly potent.

As recently as 18 months ago, if a user clicked an ad in their Facebook or Instagram feed, the company could follow consumers through the life of their shopping journey on third party applications all the way to checkout. Facebook was able to know what users spent their time looking at and their money buying, and it could calculate return on ad spend (ROAS) with precision by showing advertisers which ads led to clicks and which clicks led to purchases. This feedback loop was used to inform its algorithm on what ads to serve up next and to whom. These were democratizing weapons in the hands of heretofore disadvantaged companies.

With the rollout of iOS 14 in the summer of 2021, Apple severed Facebook's ability to "follow" users through these shopping journeys. Facebook still knows which users click ads, but it can no longer tie activity on third party sites like time spent reading about a shirt, or the purchase of a hat, to individual user profiles. As a result, the wealth of data Facebook was feeding its ad-serving algorithm is now lessened, and the precision with which it can measure ROAS for advertisers has been impaired. We expect Google to follow Apple with comparable changes to its platform in the coming years.

[2] Thermo Fisher Scientific purchased Patheon for $7.1 billion in 2017, ~20x trailing EBITDA (earnings before interest, taxes, depreciation, and amortization). Lonza Group purchased Capsugel that same year for $5.6 billion, or roughly 15x trailing EBITDA. Charles River Laboratories purchased Cognate Bioservices in 2021 for $875mm, reflecting 22x trailing EBITDA.

Facebook has responded by investing unprecedented sums into computing power and engineering talent in an effort to fill the void caused by imperfect data with artificial intelligence. Compared to 2019 when it spent $41 billion in operating expenditures, Facebook will lay out roughly $85 billion in OPEX in 2022, and it plans to invest up to $100 billion in 2023. Capital expenditures have similarly doubled, growing from $15 billion in 2019 to an estimated $32 billion this year and next. To state the obvious, this will be a long and expensive endeavor—one that if completed will still leave Facebook playing the role of tenant in Apple and Google's real estate empire.

Finally, the company is doubling down on its augmented and virtual reality trailblazing ambitions to create the so-called Metaverse—the ultimate attempt at freeing itself from the rule of the mobile giants by creating a paradigm shift in how society computes. Facebook's Reality Labs segment cost the company roughly $12 billion in operating losses in 2022, and management has told investors to brace for those losses to grow significantly in 2023. These investments have an unknown payoff at best, and one that's five or even closer to ten years out, if at all.

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Facebook's determination to avoid The Innovator's Dilemma that has doomed so many of its predecessors is as clear to us as it is admirable. We wouldn't bet against this team. But the disruption of its core business with the flip of a competitor's switch begs the question: will it have to recreate itself again? And if so, in how long? Which brings us full circle to the theme we introduced at the beginning of this letter…patience. Should we have it or not? The answer is a resounding yes—in as much as the fundamental prospects of the business remain intact. And therein lies the nuance that resulted in different courses of action with two Ironvine companies—Catalent and Facebook—that have both experienced significant share price declines.

We invested in Facebook because its personalized ads and measurement tools lowered the cost of acquiring a customer so much that an enormously long tail of direct-to-consumer growth and new business formation—that Facebook would participate in—looked inevitable. Apple made it much harder for Facebook to personalize ads and nearly impossible for them to measure an ad's success. The result is a business that we have a harder time understanding fundamentally—one with less certain revenue growth and a much wider range of future cash generation possibilities. Thus, our decision to sell Meta in favor of a handful of businesses with more durable competitive positions and well-defined reinvestment runways.

In the case of Catalent, we were attracted to its established position as a trusted partner to the highly regulated biopharmaceutical industry. Notwithstanding some temporary macroeconomic headwinds and the current working capital bloat, the long-term trend of outsourcing components of the R&D and manufacturing process to CDMOs is alive and well, warranting patience. And, in our judgement, incremental capital at attractive prices.

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The addendums to this letter contain additional information on each of our strategies.

Thank you for your continued trust and confidence.

The Ironvine Team

January 27, 2023

	Annualized Returns as of 12/31/22				Cumulative
	1 Year	3 Year	5 Year	Inception 04/01/12	Inception 04/01/12
Ironvine Concentrated (net)	(20.36%)	6.13%	9.92%	10.41%	189.97%
S&P 500	(18.11%)	7.66%	9.42%	11.95%	236.45%

Performance reflects the results of the Ironvine Concentrated Equity Composite. See the Important Disclaimers at the end of this document for additional pertinent information.

CORE EQUITY

		Annualized Returns as of 12/31/22			Cumulative
	1 Year	3 Year	5 Year	Inception 01/01/16	Inception 01/01/16
Ironvine Core (net)	(22.10%)	7.44%	10.81%	12.28%	124.92%
S&P 500	(18.11%)	7.66%	9.42%	11.48%	113.99%

Performance reflects the results of the Ironvine Core Equity Composite. See the Important Disclaimers at the end of this document for additional pertinent information.

Important Disclaimers

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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– 12/31/21. 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– 12/31/21. The Ironvine Core Equity Composite has had a performance examination for the periods 1/1/17– 12/31/21. 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.