



January 20, 2022

To Our Clients and Friends:

For the fourth quarter of 2021, Giverny Capital Asset Management's model portfolio, which is a Poppe family account, rose 10.73%, net of fees,¹ vs. 11.03% for the Standard & Poor's 500 Index.² For the year, the GCAM model generated a return of 29.48% vs. 28.71% for the Index, net of fees. Our firm is now 21 months old and has generated annualized performance of 44.45%, net of fees, vs. 44.11% for the Index since inception.

We had a good year. We modestly outperformed the Index, which itself generated a tremendous return, and we did so despite holding a little cash throughout the year and with less exposure than the Index to the largest tech stocks. Once again in 2021, a small number of giant tech stocks drove a disproportionate share of the Index's return. We posted an imperfect scorecard for the year, but overall, I'm pleased with the portfolio.

A year ago, I wrote to you that investors had bid stocks to elevated levels that would require exceptional earnings growth to support. In fact, Corporate America delivered that earnings growth in 2021. The Index rose nearly 29% for the year, but it appears that underlying corporate earnings will rise 40% or more for the year. We will know more as results are reported in coming weeks.

In hindsight, the market assessed better than I did that the extraordinary level of relief pumped into consumers' bank accounts and the economy broadly in 2020 would stimulate strong earnings growth in 2021. A year ago, the consensus estimate for 2021 earnings for the S&P 500 constituents was about \$175, representing just 10% growth over 2019 levels, the year before the pandemic. Today, it appears 2021 Index component earnings will be closer to \$205. And the estimate for 2022 is above \$220, per FactSet Research.

Much has been written in recent years about the historically high price-to-earnings multiple accorded to stocks. Because earnings grew faster than stock prices in 2021, the PE multiple has come down a bit. A year ago, the S&P multiple on 2021 earnings estimates was 22.3x. At year end, the multiple on 2022

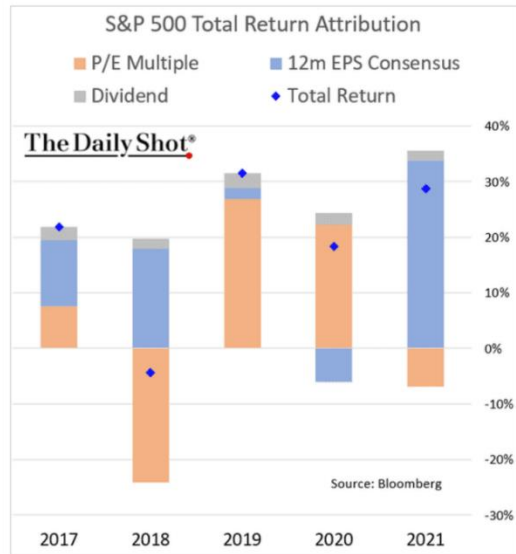
¹ The family account does not pay a management fee. The returns presented herein assume the deduction of an annual management fee of 1% to show what a client account's performance would have been if it had been invested the same as the family account during the period. Past performance is not necessarily indicative of future results.

² The S&P 500 Index returns include the reinvestment of dividends and other earnings. The Index is an unmanaged, capitalization-weighted index of common stocks of 500 major US corporations. The Index does not incur expenses and is not available for investment.

estimates was just above 21x and after a weak stretch for stocks to start the year, the PE multiple is just over 20x.

Two charts tell the story visually.

• S&P 500:



• The S&P 500 forward EPS:



The first chart shows that the S&P return in 2019 and 2020 was driven by an expanding PE multiple, with no net contribution from earnings growth because of the Covid-19 impact in 2020. But in 2021, the PE multiple contracted and earnings growth drove the return. The second chart tells the same story a different way: the market is up a lot, but the PE multiple is lower than a year ago, albeit still elevated.

Wall Street economists note that it takes about a year for monetary stimulus to work its way through the economy. If so, the continuing relief paid in 2021 presumably will keep the economy hot for at least the next few quarters. The market has been very wobbly in January and the Omicron wave of coronavirus has injected uncertainty into the economic recovery (and earnings forecasts), but people are working for higher wages, consumers are flush with cash and corporate earnings are growing.

An article published in The Wall Street Journal on January 10 noted that the first two rounds of stimulus payments lifted 11.7 million people out of poverty and helped Americans build up \$2.7 trillion in extra savings. The savings didn't flow entirely to households, but the extra savings amounts to about \$24,000 per US household, a significant number. JP Morgan Chase says its median checking account balance was 50% higher in the summer of 2021 than two years earlier.

The downside of so much cash hitting the bank accounts of so many people all at once is inflation. Might the federal government, in trying to minimize economic harm during the pandemic, have gone too far? I have been struck recently by reports from Evercore ISI economist Ed Hyman, who notes that for the past 50 years, the Fed Funds rate, or the rate at which the Federal Reserve is willing to lend to the nation's banks overnight to meet their liquidity needs, has tended to be about the same as nominal GDP, or a bit less. That is, if nominal GDP (which is real GDP growth plus inflation) were growing 5%, one might expect

the Fed Funds rate to be around 4%. So, the Fed Funds rate less nominal GDP over time would be slightly negative or perhaps zero.

There are two great exceptions to this equilibrium. In the early 1980s, the Federal Reserve under chairman Paul Volcker raised interest rates enormously to choke off capital to the economy and break a long stretch of stubborn inflation. For a time, the Fed Funds rate exceeded 15%, while nominal GDP growth was in low single digits, yielding a Fed Funds rate minus nominal GDP rate of 10 or more. What happened next is that the economy contracted violently, inflation declined and interest rates began a 40-year descent that powered a remarkable 40-year climb in asset prices. What may have been forgotten is that this played out slowly, not quickly.

To put an anecdote to this, my wife and I bought our first home in suburban Miami in 1992, paying \$143,500 and taking out a mortgage at 8% interest. Thirty years later, Zillow says that house is worth \$1.25 million. Not incidentally, a borrower today would pay about 3% for a mortgage. The interest rate is not the only reason the property value increased nearly nine-fold. Miami is hemmed in by ocean on one side and the Everglades on the other, and demand for single family homes outstripped supply of land over time. But the low interest rate meant the monthly payments kept declining (as owners refinanced) and allowed subsequent buyers to pay more for the asset. This contributes to a virtuous circle, as price appreciation encouraged owners to invest in the property, which raised its value. [I can see the photos on Zillow.] Owners felt comfortable adding a patio deck or a new kitchen because the property value was rising and the cost to borrow to pay for the work was low. We probably all know somebody who refinanced in recent years, taking on more debt yet reducing their monthly payment. Essentially, Americans built a lot of “free” swimming pools in recent decades.

Flash forward to today, and we run the risk of an opposite phenomenon. The Fed Funds rate is 0.25% as of this writing, while nominal GDP growth in 2021 was around 12% - roughly 6% real GDP growth and 6% inflation, per Evercore ISI. So, our equation of Fed Funds rate less nominal GDP is now roughly *negative* 12. The exact reverse of the Volcker era.

If history is a guide, this massively out-of-whack relationship between the cost to borrow money and nominal GDP growth suggests we may be in for a sustained period of either high inflation or, as a corrective, rising interest rates and consequently weak asset prices. If super-high interest rates broke persistent inflation, does it not stand to reason that high inflation might break the era of persistently low interest rates?

After 40 years of tailwinds from lower rates, an extended period of rising interest rates would feel quite painful. Forget 8%, if one had to pay 6% interest for a mortgage on a typical suburban house, it's conceivable the value of the nation's housing stock would lose a meaningful portion of its resale value.

And think about the knock-on effect: if your home lost, say, a quarter of its market value, how likely would you be to remodel the kitchen? Or move for a job in a new city? What would happen to property taxes if home values fell?

Higher asset prices lead to higher investment. And vice versa. If rates rise and asset prices tumble, there will be a correlated reduction in investment across the economy: in homes, factories and especially speculative ventures, as the prospect of not earning a profit for years while paying a meaningful tariff for the use of capital becomes unattractive.

Many smart people believe the current inflation is transitory, as it has been juiced by one-time relief payments that will quickly flow through the economy. Essentially, too much money hit our collective wallet at once, and we are spending it at the same time. That will end soon enough. Then, because technological innovation tends to lower costs, the US will resume its battle against deflation.

I don't know whether that is right or wrong, but it does seem possible that US corporations are going to have to relocate some of their supply chains to North America as our relationship with China deteriorates. Producing goods in North America costs more than in Asia. Labor rates have been depressed for decades; now the population is aging, immigration is low and, not trivially, the workforce is pushing back. The booming stock market allowed some workers to retire earlier than they may have planned. That \$2.7 trillion of extra savings allows others to be choosier about the jobs they take. Society's attitude toward low wages is changing. Wage and cost inflation may not be transitory.

Making predictions about the future is a fool's errand; planning for the future is not. GCAM is up more than 90% in just seven quarters since inception. We've had a great start, but looking ahead, I expect more volatility and more modest returns. I hope I am wrong about this! As always, I try to remember that through every type of economic environment in my lifetime, the right answer has been to own great companies, hopefully ones with pricing power, and tolerate volatility.

As for our portfolio, even after rising nearly 30% in 2021, I like the prospects of our underlying businesses. Here is a chart of our five best and five worst-performing positions for the year.

Top 5 Portfolio Position Performers					
	<u>Weight</u>	<u>Return</u>	<u>Impact</u>	<u>Security</u>	<u>Sector</u>
1)	3.94%	98.67%	3.01%	Credit Acceptance Corp.	Finance
2)	4.82%	97.89%	3.88%	Arista Networks, Inc.	Electronic Technology
3)	9.00%	65.30%	5.35%	Alphabet Inc. Aggregate A & C	Technology Services
4)	5.35%	60.21%	2.86%	Charles Schwab Corp.	Finance
5)	3.68%	51.48%	1.79%	Eurofins Scientific	Health Services
Total	26.8%		16.9%		

Bottom 5 Portfolio Position Performers					
	<u>Weight</u>	<u>Return</u>	<u>Impact</u>	<u>Security</u>	<u>Sector</u>
1)	1.47%	64.57%	-1.75%	Autohome, Inc. Sponsored ADR	Technology Services
2)	0.49%	41.72%	-0.99%	A2 Milk Total	Consumer
3)	0.25%	-2.78%	-0.05%	M&T Bank Corp.	Finance
4)	4.88%	0.04%	0.00%	[Cash]	Cash
5)	2.67%	1.56%	0.03%	Mastercard Inc.	Finance
Total	9.8%		-2.8%		

Note: position weight is the average weight during the year. Stocks owned for part of a year will have an average weight that does not reflect their size during the ownership period.

The good news is that several of our larger positions at the start of 2021 enjoyed stellar performance. That would include the five stocks on the chart, plus Carmax (+38%) and Constellation Software (+43%), which were among our top five holdings to start 2021.

Our two worst performers, A2 Milk and Autohome, were among our smaller positions at the start of 2021. We exited both during 2021 at significant losses. Other outright sales during the year were Jacobs Engineering and TJX Companies. Jacobs and TJX are both fine businesses and generated good returns for us, but we saw better opportunity elsewhere.

In addition to those four exits, we did a bit more trimming of positions than should be normal for us. This freed up some capital to make new investments, which I'll discuss below, but also left me with mixed feelings.

At various points we pruned Alphabet, Carmax, Arista Networks, Credit Acceptance, Eurofins, and JP Morgan. Of those, we reduced JP Morgan to make room for M&T Bank, but the others were strictly based on valuation.

I don't believe in arguing with Mr. Market on a regular basis. That is, it is not productive to think I can estimate value with precision, and then trade stocks based on my assessments. Portfolio management is not a work of art that gets better with endless sculpting.

If one of our stocks rises spectacularly, the right answer generally is not to argue with the market but to *listen* to it. Mr. Market is trying to tell us something: you got this one right! Learning how to take a compliment is a skill in and of itself, and especially so when one of our companies turns out to be even more valuable than we thought. (The reverse is also true: if the market hates something you own and bids it down, remember that this is the collective judgment of thousands of smart people. Are they wrong, or are you?)

Against that backdrop, it's fair to say we had a few stocks rise so much in 2021 that I felt compelled to take some profit while maintaining significant exposure. I sold a bit of our holding in Arista Networks at a split-adjusted \$133 after a remarkable rise during the year. Arista is now our fourth-largest position.

I trimmed our holding in Credit Acceptance Corp., the subprime auto lender, which was up nearly 100% last year. CACC remains one of the most underappreciated companies we own: even after that huge run-up, it trades for 12x expected 2021 earnings per share and, for good measure, will earn about 46% on equity this year. Like Arista, it enjoyed a spike upward after a great earnings report in the fall, prompting us to take some profits when the stock rose above \$660.

For those who aren't familiar with it, Credit Acceptance is a lender of last resort for car buyers. A person with a default or three on his credit report may not be able to get a loan from a traditional source. But that person may also need a car to get to work. And holding down a job is the only way the person can improve his credit worthiness. CACC works mostly with "buy here, pay here" auto dealers, who sometimes cater to financially stressed customers. It enters into profit-sharing arrangements with dealers, to incentivize them to make loans that can be collected.

In the current environment, relatively few people are financially stressed. The government has provided enormous relief to consumers, the job market is strong, wages are rising. Plus, the value of used cars has

risen so much that even when a customer can't make loan payments, the lender can recoup most of the loan balance after a repossession. So, Credit Acceptance has historically high rates of repayment on its book of loans.

This is true for all lenders, but Credit Acceptance charges very high interest rates that incorporate the risk of substantial defaults into its return profile. As loans pay off at unexpectedly strong rates, Credit Acceptance earns a windfall. But because most customers are improving their credit scores and can get loans from banks and credit unions, Credit Acceptance finds itself harvesting a bountiful crop but not planting many seeds. We like this company and think it has a strong compliance focus and ethical grounding. The PE ratio is perpetually low because people conflate lending to bad credit risks, and sometimes being adversarial with those borrowers, as being a bad company. Ultimately, we sold some shares to manage the risk that Credit Acceptance won't grow in the future the way it has in the past.

I sold some of our JP Morgan Chase in the fourth quarter, redeploying the proceeds and a bit of available cash into M&T Bank. JP Morgan is the nation's best giant bank and I am optimistic about its future. GCAM still owns some. But M&T has a multi-decade record of excellent results, a strong balance sheet and conservative loan loss reserves. Importantly, it is extremely sensitive to rising interest rates.

We ended the year with roughly a 7% weighting to US banks, in three holdings: First Republic Bank, JP Morgan and M&T. Normally, I like to try to identify the best company in an industry and own that one. In this case, however, our three banks have different business models. First Republic arguably is less a bank than a service organization for wealthy people and institutions. Over its four-decade history, it has suffered virtually no credit losses, as it makes extremely low risk loans to affluent borrowers. High net worth individuals tend to have different financial services needs than regular bank customers and they appreciate First Republic's service.

JP Morgan generates income from traditional bank lending, but also from trading, investment banking and wealth management. It is the nation's largest credit card issuer and also does business with about 80% of the Fortune 500. M&T is more oriented to commercial real estate lending and could be a major beneficiary of higher interest rates, as it has a lot of excess cash on its balance sheet and a stable core deposit base. As rates rise, it will have plenty of ability to make loans. Alternatively, M&T could buy back a lot of stock with that surplus cash.

In addition to our banks, GCAM owns other high-quality financial businesses that would benefit from higher interest rates, notably our large holding in Charles Schwab. Our insurers Progressive Corp., Berkshire Hathaway and Markel also benefit from higher interest rates as they invest the premiums paid by customers in fixed income securities until they pay claims.

I like the exposure to higher interest rates, but we own these businesses because we believe they possess durable competitive advantages.

Coming back to our trims, sales of Carmax, Eurofins Scientific and Alphabet were based on valuation. Alphabet's strong performance during the year caused it to rise above a 10% portfolio weight and we cut it back to 8.5% in July. Eurofins has benefited enormously from growth in Covid testing, which is unlikely to be an enduring source of growth, and we reduced our holding in July after a large run-up in the stock price. Carmax has been very volatile this year. We sold a small portion of our holding but feel upbeat about the company's position.

As for purchases, in the fourth quarter we bought M&T Bank and established a new position in Ciena Corp. We added modestly to our holding in II-VI Inc.

We talked about II-VI (pronounced Two-Six) in our third quarter letter and will repeat that we continue to believe this optical components manufacturer is well-positioned in a variety of growing markets, including network communications; electric vehicles; industrial automation and defense. II-VI's share price plunged after it emerged as the high bidder for the laser technology company Coherent last summer. We bought II-VI after the plunge, and in our first months of ownership, the stock has performed well.

The logic behind our purchase of Ciena is similar to II-VI. Whereas a large chunk of II-VI's business is in network communications, Ciena is entirely oriented to the sector. It makes optical equipment that transports voice and data on Internet and telecom networks.

Ciena has been a technological leader for a long time, but for many years the industry itself was challenging. First, domestically Ciena relied heavily on two customers: Verizon and AT&T. The customers had negotiating power and drove hard bargains. Second, Ciena competed globally against Huawei, the Chinese state-owned telecom components manufacturer. Huawei might be described as caring more about market share than profit and it was hard for Ciena to make money competing against it.

Huawei today has been banned from supplying new 5G infrastructure in North America, Western Europe and India, based on allegations that it shares customer information with the Chinese government. Plus, the explosive growth in cloud computing data centers has customers like Microsoft, Facebook and Google spending billions of dollars a year on their communications infrastructure. Bottom line: the customer base has expanded at the same time the largest competitor has receded.

As a result, Ciena has become a better business. In recent years, it has begun generating significant earnings and free cash flow and Wall Street analysts think Ciena can grow earnings per share at mid-teens rates over the next three years, or about 50% overall. We paid \$57 for our shares, or roughly 19x 2021 earnings.

I want to highlight a small shift in the portfolio. At year-end, Ciena had an \$11 billion market cap and II-VI an \$8 billion market cap. A third new purchase, M&T Bank, was valued at \$20 billion. The stock we sold to buy it, JP Morgan, has roughly a \$500 billion equity valuation.

It is simplistic but true that it's easier to grow a \$10 billion market cap to \$30 billion than to grow a \$30 billion market to \$90 billion. We're delighted to increase our exposure to midcap stocks, especially while gaining exposure to the growing network communications sector.

That said, since inception our largest position has been Alphabet. After a huge run in 2021, Alphabet's market cap approaches \$2 trillion. The core search business is a product most of us cannot do without and is well appreciated by the market. If there is a knock on Alphabet, it would be over capital allocation. The company spends \$25 billion annually on research and development, some of it in far-flung areas. R&D is not quite a black box, but it's hard for investors to know how wisely Alphabet spends this budget.

However, quite a few of Alphabet's investments have turned out brilliantly for shareholders: YouTube, Double Click and Android, to name three. Its Waymo division, which is developing self-driving cars, likely

is worth tens of billions of dollars. We think Alphabet is at the forefront of research on machine learning and artificial intelligence. In November, a friend sent us two days of wire service items on Alphabet. It looked like this:

November 3

Google aggressively pursuing major contract with Pentagon, NY Times says

Alphabet's Google is aggressively pursuing a major contract with the US Department of Defense to provide its technology to the US military. ... Google's plan to receive a potentially lucrative contract, known as the Joint Warfighting Cloud Capability, could cause problems from its outspoken workforce ...

Waymo to bring autonomous cars to New York City

Alphabet's Waymo said that ... it is bringing Waymo Driver to New York City for mapping and testing purposes.

Pegasystems announces collaboration with Google Cloud

Pegasystems (PEGA) announced a collaboration with Google Cloud that will help improve experiences in healthcare with better data insights and personalization. ... Organizations will be better positioned to deliver optimal care and health outcomes to millions of people by combining Google Cloud's comprehensive data platform with Pega's personalized recommendations.

November 4

Alphabet has new drug discovery company, Stat News reports

Alphabet is plunging into the drug discovery business, Stat News' Kate Palmer reports. Over the last year, the Google parent company has made a large and unlikely splash in the world of biology, with DeepMind, its AI research outfit, wowing structural biologists ... by cracking the longstanding problem of predicting protein structure with its deep learning model, AlphaFold 2 ...

CME Group signs 10-year partnership with Google Cloud for derivatives market

CME Group (CME) and Google Cloud announced a 10-year strategic partnership to accelerate CME Group's move to the cloud. CME Group will migrate its technology infrastructure to Google Cloud beginning next year ...

Five headlines from just two days in November suggest this is an incredibly ambitious company.

Despite its size, Alphabet is not very expensive. The company's market cap was \$1.9 trillion at year-end, but free cash flow for 2022 is estimated at \$80 billion, per FactSet Research. That's a 4% free cash flow yield. And the free cash comes after the previously mentioned investment of \$25 billion in R&D and another \$25 billion or so in capital spending, which is investment in physical plant that also supports growth. There also is \$135 billion of net cash on the balance sheet.

Essentially, the shareholder owns an extraordinarily profitable business with the means to spend at high levels to drive future growth. It is reasonably clear that across artificial intelligence, autonomous driving, cyber security and even biotechnology, Alphabet has enviable positions. We don't regret trimming Alphabet as it rose above a 10% portfolio weight, but maybe in three years we will.

As for the rest of our top 10 holdings, Carmax finished 2021 as our second-largest holding and it simply plows ahead, turning in good results even though much of the market seems skeptical of its model. Carmax continues to take market share profitably in the massive used car market. It seems to have disappointed some investors by not generating even more profit in recent months, as used car prices soared. But Carmax has always been very clear that it will maintain its mark-ups on cars at about \$2,100 per vehicle, even as retail prices ebb and flow. That practice provides customers with a fair deal and

shareholders with a good return. Carmax shares rose 38% in 2021 but have been quite weak to start 2022.

Arista Networks finished the year as our number three position, thanks to a near doubling of the stock price. Arista makes switches and routers used by hyperscale data center operators – Microsoft and Facebook are its two largest customers. Increasingly it is also a preferred solution for corporate communications networks. Arista sells hardware with an easy-to-use software operating system, which allows customers to manage their networks as they grow. This sounds straightforward, but most of Arista’s competition strictly sells hardware. Arista generated sales of just under \$3 billion in 2021. The market leader, Cisco Systems, has annual revenue of about \$50 billion. Cisco is a fine company, but if Arista can continue to deliver great products that are easy to for customers for manage, there should be years of growth ahead.

Our fourth-largest holding at year-end was Charles Schwab. Schwab shares rose 60%, buoyed by twin tailwinds of asset growth and the prospect of rising interest rates. Schwab is an exceptional business – it has grown new brokerage accounts at a steady 5%-6% clip for many years, and even faster recently. It has won the trust of retail investors – it’s hard to overstate how important trust is in financial services – but also offers financial advisers a low-cost custodial solution that has helped it win large chunks of business from legacy players like Merrill Lynch or Morgan Stanley. Schwab earns the bulk of its profit on interest rate spreads, or the difference between what it earns on cash deposits held in customers’ brokerage and bank accounts and what it pays to the owners of those accounts. As interest rates rise, so Schwab’s earnings. We’re happy about that, but we see Schwab continuing to grow brokerage accounts for years to come.

Constellation Software rounded out our top five after a 42% rise during the year. Constellation is run by one of our all-time favorite leaders, founder Mark Leonard, and continues to perform well. The company is actually an assemblage of hundreds of small enterprise software companies acquired over many years, catering to users in niche markets ranging from golf courses to law firm management to municipal governments to small utilities.

One concern with Constellation has been that there is a limit to how many \$5 million software companies one can buy. At some point, to maintain its growth rate Constellation would need to start buying larger businesses. When large businesses get sold, they tend to have suitors who bid aggressively against one another. Skeptics questioned whether Constellation could effectively buy \$300 million of assets in a year and maintain its strong returns on capital. Then it was \$500 million. Then \$600 million. Well, in 2021, Constellation made \$1.3 billion of acquisitions. It has doubled operating profit over the past four years while maintaining outstanding returns on capital with very low debt levels.

Progressive Corp. had a rough year that caused it to drop to our sixth-largest position from number three a year ago. Progressive is the country’s most efficient auto insurer, typically earning 7%-9% profit margins underwriting auto policies. The industry overall earns about 1% from underwriting. Progressive has a number of structural advantages that contribute to its superior profitability, including low customer acquisition costs (despite all the TV ads), superior data analytics that help it set accurate rates, efficient claims processes, and more.

The entire industry enjoyed a profit windfall in 2020 as Americans stayed home during the pandemic, driving fewer miles and getting in fewer accidents. In 2021, not only did they drive more, but they also

600 Madison Avenue, #2300, New York, NY 10022
646-669-8950 or gcaminfo@givernycapital.com

drove worse. Accident frequency didn't change much but severity did as there were more high-speed collisions. No underwriting model foresaw that strange turn of events. Worse, as supply chain challenges limited the production of new cars, the value of used cars soared. That Toyota that got insured based on an estimate of its value of \$25,000? When the car got totaled, the cost to replace it might've been \$35,000.

In the third quarter, Progressive lost money underwriting insurance for the first time in 20 years. The stock dipped based on fears that Progressive's competitive position was slipping. But as the rest of the industry subsequently reported even worse results, it became clear that Progressive's advantages had not eroded; rather, the entire industry had been stunned by the uptick in severe accidents and inflation in used car prices.

As I write this, it's clear the industry will push through rate increases in 2022. When rates rise, consumers tend to shop more. Historically, when they shop more, Progressive grows faster because of its ability to match the best rates to the right risks. We remain convinced Progressive will be a much larger company in five years than it is today.

Our number seven position at year-end was Credit Acceptance Corp., which we discussed above. At number eight was SS&C, run by another of our favorite founder-CEOs, Bill Stone. SS&C owns a full complement of businesses that offer software applications to manage securities trading, client account administration, accounting and transfer agent services for hedge funds, private equity firms and other investment managers. These back-office applications aren't very exciting, but they are the backbone of many firms' reporting and accounting systems. It's painful to change systems, which is why 95% of SS&C's revenue recurs every year. Stone uses that reliable cash flow to make smart acquisitions, such that SS&C has increased its operating profit by a factor of 12 times since 2011, per FactSet Research. This is a spectacular growth rate that is not reflected in the stock's modest valuation of 16x earnings.

Our ninth-largest holding at year-end was Heico. This is another company run by sharp owner-operators, in this case the Mendelson family in South Florida. Heico is the country's leading supplier of private-label spare parts for commercial aviation. The federal government regulates airplane spare parts very tightly, and there are few private-label manufacturers. Heico has steadily acquired niche suppliers and won regulatory approvals for new parts over decades. It has by far the widest offering of unbranded parts and can sell those parts for 30% less than the original equipment manufacturers and still make healthy returns. This market, understandably, has been under pressure as airplanes sat on the ground during the pandemic. But as miles flown rebounded in recent months, Heico enjoyed robust demand. Throughout the downturn, it also grew its aviation electronics business steadily. The stock is expensive relative to earnings, but Heico's share of the aviation spare parts market is small, leaving years of growth ahead.

Our number 10 position is the Death Star doppelganger formerly known as Facebook. We can't say the name Meta Platforms without chuckling and wondering if founder Mark Zuckerberg maybe skipped high school the week they read Romeo & Juliet. "Facebook by any other name would smell just as" ... never mind. This company is hated by many, and the name change might feel more like running away from the past than running to the future. But Meta remains the digital town square for some 2.8 billion people worldwide, who for better and worse use it and its sibling Instagram to congregate peaceably and exchange information on their favorite dance moves, vacation destinations and bonkers conspiracy theories. Because so many people spend so much time on Facebook, it is the digital world's best

advertising medium. Importantly, ad monetization outside the US is much lower than domestically, suggesting that despite its size Meta has a long growth runway.

Perhaps I am too flippant here, as Meta causes real harm to society with algorithms that push many toward extreme views and misinformation. But if Meta did not exist, I do not believe the torrential flow of misinformation would slow. People can congregate on the Internet without filters, full stop. The regulation of speech on social media platforms is an issue for responsible, thoughtful government policy. I am unaware of much progress being made.

Meta doubled its revenue and operating profit over the past three years, yet it trades for about the market multiple. There is some anxiety about the impact on Meta of Apple's decision to make it harder to track people who use its mobile operating system. I suspect these changes will result in Meta and Alphabet getting stronger over time, as they will have the machine learning capabilities to track consumers in alternate ways and deliver targeted advertising, while competitors won't.

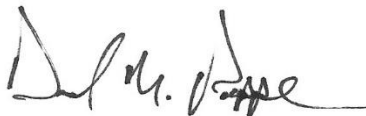
Since I spent time discussing the potential for higher interest rates to impact asset prices, let me repeat that our aim at GCAM is to outperform the broader Index and sleep well at night by owning a focused portfolio of businesses with durable competitive advantages, responsible levels of debt and great management teams. If our prosperity relies on my ability to predict the future, we're in trouble.

Before signing off, I'd like to thank my partners at Giverny Capital Inc., in Montreal. I could not be happier about this relationship. We worked together on a number of great research projects during the year, leading to several investments. In addition, the Giverny team has been exceptionally helpful to me and our operations chief Al Munro, Jr., behind the scenes.

We grew our client base nicely in 2021 and hope to do the same in 2022. We know that for new clients, the previous seven quarters aren't what matters. We need to generate value in the years ahead. While we don't think the overall market will deliver the outsized returns of recent years, we think our portfolio is a good one, our research process sound, and our prospects bright. I have a large majority of my family's net worth invested in this portfolio and my attitude is long-term.

I am delighted to have the client base I do and appreciate the confidence you have placed in me, Al and our Giverny partners.

With every good wish,

A handwritten signature in black ink, appearing to read "David M. Poppe". The signature is fluid and cursive, with a large initial "D" and "P".

David M. Poppe

**Giverny Capital Asset
Management, LLC**

Top 10 holdings

December 31, 2021

Alphabet A&C	8.7%
Carmax	6.7%
Arista Networks	6.1%
Charles Schwab	5.7%
Constellation Software	5.6%
Progressive Corp.	4.9%
Credit Acceptance Corp.	4.9%
SS&C	4.7%
Heico Class A	4.3%
<u>Facebook</u>	<u>4.3%</u>
Total	55.9%