

## **Quarterly Market Outlook & Strategy**

*Valor Added*

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## **"If Something Cannot Go On Forever, It Will Stop"**

Those [immortal words](#) were offered by Herb Stein, former Chairman of Nixon's Council of Economic Advisors, *"in response to those who think that if something cannot go on forever, steps must be taken to stop it."*

Sustainability is a hot topic these days, one that Paladin has pondered at length. It's fair to ask whether one should care whether a trend is sustainable. After all, if something is working now, why worry about a hypothetical time when it *might not* work? As Yogi Berra said, it's hard to make predictions, especially about the future! History is replete with failed prognostications—especially those warning of impending doom—which produced little more than embarrassment for their authors. One can cite Stein's still-relevant example of the "unsustainably" large US trade imbalance, which has been sustained for close to 40 years now. Or the massive Japanese government deficits that were sure (in the late 1990s) to provoke a rise in interest rates. Then we had the Peak Oil hysteria early in this millennium, China's "hard landing" of fifteen years ago, negative interest rates in Europe and...you get the idea.



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Even if a trend is correctly identified as unsustainable (with the benefit of hindsight, of course) that doesn't mean there's an obvious, effective and/or necessary way to stop it. Well-intentioned steps to halt or reverse a trend can make a situation immeasurably worse. Let's go back to Stein's 1980s trade imbalance. The primary goal of the Plaza Accord of 1985 was to lower the value of the US dollar vs. the yen, and thereby to reduce the deficit. It worked, but only for a time. And many analysts believe the resulting yen appreciation contributed to the 1980s bubble in Japan's stock and bond markets, whose collapse had a catastrophic impact on that economy. *The world is shaped by unintended consequences, because we don't really understand the complexity of the systems in which we operate.* Darwinian evolution has favored those who are good at adapting, not anticipating.

Humility and critical thinking are virtues for all of us, and a necessity for investors. Therefore, let us not speak of *predictions*. Let's call them *plans* instead. We all make plans, on the assumption that the world will carry on more or less as it has done up 'til now. It can be uncomfortable when plans must change, especially when the change is abrupt. As Alan Watts expressed so eloquently in his 1951 book, [The Wisdom of Insecurity](#), we know that disruption is inevitable, yet we increase our distress by clinging ever more tightly to our plans. Conversely, we may comfort ourselves by thinking a trend is unsustainable if we don't like the status quo. Peak Oil adherents hoped that consumers might be forced to economize on fossil fuels before we destroy nature and ourselves by burning them. Yet, not only have we *not* run out, the prices of most fossil fuels have fallen since the Peak Oil story gained prominence in the early '00s. One can identify any number of unfortunate trends that are, apparently, sustainable.

The United Nations defines sustainability as: *A focus on meeting the needs of the present without compromising the ability of future generations to meet their needs.* As this language suggests, there are a great many unknowns involved in such assessments. That said, if a trend or system is unsustainable, there will likely be warning signs of instability along the way—and powerful incentives for the participants in that system to adapt or adopt a different approach.

Therefore, we should be prepared for the *possibility* that the investment context in which we operate could change—perhaps in fundamental ways. Managing peoples' retirement assets is a great responsibility, one that we take very seriously. We want to ensure we are providing the best possible guidance to our clients. For many of them, that guidance extends well into the next generation—lengthening our planning horizon from 30 to 60 years or more. And yet, according to the Bureau of Labor Statistics, only a third of new US businesses survive for 10 years, and only a fifth make it to the 20-year mark. Paladin has eleven years under its belt and is going strong, which puts us in the minority of firms that launched in 2008. That said, we think “it's too early to say” that our approach is sustainable—just as Chinese Premier Zhou Enlai commented in 1972 that it was premature to speculate on the impact of the French Revolution.

Nassim Taleb's masterful book [Antifragile](#) offers powerful insights and practical advice to cope with a rapidly changing—and increasingly fragile—world. His message resonates with us, since Paladin aims not simply to remain resilient, but to *become stronger* in response to the challenges we confront. We aim to be there—and be better—for our clients, for many years to come.

### **Fostering an Anti-Fragile Mindset**

Taleb illustrates the many ways that, in our quest to tame nature, increase efficiency, and reduce risk, man invariably creates new and offsetting hazards. Let's consider some examples. Seat belts were designed to make us safer, and did so. But they also led drivers to compensate by raising their speeds, thereby increasing the risk of a major crash. Malcolm Gladwell documented similar effects from the introduction of anti-lock braking systems in Germany, the creation of child-proof caps on medicine bottles, and the effect of sidewalks and bike lanes on the

frequency and severity of vehicular accidents. As he explained back in 1996, [homeostasis](#) causes people to “consume” the risk reduction, rather than save it.<sup>1</sup> This concept is the intellectual cousin of *Jevon’s Paradox*, to which we introduced our readers last spring.

Homeostasis is a natural phenomenon. Technology may seek to overcome it, but so long as humans are the ones deploying the technology, nature usually has the last word. For example: the US Interior Department established policies to reduce the risk of forest fires. In so doing they prevented small blazes that might have eliminated dry tinder—which resulted in less frequent, but more devastating conflagrations. Antibiotics have been successful in curbing infections, while making us vulnerable to the lethal consequences of immune resistance. Avoiding germs and other “allergenic” substances has been shown to makes humans more susceptible to allergies. Large-scale, chemically-enhanced monoculture farming has boosted crop yields, while rendering plants more vulnerable to disease and pests. We rely on information technology to achieve scale economies across global production chains, which then become vulnerable to supply interruptions, intellectual property theft and the whims of policymakers. We design computerized airplane control systems that make flying safer, until one day the flight instructions contradict one another, resulting in a catastrophic crash.

Such failures occur because, over time, people treat latent risks as if they no longer exist, leaving systems exposed to less frequent, but more serious breakdowns. On balance, society benefits from innovation—things generally turn out fine—so long as we understand and can manage (or at least mitigate) multiplying, interconnected, and opaque risks. One might say the history of progress is one of innovation leading to increased efficiency, complexity and *managed* fragility.

Financial markets have a long history of fragility—of stability that breeds instability. In his 1986 book, [Stabilizing an Unstable Economy](#), Hyman Minsky provided a framework for understanding market cataclysms, which have been dubbed “Minsky Moments.” Nobel Laureate Robert Shiller also explained how rising asset prices foster investor confidence, creating positive feedback loops to the economy and markets, which reinforces a bias toward risk-taking. Shiller described this as a naturally occurring Ponzi process in his influential 2000 book [Irrational Exuberance](#). From the “portfolio insurance” that triggered massive program selling during the 1987 stock market crash, to the fixed-income arbitrage that caused the collapse of Long Term Capital Management (LTCM) in 1998, to the packaging of sub-prime mortgage securities that blew up the financial system in 2008, latent risks have routinely been underestimated and intensified by leverage. Why is that a problem? *Because markets that do not rise make it harder for leveraged investors to meet their obligations.* Actual declines are worse, of course; they can trigger margin-related selling that quickly snowballs. Quantitative strategies are especially prone to blowups, since they are often built around the same set of financial assumptions.<sup>2</sup>

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<sup>1</sup> Malcolm Gladwell, “[Blowup](#),” *The New Yorker*, January 22<sup>nd</sup> 1996.

<sup>2</sup> See “[Black Box Trading: Why They All Blow Up](#)” By Global Slant at *Valuwalk*, September 2<sup>nd</sup>, 2016.

Today's markets are fragile. Near-zero interest rates for over a decade have made it attractive for investors to borrow, and have required smaller market returns to service those debts. Central banks have been underwriting all manner of financial risk, with the goal of extending the recovery, while making it more fragile. To cite just a few examples: leveraged share buybacks, mergers, and private equity buyouts have increased the risk to corporate balance sheets. Debt-financed fracking operations have masked the high cost of extracting an increasingly scarce resource, driving down market prices in the process. State and local pension borrowing has postponed the day of reckoning for underfunded retirement plans, while eroding their solvency. Individuals are extrapolating past market returns and counting on uninterrupted pension and Social Security benefits, rather than saving for retirement. Even wealthy people are [borrowing against their art collections](#)—illiquid assets that will be all but impossible to sell in a market downturn. Throughout society, we've been ignoring risk and borrowing against the future, making our lives and livelihoods increasingly fragile.

Most people have no idea how to deal with rare but potentially catastrophic risks. Economic theory suggests a simple method for computing the expected payoff to future events: you identify a series of potential outcomes and weight them by the probability of their occurrence. This is how insurance premiums are calculated. But most people find it hard to imagine certain outcomes, and even harder to compute the associated probabilities. The complexity of modern life makes it difficult to calibrate interconnected and opaque risks. Even if the probabilistic method works out *on average*, an understanding of probabilities won't help you if you're caught in a catastrophic scenario. So here's some common sense: *if everything has to go right in order for your strategy not to fail, it's fragile.*



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## Getting Skin in the Game

Paladin serves as a fiduciary to our clients, which means putting their interests ahead of our own. Regardless of professional obligations, as a small business, we have an enormous stake in our clients' welfare; their success is critical to ours. These are close, ongoing relationships, not a series of impersonal, arms-length transactions. Paladin is structured to give our staff considerable *skin in the game*, so clients know we are motivated to act in their best interest.<sup>3</sup>

As such, it's natural for us to engage in anti-fragile thinking on our clients' behalf. First and foremost, we've chosen an investment approach whose risks are, we believe, discernible and predictable. Value investing—which entails buying assets that have fallen out of favor (and are relatively cheap) while selling those that are expensive—is a time-honored strategy that presumes a fundamental stability of the market context. Otherwise, it would be impossible to define "cheap" vs. "expensive." Our method presumes there are boundaries beyond which relative asset prices cannot easily move, given the self-equilibrating forces of homeostasis.

The greatest challenge in pursuing a value-oriented strategy is underperforming in the latter stages of a bull market and losing the patience of our clients. That said, we view this as an *opportunity cost*, rather than a true risk to their portfolios. Moreover, these periods of underperformance have, for Paladin, been more than offset by relatively good results during market downturns and in the subsequent recoveries. Our clients *win by not losing*, just as the tortoise bested the hare over a long race. We have never attempted to "beat the market" and yet, at the end of 2018, most Paladin clients were ahead of their benchmarks, with the largest performance margins among those who have been with us the longest. That at least *sounds* like a sustainable approach, insofar as we are helping clients meet their needs in the present, without compromising their portfolios' ability to meet future needs.

By contrast, momentum investing (along with popular risk-parity, short-volatility, carry trade, and market-cap-weighted passive strategies), extrapolates whatever trend is already in place. These approaches often produce high short-term returns, but are prone to abrupt reversals that can generate large portfolio losses. They are *fragile* strategies—ones for which a small change in system variables can produce large negative results. These are the kinds of investments we try to avoid. Instead, we design our clients' portfolios to be *anti-fragile*—to profit from market dislocations. We hold meaningful cash buffers for this purpose; we seek opportunistic investments that offer a risk-return profile with a strong positive skew; and we rely on barbell asset allocations and option strategies that benefit from heightened market volatility. By outperforming other investment approaches during bad markets, we typically gain clients in the years that follow, creating a counter-cyclical revenue profile for the firm.

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<sup>3</sup> After a decade in business, we have reached a size that allows us to offer a wide range of services, with a level of efficiency that helps keep costs down. Yet we remain small enough to know our clients well. We think the "sweet spot" that balances efficiency with a personal touch lies in the 50-100 client range.

We recognize that long-range plans are inherently fragile. Financial projections rely on numerous assumptions, and are highly sensitive to small changes in those assumptions. In order to build robustness into our clients' plans, we spend a great deal of time validating the assumptions with our clients, making them appropriately conservative, and conducting extensive sensitivity testing around them. We refresh our clients' financial plans frequently, to see whether they are tracking actual experience, and whether any revisions are warranted. Changes in our clients' circumstances and/or the market environment create opportunities for us to deepen our understanding of the dynamics of a plan—and make it more robust.

### **Biological Thinking**

In developing an anti-fragile mindset, Paladin has embraced what Martin Reeves calls "biological thinking." In a fascinating [2016 Ted Talk](#), Reeves addresses the question of how to build a business that lasts 100 years. He weighs the business imperatives of efficiency vs. resilience, noting that businesses that survive share some common traits: they build *redundancy* into their operations; achieve *diversity* across product lines, suppliers and customers; incorporate *modularity* into their organization; are embedded in the larger systems in which they operate, and *adapt* quickly to changing circumstances. Above all, they are *prudent* in their planning and management. Reeves draws a parallel between enduring firms and resilient natural phenomena, such as the phenomenally successful human immune system.

One of the easiest defenses against fragility is diversity. At Paladin, we don't put all of our clients' nest eggs into one basket. Modularity (managing components of the portfolio separately) and redundancy (ensuring more than one person knows each client well) help protect that diversity. We anchor our clients' investment plans to a solid financial plan. Most of all, we exercise prudence: we review and recalibrate risks often, and remember that successful investing is a marathon, not a sprint.

We are also seeking to make Paladin's operations as resilient as possible. That means building a strong internal succession plan. It means broadening our services and skills. It means updating our technology, while strictly controlling access to our clients' personal information. It means embedding ourselves in strong professional networks: quantitative analysts, pension and insurance consultants, accountants, estate and tax planning experts. We unite a [Burkean](#) respect for tradition and human dignity with a commitment to adaptive and continuous improvement.

A prototypically modern firm, by contrast, focuses on rapidly achieving competitive efficiency and economies of scale. Differentiation, technology and monopoly are seen as the critical tools to accomplish these goals, and speed as essential to success. The business ethos is to eliminate redundancy, dismantle silos, and stake the firm's future on revolution, not evolution. Strong leaders are expected to champion "disruption" and "creative destruction" at every turn. This normative "machine thinking" is increasingly common in a world dominated by computation, engineering and, increasingly, artificial intelligence. The adaptive and naturalistic mindset that guides Paladin's anti-fragile planning is very different.

Both perspectives are valuable, of course; they are the yin to each other's yang. A firm cannot remain competitive—or long survive—without the use of modern tools. Yet for every “solution” it provides, technology creates new and complex challenges, and it is foolish to stake everything on a set of techniques that have not been vetted by time. Whereas many innovations have clearly expanded human capacity (i.e., eyeglasses, computers, Wikipedia), others (GPS-enabled maps, electronic health records, robotic vacuums) serve mainly as prosthetics, surveillance devices, or tools to extract “consumer surplus.” Most tools bring a combination of good ideas and unintended consequences—making us both more *and* less capable, in different ways.

### Surveillance Capitalism

The tension between industry and nature, man and machine, revolution and evolution is as old as humanity itself.<sup>4</sup> But there's a new twist on this ancient story, as described in Shoshanna Zuboff's 2019 masterpiece, [The Age of Surveillance Capitalism](#). Zuboff details the work of technology firms in harvesting and analyzing massive quantities of personal data, in ways that are *deliberately* hidden from their sources: i.e., the users of their tools. She distinguishes the ostensible purpose of this intrusive data gathering (*to develop tools that make our lives better*) from technologists' true agenda (*to create and dominate markets for behavioral prediction*).

Zuboff's language is repetitive and overwrought in places, and she gives short shrift to technology's extraordinary benefits. We do not agree that the challenges created by machine intelligence reflect an inherent failure of capitalism. That said, we think Zuboff's analysis and framing are spot on—and well worth the time a careful reader will devote to her 500 pages.



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<sup>4</sup> The distinction between tools that expand vs. replace human capacity was first explored by Henry David Thoreau in [Walden](#) (1854), by Ivan Illich in [Energy and Equity](#) (1973) and by John Michael Greer, in [The Long Descent](#) (2008).



For the purposes of this essay, we are primarily concerned with the consequences of machine intelligence for the *fragility* of our economy and markets. Drawing on the useful framing provided by Martin Reeves, two issues are of particular concern. The first is the loss of *diversity* that results from the aggregation of valuable information in so few hands. Quite apart from the asymmetry of wealth and power that results from such concentration, any natural system becomes more fragile when it is dominated by a single paradigm, whether that be physical, mechanical or intellectual.

Tech companies implied that, in gathering and organizing the world's information, we would all have access to it. In reality, the information that's been shared represents a small fraction of what they've obtained—and is not the most valuable stuff. It's the "digital exhaust," or trail of "informational breadcrumbs" humans leave behind that has turned out to be gold dust, and which proprietary algorithms have transformed into solid gold. These behavioral insights are richer than anyone imagined, and yet are available to the very few. Sure, many companies are engaged in all manner of data gathering; any activity involving a computer is now tracked, usually in multiple ways, by multiple intermediaries. However, the vast majority of this information eventually finds its way back to Google, which dominates markets for behavioral prediction, starting with its auction-based ad-delivery system, AdSense.

According to Zuboff—who meticulously documents her sources—technologists have crossed the fine line between *prediction* and *manipulation* of human behavior. Their goal is to minimize uncertainty in order to achieve *deterministic* success for their prediction products. This raises a host of civil liberties concerns, since companies' promises to "anonymize" their data have proven to be quite hollow. Already there is extensive sharing of personal information across platforms, allowing companies to identify and "tag" specific individuals with a high degree of accuracy. Tech firms may have different goals, but they share a common agenda: to map and predict human behavior, down to the finest details. Concerns about the resulting infringement of privacy, and growing risks to personal autonomy and agency, are now widely discussed in the press, and among policy and technology experts. Less attention is paid to the *collective* consequences of sweeping behavioral "management."

There is, as we all know from experience, extraordinary diversity in human aptitudes and attitudes—it's a rich tapestry, to say the least. This diversity has been critically important to human survival and progress. Algorithmic behavior regulation, via closely-held, complex and opaque technologies, threatens that diversity. Let's consider a recent example: certain personal qualities have been shown to be [beneficial in the workplace](#); among the so-called [Big Five](#) traits, conscientiousness, agreeableness and openness correlate closely with professional success. These traits exist on a spectrum, of course—meaning that half of humanity might be *not so suitable* for work (NSSFW).☺ Yet who can doubt that the full array of human abilities and attitudes has played a critical role in the development of our species? When people are herded toward "correct" behaviors, a great deal of intrinsic (if not immediate) value is likely to be lost.

Evolutionary biologists have written of the myriad benefits that accrue from genetic “accidents” in a diverse ecosystem. Only the beneficial mistakes survive, so these are not, with the benefit of hindsight, viewed as such.<sup>5</sup> If intelligent machines try to improve/manage/accelerate this process via artificial selection, fewer mistakes will be made, including the useful ones. That’s *assuming* the algorithms are accurate in their predictions and effective in selecting for desirable human traits, which is very far from assured. We are reminded daily of technologies that make things worse, producing alienation, distrust, and insecurity. Tools that reinforce biases and marginalize those who don’t “fit” the preferred paradigm. Not to mention all the gadgets that simply don’t work as intended. Warren Buffet had a point when he labeled financial engineering a *Weapon of Math Destruction*. There’s a growing tension between machines that evolve at lighting speed, suppressing diversity along the way, and the evolutionary human processes of adaptation, innovation and winnowing that occur over generations, if not millennia. Machines may be more efficient, but they are almost certainly more fragile as well.

Many of the things we cherish are valued *because* they are imperfect, inefficient and fleeting; they *cannot* be produced by machines. These include ancient art, young love, home-cooked meals, live music, handmade objects, natural diamonds, wisdom and, of course, grandmothers. Presumably there is an evolutionary basis for our attachment to such things. Our species has a talent for recognizing and rejecting artifice, so it’s unlikely that modern behaviorists will have their way. When they break something—as they are prone to do, given the complexity and fragility of their methods—it’s likely that we will revert to simpler and more robust systems.<sup>6</sup>

A second, and more immediate, concern with the rise of machine intelligence relates to the loss of *redundancy* in our operational systems. What happens when complex technologies, upon which we have become so reliant, break down? It’s always been true that an effective tool quickly displaces its less effective predecessors. What’s new is the *speed* and *totality* of that displacement, resulting in a scarcity of viable alternatives. Network effects and industrial concentration make it difficult to bypass computer-mediated transactions; companies of all stripes are moving at warp speed to integrate computerized controls into everyday devices. You’re hard pressed to find an automobile that’s not laden with the latest technology—and it will be virtually impossible to do so in ten years’ time. Planned obsolescence has shortened the life cycle of many products, forcing us to “upgrade” to those manufacturers want us to use, so they can monitor our behavior.

One can think of tools (skills) through the prism of general-purpose (generalists) vs. special-purpose (specialists). Efficiency is maximized through the use of specialized tools, whereas resilience is sustained by those with broad skills that are readily adaptable to different purposes.

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<sup>5</sup> For some fun examples of practical mistakes that worked, see [this book](#) by Charlotte Foltz Jones.

<sup>6</sup> Joseph Tainter [explains](#) that complexity develops as a means of solving social problems—coordinating behavior and distributing scarce resources in a highly differentiated system. Eventually, societies confront diminishing returns to complexity, given the exhaustion of early/easy innovations. Societies, such as the Roman Empire, are then prone to collapse, which he defines as rapid and radical simplification.

What happens when we outsource our intelligence to machines, and those machines fail—or are hacked, or run out of the energy needed to run them? How will we respond as humans when our technologies traverse the slippery slope from helpful “nudges” to oppressive behavioral control? What if our algorithms run against cherished but subtle—i.e., not programmable—human values? If nature is destined to have the last word, what will that word be?

These are not hypothetical concerns about distant risks—they are of immediate and practical relevance to the day to day operations of a business like Paladin. The vast majority of small advisory firms are on a path toward storing/outsourcing all client data and analytics to cloud-based systems—in addition to their accounting, CRM, and other management tools. Many of these programs do not lend themselves to (or allow) redundancy, making advisory firms and their clients vulnerable to monopolistic business practices, data surveillance, hacking, loss of connectivity, and/or other service interruptions. We think those risks are unacceptable, so Paladin has chosen a different (and more difficult) path.

Many advisors—especially younger ones—have become quite reliant on technological tools in order to serve clients. They have no choice, really, given the scaling up of the size of advisory businesses in recent years. As a result, many advisors’ computational and analytical skills—their ability to “think on their feet” in addressing complex or nuanced investment and planning questions—is underdeveloped or atrophied. We’ve seen this quite dramatically in our recruitment efforts; a majority of potential candidates cannot solve what we consider to be relatively simple mathematical and analytical tasks, without the aid of their tools. Rather than succumb to the pressures of scale by “dumbing everything down,” we’re seeking employees who possess broad skills, a nimble and adaptable intelligence, and a love of learning. We then spend years honing their critical thinking.

### **A Word on Shareholder Value**

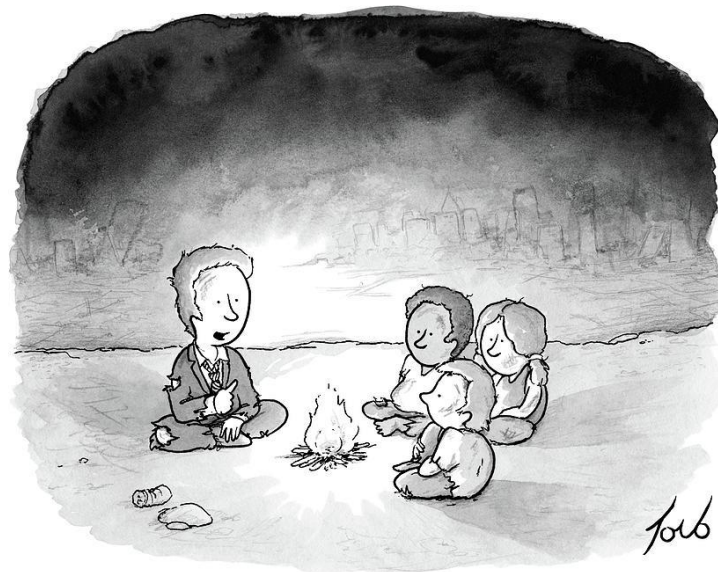
As you can imagine, modern technology is expensive, since intelligence is expensive. Privacy is also becoming costly; we pay extra for tools to secure our clients’ private information. A desire for diversity and redundancy in our operations further increases the cost of doing business. Most firms have addressed the rise in costs by abandoning redundancy, client privacy and/or increasing scale—with an attendant (and conspicuous) loss of service to clients. That is an inevitable result of the ascendance of “shareholder value added” (SVA) as business theology.

Paladin eschews SVA as an operating concept. Instead, we practice CVA (customer value added), which is consistent with our duty as a fiduciary. It’s always puzzled me that the fiduciary standard is (or at least was) viewed as the appropriate paradigm for professional service providers—advisors, accountants, attorneys, doctors—whereas the rest of corporate America is meant to prioritize shareholders. My guess is that large corporations have deployed *technology* to achieve a scale that allows them to treat clients and employees not as people, but as abstractions to be managed. SVA is the *ideology* that allows them to avoid the cognitive dissonance that might otherwise result from their doing so.

Jack Welch called SVA “[the dumbest idea in the world](#).” Shareholder value, he declared, is a result, not a strategy. We agree. Leaving aside the problems created by an incentive structure that prioritizes short-term stock prices over long-term business performance, SVA sets up an apparent conflict between owners, employees and clients—a conflict that need not, and *should not* exist in a successful enterprise.

Paladin simply would not exist if we espoused the principles of shareholder value added. Building an anti-fragile enterprise is not compatible with near-term profit maximization, given the requirements of *diversity, redundancy, modularity, adaptability* and *prudence*. Chasing assets (which creates a conflict of interest between current and future clients), escalating fees (which hurts portfolio performance) or curtailing service (which makes everyone’s life more difficult) has never been a goal of this firm. Since we’ve been successful without doing any of those things—and clients seem to like the way we operate—we think a holistic, mutually-affirming approach is both viable and honorable.

### **Valor Added!**



*“Yes, the planet got destroyed, but for a beautiful moment in time we created a lot of value for shareholders.”*