

## Investing in Innovation – Learning From the Past By: Jason Rodnick, CFA January 2024

## During the Gold Rush, most would-be miners lost money, but people who sold them picks, shovels, tents and blue jeans made a nice profit.

Famed investor Peter Lynch's quote on the 1848 Gold Rush encapsulates both the promise and peril of investing amid periods of speculation. Opportunity springs from enabling new innovations, but danger lies in chasing overnight fortunes.

The current gold rush and source of unbridled market optimism is artificial intelligence (AI). However, it is important to note that AI is not new. While OpenAI introduced the world to generative AI, machine learning and deep learning have been around for a while. In fact, over the past decade there have been several instances of AI hype followed by subsequently disappointing reality. For example, IBM spent over a decade investing billions of dollars and heavily promoting its Watson Health initiative as revolutionizing medicine through advanced AI, however in 2022, lackluster revenue and adoption led IBM to sell. Similarly, visions of self-driving cars dominating the roads were underpinned by forthcoming AI advancements. However, true autonomous vehicle capabilities remain elusive and years behind initial promises. Between healthcare missteps and lagging autonomous driving capabilities, the gap between AI aspirations and actual technological progress serves as a sobering reminder of the need to approach promotions critically rather than unquestioningly buying into claims about transformational impact.

There is no denying AI's enormous promise to transform industries and our everyday lives. However, the hype and enthusiasm for AI startups and related stocks is showing signs of speculative excess, with valuations becoming detached from business fundamentals. While an AI-powered future seems inevitable, current valuations indicate most AI investments represent poor opportunities today.

Three years ago, we published an article, "Investing in Innovation – the Promise and the Perils," warning that electric vehicle manufacturers had detached from reality, with valuations implying massive market share, revenue, and profit gains. Based on our analysis we argued that the euphoria made most EV stocks poor investments despite the genuine excitement about the industry's potential. Subsequent stock crashes have validated those concerns. Revisiting our EV analysis provides an excellent case study of the benefits of applying our core principles of analyzing a potential investment's risks and rewards.

At Osborne Partners, we utilize a rigorous framework for analyzing potential investments that seeks to weigh risk and reward. We establish a range of upside and downside price targets for a stock by evaluating the company's growth outlook and setting reasonable valuation multiples under both bullish and bearish scenarios over a multi-year timeframe.



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The ratio between the potential upside price gain and downside price loss determines whether we will invest. We typically want to see over a 2:1 ratio, meaning there is twice as much potential upside versus downside in percentage terms based on our targets. This skewed ratio compensates us for the risks involved if our investment thesis does not fully play out.

This framework allows us to gauge whether unrealistic expectations are "priced in" to a stock's valuation through overly optimistic growth assumptions or lofty valuation multiples. When a company needs to achieve an improbably rosy outlook to justify its current stock price, it implies significant downside risk that requires avoidance even if the business shows immense promise.

Conversely, low valuations can mean negativity and adversity are already "priced in" by the market, allowing upside if business conditions prove less severe than feared. Finding this sweet spot between upside potential and downside risk is key to investing in innovative companies without exposure to hype-driven bubbles or excessive losses when growth stalls. It enables participation in promising secular shifts while limiting investment risks.

In early 2021, we used this framework to determine that certain EV stocks had "priced in" only best-case scenarios playing out. With downside risks dwarfing realistic upside potential, we avoided EV manufacturers as investments despite electric mobility's promise.

The last three years demonstrated the peril of over-optimism. EV stocks like QuantumScape, Lucid, Lordstown Motors, and Workhorse have plunged by 90% or more since early 2021. The problem was not electric vehicles themselves, as EV adoption has continued rising. Instead, setbacks in profitability and production timelines made lofty expectations unsustainable. Gravity eventually reasserts itself.

Today we see echoes of this dynamic in artificial intelligence. AI will undoubtedly enable breakthroughs over time. However, this promise has spawned speculation detached from operating realities, reminiscent of past frenzies. Currently, the speculation is mostly confined to private markets, but we would not be surprised to see the euphoria spread to public markets this year.

Anthropic, an AI startup, is in the process of raising \$750 million at a rumored valuation of \$18 billion. Anthropic has annualized sales of just \$200 million, implying a price to sales multiple of 90x. OpenAI, the company that first brought the power of AI to the masses, is raising \$8 to \$10 billion at a valuation around \$100 billion and a price to sales of 63x. These valuations reflect visions of AI's potential rather than its fundamentals. This disconnect represents the perilous side of investing in innovation.

Harnessing innovation's promise while mitigating risk first involves recognizing that hype frequently takes valuations to unsustainable extremes. Applying a risk-reward framework grounded in conservative multi-year projections helps avoid overpaying even for excellent companies. Monitoring upside-downside ratios then allows selling or trimming holdings when optimism narrows this spread. Additionally, investing



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in technology enablers like Microsoft, AMD, and Elastic, which all trade at more reasonable valuations, often proves safer than chasing startups, no matter how alluring their technology.

Innovation holds genuine potential to reshape industries, but investor rationality often falls victim to such possibilities. As emerging technologies like AI develop, maintaining rigorous valuation discipline provides the best means to capture their long-term gains without peril. Hype inevitably fades, and gravity reasserts itself. Adhering to core investment principles provides the sturdiest bridge from today's imaginations to tomorrow's realities.

P.S. This article was largely written by claude.ai with prompting and editing by myself. I provided my prior article "Investing in Innovation – The Promise and The Perils," the opening quote, stock return data, and various other factual details as a jumping off point.

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