



October 14, 2021

Through the third quarter of 2021, Banyan's equity composite gained 18.3% compared to the S&P 500's total return of 15.9% (click [here](#) for more details about our composite).

### **The Evolution of Products**

It is in vogue to evoke “evolution” to describe aspects of life other than biology. The culmination of this trend was captured by Matt Ridley in his 2015 book, *The Evolution of Everything*, where he argues evolutionary forces are molding everything from the Universe to morality. In the introduction, Mr. Ridley claims, “Darwinism is the ‘special theory of evolution’; there’s a general theory of evolution too, and it applies to much more than biology.”<sup>1</sup>

We tip our hat to Mr. Ridley. If properly applied, evolutionary theory has tremendous explanatory power, and it is proper to apply the theory to commercial life. The reason is simple – commercial products “evolve” in the technical sense. That is to say, products are subjected to “cumulative selection” pressure, which is true of any population whose members (1) replicate, (2) possess variable traits, and (3) have replication rates influenced by those traits.<sup>2</sup>

These conditions clearly exist in product markets. Products are reproduced with great fidelity by firms, which means they replicate. Products also possess variable traits, and those traits influence a product's replication rate. Ford, for example, cannot sustain, much less expand, the F-150 product line if consumers do not select the F-150 over substitutes, and consumer selection hinges on the F-150's differentiating traits, including price, aesthetics, reliability, efficiency, and more.

Cumulative selection pressure is therefore applied by consumers who select products deemed most “fit” to satisfy a need. Products deemed “fit” grow in number as product lines expand, and “unfit” products fall in number. The variations differentiating “fit” and “unfit” products follow the same trajectory but at a faster rate as competitors mimic “fit” variations and ditch “unfit” variations. A species of product thereby evolves over time to better adapt to the demands of its market niche.

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<sup>1</sup> Matt Ridley, *The Evolution of Everything* 5 (1<sup>st</sup> ed. 2015) (paraphrasing Richard Webb).

<sup>2</sup> See Richard Dawkins, *The Blind Watchmaker* 191 (3<sup>rd</sup> ed. 1996) (going so far as to state, “[I]f any entity, anywhere in the universe, happens to have the property of being good at making more copies of itself, then automatically more and more copies of that entity *will* obviously come into existence. Not only that but, since they automatically form lineages and are occasionally miscopied, later versions tend to be ‘better’ at making copies of themselves than earlier versions, because of the powerful process of cumulative selection.”) (emphasis in original).

The “invisible hand” that the father of economics, Adam Smith, saw guiding commercial life was merely evolutionary forces at work.<sup>3</sup> As a result, musing over biology texts is likely a better use of time for investors than studying most of the texts of modern economics. Why, for instance, is Apple so valuable while Blackberry, once a dominant smartphone maker, is a shadow of its former self? An evolutionary explanation is far more enlightening than supply and demand curves can be.

To illustrate, let’s focus on two traits that differentiated the first iPhone from a primary competitor, the Blackberry Pearl – the touchscreen and the operating system:

1. **Touchscreen** | The original iPhone of 2007 had a touchscreen with unique attributes such as pinch to zoom. This seems unimpressive now, but it was important at the time.<sup>4</sup> The Blackberry Pearl 8300 had a mini computer keyboard and a trackball (i.e., the “Pearl”).<sup>5</sup> The iPhone was an immediate success in part because of its touchscreen. By 2008, even Blackberry had mimicked the trait with the Blackberry Storm.<sup>6</sup> Fast forward to today, and it is rare to see a smartphone without a touchscreen. The trait permeated the market as Apple expanded the iPhone product line and, even more importantly, competitors included the trait in their own product lines. It is now a standard feature of smartphones.
2. **Operating System** | The original iPhone also had a differentiated operating system, later named iOS, while Blackberry ran its own proprietary system. At first, iOS was not a trait consumers selected for in and of itself, but this soon changed. The App Store (available only on iOS) unleashed a vast developer ecosystem to create apps for iOS, and these apps, once downloaded, do not easily transfer to other systems. This feature, among others, made iOS an appealing trait for consumers. Yet, iOS remained exclusive to the iPhone product line. To compete, virtually every competitor had to adopt Android, a product by Google, that had its own app store, Google Play. Even Blackberry eventually adopted Android.

Although the touchscreen was important at the time, it was worth little to Apple’s owners. Without control of the technology, Apple could not slow the trait’s spread through the market. Competitors swiftly incorporated the “fit” trait into their product lines, and it ceased to be a differentiator. Apple

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<sup>3</sup> See Ridley, *The Evolution of Everything* 110 (noting, “Smithism, like Darwinism, is a theory of evolutionary mechanism: a hypothesis as to what causes change that is not random, but not directed either. . . . [T]oday few people appreciate just how similar the arguments made by Smith and Darwin are. . . . Economic evolution is a process of variation and selection, just like biological evolution.”).

<sup>4</sup> See, e.g., Michael deAgonia, Computerworld, *First look at the iPhone: Tomorrow’s technology today* (June 30, 2007) available at: <https://www.computerworld.com/article/2542195/smartphones-first-look-at-the-iphone-tomorrow-s-technology-today.html> (stating, “[L]ittle mobile keyboards are just so commonplace, they’re just so . . . late 20<sup>th</sup> century. The iPhone, in contrast, rivals gadgets shown in science fiction movies. The iPhone, with its multitouch screen, is like a *Star Trek* gadget come to life.”).

<sup>5</sup> Alex Kidman, cnet, BlackBerry Curve 8399 review (Aug. 12, 2007) available at: <https://www.cnet.com/reviews/blackberry-curve-8300-review/>

<sup>6</sup> Britta O’Boyle, Pocket-lint, *The history of Blackberry: The best BlackBerry phones that changed the world* (last updated July 22, 2021) available at: <https://www.pocket-lint.com/phones/news/137319-farewell-blackberry-os-here-are-the-23-best-blackberry-phones-that-changed-the-world>

controlled iOS, however, and it was able to slow the trait's spread. Competitors could mimic iOS's features, but they could not replicate it. Accordingly, the "iOS trait" was a *durable* differentiator.

Apple's success and Blackberry's demise can therefore be boiled down to this – Apple's product line is durably differentiated; Blackberry's product line is not. In other words, Apple's product line enjoys a durable competitive advantage, or economic moat, and such a product line is the *only* source of sustainable excess profits. Or, as Warren Buffett once put it, "The products or services that have wide, sustainable moats around them are the ones that deliver rewards to investors."<sup>7</sup>

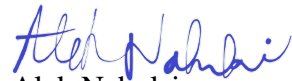
The best way to ***build permanent wealth*** is to own great businesses. Understanding the nature of a great business is therefore critical to our success as investors. In the final analysis, whether a business is great or not depends on its ability to slow the spread of its product's differentiating traits through the marketplace. Economic principles explain *why* a business can or cannot accomplish this feat, but it is an evolutionary process we are trying to understand and anticipate.

Sincerely,



Drew Estes, CFA

Partner & Portfolio Manager



Alek Nabulsi

Partner

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<sup>7</sup> Carol Loomis, *Mr. Buffett on the Stock Market*, Fortune (Nov. 22, 1999) available at: <https://www.berkshirehathaway.com/1999ar/FortuneMagazine.pdf>