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Apple Inc AAPL |

PDF Report

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Apple is driving software and services innovation to capture premium pricing on hardware.



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Investment Thesis 01/27/2016

We believe Apple's strength lies in its experience and expertise in integrating hardware, software, services, and third-party applications into differentiated devices that allow Apple to capture a premium on hardware sales. Although Apple has a sterling brand, strong product pipeline, and ample opportunity to gain share in many end markets, short product life cycles and intense competition will prevent the firm from resting on its laurels, or carving out a wide economic moat, in our opinion.

We believe Apple has developed a narrow economic moat, thanks to switching costs related to many attributes around the iOS platform that may make current iOS users more reluctant to stray outside the Apple ecosystem for future purchases. In our view, much of Apple's exponential growth in recent years has stemmed not from the firm's economic moat, but from the achievement of building the first truly revolutionary smartphone, the iPhone, that integrated hardware and software, as well as a robust apps store and ecosystem that attracted new users to platform. Apple's first-mover advantage may be diminishing, and "easy growth"

Morningstar's Take AAPL

Analyst

| | | |
|-------------------------|----------------------------|--------------------|
| Price 08-12-2016 | Fair Value Estimate | Uncertainty |
| 108.16 USD | 133 USD | High |

| | | |
|---------------------|----------------------|----------------------|
| Consider Buy | Consider Sell | Economic Moat |
| 79.8 USD | 206.15 USD | Narrow |

Stewardship Rating
 Standard

Bulls Say

- Between first-time smartphone buyers, people switching away from Android, and repeat sales to current customers, Apple's iPhone business still has potential for further revenue growth.
- Apple's iPhone and iOS operating system have consistently been rated at the head of the pack in terms of customer loyalty, engagement and security, which bodes well for long-term customer retention.
- Innovation at Apple lives on with introductions of Apple Pay, Apple Watch, and Apple TV, each of which could drive incremental revenue but, more important, help to retain iPhone users over time.

Bears Say

coming from early smartphone adopters may be winding down as the smartphone market moves up the adoption curve and competition ramps up. However, Apple still has a good chance of both attracting new customers and retaining its existing premium customer base.

Ultimately, we think future smartphone competition will stem from software and services, as we're seeing less and less meaningful hardware differentiation. We view Apple as well positioned to develop and expand enough services to enhance the user experience, in order to build switching costs that will help the firm retain customers and generate significant repeat purchases will be critical for future iPhone growth in the years ahead. We consider almost all other products and services that Apple is building (Apple Watch, iCloud, Apple Pay) as not only incremental revenue and earnings drivers for the firm, but more important, improving the iOS ecosystem that will enable Apple to sell future iPhones to a loyal customer base at premium prices and peerless profitability going forward.

Economic Moat 01/27/2016

We believe Apple has a narrow economic moat based on modest, but not insurmountable, customer switching costs. We don't believe these switching costs are critical factors in attracting new iOS customers, especially in emerging markets, but that such switching costs will allow Apple to build a loyal iOS user base that may be less likely to flee to other operating systems for future device purchases in the long term. As the smartphone market matures and a greater proportion of purchases come from previous smartphone owners, we foresee these switching costs as extremely important differentiators in favor of Apple. That said, given the short product life cycles of two to four years for most of its devices, we still think competing products will have plenty of chances to lure iOS customers away from Apple's platform and overcome these switching costs, especially if Apple were to stumble in any given product refresh cycle. This prevents us from assigning the company a wide economic moat.

Inherently, we believe there are minimal switching costs associated with smartphones, as all of these devices can perform most necessary functions--place calls, send texts, browse the web, run apps, and so on. However, we believe Apple has done a much better job at trying to develop switching costs than its handset

- Apple's recent decisions to maintain a premium pricing strategy may help fend off gross margin compression but could limit unit sales growth as devices may be unaffordable for many emerging market customers.
- Apple has a host of large tech rivals, many of which are willing to sell devices at bare-bones prices in order to earn income elsewhere.
- Apple's less-than-stellar launches of Apple Maps and iOS 8.0.1 were near-misses that frustrated many users for short periods of time, but any other buggy software launches could diminish Apple's reputation for building products that "just work."

Competitors AAPL

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| Name | Price | % Chg | TTM Sales \$ mil |
|----------------------------|-----------------|-------------|---------------------|
| Apple Inc | \$108.16 | 0.20 | 220,288 |
| Samsung Electronics Co Ltd | \$1,220.00 | 0.00 | 181,328 |
| Sony Corp ADR | \$32.82 | -0.67 | 78,399 |
| Sony Corp | \$32.80 | -0.88 | 78,399 |
| Panasonic Corp ADR | \$9.89 | -1.30 | 75,983 |
| Panasonic Corp | \$9.76 | 0.10 | 75,983 |

predecessors (such as Motorola and BlackBerry) that failed to lock in customers when they were on top. In our opinion, Apple's switching costs stem from its iOS operating system and appear to be increasing, thanks to iCloud and other native services. Apple iOS users who purchase movies, TV shows, and applications from the iTunes store are unable to port these items to Android or other portable devices (music is transferrable). iCloud adds another layer of switching costs by synchronizing media, photos, notes, and other items across all Apple devices. New services like Apple CarPlay and Apple Pay should also aid the firm's efforts not only to improve the entire iOS ecosystem and the overall user experience, but also to build switching costs that give users more and more reasons not to depart the platform. Furthermore, in hardware, we believe an owner of multiple Apple devices (say, an iPhone and iPad) is less likely to switch from an iPhone to an Android phone if it means that he or she will be unable to sync or access a portion of their content. Additional Apple devices, such as the Mac, Apple Watch and Apple TV, as well as other gadgets to potentially tie to iOS via HomeKit, could raise these switching costs even further. By comparison, no other former handset leader (Nokia, Motorola, BlackBerry) offered secondary devices that partnered with their phones, giving Apple a unique edge. Other hardware vendors, such as Samsung, are still trying to emulate this business model by bundling devices together. However, Samsung doesn't control the operating system (Android) used to run these products, and the company has had several false starts in trying to build its own operating system, Tizen.

Looking at other sources of economic moat, Apple holds intangible assets associated with patents for its hardware and software designs. However, both the value of such assets and the sustainable competitive advantage stemming from these assets remain cloudy. Regarding Apple's sterling brand equity, we view brands within technology differently than, say, consumer luxury goods. We doubt that Apple can charge double the price for a product that has the exact same hardware and software specifications as an unbranded product. However, we think that Apple benefits from intangible assets, or a brand, in terms of the (mostly) positive user experiences that customers capture from the firm's integrated hardware, software and services. This brand equity may encourage customers to go with Apple for their first wearable device, instead of similar offerings from a host of other competitors. Similarly, Apple might be the world's most trusted consumer technology firm in terms of delivering flawlessly working products in existing, and even new, product categories. However, we still think tech brands are

relatively fleeting, as technological inferiority can supersede years of brand equity at any given time. As an example, Nokia was long considered a top-10 brand, but brand recognition failed to make up for its lack of technological innovation in the smartphone space. In other words, new customers might give Apple's products the benefit of the doubt and trialability based on brand, but such an advantage might not be sustainable forever.

Apple is trying to improve the network effects of its devices with functions like iMessage and FaceTime. However, BlackBerry's demise proves that even highly popular smartphone-centric networks like BlackBerry Messenger can be broken if other smartphone features (or lack thereof) drive customers to flee. Network effects may be forming around Apple's apps developers, as a more robust apps store is likely helping Apple attract new customers. However, these same developers likely build for Android as well, so we think that developers will flock to the ecosystem that offers the most attractive return on investment. Along these lines, Apple Pay may ultimately develop a network effect between merchants, credit card networks, and users, but we would also anticipate that some other service (PayPal, Google) could come close to replicating this service and provide customers with a non-iOS alternative. In short, the network effects created by these services (with perhaps the largest and most important being the iOS apps community) might not be strong enough to ensure excess ROICs for Apple if other aspects of the phone (hardware, operating system, services, for example) become inferior to other offerings.

Finally, Apple may have some cost advantages associated with its supply chain, such as squeezing suppliers or making massive purchases of flash memory and other key components. However, we believe these advantages are predicated on the enormous forecast volume of Apple's products, and we suspect these advantages would evaporate if Apple's device production were to shrink.

Valuation 07/28/2016

Our fair value estimate for Apple is \$133 per share, which implies fiscal 2016 (ending September 2016) price/earnings of 16 times (and only 13 times after excluding Apple's net cash balance on hand). Apple's tremendous iPhone 6 and 6 Plus enabled the firm to grow fiscal 2015 revenue by 28% or \$51 billion dollars,

more than total revenue earned by almost 90% of the Fortune 500. Due to this amazingly high revenue bar, as well as currency headwinds and macroeconomic softness, we project that Apple's revenue in fiscal 2016 will fall by 8%. We foresee a bounceback in revenue with 4% growth in fiscal 2017 along with the launch of the iPhone 7. Longer term, we foresee Apple returning to growth and achieving modest iPhone revenue growth in the low-single-digit range, with unit sales growing at a mid-single-digit pace. We envision Apple's iPhone unit sales growing at a similar pace to the high-end of a maturing smartphone market. While we're not overly bullish on long-term iPhone growth, we think that Apple's moat will help the firm retain most of its current customers, thus making iPhone revenue more resilient than the ups and downs witnessed by other hardware-only smartphone makers. Longer-term, we model average revenue growth for Apple as a whole in the 4% range. We expect strong growth from Other Products (including the Watch and TV) and Services, but slower growth from larger businesses like iPhone, iPad, and Mac. Based on Apple's premium pricing strategy and services becoming a slightly bigger part of Apple's revenue mix, we model only modest gross margin deterioration for Apple from 40% in fiscal 2015 to 38% by fiscal 2020. We expect Apple to aggressively spend on research and development in order to fund new product categories (perhaps an Apple car), so that operating margins deteriorate from 30.5% in fiscal 2015 to the mid-20% range in the long-run.

Risk 01/27/2016

Apple faces several key risks as competitors attack the firm from all angles. Smartphone and tablet competition is rising, both from upstart Chinese OEMs on the low- and midrange, and tech titans like Samsung and Huawei, which all have the size and scale to build large smartphone portfolios to suit customers at every price point. As a premium phone supplier, Apple runs the risk that, as wireless carriers in the U.S. have eliminated phone subsidies and two-year contracts, customers may hold on to their phones longer, in turn weighing on future sales. Finally, some competitors like Xiaomi and Amazon are more than willing to sell hardware at close to cost in order to drive other revenue streams. If any of these devices offer a similar user experience to iOS products, Apple may be unable to capture an adequate premium on future hardware sales. All the while, the low end of the smartphone market (where Apple does not participate) will likely be the faster growing portion of the smartphone market for years to come.

In addition to continual innovation on the hardware front, Apple must also deliver immaculate software and services in order to generate premiums on hardware sales. Recent mistakes like the early launch of Apple Maps and a buggy iOS 8.0.1 release show the difficulty in flawlessly staying on the cutting edge. Any severe slip up could be damaging to Apple's brand and customer loyalty. Further, Apple still relies on a robust app-developer base and strong partnerships with third parties, yet these companies will likely focus on the operating system that provides the best return on investment and could turn their attention to Android if Apple's iOS user base were to slip. If Apple were to falter and its exceptional brand be diminished as customers departed iOS in droves, we're not even sure that Apple's mighty cash cushion could help the firm buy its way out of any problem.

Management 07/28/2016

We view Apple as a good steward of shareholder capital. Tim Cook became CEO in August 2011 after cofounder, longtime CEO, and visionary Steve Jobs stepped down from the CEO role before passing away in October 2011. Cook was considered to be Jobs' right-hand man and served in various operations roles with Apple before becoming COO in 2005. We believe Jobs' passing was a blow to the firm, as he was a one-of-a-kind leader and creative mind. Arthur Levinson, former chairman and CEO of Genentech, is chairman of Apple's board of directors. Jeff Williams serves as COO of Apple and would be our best bet to replace Cook if he were to ever leave the CEO role.

We're comfortable with Apple's level of technological innovation over the past couple of years after Jobs' passing. Much of this innovation has come from new software and services within iOS like Apple Pay, rather than brand-new smash-hit products. That said, we still have high hopes that the Apple Watch will deliver incremental earnings growth to Apple, and the firm's ability to execute and deliver another premium product will likely be viewed by many as a sign that Tim Cook's Apple can, or cannot, deliver successful new products over time. We are not concerned by the relatively slow start for the Apple Watch, as both the iPod and iPhone had similarly tepid launches, at least in terms of unit sales. We think the firm still has a ways to go in areas like voice recognition and artificial intelligence to stay ahead of other tech titans like Google, Facebook, and Microsoft, but by no

means would we call Apple a laggard in these areas just yet.

Although Apple maintains sterling brand recognition and has hundreds of millions of loyal followers, the company has made a couple of missteps under Cook that, some skeptics would argue, would have never happened under Steve Jobs. Apple executed poorly when it decided to part ways with Google Maps in iOS 6 and launch Apple Maps with a variety of bugs and errors, leading to a formal apology. Also, Apple launched an iOS 8.0.1 update that was quickly recalled after it rendered some users' phones useless. These types of missteps could potentially leave the door open for any frustrated customers to try another platform like Android. At the very least, Apple may find it more difficult to quickly push its iOS user base onto the latest version of its operating system in future releases, which we see as a key positive differentiator for Apple over Android as apps developers don't need to build and test their apps for a wide variety of operating system versions.

In terms of capital allocation, we applaud Cook's decision to initiate dividend and stock buyback programs, as well as take on debt in order to fund such programs. We recognize that many high-profile investors have called for larger buyback programs, but we think that Apple's current plan of \$175 billion is more than satisfactory as long as buybacks (and the debt issuances needed to fund these buybacks) are made in a prudent manner.

Perhaps more importantly, we think Apple's frugality in terms of acquisitions is quite admirable. Apple's strategy of focusing on smaller, tuck-in deals and developing products in-house, rather than splashy but questionable deals like Microsoft's purchase of Skype or Google's foray into hardware by acquiring Motorola Mobility and Nest, appears to have served investors quite well in recent years. Even Apple's \$3.0 billion acquisition of Beats Music and Beats Electronics represented only a tiny portion of the firm's total cash balance, and we suspect that solid revenue growth and gross margins on headphone hardware sales may have justified the valuation.

Apple has also done a good job of attracting topnotch talent to the company, such as former Burberry CEO Angela Ahrendts to run Apple's retail and online stores. We are comfortable that these hires have strengthened Apple's bench in the unlikely event of Cook departing the company, and each hire likely has aided in Apple's efforts to build and deliver Apple Watch, and perhaps future products as well. All

the while, Apple's ongoing operations continue to generate operating margins and cash flow well above its peers in various hardware industries, which bodes well for future free cash flow for investors.

Overview

Profile:

Apple designs consumer electronic devices, including smartphones (iPhone), tablets (iPad), PCs (Mac), smartwatches (Watch) and portable music players (iPod), as well as a variety of services like Apple Music, iCloud, and Apple Pay. Apple's products run internally developed software, and we believe this integration of hardware, software, and services often allows the firm to maintain premium pricing for its devices. Apple's products are distributed online as well as through company-owned stores and third-party retailers.

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