THE DEVIL'S ADVOCATE REPORT

July 31, 2015

Fitbit Inc.

(SELL)

Price:	$47.60	**Ticker:**	FIT
52-Week Range:	$29.50-$48.98	**Dividend:**	Zero
Shares Outstanding:	243 million	**Yield:**	Zero
Market Capitalization:	$11.6 billion	**Short Interest:**	7.7%

Data As of July 31, 2015

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The Devil's Advocate Report

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Investment Thesis

Fitbit's devices, which track users' statistics such as daily steps taken, calories burned as well as sleep duration and quality, have exemplified a consumer trend toward health and fitness in recent years. The company has become an early leader in this market with a market share in units of approximately 67%. Yet, with 10.9 million units sold last year, it is still small relative to the approximately 200 million iPhones sold last year and the 1.2 billion smartphones. While some market observers might worry that the Apple Watch could take market share from Fitbit, the reality is that any smartphone is already equipped to accomplish all of, or most of, the functions built into Fitbit's devices. Apple even has a built-in app, Apple Health, preinstalled on all of its iPhones running iOS 8 or higher, that tracks some statistics such as steps and distance. Some Android users have to download a free, or very inexpensive, app to accomplish the same thing, while others, including Samsung, have this functionality built into its operating system as well. Consequently, it appears that the fitness tracker market has very low, or even no barriers to entry and perhaps the greatest threat is disintermediation by existing smartphones.

Fitbit has reached a $12 billion market capitalization, which, to put it in perspective, represents 1.5x Garmin's market value and 2x that of GoPro, companies whose products appear to be much less susceptible to competition from smartphones or smartwatches. In addition, historically, retention for activity trackers has not been very high. According to Endeavour Partners, more than 30% of consumers stopped using their activity trackers after six months and more than 50% stopped using them after two years. This is a problem for Fitbit since retention rates are important. The company needs to be able to sell upgrades to its installed base in order to retain rapid growth rates. At the end of the first quarter, it appears that approximately half of the 14.8 million devices sold in the prior five quarters actually resulted in buyers becoming 'active users', which, based on Fitbit's definition, is very easy to reach. Consequently, it appears that many Fitbit tracker owners, perhaps as many as half, had given up within a few months. This indicates that Fitbit's rapid growth phase could come to a halt and that it will become increasingly difficult to meet Wall Street's sales forecasts.

There are many new competitors emerging in Fitbit's core business, perhaps partly attracted by the early success of Fitbit. Some of these competitors, which have activity tracker bands very similar to Fitbit's, include Microsoft, Polar, Garmin, Xiomi, Jawbone, Adidas and Moov. Nike, on the other hand, held the #3 market share but decided to exit the market last year. This move no doubt strengthened Fitbit's position. Over time, and if wearable devices will actually collect fitness and health data for corporate or individual wellness, the user interface (UI) will probably migrate towards a data aggregator, which will probably be a company such as Apple or Google rather than Fitbit, given the much greater installed base of iOS and Android devices. If these devices will evolve to collect actual medical information, they will have to be regulated by the FDA, which would extend the approval process for such devices to perhaps one year or longer. Google has already developed such a product and could have the lead if the industry evolves in that direction.

Fitbit expanded its revenues rapidly in the first quarter of 2015, at 210% compared to the same period last year, but that was largely because the company had introduced two high-end devices in the fourth quarter of 2014, which resulted in higher average selling prices (ASPs). Unit sale rose by 145%, indicating that ASPs improved from $69.08 to $87.10. This is most likely non-repeatable in the first quarter of 2016. Fitbit's highest-priced device, the Fitbit Surge (with a $249 price point), can be considered more of a "feature watch" than a smartwatch, similar to the way so-called feature phones were popular a few years ago but ultimately lost out to smartphones, as the price of the latter declined. A similar scenario is not difficult to imagine in the fitness band segment. Consequently, it will be difficult for Fitbit to successfully introduce new, higher-priced devices, as those would compete with superior Apple and Android offerings, and even Garmin or Polar's high-end watches, which are targeted towards more serious fitness-minded consumers. On the low end, Fitbit will be pressured from companies such as Xiomi, which just recently began selling its fitness band, known as Mi Band, in the US for under $20. This band, which has already sold more than 6 million units worldwide, has most of the functionality of Fitbit's much higher priced devices.

Ultimately, it will be very difficult for Fitbit to continue to expand at its current rate. The company has benefitted from Nike's exit and the introduction of higher-priced devices, which each had a temporary effect on its sales and average selling prices (ASPs). Over time, intensifying competition from free smartphone apps as well as a plethora of similar-looking and performing activity trackers from a diversified mix of well-established companies should result in lower ASPs and narrowing profit margins, even if the overall market is expanding.

Assuming that competition will reduce ASPs 10% per year, for Fitbit to grow revenues 20% per year beyond 2015, it would need to sell approximately 100 million devices by 2021. That represents almost one device per household in the United States, per year (Fitbit has not been very successful abroad). Even if this very optimistic scenario materializes, at a $45 ASP, revenues would reach just $4.5 billion. At a generous 10% net profit margin, this would result in just $450 million in earnings, or $1.85 per share, providing no share issuance in the next six years. At a 20x P/E, which could be justified at the time, since its rapid-growth phase most likely is over by then, its shares would trade at $37, or 20% below the current level. On the other hand, Fitbit's expected growth pattern could get disrupted by new technology or new devices at any time, which could result in declining sales and collapsing earnings and P/E ratio. Consequently, the risk/reward profile appears to favor the short-seller and, as such, shares of Fitbit Inc., are recommended for sale or short-sale.

Overview

Founded in 2007 by James Park and Eric Friedman, Fitbit is a pioneer in the wearable technology/connected fitness market with products that are designed to help its users become more active, exercise more, sleep better, eat smarter, and manage their weight. The company has sold over 20.8 million devices since inception in 2007, and most recently achieved an 85% dollar market share of the US connected activity tracker market in the first quarter of 2015 (67% unit share).

Product features include activity monitoring, sleep tracker, floors climbed, running statistics, continuous heart rate monitoring, BMI (body mass index), GPS (global positioning system), caller ID and text message/music control. The company also operates a software platform that allows users to see trends and achievements, access motivational tools and compete/socialize with friends and family, as well as utilize premium services such as virtual coaching, customized fitness plans and interactive video exercise experience. The company operates in more than 50 countries and through over 45,000 retail stores, with products that have broad market compatibility with devices such as those based on iOS, Android and Windows Phone products.

Fitbit's growth has been remarkable over the past three years. The number of devices sold has increased from 1.3 million in 2012 to 10.9 million in 2014, while its revenues have expanded from $76.4 million in 2012 to $745 million in 2012. This indicates an average selling price of approximately $69 (disregarding the 1% of revenues that are not hardware-related), which could be compared to $59 in 2012. Of course, the difference can be explained by the fact that Fitbit introduced a number of higher-priced devices in 2014. In FY14, Fitbit reported pro forma diluted earnings per share (EPS) of $0.72 - it earned $132 million in net income. If Fitbit can meet the consensus expectations for this year, $0.61 per share, its earnings would reach $148 million. Thus, while its net income would have increased 12%, its EPS would actually have declined 12% as a result of additional shares outstanding, as well as options awards. Currently, the company derives approximately 79% of its revenues from the US, perhaps an indication of stronger competition abroad.

Fitbit came public on June 18 at an offering price of $20 a share, which was above the expected $17-$19 range, and gained 48% on its first day of trading. The $731.5 million raised made it the largest technology IPO this year and the third largest overall. Currently, the shares have more than doubled from the IPO price and the company has obtained a market capitalization of almost $12 billion.

Brief Product History
In September 2009, Fitbit began selling its Fitbit Tracker, a device that tracked steps, distance, calories burned and sleep. It later introduced an online dashboard which could be synced to the Fitbit Tracker. In February 2011 it released an open application programming interface (API) allowing third-party developers to integrate with its platform. Later in 2011,

the Fitbit Ultra was introduced, which, in addition to what the Tracker could already do, also was able to track the number of floors one climbs. It also began selling its products in the UK. In 2012, it began selling its Fitbit Aria Wi-Fi connected scale that measures weight, body fat and BMI (body mass index). Later in 2012, it began selling its Fitbit Zip (currently with an ASP of $59.95), its first Bluetooth-enabled tracker, as well as the Fitbit One (current ASP of $99.95), which is not a band but a device one can clip on a belt or carry in a pocket. In fact, it did not introduce its first wrist band device until 2013, when the Fitbit Flex (current ASP of $99.95) was introduced. Finally, in 2014, the company introduced the Fitbit Charge (current ASP $129.95), which added caller ID to the wrist band (when used with a Bluetooth-connected smartphone), Fitbit Charge HR (current ASP $149.95) and Fitbit Surge (current ASP $249.95), which added a heart rate monitor. The Surge also added GPS (global positioning system) capabilities. In addition, Fitbit makes and sells a wide range of accessories, such as charging cables, clips, bands and branded apparel.

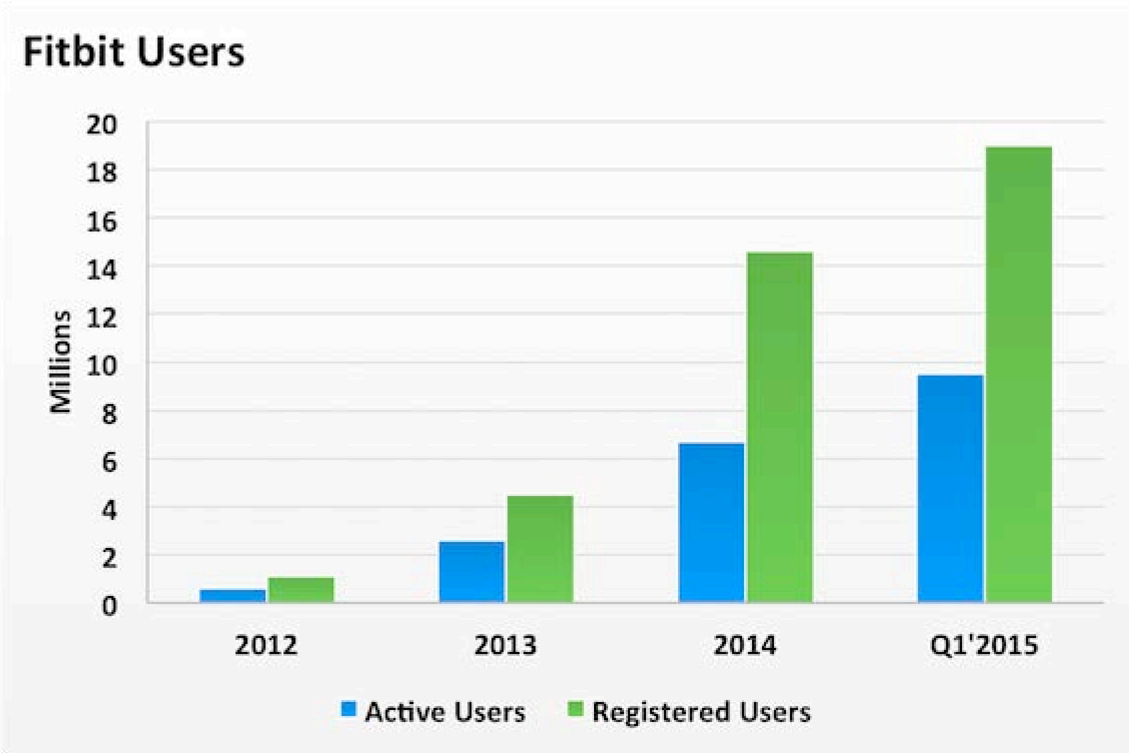
Activity and Inactivity

The number of active users has improved to 9.5 million from just 0.6 million in 2012. However, the bar for being considered an 'active user' is set very low – all that is required is that one takes 100 steps within a three-month period of purchasing the device. This is how the company defines an active user in its prospectus:

> "We define an active user as a registered Fitbit user who, within the three months prior to the date of measurement, has (a) an active Fitbit Premium or FitStar subscription, (b) paired a health and fitness tracker or Aria scale with his or her Fitbit account, or (c) logged at least 100 steps with a health and fitness tracker or a weight measurement using an Aria scale."

The 100 step per 90 day requirement compares to a more common recommendation to attempt to take 10,000 steps per day, which equates to approximately 900,000 steps in three months, as an aspirational goal to stay healthy.

Meanwhile, Fitbit separately discloses the total number of registered users it has on its platform. There is quite a discrepancy between the two figures, and approximately half of its registered users can be considered active users.



At the end of the first quarter, there were 9.5 million active users and 19 million registered users, compared to 6.7 million active users as of December 31, 2014 and 2.6 million active users as of December 31, 2013. The potential risk is, consequently, that a large portion of Fitbit customers who register an account eventually become inactive, i.e., stop using their devices within a few months. In fact, Fitbit sold 10.9 million devices in 2014 and 3.9 million in the first quarter of 2015. Consequently, adding the number of active users as of December 31, 2013 (2.6 million) to the combined unit sales figure since that time of 14.8 million, if they had all been considered 'active' by March 31, 2015, Fitbit would have had 17.4 million active users as of that date. Instead of the actual figure of 9.5 million. Alternatively, assuming all the 2.6 million users that were considered 'active' by December 31, 2013 remained active by March 31, 2015, Fitbit only added 6.9 million active users by selling 14.8 million devices in the five-quarter period. Thus, it appears that approximately half of Fitbit's customers never use their devices, or lose interest in them relatively quickly.

Historically, customer retention for activity trackers for the industry as a whole, has not been very high. According to consulting firm Endeavour Partners, more than 30% of consumers stopped using their activity trackers after six months and more than 50% stopped using them after two years. This is an obvious problem for Fitbit since retention rates are important in order to sell upgrades and, potentially, recurring services.

Products

As mentioned, the company offers fitness products such as the Fitbit Zip, Fitbit One, Fitbit Flex, Fitbit Charge, Fitbit Charge HR, Fitbit Surge and Aria weight scale:

Functionality Comparison

	EVERYDAY FITNESS				ACTIVE FITNESS	PERFORMANCE FITNESS
	Zip $59.95	One $99.95	Flex $99.95	Charge $129.95	Charge HR $149.95	Surge $249.95
Steps, Calories, Distance	✓	✓	✓	✓	✓	✓
Clock	✓	✓	—	✓	✓	✓
Sleep Tracking	—	✓	✓	✓	✓	✓
Auto Sleep Detection	—	—	—	✓	✓	✓
Silent Wake Alarm	—	✓	✓	✓	✓	✓
Floors Climbed	—	✓	—	✓	✓	✓
Active Minutes	—	—	✓	✓	✓	✓
Multi-Sport	—	—	—	—	✓	✓
Continuous Heart Rate	—	—	—	—	✓	✓
Caller ID	—	—	—	✓	✓	✓
Text Notifications	—	—	—	—	—	✓
Music Control	—	—	—	—	—	✓
GPS Tracking	—	—	—	—	—	✓

Though Fitbit counts 9.5 million active users, very few of those are paying Fitbit any recurring fee. Fitbit's longer-term aspiration is to generate additional revenue streams from software and services fees, capitalizing on its device and app. customer base. To that end, it recently paid $33 million to acquire FitStar to enhance its online software capabilities.

Growth

In 2014, Fitbit's revenue and EBITDA increased 175% and 142% year over year, respectively and its revenue is forecasted, based on Wall Street's consensus, to improve 88% in 2015 and 34% in 2016, while its EBITDA is expected to expand 31% and 34% in those years. The company's year-over-year sales growth decelerated from a triple digit run-rate to 82.7% in the third quarter of 2014 and reaccelerated to 166% in the fourth quarter of 2014 and 180% in the first quarter 2015, following the launch of the Charge HR and the Surge products at the end of 2014. In addition, Nike discontinued not only its Fuelband, but also its $299 Sportwatch GPS last year, a move which probably benefitted Fitbit's high-end Surge. Nike's exit is, of course, a non-repeatable event, to the extent that it temporarily boosted Fitbit's sales.

Ultimately, Fitbit's market positioning could become a problem. Fitbit's bands cannot be considered fashion accessories, nor actual health monitoring devices. In fact, most smartphones and smartwatches can accomplish similar activity tracking for no additional expense. For more athletic users, Fitbit's devices are not accurate enough (in terms of distance, speed, GPS, etc.) and do not provide enough features to compete with Garmin, Polar, Suunto, TomTom or Timex's watches, which can be used for running, swimming, biking, hiking, etc. Consequently, if Fitbit attempts to raise its prices, even just slightly, it will compete more directly with these companies, in addition to the Apple Watch and Android Wear. On the other hand, if Fitbit tries to produce low-cost devices, it would have to compete with Xiomi, which will be difficult at the current $15 price point. Thus, it appears that, at least for now, Fitbit is somewhat stuck in the middle and its competitors could begin to enter that part of the market from both ends.

International sales accounted for just 24% of sales in 2014, leading some to believe that this represents a significant growth opportunity. However, in the first quarter of 2015, sales outside the U.S. represented just 21% overall sales, indicating a declining trend in percentage terms (although in dollar terms, international sales more than doubled). The comparatively slower international expansion could be explained by different brand awareness and stronger international competitors, such as Xiomi, Polar, Tom-Tom and Suunto.

Almost Entirely About Hardware

Fitbit has been trying for years to expand into premium subscription services. Fitbit Premium costs $50 per year and offers features such as benchmarks, sleep reports, activity reports, food reports, and a personalized 12-week fitness plan. Earlier this year, Fitbit acquired FitStar, a service that provides video-based exercises, which costs $40 per year. The services appear to be natural add-ons that Fitbit hopes will appeal to its growing user base. However, the company has seen limited success convincing customers to sign up for Fitbit Premium after it was launched in 2010. Less than 1% of revenue comes from subscription services. This is unlikely to expand much since Fitbit's software will be competing against software that runs on Apple's and Google's operating systems, and third-party developers should see to it that such software is quite superior and more rapidly updated compared to what Fitbit can accomplish on its platform. Consequently, at least for now, Fitbit is predominantly in the hardware business. For a hardware business, the company is generating undeniably impressive gross margins (50% last quarter), but in the long term, all hardware businesses rely on sales to new adopters, or upgrades from existing users. The market for wearable fitness-tracking devices is so young - just two years since Fitbit introduced the first wrist band - that there are certainly still plenty of early adopters. However, converting adopters into upgraders is a key effort for the company long-term, given its uninspiring attempts to grow subscription services.

Corporate Wellness

According to a 2010 MetLife study, 61% of companies with 500 or more employees offer a wellness program, compared to 46% in 2005. An analysis by Health Affairs found overall medical costs fell by $3.27 for every dollar spent on a wellness program, while the cost of absenteeism dropped about $2.73 for every dollar spent. Thus, there is a market for corporate wellness; the question is to what extent Fitbit will benefit from that.

Fitbit has a corporate wellness strategy and claims 30 Fortune 500 customers, though it has not broken out specifics. According to IBISWorld, the corporate wellness market expected to surge from an estimated $7.4 billion in 2014 to $10.4 billion in 2018 in just the U.S. According to Society for Human Resource Management (SHRM), U.S. corporate wellness spending per employee grew to $594 in 2014, up 15% year over year. Over the past five years, corporate wellness spending has grown at an 18% rate, trends that may or may not benefit Fitbit. It will take years before a true leader in this market begins to emerge.

Market Overview

According to The International Data Corporation (IDC), 'global wearable' (a segment that includes fitness trackers as well as smart watches) shipments are expected to rise from 26.4 million in 2014 to 72.1 million in 2015 and 155.7 million in 2019, representing a $28 billion worldwide revenue industry. This also implies an average selling price (ASP) of $180. Part of this is can be explained by the high-priced Apple Watches, which can reach $10,000 or more, as well as some premium Android Watches, perhaps manufactured by the Swiss incumbents, among others. Fitbit models usually occupy the more moderate price segments. Still, the IDC data indicates that the expected growth rate is 173% in 2015, only to decline to a cumulative 116%, or a 21% annualized growth rate for the 2015-2019 period.

Another research firm, TECHnalysis Research, predicts that world-wide sales of wearable computing devices will grow briskly in the next few years, to 175 million in 2020, an increase of 667% from its estimate of 22.8 million for 2014, or an annualized rate of expansion of almost 40%. It is expected that a large portion of that growth will come as these devices gain favor in business settings, rather than continuing to depend on consumer demand, according to the research firm. However, that remains to be seen, and even if that were to come to fruition, it is too early to tell which platform will ultimately become dominant.

According to NPD, Fitbit held 85% of the U.S. fitness band market in the first quarter (approximately 67% based on unit sales), with a global share of 34.2%, according to IDC. Of course, the fitness band market is a subset of the wearable market mentioned above. Its main competitors in the US last year included Jawbone at 14%, Garmin at 5%, Misfit at 4% and Nike (which withdrew from the market in 2014) at 2%. 'Others" were at 8%. In either case, Fitbit has a head start in this market in terms of brand recognition, but it does not necessarily offer the best products for the price. Given its wide profit margin, competition is intensifying as other companies are attracted to this market segment, which will be discussed in more detail below. Fitbit recently increased its R&D expenses from $9 million in the first quarter of 2014 to $22 million in the same period this year – a 147% increase, which may be needed for the company to remain competitive. Relative to the $337 million in revenues it generated in the first quarter, this figure represents 6.6%, which compares to 14% for GoPro ($49 million) in the first quarter, and 18% ($106 million) for Garmin. Consequently, Fitbit may have to boost its R&D spending at a faster rate than its revenues increase in order to avoid falling behind.

Wearables can be divided into two categories – medical and consumer. Medical devices require FDA (Food & Drug Administration) approval to be used and consumer devices do not. Consequently, non-medical devices companies and startups tend to focus on consumer wearables because of the lesser regulative burden. However, there is a limit to how useful these devices can become, in terms of actually monitoring one's health, unless they are approved by the FDA. On the other hand, if Fitbit were to enter the more medically-related segment, in terms of functionality, and thus had to be regulated by the FDA, it could have to wait years before receiving approval by that agency for devices as well as software updates. Apple Watch, Android watches and Fitbit all fall into the consumer wearables category for this reason. However, they are very different devices. Apple Watch is an accessory to the iPhone and has a lot of functionality beyond tracking users' health. Fitbit's wearable are mainly focused on tracking activity although the company has a few products that perform other functions such as the capability to alert users when they have an incoming phone call and the ability to read text messages. Perhaps, over time, the market will come to prefer devices that are actually approved by the FDA and, thus, are much more capable in terms of monitoring one's vital signs such as heartrate, blood pressure, and perhaps even more important tests such as blood sugar levels (for diabetics) and cholesterol.

IDC has indicated that vendors such as Fitbit and Xiaomi have helped propel the industry with their bands priced under $100, but it predicted smart wearables, or those capable of running third-party apps, would become more dominant over time. Such smartwatches, which includes Apple Watch and Android watches, should become more formidable competitors over time as the devices tend to become smaller, lighter, thinner, more capable and more inexpensive. That has been the trend in other technology areas for decades, such as PCs, mobile phones, mp3 players, digital cameras and tablets, and companies such as Nokia, Blackberry and Palm, among many others, have suffered because of the short product lifecycles and the risk of technological obsolescence. For example, the new Jawbone UP2 activity tracker, which competes with Fitbit's offerings, is 45% smaller than the device it replaces and 30% less expensive.

High Expectations

Market participants have high expectations for Fitbit. The company is expected to expand its revenues 94% in 2015, based on Wall Street's consensus forecasts, and earnings are expected to grow as well, to $148 million, from $132 million last year. Although, on a fully-diluted EPS-basis, this represents just $0.61 per share for 2015, compared to $0.72 per share in 2014, or a decline of 12%, as a result of additional shares and stock options outstanding.

The market appears to believe that the opportunity Fitbit has is much greater than just selling wrist band activity trackers, but rather the creation of a new consumer brand, synonymous with fitness, health and wellness, that can sell consumers an evolving suite of consumer health instruments and services, that keeps their data centralized and in the cloud, and that enables them to share the data with peers and health care providers. However, for some of this functionality it will likely need approval by the FDA to offer these services, and none of that would be very difficult for competitors to replicate.

Consequently, Fitbit has its brand name, and investors appear, to a large degree, to gamble that this brand name will be sufficient to dominate the industry, regardless of the price and functionality of its devices, and the possibility that the competition may develop more desirable and affordable products, or completely disintermediate Fitbit's products.

Also, Fitbit was taken public by a syndicate of the largest banks, including BofA Merrill Lynch, Deutsche Bank Securities, Morgan Stanley, Barclays Capital, Piper Jaffray, Raymond James, Stifel Nicolaus, SunTrust Robinson Humphrey, and William Blair & Co. These companies have generally issued favorable research reports on Fitbit over the last few weeks, which may have contributed to inflating the shares to 75x this year's consensus earnings estimate.

However, the reality is that hardware companies such as Fitbit have, historically, struggled with declining ASPs and narrowing profit margins, even though unit growth might have been strong. The competitive situation can result in a rapid slide in ASPs and retail prices.

Acquisitions

There has been a fair amount of acquisition activity in the fitness industry in recent years. For example, Under Armour acquired MyFitnessPal for $475 million, MapMyFitness for $150 million and Endomondo for $85 million. These were some of the most successful fitness app companies, with millions of registered users - although not much in terms of revenues. However, even if Fitbit were able find and acquire similar companies, the scale of these companies is simply insufficient, given Fitbit's $12 billion market capitalization and $1.4 billion in revenues, to really make much of a difference. It would need more established companies, perhaps in the $1-$2 billion market value range, with perhaps $100 million or more in annual revenues. Such companies appear very scarce (competitor Jawbone was estimated to have a $3 billion valuation last year, although if its value has increased in line with Fitbit's, it could be worth twice that by now). Consequently, it is questionable to what extent, if any, Fitbit can expand via acquisitions.

Smartphone / Smartwatch Disintermediation

Apple's own Health App, which, among other features, keeps track of one's daily steps taken, is preloaded in the operating system, so no app needs to be downloaded, and this enables anyone who has an iPhone to track their daily activity for free. This can be displayed on a dashboard to allow users to view steps taken per day, week, month or year, as well as additional features. Samsung has a similar tracker preinstalled on its devices and there are free apps available for both iOS and Android that can provide these services. Thus, for users who are simply interested in monitoring how many steps they have taken, as long as they own a smartphone, no separate activity tracker purchase is necessary. This is perhaps not widely understood by consumers purchasing Fitbit bands.

This smartphone capability will only get better in terms of features, user interface, privacy and sharing options, etc. Technically, the Fitbit bands are, therefore, redundant. The company could, if it so chooses, simply provide all the same functionality through its own iPhone app, in which case the data would come from the iPhone's own built-in sensors (gyroscope, compass, GPS and accelerometer, etc.), rather than those of a wrist band's. The iPhone is even capable of measuring sleep quality and there are several free apps for that. Thus, the market could be limited for single-purpose activity trackers such as Fitbit's.

In addition to smartphones, by 2020, it is possible that so-called smartwatches may have completely disintermediated activity trackers and fitness bands, and reached unit sales of

100 million or more. It is already assumed by Strategy Analytics that over 5 million smartwatches were sold in the second quarter of this year – an annual run-rate of 20 million, compared to an annual run-rate of 4 million based on last year's figures. Still, the wearable technology market is developing rapidly and it is not unreasonable to expect head-worn devices (including virtual-reality glasses) to be the next area of rapid innovation. Technalysis Research predicts that headworn wearables will have $13.5 billion of global sales in 2020, which is exactly the same as its estimate for smart watches. According to the Vision Impact Institute research, 3 out of 4 people in the U.S. have vision correction, and of those people, 71% wear glasses and 22% wear contacts. Consequently, just over half of the US population actually wear glasses. Therefore, if Android or iOS functionality could be integrated into eye glasses - that is just another way the existing fitness bands could be disintermediated. And this is just five years into the future. Ultimately, it may be a challenge to make people wear additional devices, and perhaps that is the reason potentially half of Fitbit owners stopped using their devices within a few months. However, if the functionality is integrated in one's phone (which it largely is today already), one's watch or in one's eye- (or sun) glasses, there will be no additional device to remember bringing and charging. Simplicity appears poised to win in the end.

Intense Competition

The segment is attracting new entrants and competition from established brands appears to be intensifying, and Fitbit is not the only fitness device company that is expanding. IDC statistics indicate shipment volume growth of 133% for Garmin and 150% at Jawbone for the first quarter of 2015. This is a greater rate compared to Fitbit's 129% shipment volume growth. Below, we discuss some of these competitors and their devices:

Jawbone

Jawbone, which formerly focused mainly on its Bluetooth headsets and wireless speakers, now offers a full line of fitness trackers - three of them in band format and one pocket device. The company was founded 16 years ago and recently received a $300 million capital infusion from BlackRock. In addition to BlackRock, Jawbone's investors include Andreessen Horowitz, J.P. Morgan's Digital Growth Fund, Kleiner Perkins Caufield & Byers, Khosla Ventures and Sequoia Capital. Its board includes Ben Horowitz and Marissa Mayer. As such, Jawbone should continue to be a strong competitor to Fitbit, and some of its devices already offer capabilities that Fitbit's commensurate offerings do not.

- Jawbone's most basic device, a belt clip unit known as UP, tracks sleep, exercise, and overall calories burned, and it syncs wirelessly with Android and Apple devices. This retails for $49.99.

- The UP2 tracker includes all of the features of the UP, but it also includes Smart Alarm, a feature that can wake users at the optimal time in their sleep cycle, as well as Idle Alerts, which alerts users that it is time to move when they have been sitting too long. This device retails for $99.99.

- The UP3 device includes all of the UP2 features, but also tracks one's resting heart rate and overall heart health, as well as automatically logs all of one's fitness activities. This device has a retail price of $179.99.

- Finally, its most advanced band is known as the UP4, and it can do everything that the UP3 can do, with the additional use as an American Express contactless (NFC) payment tool. When users want to pay for something with their AmEx card, they just need to hold their wrist up to an NFC terminal and follow its instructions to complete the transaction, which is similar to having Apple Pay on an Apple Watch, except it is accepted at any NFC terminal that accepts American Express. UP4 also includes a barcode scanner to facilitate the logging of one's food intake and a smart coach feature. That band retails for $199.99.

Apple
In April, Apple released the Watch in nine countries, including the United States and the United Kingdom. According to research firm Slice Intelligence, Fitbit sold 850,000 of its devices in May, exceeding the estimated 777,000 Apple Watches sold during the same period. Of course, Apple had widely publicized trouble producing sufficient supply of the Watch during this time period, and the Watch was not even available for sale in Apple stores across the world. So there should be no surprise that Fitbit outsold it in that particular month. Still, the Apple Watch is a first generation product and Apple is well known for making every succeeding generation thinner, lighter, faster, with likely improvements in battery life. Thus, over time, the Apple Watch will probably emerge as a formidable competitor to Fitbit, or it may disintermediate Fitbit's offerings completely.

The Apple Watch is argued to be a major competitive disruption for Fitbit solutions, with a high-end product quality, design, platform effect as well as the brand loyalty that typically makes Apple a formidable competitor. Of course, the Apple Watch could be considered an aspirational product (priced around $350-$1,000+), which is in a different product and pricing segment versus a Fitbit Flex ($100) or Fitbit Charge HR ($150).

Fitbit's top of the line offering is the $249 Surge, whereas Apple's most inexpensive Watch model (which is as capable as its most expensive model) retails for $349. Consequently, it is somewhat misleading to propose that Fitbit and Apple are not competing in the same market segment because their price points are different. In actuality, Fitbit's Surge is just 26% cheaper than the most inexpensive Apple Watch. The difference between Apple's $350 Watch and its $17,000 Watch is simply the band and trim; a rubber band and aluminum case for the former, and 18-karate rose gold case with rose gray modern buckle in the latter case:

Consequently, the Fitbit Surge is almost competing in the same price range as the Apple Watch, albeit with considerably inferior capabilities.

Market research firm Strategy Analytics estimates that Apple accounted for 75% of approximately 5.3 million wearable devices sold in the June quarter, or around 4.0 million units. Apple has not disclosed its actual Watch sales, though. The Apple Watch launched in sixteen countries and appears to have raised the bar for the global smartwatch industry. What impact this will have on companies such as Fitbit remains to be seen. It is possible, though, that the Apple Watch is the greatest threat to Fitbit, as it is a very attractive platform for third-party app developers and, as such, its functionality should soon be superior to Fitbit's offering and the speed of new updates and improvements also appear to favor Apple as a result of its close relationship with third-party developers. For example, recently, Apple and IBM added three new apps that the Apple Watch will support. These apps include the healthcare app Hospital RN, the energy and utilities app Field Connect, and the public safety app Incident Aware.

Xiomi

Xiomi is dominating the low end of the activity tracking market with its Mi Band, which retails for $15-$20. The Mi Band can perform some basic tracking such as counting steps, distance, calories burned, as well as checking sleep quality and waking up users gently through a gradual vibrating alarm. It also syncs via Bluetooth to the Internet, where data can be shared and compared with those of friends and family. In the first quarter of this year, Xiaomi's global market share (in units) in the wearables department increased to 24.5%, despite its limited availability of its Mi Band. A $20 Mi band offers more or less the same functionality as a $100 Fitbit device. The Chinese company recorded 2.8 million shipments in the first quarter of this year, compared to none in the same period last year. It is also estimated that it has sold 6 million units in total, which compares to the 10.9 million devices Fitbit sold last year. Of course, Xiomi's bands are considerably cheaper than Fitbit's, so while Xiomi's unit share is high, in dollar terms it is still far behind Fitbit, whose ASP was approximately $67 last year.

Xiomi is rumored to be working on a Mi Band 2 (or possibly known as Mi Band 1S), which is expected to include features such as a built-in heart rate monitor, according to a report by Engadget.com. While Xiomi sold all these devices in Asia, it only recently entered the US and European markets. In fact, June 1st was the first day it opened an online store accessible for US consumers. Consequently, Fitbit has yet to be impacted by Xiomi's entry into the US market. Xiomi's vice president of international operations, Hugo Barra, formerly had a successful role at Google, working on the development of Android.

Garmin

Since releasing its first Forerunner product in 2003, Garmin has been a leader in the fitness watch/sports watch segment and it began introducing fitness bands/activity trackers last year. These devices appear to compete directly with Fitbit's offerings. Garmin has a well-established brand name and distribution network and can leverage the R&D investments it has made into its existing, higher-end, devices. Direct competitors to Fitbit's offerings include:


vivofit -$80


vivofit 2 - $100


vivoactive -$299


vivosmart - $149

These products compete with Fitbit's entire product line, in every segment, and has more or less the same functionality and price points. In addition, Garmin's product line extends to higher-end watch products with enhanced capabilities ranging from $350-$550, which typically target specific niches such as running, cycling, swimming or triathlon.

<u>Other Higher-End Devices</u>

Particularly internationally, Fitbit competes with well-established European companies such as TomTom, Suunto and Polar, which produce higher-end connected devices that target a more sophisticated athlete who has higher expectations of accuracy and precision in data. That being said, the pricing of these devices are not necessarily higher than the Fitbit Surge. For example, TomTom offers a running watch that has a built-in heart rate monitor as well as GPS, for $229, and Suunto offers a similar device for $244, while Polar's equivalent ($249) requires a separate heartrate chest band. These watches can generally perform most of what Fitbit's activity trackers can do, including syncing with the web and apps such as MuFitnessPal:

TomTom Runner Cardio

Suunto Ambit2 S

Polar M400

Out of these three companies, Polar has already ventured into more direct competition with Fitbit by introducing two pure fitness tracking devices known as the Loop and the Loop2:

Polar Loop

Polar Loop2

These devices, which retail for $79.95 and $119.95 (chest band for measuring heartrate is sold separately) have similar functionality as Fitbit, including the tracking of steps and distance, inactivity alerts, calories burned, sleep tracking, smart notifications and wireless sync to the Internet and various apps.

In addition to these competitors, Microsoft, Misfit, Adidas, Samsung, Pebble, Basis, Moov, Zeaplus, Yu Fit and LG also produce feature-rich smartwatches, and others such as Guess, which will introduce a more fashionable fitness band, Sequential Brand's Avia brand, which is introducing an entry-level fitness band and Fossil (which has partnerships with Google and Intel) have plans to introduce devices shortly. HTC also has its own fitness band, known as HTC Grip, which is expected to launch soon at a $199 price. Whether Fitbit can retain its position in the middle ground remains to be seen.

Google

Android Wear is the name for watches that run Google's Android operating system. These watches are marketed by companies such as Samsung, Motorola, Asus, Huawai, and Sony. Strategy Analytics estimates that these devices, collectively, reached 600,000 units in sales in the second quarter, which was a 100% growth rate from an estimated 300,000 in the same period last year. While these are the early days of Android Wear, the operating system is still being fine-tuned for the watches and new functionality is being introduced gradually. For example, Google Maps just recently became available for the Watches. If history is any guide, Android Wear, as well as Apple Watch, will get better and better with each iteration and the market will expand accordingly, perhaps at the expense of companies such as Fitbit.

Google is also approaching this from another angle. Since watches that purport to provide actual health benefits or health information are regulated by the FDA and since this has restricted the number of such devices, Google, besides Android Wear, has also developed a Google health wrist band that is aimed at researchers, doctors and drug makers. Google is seeking to give doctors, researchers and physicians minute-by-minute data on how their patients are doing. Its intended use is for this to become a medical device that is prescribed to patients or used for clinical trials. Google's experimental device can determine pulse, heart rhythm and skin temperature, along with environmental information like light exposure and noise levels. Like Apple and others Google offers health-monitoring smartwatch features in its Android Wear software platform for consumers.

However, most consumer devices are not precise enough for research. Rather, it is the intent that tools like Google's wristband would help healthy people detect early signs of disease. Google plans to team up with academic researchers and drug makers to test the wristband's precision and seek regulatory approval to use it in the U.S. and Europe. Consequently, in five years' time, perhaps corporate wellness programs dictate that employees have to wear a Google health band and have their actual health, not just the number of steps they have taken or the number of calories they have burned, monitored by their actual primary care physician. Because if wearable devices are to make an actual impact on one's health, it appears the FDA regulatory path, although an added burden, is perhaps a necessary step to add value to consumers, corporate wellness programs, as well as doctors and the healthcare industry in general. Fitbit appears to have no such aspirations.

According to stats from Emergo, the average time taken for a medical device to gain FDA approval is six months. Making an Apple Watch, Galaxy Gear or Fitbit Charge for medical use would require more expensive components, additional testing and considerably lengthen the time between releases once that FDA approval process is factored in. It could also wreak havoc with operating system updates, which may also require approval before release.

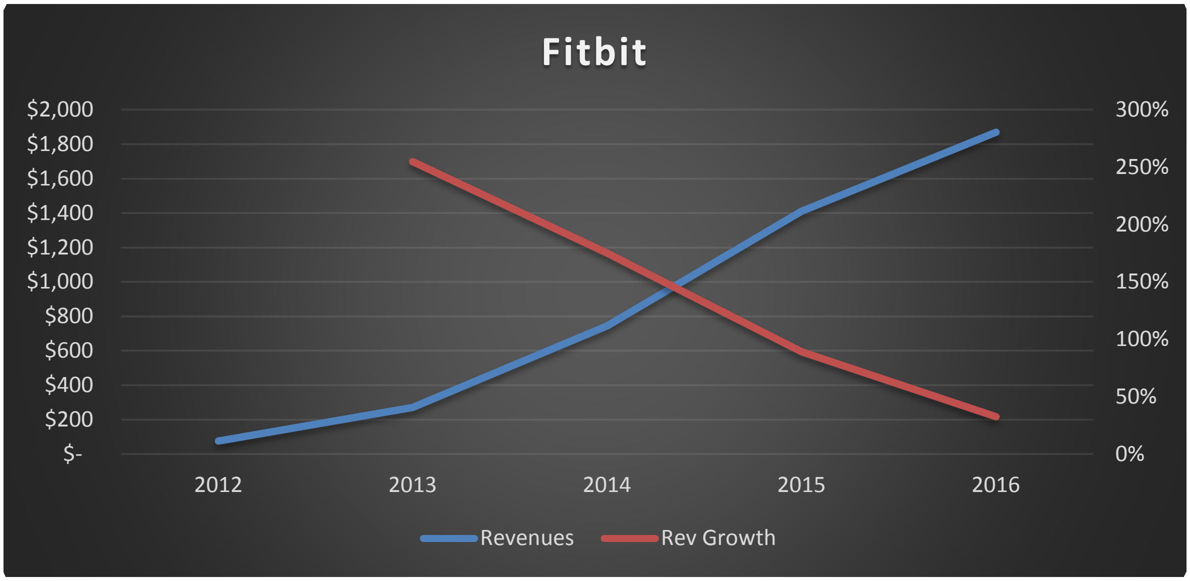
Nike
In 2013, Nike had the third largest market share, yet still opted to exit the industry in 2014. This move clearly benefitted Fitbit as, undoubtedly, would-be Nike buyers purchased Fitbit instead. Nike exited its Fuelband business last year, before the Apple Watch arrived. While Fitbit may sell many units, there is no strong demand for such products.

Jawbone Lawsuit

An ongoing legal battle between Jawbone and Fitbit has put a question on the latter's business practices. In May 2015, Jawbone filed a lawsuit claiming that Fitbit hired five Jawbone employees who stole Jawbone's intellectual property. In a second lawsuit filed in a San Francisco court in June, in which Jawbone claimed that Fitbit infringed and continues to infringe on one or more of its patents. Jawbone and its parent company, AliphCom Inc., hold 147 patents, 53% of which relates to design, 31% to hardware and 16% to software. Jawbone intends to take its claims to the International Trade Commission, which could potentially lead to a ban on the import of Fitbit products or their parts (these are mainly manufactured in Asia by companies such as Flextronics). Jawbone has requested a ruling within 15 months and a cease-and-desist, which could come before that. Consequently, if the outcome of these lawsuits is unfavorable to Fitbit, it could have a material negative impact.

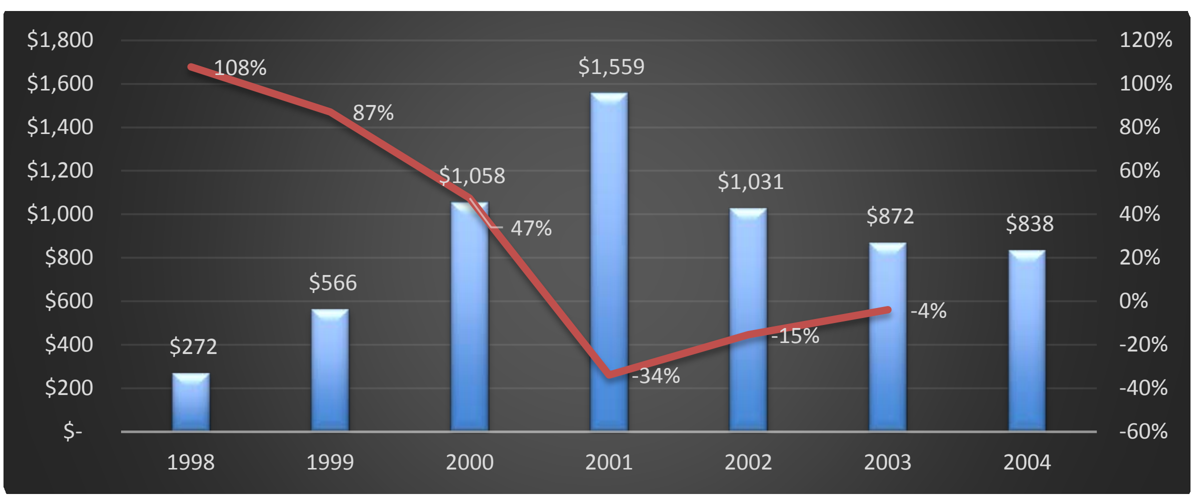
Valuation

Fitbit is currently trading at 75x Wall Street's 2015 consensus earnings per share (EPS) of $0.61. This is mainly a reflection of its strong expected growth rates. Currently, Wall Street forecasts that Fitbit will generate $1.41 billion in revenues in 2015 and $1.87 billion in 2016. If that comes to fruition, the company's revenues over the five-year period would expand almost exponentially, as the chart below illustrates, but its year-over-year growth rates would decline from 255% in 2013 to 33% in 2016:



(Revenues in millions)

In the long-term, though, the company has to continue to innovate and create desirable devices to convince consumers to replace them on a continual cycle. Thus, while it is tempting to extrapolate its revenue growth, perhaps at slightly diminishing percentages, well into the future, it is also possible that the expansion will be reversed within the not-too distant future, should competition intensify, or technology get disrupted by a better platform. By comparison, consider the chart below, which outlines revenues and year-over-year growth rates for a specific company:



(Revenues in millions)

These are actual revenue figures, by a company that was similar in size to Fitbit in terms of revenues. That company expanded from $272 million in 1998 to $1.56 billion in 2001, which could be compared to Fitbit's expected rise from $271 million in 2013 to $1.87 billion in

2016 (based on consensus estimates). However, as the chart above indicates, this company's revenues topped out at the $1.56 billion level and declined by almost 50% in the ensuing three years. That company was known as Palm, Inc., and it briefly obtained a market capitalization of more than $50 billion in 2000 (it was also the subject of a short-sale report from this publication in 2001). Its profitability and profit margins had improved steadily until its IPO in March 2000, but from 2001 and beyond, it began to lose substantial sums of money - hundreds of millions of dollars from 2001-2004 - partly as a result of impairment and restructuring charges. Much later, in 2010, Hewlett-Packard was able to acquire it for $1.2 billion, and it eventually had to write all of that off, and more.

In its day, Palm was quite profitable, with an operating margin of approximately 10% and a net profit margin of around 5%. By comparison, Fibit had operating margins of 21% in 2014 and 27% in the first quarter of 2015, and net profit margins of 18% and 14%, respectively. Thus, for a hardware manufacturer, Fitbit's profit margins appear wide, at almost 2-4x what Palm achieved in 1999-2000 and double the 7.9% net profit margin that is expected by GoPro for the current year. Assuming Fitbit will only achieve a net profit margin in line with GoPro's for 2016, and assuming further that it can generate the $1.87 billion, which Wall Street currently expects, then Fitbit's earnings would be $147 million, indicating a current P/E of 81x. Of course, that assumes that Fitbit will not suffer a similar fate as Palm. If its rapid growth phase continues through 2016, but if revenue forecasts for 2017 eventually have to be adjusted downward, Fitbit's P/E multiple could easily be cut in half. GoPro itself trades at 31x next year's consensus earnings, even though a 21% revenue expansion rate is expected. Thus, if Fitbit's 2017 revenues were to improve by 21% compared to the prior year, and assuming that it would achieve the same P/E multiple and net profit margin as GoPro's, it would generate revenues of $2.26 billion in 2017, income of $178 million, and its market capitalization would be $5.5 billion, or half of its current valuation. Perhaps that could still be considered an optimistic scenario, given the alternative path followed by Palm Inc.

Another comparison is Apple, which is currently trading at less than 10x next year's expected earnings, net of its large cash balance. Apple is expected to grow its revenues a respectable 8% in the current year and its net profit margin is 22%, mainly because of its valuable brand name and the strength of its hardware and software ecosystem. That company is also considerably more diversified than Fitbit and few, if any, doubt that it will still be in business in 10 years' time. The same cannot be said for Fitbit. It appears that a great percentage of Fitbit customers, perhaps half, stop using the product within a year. Yet, somehow Fitbit's stock is trading at six times the price/earnings multiple of Apple. Consequently, it seems a significant component of Fitbit's valuation is derived from momentum. Thus, should its revenue growth slow significantly, or even come to a halt within 2-3 years, it is doubtful that it would even trade at 10x earnings, like Apple. Hence, even if it were to earn the $178 million in net income in 2017 as speculated above, unless it has reasonable prospects to continue to expand meaningfully over the following years, its revenue growth momentum could be broken, which almost certainly would break the momentum for the stock price as well. At an Apple-like P/E multiple of 10x (excluding cash), Fitbit would be worth less than $3 billion, or one-quarter of the current stock price.

Despite its strong revenue growth and wide net profit margin and its early lead in the market, Fitbit generated negative free cash flow in 2014 and is projected by Wall Street to reach approximately $30 million in 2015, indicating a valuation of approximately 400x this amount. While some might argue that this figure is bound to increase rapidly in the years ahead, this is far from certain as competition should force a reduction in average selling prices, which leads to a reduction in net profit margin, while, at the same time, Fitbit may be forced to dramatically increase its R&D expenses and marketing budget to support its expansion. Similar hardware/fitness companies trade around 30x trailing free cash flow, highlighting yet another metric pointing to a significantly inflated valuation for Fitbit.

Scenario

The problem with technology as a business in general and hardware in particular, is the short product lifecycles and the risk of technological obsolescence, disintermediation and simply intensifying competition as a result of low barriers to entry. To gain an edge in this type of competition, a company needs to either reduce prices, or invest substantial sums in R&D and advertisement and focus on the high end of the market. In the former case, Fitbit would have to compete with companies such as Xiomi on price, which would decrease its margins meaningfully, or it would have to compete more closely with companies such as Google, Apple and Garmin in the latter case. Either way, it will be difficult for Fitbit to continue to grow rapidly while preserving its average selling price and profit margins.

Thus, a fitness band/activity tracker that sells for $100 today might only cost $50 five years from now, even though Fitbit's cost of goods sold and operating expenses cannot decline by similar magnitudes. Thus, assuming that the average selling price will decline by 10% per year, for Fitbit to expand its revenues by 20% per year over the next five years, it must sell a great number of devices:

	2015	2016	2017	2018	2019	2020
Units	17.0	22.7	30.2	40.3	53.7	71.6
ASP	$83	$75	$67	$61	$54	$49
Revenues	$1,411	$1,693	$2,032	$2,438	$2,926	$3,511

(Units, revenues in millions. 2015 figures based on Wall Street's consensus.)

Consequently, Fitbit would have to sell 72 million devices in 2020, compared to 10.8 million devices actually sold in 2014, in order to generate annual revenue growth of 20%, amid annual declines in average selling prices of 10%. Therefore, the question becomes, will there really be demand for 236 million Fitbit devices over the next 5.5 years? Will the people who stop using their devices within a few months (which could be as many as half of all users) ever buy another Fitbit? Will the current active users upgrade to newer devices or be content using their existing devices? If the answer to those to questions is 'no', it appears very difficult for Fitbit to sell an additional 235 million devices over the specified time frame. Also, to the extent that formerly disinterested Fitbit users want to purchase another device, or current active users to upgrade, there is clearly a plethora of alternative offerings to choose from. In either case, it is difficult to imagine that the profit margin can be sustained in a declining ASP environment, which intensifying competition is bound to bring.

Even so, assuming a 10% profit margin on the $3.5 billion in 2020 revenues in the preceding, truly optimistic full success scenario, would result in $350 million in net income in 2020. At that point, Fitbit would have to sell almost 100 million devices in 2021 in order to retain its 20% growth rate. Sooner or later, it will fall short, and when that happens, its P/E ratio could be reduced to 20x, or less. If that happens in 2020, based on $350 million in earnings, the market value of Fitbit could drop by 35% to $7.0 billion. And that is assuming that it can expand revenues by 20% per year between 2015 and 2020, while also retaining a double-digit net profit margin. In reality, both of these assumptions could be aggressive, resulting in a greater potential return for the short-seller.

Expectations vs Reality

While Wall Street only expects Fitbit to reach a 10.5% net profit margin in the current year, the company's own, long-term, target for its net profit margin is 15-17%. That compares to 18% for Garmin and 8% for GoPro, based on consensus expectations for the current year. Consequently, assuming that Fitbit can reach 16% once its rapid growth phase is over, to justify a $12 billion market capitalization at a 15x P/E ratio, in line with Garmin's current multiple, it would require revenues of $5.0 billion. The lower P/E ratio reflects the fact that it will take Fitbit a number of years to reach $5.0 billion in revenues, to the extent that it will ever accomplish this, at which time its rate of expansion would have moderated considerably and, thus, a lower P/E multiple would be justified. Even at an average revenue growth rate of 60%, it would take almost four years for Fitbit to reach a revenue run-rate of $5.0 billion from the actual $745 million generated last year. Therefore, even if Fitbit is highly successful and able to expand its revenues at 60% per year for four years, and manages to improve its profit margin from 11.5% in 2013 to 16% by 2019, despite the likelihood of declining ASPs, the shares would be largely flat over the next four years as long as the ending P/E ratio is 15x. Performance could be worse, for example, if the company were to use stock-based compensation or issue additional shares for acquisitions.

Company	Symbol	Price	2015 P/E	2016 P/E	2015 EV/Rev	Price/ Book	EV/ FCF	Rev. Growth	EPS Growth	Market Cap
Finish Line	FINL	$27.60	15.3x	13.8x	0.6x	2.4x	NA	4%	11%	$1.2B
Foot Locker	FL	$70.50	17.5x	15.8x	1.2x	4.2x	19.8x	5%	11%	$9.8B
GoPro	GPRO	$61.68	37.2x	31.5x	2.7x	8.2x	44.4x	21%	18%	$5.6B
Garmin	GRMN	$42.83	15.0x	14.3x	2.3x	2.5x	14.7x	1%	5%	$8.2B
Lululemon	LULU	$62.86	32.6x	27.1x	3.8x	7.4x	53.4x	15%	20%	$8.3B
Nike	NKE	$114.50	27.4x	24.2x	2.3x	3.9x	21.0x	9%	13%	$77.5B
UnderArmour	UA	$96.90	90.6x	68.2x	4.7x	24.8x	894.4x	22%	33%	$17.4B
			33.6x	27.8x	2.5x	7.62x	30.7x	11%	16%	
Fitbit	FIT	$47.00	77.0x	58.8x	7.5x	13.3x	329.3x	33%	31%	$11.4B

(Free cash flow based on trailing four quarters. Revenue and EPS growth based on 2016 estimates over 2015 estimates.)

Under Armour and Nike are highly diversified and there is little doubt that they will still be in business 10 years from now as they are not subject to product obsolescence. Fitbit, on the other hand, is almost exclusively dependent on the wearable fitness band segment, which may or may not exist as a separate product category in five years, at least in its current form. That is not too far-fetched, given that there were no wearable fitness bands just two years ago. More likely, step counters and heart rate monitors will be built into shoes and shirts, or perhaps glasses and sunglasses. Consequently, beyond the next few years, it is impossible to develop a somewhat accurate terminal value based on Fitbit's future cash flows, as they are so uncertain. The pace of innovation in this industry could lead to dramatic changes in market share in just a few years, as some of our prior reports have highlighted, e.g., Nokia, BlackBerry and Palm. Therefore, an argument could be made that Nike and Under Armour should trade at higher valuations than Fitbit, simply because their longevity is more certain, even though their growth rates are currently below those of Fitbit's.

If Fitbit's projected 2017 revenues or earnings get revised lower, to indicate growth rates in the mid-double digits, which would be in line with the averages in the table above, its multiples, and, therefore, valuation, could decline by 50% or more, given the substantial premiums at which Fitbit currently trades. This premium is entirely contingent upon growth forecasts materializing, which appears unlikely. With expectations as high as they are, should the company report a good quarter and raise its forecast, the stock might appreciate slightly from current levels. However, if it disappoints, not only could its earnings actually decline (or vanish, as was the case with Palm), but the P/E multiple applied to the now-lower earnings would probably be dramatically reduced as well.

In a world focused on passive investing and exchange traded funds using stocks as 'raw material' with a main consideration of market capitalization and liquidity, Fitbit is clearly very attractive as few, if any, $12 billion market capitalization companies are able to expand their revenues, potentially, 100% in 2015. Thus, it is possible that investors pay a scarcity premium for Fitbit in order to gain exposure to the superficial statistical profile of a rapidly expanding, mid-capitalization company with very good liquidity. In fact, Fitbit trades approximately 17 million shares per day, which, with a $47 stock price, indicates a value of $800 million per day traded. Thus, with a $12 billion market capitalization, it turns over every 15 trading days, indicating an annual turnover of 1,700%. Of course, in reality, Fitbit offered only 39.7 million shares in its recent IPO, which now represents the float. Thus, since 17 million shares per day trade, the entire float is, if fact, turning over in just 2.3 trading days.

Investment Summary

Fitbit's valuation of almost $12 billion appears to reflect high expectations by investors. Such investors might see that Fitbit is fairly profitable with an operating margin of 24% and that, in spite of having close to $1 billion in revenues, it is still growing very rapidly. Indeed, it is expected to almost double its revenues in 2015 compared to the prior year. That being said, there are several potential problems, which do not appear to be reflected in the market capitalization. For example, there are many new entrants in the wearable technology segment. Apple Watches and Android Wear watches potentially have a run-rate of 20 million units per year already, a 5x increase from last year. This is already close to double the number of units Fitbit sold in 2014. These devices generally have more functionality than Fitbit's and are priced only slightly higher. On the other hand, Xiomi's $20 Mi Band, which was just introduced in the US market, appears poised to continue to dominate the low end of the market, and perhaps, as it improves its functionality in forthcoming iterations, put pricing pressure on companies such as Fitbit, which appears to be stuck in the middle tier. If history is any guide, there is a greater chance of fitness tracking becoming a more convenient feature within a larger product than remaining a standalone device. In that regard, the Apple Watch and Android-based watches could soon emerge as overwhelming competition for Fitbit.

Ultimately, perhaps the smartwatch market will disintermediate the need for a standalone fitness tracker, or perhaps the fact that the smartphone of today can already perform most of the services offered by Fitbit's devices at no additional cost will reduce the demand for Fitbit's activity trackers. One has to consider the possibility that many buyers of fitness trackers, potentially, are also unaware, at least for now, that their smartphone or watch may already be able to provide the same service at no cost.

Another problem is the fact that perhaps as many as half of Fitbit buyers ceased to be "active" within a few months, which means that they stopped using their devices fairly quickly. Indeed, these threats are serious and there should be clear concerns that Fitbit could lose its market position, growth and profits over time. Instead, it appears nothing but the most optimistic scenario is discounted in its market capitalization.

Since Fitbit's valuation does not seem to be supported by its existing business, investors appear to gamble that, even though there may be many competitors with similar, or even better devices at more affordable prices, the consumer will continue to purchase Fitbit because of its brand name, not the device itself. It is also a bet that as the market for fitness trackers will continue to expand and that it is not a fad, and that Fitbit will be able to retain a leading market share, but remain highly profitable - being able to sell essentially the same product as its competitors at higher prices.

This market capitalization is incompatible with anything but extreme success. Extreme success would require that despite the surge in the past year or so of new, significant competitors, all with comparably rapid unit growth, with model proliferation both at the low end and high end of the Fitbit product range, with roughly 50% user fatigue rates, with essentially no recurring revenue, that Fitbit's products will not suffer price competition nor require disproportionate increases in R&D expense – essentially, that its first mover advantage period never subsides (yet which appears to be in progress).

Extreme success in such a market with so many competitors at price points so much lower appears unlikely, despite its early success and leadership in terms of market share. History is filled with early leaders that floundered, including the Rio MP3 player, the Blackberry smartphone, Palm digital organizer, or Kodak's digital cameras, all of which, incidentally, ultimately could be replaced with an Apple iPhone. Consequently, since wrist worn fitness bands have only existed for two years, pricing the market leader as if it will achieve guaranteed success is premature, particularly since there are no barriers to entry and Fitbit has no sustainable advantages. While, theoretically, Fitbit could build a sustainable high-margin franchise, it appears that scenario is already reflected in its market capitalization, while the high probability that it will not, is not reflected. Therefore, the stock's valuation seems to favor the short-seller and, as a result, shares of Fitbit are recommended for sale or short-sale.