

Apple: Hard-software integrater with revenue model migration

Apple: A trend leader



Source: Techspot

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“I regard AR as a big idea like the smartphone. The smartphone is for everyone; we don't have to think the iPhone is about a certain demographic, or country or vertical market: it's for everyone. I think AR is that big; it's huge. I get excited because of the things that could be done that could improve a lot of lives.” – Apple CEO Tim Cook.

Worth a higher multiple: Global smartphone market is mature and its growth rate has slowed down to around 0% starting from 2017 with the extending device replacement cycles and lack of innovation/incremental benefits. We believe the next growth stage for Apple (AAPL.US) is its service revenue and Augmented reality (AR). Higher multiple should be given to Apple to reflect the high margin and recurring revenue stream. We also like Apple's strong balance sheet to support its buyback and dividend program

Vertical integration to improve stickiness: From iPod (2001) + iTunes (2001) + iTunes Store (2003), to iPhone (2007) + App Store (2008), iPad (2010), Apple is able to achieve **multi-layer innovation (from hardware, software and OS platform services), and then grasp the key aspects of the industry, on one hand to improve customer experience and stickiness, boosting its product average price, creating a superior brand belief (shown by high retention rate), on the other hand, to increase the bargaining power towards suppliers**

We figure out 5 positive catalysts to its share price:

Augmented Reality: MarketsandMarkets forecasts the global AR market to grow at an annual CAGR of 75.7% through 2016-2022. We think AR can contribute to Apple's revenues in 3 ways. **Firstly, sell AR enhanced Apps from App Store; Secondly, more iPhone newer models support AR features, including rear 3D sensing in 2019; Thirdly, sales of new Apple AR glass (yet to be announced)**

Service segment growth: Over the past three years, Apple Services revenue grew at CAGR of 18%, outgrowing its three main devices (iPhone: 11%, iPad: -14%, Mac: 2%). Services include App Store, AppleCare, Google Licensing, Music, iCloud, and Apple Pay and Others. Apple Services revenue growth can even accelerate despite high base effect and slower installed base growth. We believe **(1) migration to subscription model and (2) Apple's App Store search advertising push.**

Higher selling price and GPM for iPhone: With the spec upgrade (dual camera, facial recognition by True Depth camera, bezel-less display, stronger memory, AI Bionic chip with faster computing power, etc), we expect iPhone ASP will continue to have its upward trend. Apple can also leverage its brand image and vertically integrated services with strong user stickiness and bargaining

power to suppliers, achieving a strong GPM.

Other items see room for accelerating monetarization: Resources like AppleCare, Apple Pay, Apple Watch, home/health kit, may take time to mature. We are waiting to see how it can accelerate its monetarization in the future. Apple is reportedly working on a TV, Music, and News bundle, and Apple has hired staff to develop original content. We remain to see how it will be going in the future.

Large cash balance + strong balance sheet + tax reform => dividend payouts + share buybacks + potential acquisition: Apple now has USD243.7 bn in cash on hand, around 23% of market cap, showing its strong cash balance. We expect (1) further dividend payouts or (2) share buybacks as well as (3) potential acquisition plans in the future will provide some support to Apple share price.

Initiate 'Buy' with target price of USD260: Our target price of USD260 is based on 17.7 X our 2019 EPS estimate of USD14.68. A higher multiple than 10-year average of 15X is justified by AR secular trend, rise of service segment and abundant cash balance. Key downside risk includes deteriorating trade war concerns, longer than expected smartphone replacement cycle, lower than expected service segment growth.

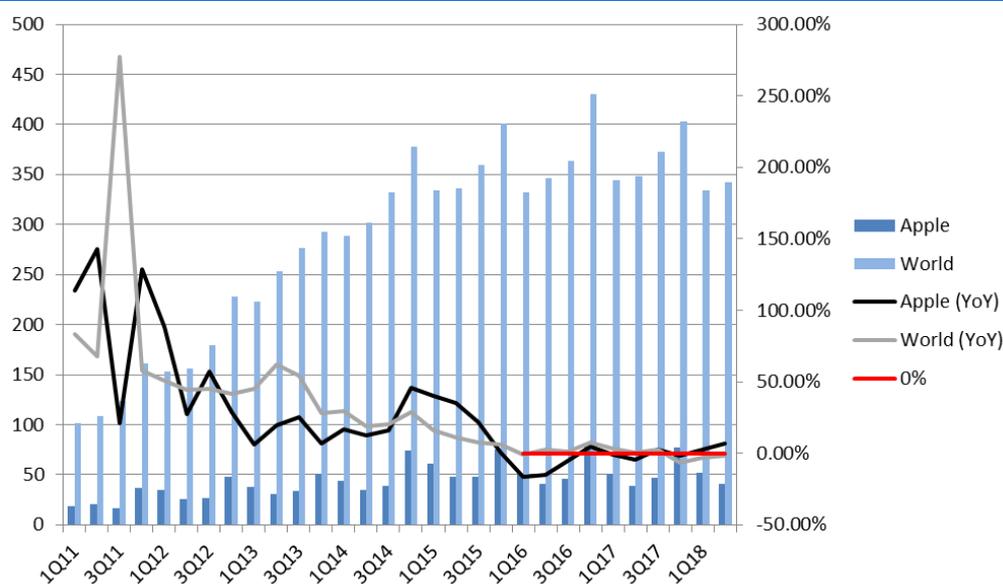
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Introduction

Global smartphone market is mature and its growth rate has slowed down to around 0% starting from 2017 with the extending device replacement cycles and lack of innovation/incremental benefits. We believe the next growth stage for Apple (AAPL.US) is its service revenue and Augmented reality (AR). Higher multiple should be given to Apple to reflect the high margin and recurring revenue stream. We also like Apple’s strong balance sheet to support its buyback and dividend program. Firstly, we will look at Apple’s business model which can help maintain long term profitability.

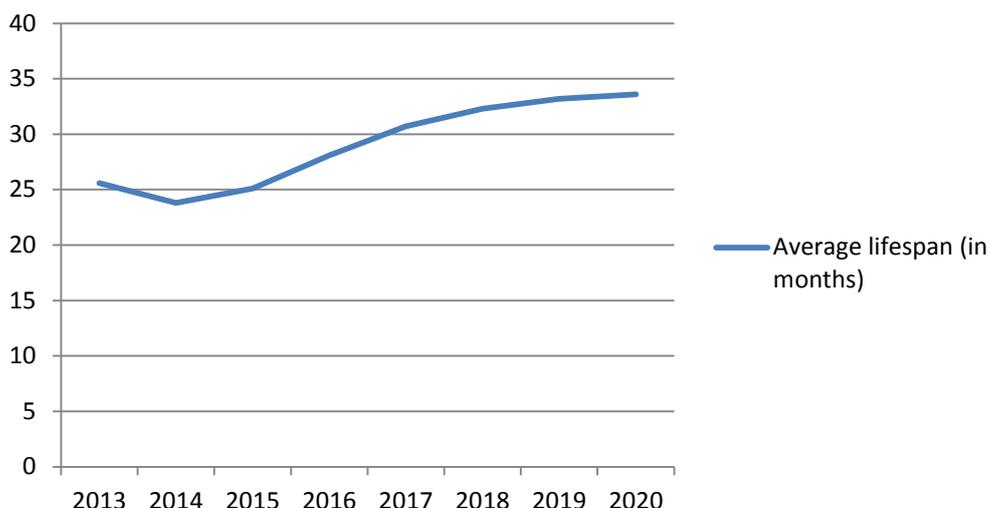
Figure. Apple and worldwide smartphone shipment



Source: Statista, CASH

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Figure. iPhone average life span (in months)



Source: Statista, CASH

Figure. Worldwide smartphone shipment

Vendor	Shipments (mn)	Market share
Samsung	71.5	20.9%
Huawei	54.2	15.8%
Apple	41.3	12.1%
Xiaomi	31.9	9.3%
Oppo	29.4	8.6%
Others	113.7	33.2%
Total	342	100.0%

Source: IDC, CASH

Long term competency

1. The business model and core competency

According to “Reinventing Your Business Model”, by Mark W. Johnson, Clayton M. Christensen and Henning Kagermann, the business model is about how to create and deliver customer value and company value. A complete business model consists of four elements: (1) customer value, (2) profit model, (3) key resources, and (4) key processes. Among them, customer value refers to **what irreplaceable value** you can bring to customers. Profit mode refers to **how you can make profits** from the process of creating value for customers. The key resource refers to **how to pool resources** within the enterprise to provide value to customers. The key process refers to **how the company ensures the**

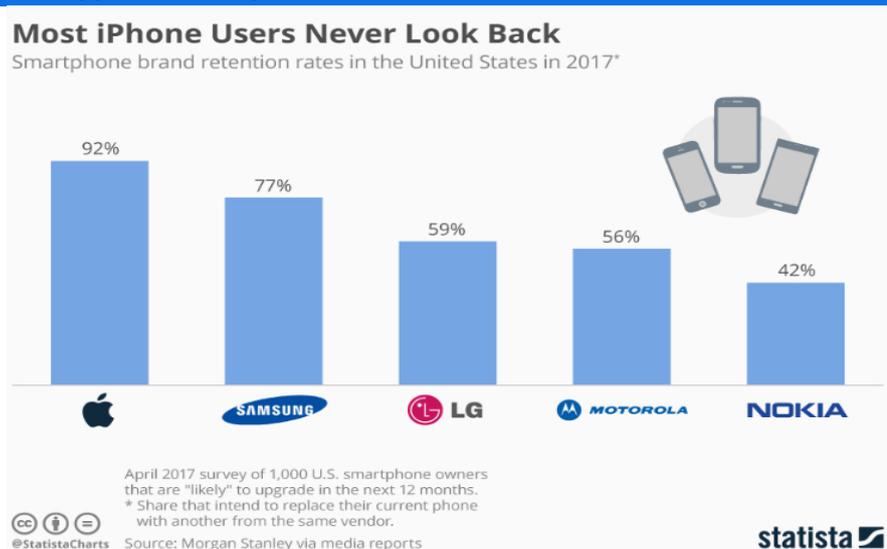
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realization of customer value internally by system and culture.

2. Apple’s customer value and profit model

Vertical integration to improve stickiness: Apple’s innovation can be demonstrated by its continual efforts in new products launch. From **iPod (2001) + iTunes (2001) + iTunes Store (2003)**, to **iPhone (2007) + App Store (2008)**, **iPad (2010)**, which has brought disruptive changes and new rules to smartphone market, extending the core functions of iPhone from pure communication and gaming, to cameras, music player and mobile internet features. Apple is able to achieve **multi-layer innovation (from hardware, software and OS platform services)**, and then grasp the key aspects of the industry, on one hand to improve customer experience and stickiness, boosting its product average price, creating a superior brand belief (shown by high retention rate), on the other hand, to increase the bargaining power towards suppliers. At the same time, through the cooperation of associated companies in an industry to make up for the lack of resources - the acquisition of facial emotion company Emotient, facial expression company Faceshift, eye-ball tracking company SensoMotoric, fingerprint identification companies and voice companies, making a better construction of ecosystem, supply chain management, brand integration. **In fact, hardware sales create profits from services/software, while services/software give higher value to hardware and higher customer loyalty.**

Figure. Apple has a superior retention rate



Source: Statista, CASH

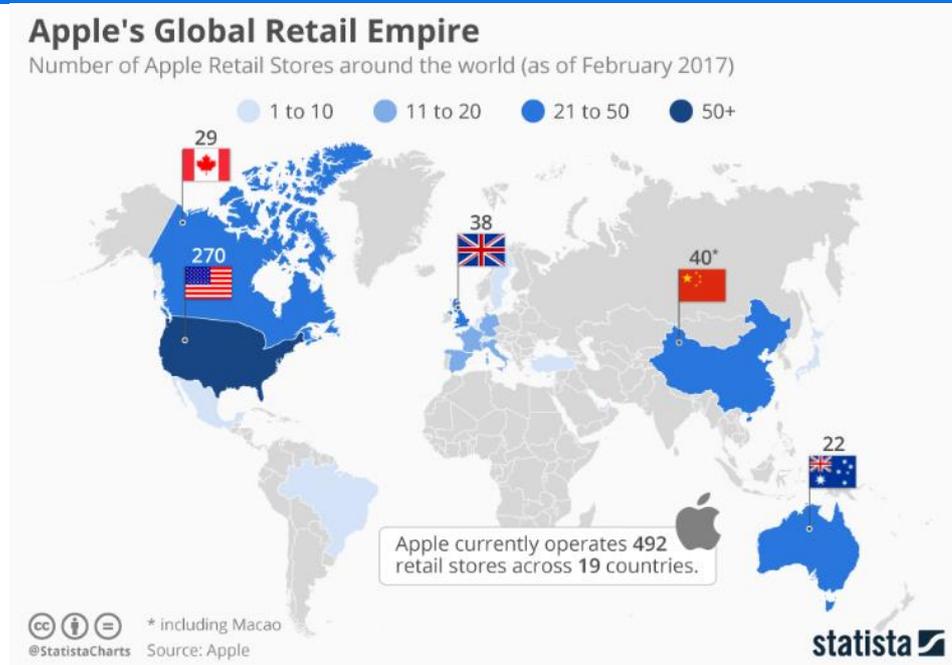
Power of platform: Apple has created platforms for content owners and app

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developers to sell their content and apps. Apple is able to take a fee from the content owners and developers as it owns and maintains the platforms that help connect consumers with them. As Apple customer base grows and more consumers access the platforms with their devices, cross-side network effects are induced, the platform becomes more attractive to the application developers and the content owners, in turn more new customers will come. The devices and platforms help Apple lock-in the consumer into its ecosystem.

Apple Retail Store Strategy: Apple continues to expand its own retail stores network globally to make sure a superior buying experience for its products. Apple retail stores are typically located at **high-traffic locations**, including quality shopping malls and urban shopping districts. These stores are designed to **simplify and enhance the presentation of product functions and marketing of the Apple products**. These stores can cross sell a wide range of **third-party hardware, software, and other accessories** that complement Apple products. The retail stores employ **experienced and knowledgeable sales**, providing advice and lecture on the use of Apple products.

Figure. Apple's global retail empire

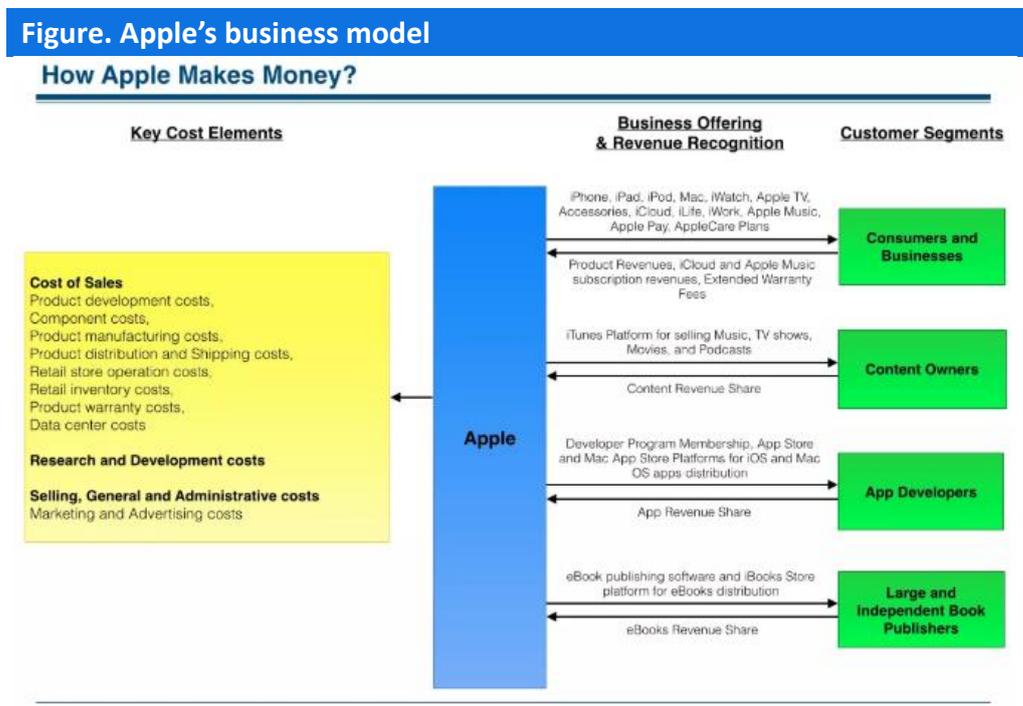


Source: Statista, CASH

3. Key talents and internal culture

Institutions and culture nurture innovations: The key resource of Apple is the **early culture developed by CEO Steve Jobs, innovative product design,**

developers and product marketers, as well as support from record companies and software developers. The key process is Apple's advocacy of innovation spirits, corporate culture and day-to-day management, fostering continuous development of products like iPhone and iPad. Among them, **smart glasses are the future revolutionary products**, foreign media CNET reported that recently Apple has confirmed to the media to acquire a German company with visual eye tracking technology SensoMotoric Instruments. This technology is mainly applied to related devices developed in VR helmets and AR glasses. Apple is likely to release these AR smart glasses by the end of this year.



Source: revenuesandprofits.com, CASH

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Future growth engine

1. Augmented Reality

MarketsandMarkets forecasts the global AR market to grow at an annual CAGR of 75.7% through 2016-2022, when that market is predicted to reach USD117.4 billion. Over the same period, VR tech is expected to grow at a 2016-2022 CAGR of 57.8% to reach USD33.9 billion. Among the 'big five', Microsoft has been well known for its development of HoloLens VR platform, takes a leading position in AR, followed by Google, Amazon, Apple and Facebook (with no patents in 2016). Other than the big five', in terms of number of patents, near the top of the list and tracking Microsoft closely includes Sony, Samsung Electronics and Qualcomm while Magic Leap is the startup with number of patents that outpace Microsoft. Apple made a series of acquisitions beginning in 2014 which indicated a serious commitment to AR/VR/computer vision.

We think AR can contribute to Apple's revenues in 3 ways. **Firstly, sell AR enhanced Apps from App Store; Secondly, more iPhone newer models support AR features, including rear 3D sensing in 2019; Thirdly, sales of new Apple AR glass (yet to be announced)**

The current two main battlefields in AR market are: **(1) smartphone hardware/platform enabled AR, and (2) head-mounted displays (HMD).**

Smartphone hardware/platform enabled AR

Leader of the smartphone enabled AR competition are Apple and Google, who released their **AR developer kits, ARKit and ARCore**, respectively. The capabilities of these Software Development Kits (SDKs) are limited by the hardware components embedded to the smartphones. Without depth perception and using only these SDKs to analysis image and estimate the distance as well as scope of objects in the field of view, users try hard to obtain an optimal image. Therefore, hardware is vitally important in this sense to differentiate. The 3D sensors on iPhone created by Apple, with the front-end FaceID technology, (back-end likely in 2019) will enable significantly higher accuracy on applications like AR measurement for interior design (eg. IKEA Place, MeasureKit), virtual and real cross-over for AR games (Stack AR, World Brush, AR Runner) , image recognition for education (Sky Guide AR, Human Anatomy Atlas 2018). We think the penetration rate for AR usage will

pick up soon and Apple should be the trend leader in AR given iPhone's first mover advantage in 3D sensing function.

P.S: **ARKit**: In Sep 2017, Apple released **ARKit**, an iOS software development kit that allows developers to overlay digital objects on surfaces by utilizing the iPhone camera. With analysis of video components, including surface edges and texture, ARKit apps can **correctly position a 3D object** in the space. Apple **enhanced ARKit allows the use of vertical surfaces** in addition to horizontal surfaces. In WWDC 2018, Apple introduced **ARKit 2.0**, Apple **improved the object detection and face tracking features of ARKit, as well as persistent tracking**. Persistent tracking is a new feature that enables virtual objects to stay at where they are in the environment and return to them at a later moment. According to infoQ, ARKit 2 shared experiences allow multiple users to see and interact with the same AR scene using different devices at the same time, with each user seeing the common virtual environment from their own perspective.

Figure. ARKit 2.0



Source: Statista, CASH

P.S: **ARCore**: After the ARKit release, Google released its own version of an AR app programming platform named **ARCore** that can integrate with over 100m Android devices using internal cameras. According to Google, ARCore can utilize motion tracking to track the smartphone's position in the space, with environmental understanding to allow the phone to detect the size and location of flat surfaces, and finally light estimation to adjust the lighting of 3D

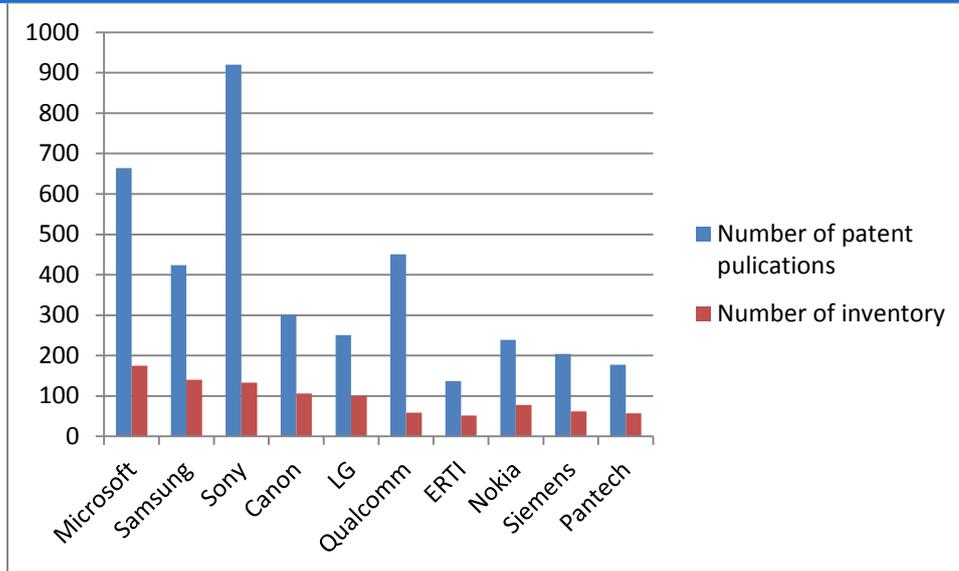
figure to reflect the reality.

Head-mounted displays (HMD)

Head mounted displays allow for hands-free user experience. **This market competition is led by both start-up companies and tech giant**, and we don't think HMD can pick up in the short term given most of them in the proof-of-concept stage in development. But, more and more people pay attention to this trend as there are currently nearly 1,596 AR start-ups listed in Angel List, up from around 600 in Aug 2016. While Sony, Samsung, Microsoft (introduced HoloLens*, in Jan 2015) and Qualcomm lead in VR/AR IP patents, Magic Leap (held by Google, Alibaba and Fidelity) has a dominant position within startups. According to Statista, in 2016, Microsoft is the leading AR patent holder with 175 AR inventories and 664 patent publications. We expect future R&D investment will be focused on improving critical requirements such as field and surface detection and analysis, HMD battery life, connectivity (e.g. low latency), scope, and interaction (e.g. motion tracking). Application will pick up with lower hardware costs and improvement in usability in long run.

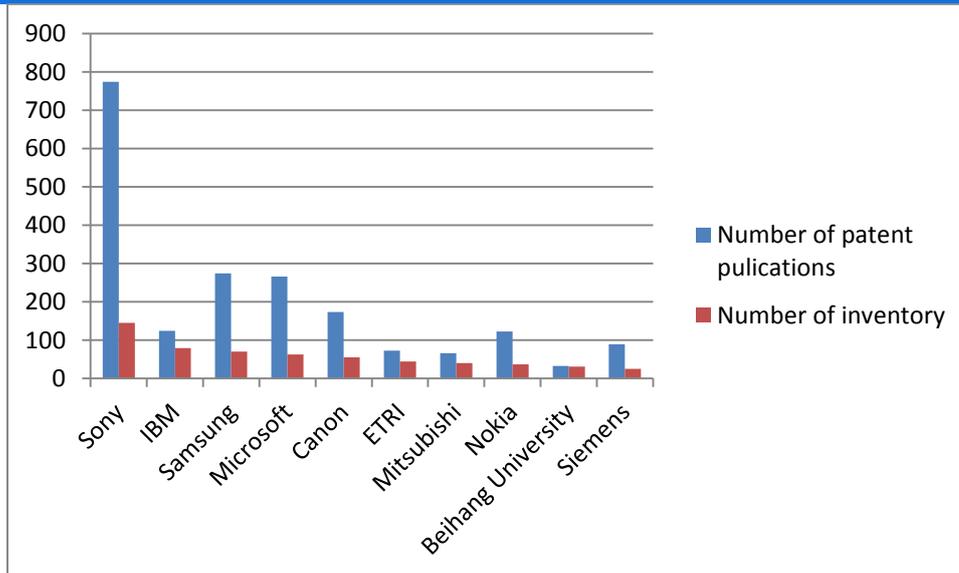
Apple acquired Metaio in 2015 that developed Augmented Reality SDK, FlyBy Media in 2016 who was the vision-based software partner for "Project Tango", and also Akonia Holographics in 2018 - a startup holographic smart glass-making startup, so on. On the other hand, Apple hired leading engineers that had previously worked on Microsoft's HoloLens project and at Magic Leap. We think Apple's ambition in AR market will allow it to have a leading position.

Figure. Number of AR patents among top patent holders



Source: Statista, CASH

Figure. Number of VR patents among top patent holders



Source: Statista, CASH

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Figure. Apple's acquisitions

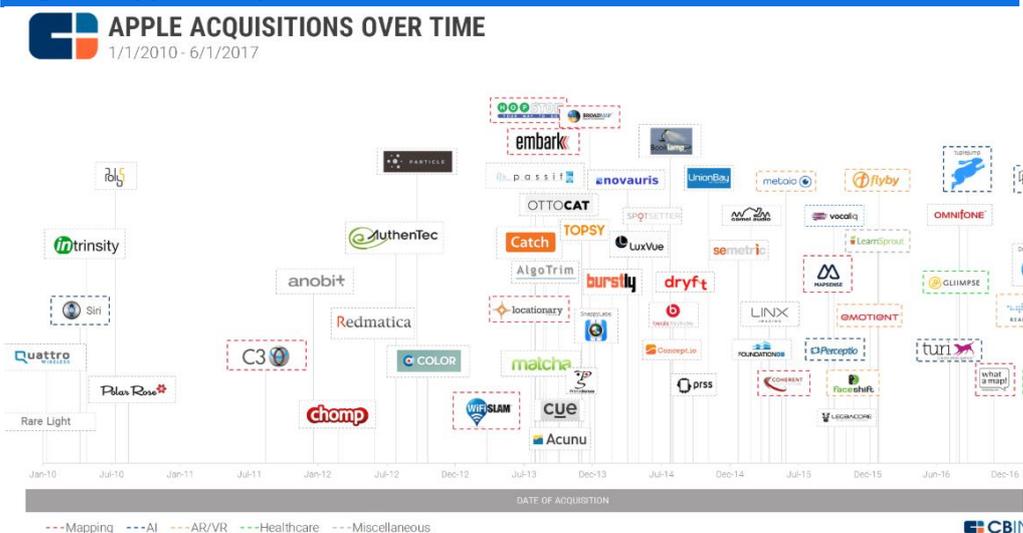


Figure. Microsoft's HoloLens



Figure. Magic Leap One (head-mounted display+ a diskshaped processing unit+ a handheld controller)



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Why we like Apple in AR? (1) Apple's ambition shown by its acquisitions; (2) Trend leader in smartphone and (3) Software hardware integration

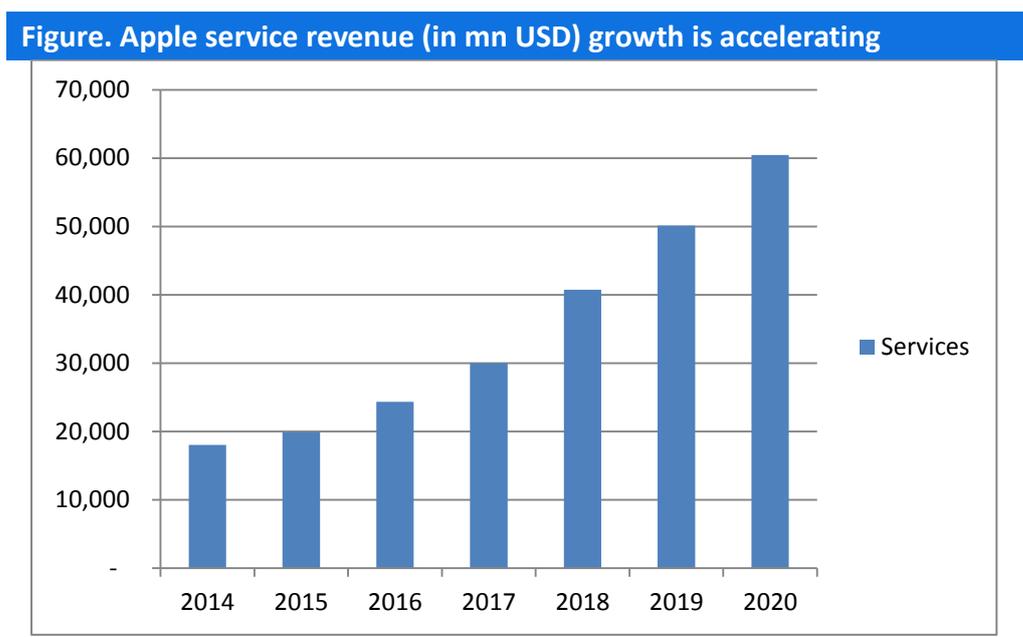
- (1) Apple's ambition shown by its acquisitions:** Apple acquired an Israeli 3D sensing company Primesense in 2013. Primesense focuses on "light coding" technology, this process coded the scene with near-IR light. Light firstly emitted from a device and returned back from an object with distortion depending on distance and angles of objects in space. A standard off-the-shelf CMOS image sensor then reads the coded light using various algorithms to triangulate and extract the 3D data. The product can analyse scenery in 3 dimensions with software, so that devices can even interact with users.
- (2) Trend leader in smartphone:** FaceID is introduced in iPhone X using light coding technology. Current front facing TrueDepth technology is based on projecting a pattern of 30,000 laser dots onto a user's face and measure the distortion to generate an accurate 3D image for user authentication. We believe Apple will likely integrate a time-of-flight sensor system better suited to analyzing details (edges and texture) and surfaces at longer distances from the iPhone. It is expected that more applications will be ramped up in the near future.
- (3) Hardware-software integration helps leverage its brand image:** Apple designs both the hardware and software related to AR of the iPhone. On hardware side, Apple has iPhone with 3D sensing function as a powerful asset. On software side, Apple possess ARKit platform for developers (released in Sep 2017). Apple keeps a 30% of sales on the App Store platform, but declines to 15% (effective in Sep 2016) if an app is sold as a subscription and a customer stays with the app for over 12 months, in order to attract more developers. Also, given iOS users spend more time on apps relative to Android users according to App Annie, combined with Apple as a trend leader in 3D sensing/AR technology, we see incentives for developers to choose ARKit rather than ARCore.

2. Accelerating Services growth even as devices shipments slow

Over the past three years, Apple Services revenue grew at CAGR of 18%, outgrowing its three main devices (iPhone: 11%, iPad: -14%, Mac: 2%).

Services include App Store, AppleCare, Google Licensing, Music, iCloud, and Apple Pay and Others. Apple Services revenue growth can even accelerate despite high base effect and slower installed base growth. We believe **(1) migration to subscription model and (2) Apple’s App Store search advertising push**.

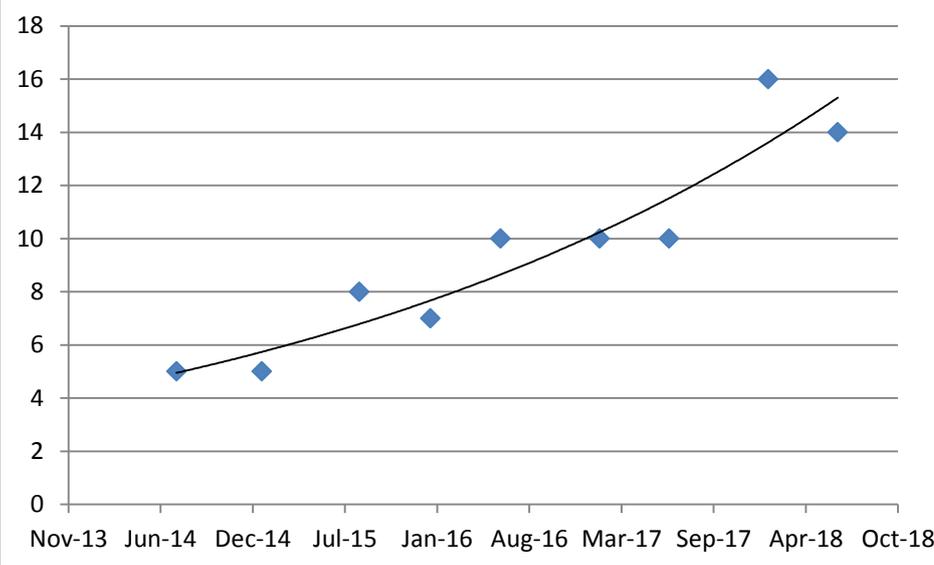
Apple app store allows app developers to advertise their apps in search results and drive attention of paid and subscription apps. This model boosts Apple app store earnings of mobile app developers (even though the growth of available mobile apps in app store is around -2% YoY to nil recently). **That means iPhone owners are more willing to spend on iPhone apps over time or they are willing to download more apps even given the same number of available apps on app store. (Note: spending per apps x download rate x number of available apps)**



Source: Bloomberg, CASH

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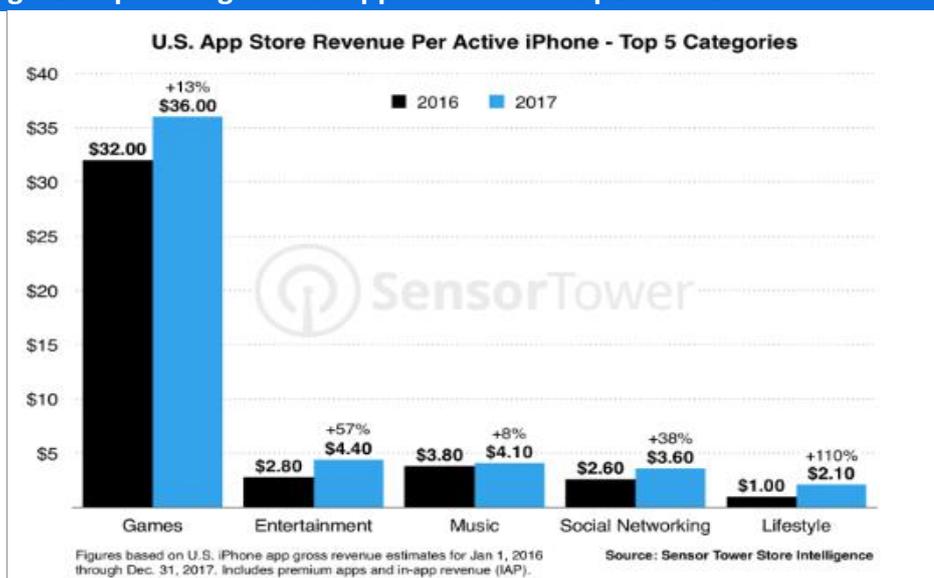
Figure. Apple App Store earnings (in bn USD) of mobile app developers is accelerating



Source: Statista, CASH

Spending per apps: In fact, according to Sensor Tower, U.S., the average amount spent (in-app purchases (IAP) + premium apps in 2017) per active iPhone increased to an estimated USD58 last year, up from USD47 in 2016. (P.S.: Games were the largest category of spending in iPhone apps on the App Store last year in US, approximately >50% of all money spent. We find that games revenue as a % of App store revenue had a decreasing trend, meaning that the strong growth in non-gaming categories may give us some confidence in the sustainability of strong App Store sales, reducing single category risk)

Figure. Top 5 categories of App store revenue per active iPhone

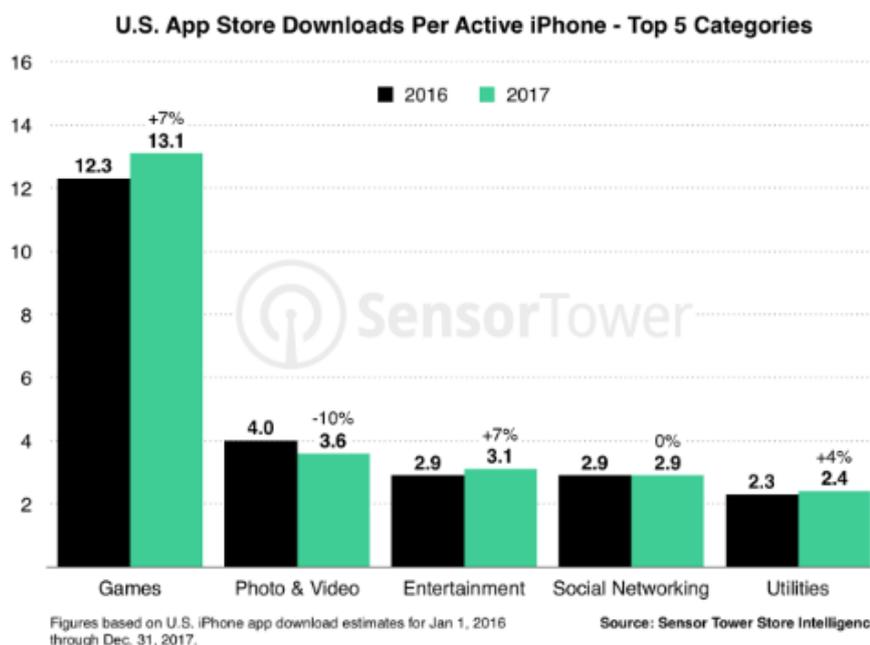


Source: SensorTower, CASH

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Download rate: Furthermore, according to SensorTower, Sensor Tower revealed a ~10% increase between 2016 and 2017 to 45 apps downloaded per active iPhone. U.S. iPhone users installed an average of four more new apps YoY in 2017.

Figure. Top 5 categories of App store downloads per active iPhone

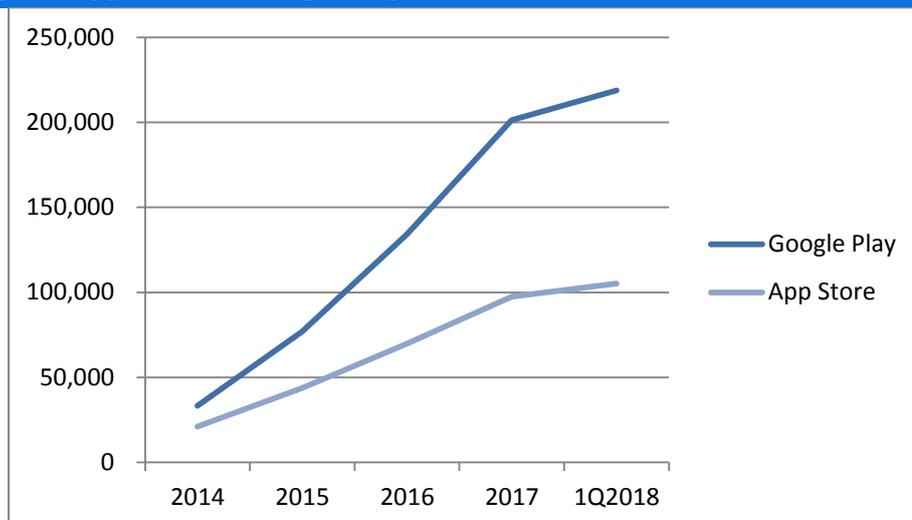


Source: SensorTower, CASH

App store has a superior earning ability compared to Google Play: As of 1Q2018, there are over 218,804mn apps download through Google Play compared with 105,208mn on App store, but app store can generate USD33,366mn net revenue, higher than Google Play’s USD19,087mn. The reasons behind may be (1) iOS users are more richer than Android users (iOS has more exposure to developed market) consistent with higher ASP of iPhone; (2) higher user engagement shown by time spent; (3) Google play is blocked in China but Apple app store has a USD12bn business there; (4) Strong customer base and bargaining power to suppliers given by Apple’s vertically integrated ecosystem and (5) developer apps with higher standard and better user experience.

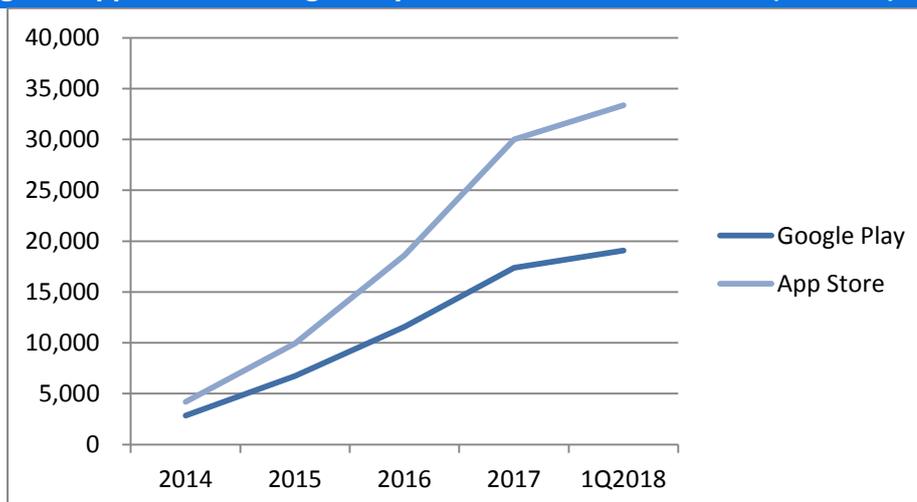
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Figure. App Store vs Google Play in cumulative downloads (mn)



Source: SensorTower, CASH

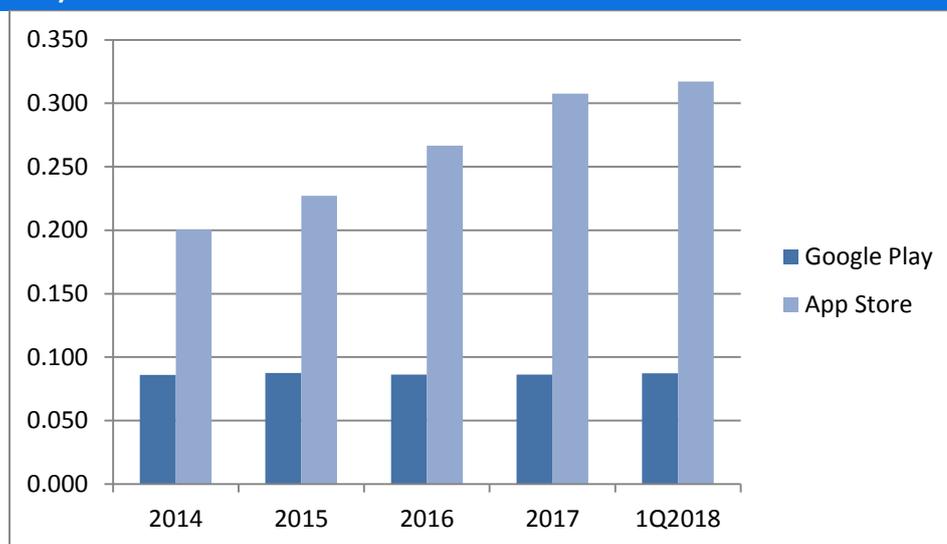
Figure: App Store vs Google Play in cumulative net revenue (USD mn)



Source: SensorTower, CASH

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Figure: App Store vs Google Play in cumulative net revenue per download (USD)



Source: SensorTower, CASH

A. Predictive Cash flow driven by migration to subscription model

Apple encourages iOS developers to switch from one-time, standalone purchases with paid upgrade to a subscription-based model. For now, Apple takes only a 15% for subscription services (from 30%) in the Apple App Store, while apps with a one-time paid download or freemium model will still be required to share 30% of revenues. We like **(1) cash flow stability from subscription model, (2) reduced cost of acquisition through the app store and increase in customer lifetime value and (3) apps quality improvement.** It can also counter the downward pricing pressure by “freemium” models which do not have the need to improve their apps to attract new users and convince existing users to upgrade/stick to the apps. Tim Cook said it now had 300 million paying subscribers coming from both its own internal services like Apple Music and iCloud as well as from third-party apps. We think the market will be huge as Netflix embraces 125mn subscriber base while Spotify has 83 million subscribers who pay up for the service.

B. Search ads

Apple network can distribute ads across their apps and Apple will share revenue with the apps displaying the ads, with the split varying from app to app. Search ads is an easy way for developers to get discovered on the

App Store by being featured prominently when users are searching for different apps. Developers can target potential customers by keyword, device type, location, schedules and more. It is now supported in 13 countries, including Australia, Canada, France, Germany, Italy, Japan, Mexico, New Zealand, South Korea, Spain, Switzerland, the UK and the U.S. Apple’s Search Ads feature for developers exists in two tiers and they are (1) Search Ads Advanced launched in late 2016 and (2) Search Ads Basic introduced Dec 2017 (US only). For the latter, it allows developers to significantly streamline the process of setting up App Store campaigns, simply by choosing the app to be advertised, the campaign budget, and how much they’re willing to pay per install. Below is the difference between them:

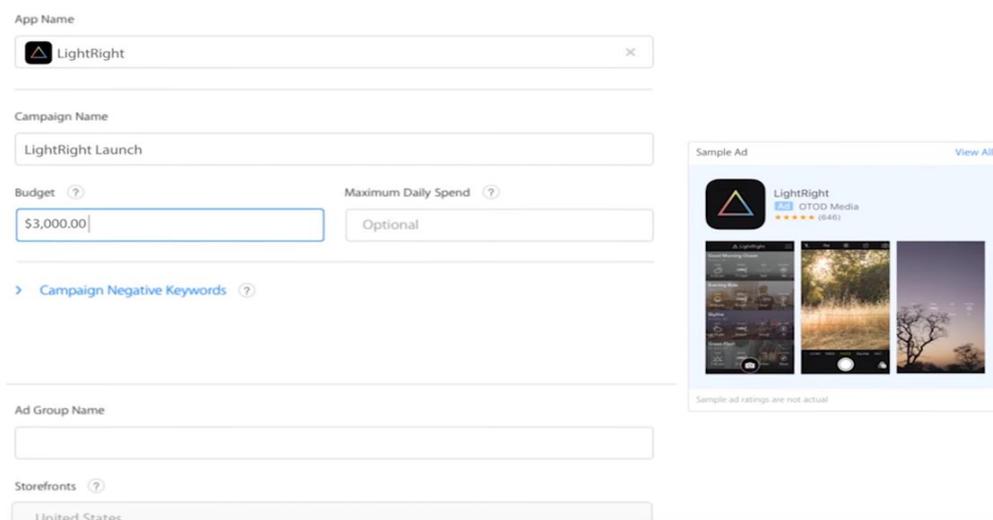
Figure: App Store Search Ads Basic vs Advanced

	Basic	Advanced
Available on the US App Store	✓	✓
Available on AU, CA, MX, NZ, CH, UK App Stores		✓
Keyword level optimization		✓
Maximum monthly budget allowed (\$5k) per app	✓	
Demographic targeting		✓
Device targeting		✓
Pay on Install	✓	
Pay on Tap		✓
Schedule ads with day parting		✓
Monthly budget caps	✓	
Daily budget caps		✓

Source: APPLE, medium.com, CASH

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Figure: App Store Search Ads



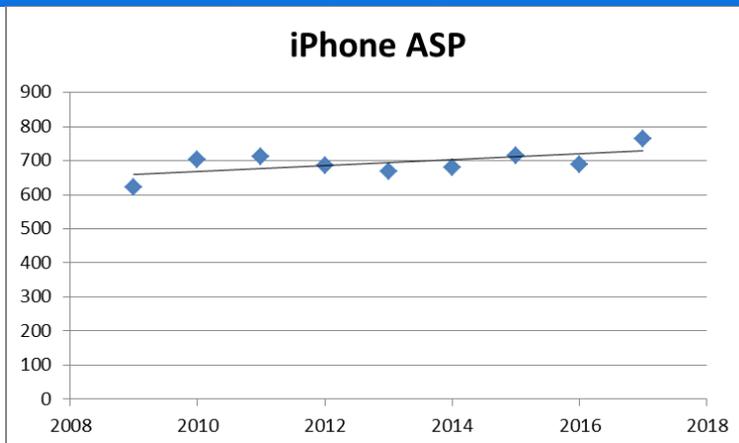
Source: APPLE, CASH

However, we see a key risk to subscription model of Apple service apps. For example, Netflix is currently testing having new or existing subscribers input their payment method directly into Netflix website (through a mobile web version), which can bypass the App Store in iOS devices. We monitor closely on whether other companies will follow suit.

3. Higher selling price and GPM for iPhone

With the spec upgrade (dual camera, facial recognition by True Depth camera, bezel-less display, stronger memory, AI Bionic chip with faster computing power, etc), we expect iPhone ASP will continue to have its upward trend. Apple can also leverage its brand image and vertically integrated services with strong user stickiness and bargaining power to suppliers, achieving a strong GPM.

Figure: iPhone ASP (in USD) is rising



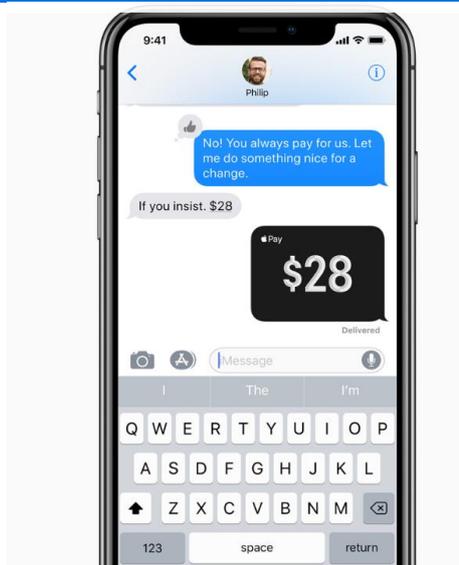
Source: APPLE, CASH

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4. Other items see room for accelerating monetization

Resources like AppleCare, Apple Pay, Apple Watch, home/health kit, may take time to mature. We are waiting to see how it can accelerate its monetization in the future. Take Apple Pay as an example, Apple pay growth seems is not fully in line with transaction volumes (growth in multiples) due to low fee charged per transaction. The addition of peer-to-peer payments in iMessages in Dec 2017 enables users to make some transactions, but now only 34% of Apple users stated they had enrolled in Apple Pay, according to a First Annapolis survey, therefore we see room for improvement in the usage of ApplePay (rather than the fee per transaction). Also, Apple is reportedly working on a TV, Music, and News bundle, and Apple has hired staff to develop original content. We remain to see how it will be going in the future.

Figure: Peer-to-peer payments in iMessages using ApplePay



Apple Pay makes sending and receiving money with friends and family as simple as sending a message.

Source: APPLE, CASH

5. Large cash balance + strong balance sheet + tax reform => dividend payouts + share buybacks + potential acquisition

Apple now has USD243.7 bn in cash on hand, around 23% of market cap, showing its strong cash balance. According to Financial Times, Apple said it would repatriate its overseas cash pile to the US, to take advantage of tax reforms (also benefited by lower tax rate) under president Trump. The Company is looking to reduce its gigantic cash hoard to become "net cash neutral" over time, according to CFO Luca Maestri. We expect (1) further dividend payouts or (2) share buybacks as well as (3) potential acquisition plans in the future will provide some support to Apple share price. In fact,

Apple has launched an USD100bn share buyback plan and raised its dividend despite previous expectations of a slowdown, showing management confidence on iPhone sales outlook.

Recent Development

New iPhone launch: Apple launched three new models in Sep 2018. Orders for the new Xs phones (iPhoneXS and iPhoneXS Max) began on 14 Sep with shipments beginning later on 21 Sep. The XR will be available to order on 19 Oct and begin shipping on 26 Oct. Apple unveiled its first 7nm chip – A12 Bionic, with 6.9bn transistors. The chip features a core CPU, core GPU and a dedicated Neural engine with faster computing power and lower power to stand out from other competitors. New large screen for iPhoneXS Max and dual-SIM (2 phone numbers interchangeable on one device) may also trigger product replacement demand. Due to our checking, sales may beat market expectations for next few months.

Finished goods inventory drops: Apple again disclosed its Inventory split into Components and Finished Goods for the second quarter in a row. We note that **Finished Goods inventory** (from USD2,476mn to USD1,649mn) declined by almost twice as much as **Components inventory** (from USD5,186mn to USD4,287mn), highlighting the management's assertion that channel inventory levels are **at the lower level (Company's target: 5-7 week range)**.

Purchase obligations pick up. The company's Manufacturing Purchase Obligations growth rate accelerated to 34% YoY, up from 25% YoY in 18Q2. Other Purchase Obligations declined 6% YoY to USD8.6bn, due mainly to a tough comp. **Overall purchase obligations grew 23% YoY to USD39.9bn, lower than 29% YoY in 18Q2.** That may suggest early launch of new iPhone model compared to last year.

Valuation

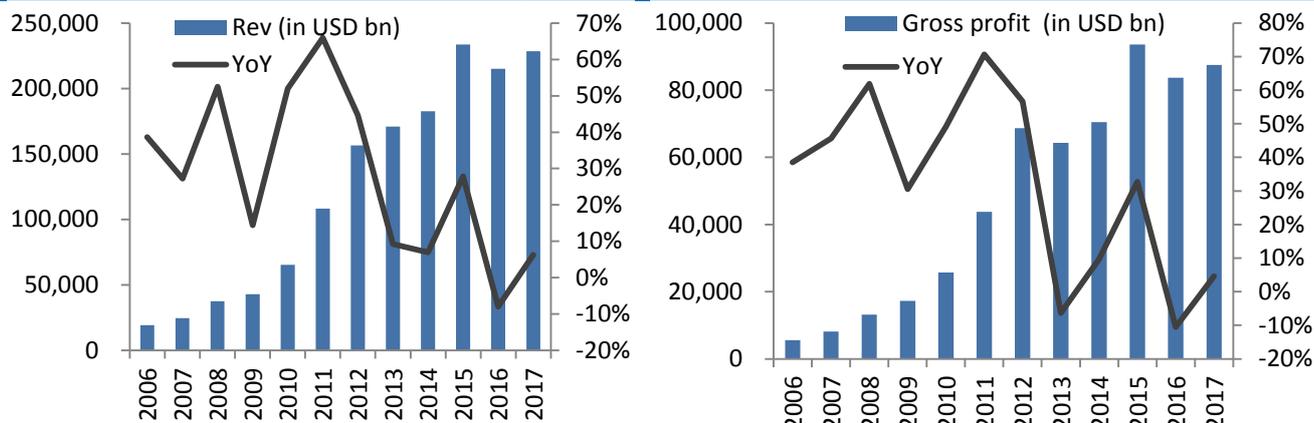
Our target price of USD260 is based on 17.7 X our 2019 EPS estimate of USD14.68. A higher multiple than 10-year average of 15X is justified by AR secular trend, rise of service segment and abundant cash balance. Key downside risk includes deteriorating trade war concerns, longer than expected smartphone replacement cycle, lower than expected service segment growth.

Figure: PE multiple valuation

FIRM VALUE: PE MULTIPLE METHOD	
2019 Estimated earnings	65,476
Outstanding shares	4,462
Estimated EPS	14.68
Target PE	17.7
Implied share price	260

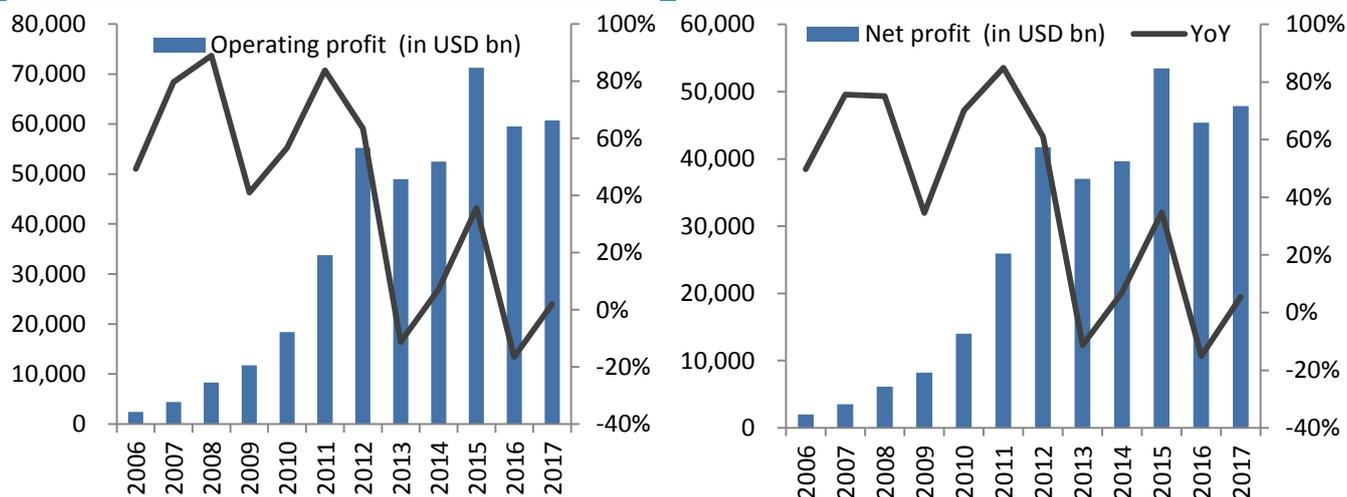
Source: APPLE, CASH

Figure. 2010-2017 Apple's revenue and gross profit



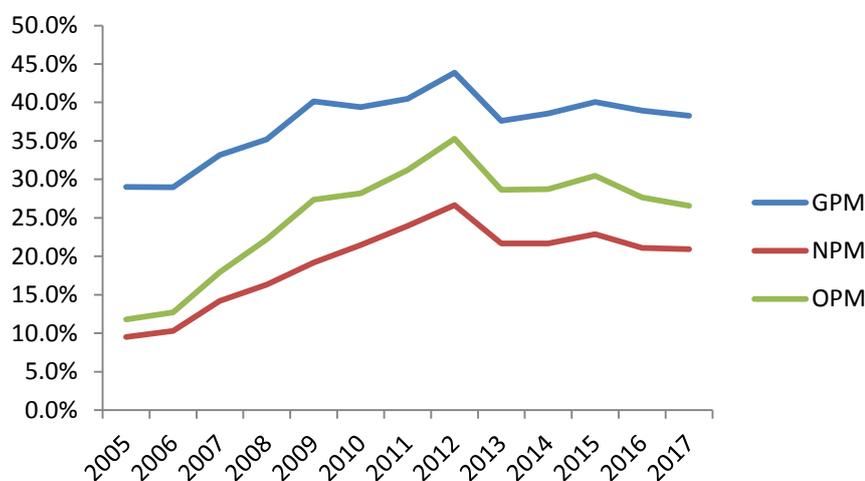
Source: Company data, CASH

Figure. 2010-2017 Apple's operating profit and net profit



Source: Company data, CASH

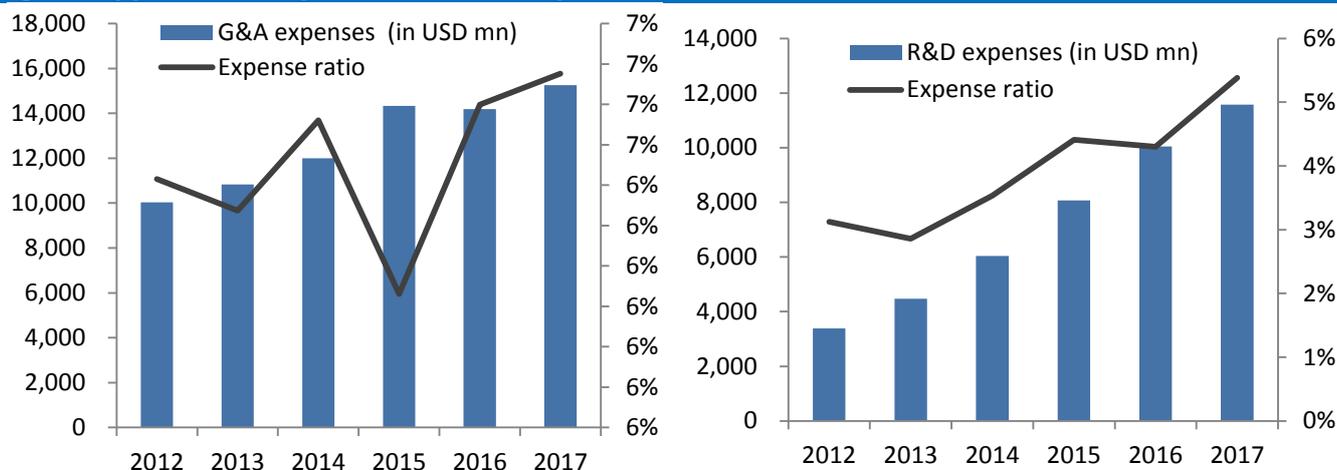
Figure. 2010-2017 Apple's GPM, OPM and NPM



Source: Company data, CASH

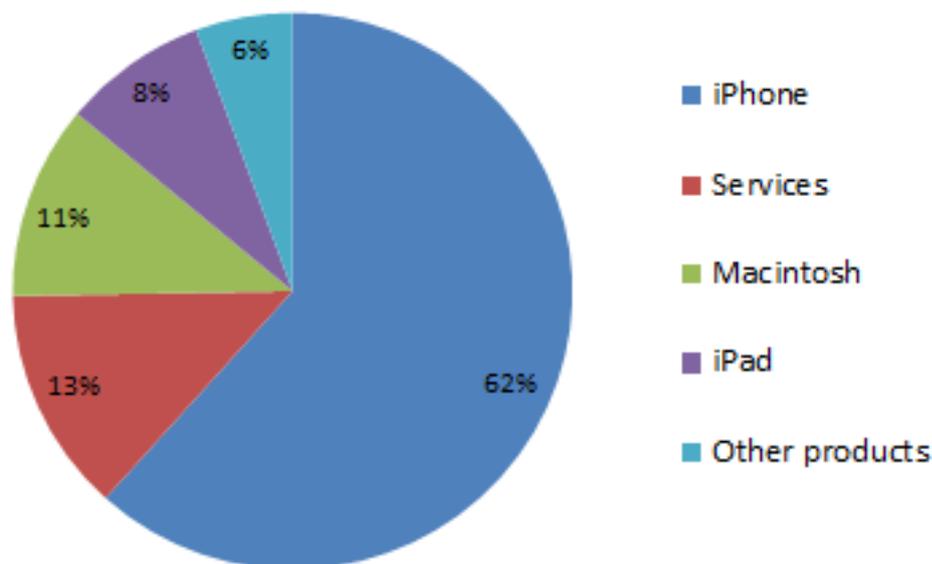
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Figure. Apple's G&A expenses and R&D expenses



Source: Company data, CASH

Figure. Apple's revenue breakdown in FY2017



Source: Company data, CASH

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Apple

Income Statement (USD million)				
Year-end 30 Sep	FY17	FY18E	FY19E	FY20E
Revenue	229,234	263,148	282,524	301,900
Cost of goods sold	-141,048	-160,183	-172,166	-184,157
Gross profit	88,186	102,965	110,358	117,743
SG&A	-26,842	-32,815	-37,011	-41,451
Operating profit	61,344	70,150	73,347	76,292
EBITDA	71,501	81,575	85,049	88,524
Depreciation	-8,957	-10,636	-11,419	-12,202
Amortization	-1,200	-789	-283	-30
EBIT	61,344	70,150	73,347	76,292
Other income	2,745	4,142	5,539	6,936
Earnings before tax	64,089	74,292	78,886	83,228
Income tax	-15,738	-13,818	-13,411	-14,149
Net profit After tax	48,351	60,474	65,476	69,079
Minority interests	0	0	0	0
Other items	0	0	0	0
Preferred dividends	0	0	0	0
Normalised NPAT	48,351	60,474	65,476	69,079
Extraordinary items	0	0	0	0
Reported NPAT	48,351	60,474	65,476	69,079
Dividends	-12,600	-15,759	-17,063	-18,002
Transfer to reserves	35,751	44,715	48,413	51,077
EPS	9.37	12.69	14.68	16.62
DPS	2.44	3.31	3.82	4.33

Cashflow statement (USD million)				
Year-end 30 Sep	FY17	FY18E	FY19E	FY20E
Net income	48,351	60,474	65,476	69,079
Depreciation	8,957	10,636	11,419	12,202
Amortization	1,200	789	283	30
Change in Net Working Capital	-3,159	-2,405	-3,819	-3,814
Cashflow from operations	63,598	69,494	73,358	77,497
Capital expenditures	-14,900	-16,362	-17,567	-18,772
Other non current assets	-25,992	-24,284	-24,284	-24,284
Other non current liabilities	4,247	4,247	4,247	4,247
CF from investing acts	-46,446	-36,399	-37,604	-38,809
CF after investing acts	17,152	33,095	35,754	38,688
Equity issue	3,832	4,616	4,616	4,616
Debt issue	24,776	38,164	41,025	43,086
Convertible debt issue	0	-1	0	0
Dividends	-12,600	-15,759	-17,063	-18,002
CF from financial acts	-17,347	27,020	28,578	29,701
Net cashflow	-195	60,115	64,332	68,389
Beginning cash	20,484	20,289	80,404	144,736
Adjustments	0	0	0	0
Ending cash	20,289	80,404	144,736	213,125
Ending net debt	83,414	61,463	38,155	12,853

Source: Company data, CASH

APPL.US, Buy, TargetPrice: 260

Balance Sheet (USD million)				
Year-end 30 Sep	FY17	FY18E	FY19E	FY20E
Cash & equivalents	20,289	80,404	144,736	213,125
Marketable securities	53,892	61,113	68,334	75,555
Accounts receivable	17,874	19,851	21,312	22,774
Inventories	4,855	3,533	3,798	4,062
Other current assets	31,735	31,534	33,855	36,177
Total current assets	128,645	196,434	272,035	351,694
LT investments	194,714	218,998	243,282	267,566
Fixed assets	33,783	39,510	45,658	52,228
Goodwill	5,717	5,717	5,717	5,717
Other intangible assets	2,298	1,509	1,226	1,196
Other assets	10,162	10,162	10,162	10,162
Total assets	375,319	472,329	578,081	688,562
ST debt	6,496	9,000	10,000	10,000
Accounts payable	49,049	50,587	54,372	58,159
Other current liabilities	45,269	49,000	52,666	56,334
Total current liabilities	100,814	108,588	117,038	124,493
LT debt	97,207	132,867	172,892	215,978
Convertible debt	0	0	0	0
Other LT liabilities	43,251	47,498	51,745	55,992
Total liabilities	241,272	288,953	341,675	396,463
Minority interest	0	0	0	0
Preferred interest	0	0	0	0
Common stock	35,867	40,483	45,099	49,715
Retained earnings	98,330	143,045	191,458	242,535
Proposed dividend	-12,600	-15,759	-17,063	-18,002
Other equity and reserves	-150	-150	-150	-150
Total shareholders' equity	134,047	183,378	236,407	292,100
Total equity & liabilities	375,319	472,330	578,082	688,563

Key Ratios				
	FY17	FY18E	FY19E	FY20E
Growth (%)				
EPS	9.3%	35.3%	15.7%	13.3%
Revenue	6.3%	14.8%	7.4%	6.9%
Profitability (%)				
Gross margin	38.5%	39.1%	39.1%	39.0%
EBITDA margin	31.2%	31.0%	30.1%	29.3%
EBIT margin	26.8%	26.7%	26.0%	25.3%
Net Margin	21.1%	23.0%	23.2%	22.9%
Effective tax rate	24.6%	18.6%	17.0%	17.0%
Dividend payout	26.1%	26.1%	26.1%	26.1%
ROE	36.1%	33.0%	27.7%	23.6%
ROA	12.9%	12.8%	11.3%	10.0%
Liquidity (x)				
Current ratio	1.28	1.81	2.32	2.83
Leverage				
Net Debt/EBITDA (x)	1.17	0.75	0.45	0.15
Net Debt/Equity (%)	0.62	0.34	0.16	0.04
Activity (days)				
Days receivable	28.5	27.5	27.5	27.5
Days inventory	7.7	4.9	4.9	4.9
Days payable	78.1	70.2	70.2	70.3
Cash cycle	-41.9	-37.7	-37.8	-37.9

Source: Company data, CASH

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