



Intel's Competitive Strategy for Dominance in the Phone Market

Course Title: **Knowledge Management**

Course Number: **ETM 567/667**

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Term: **Winter**

Year: **2015**

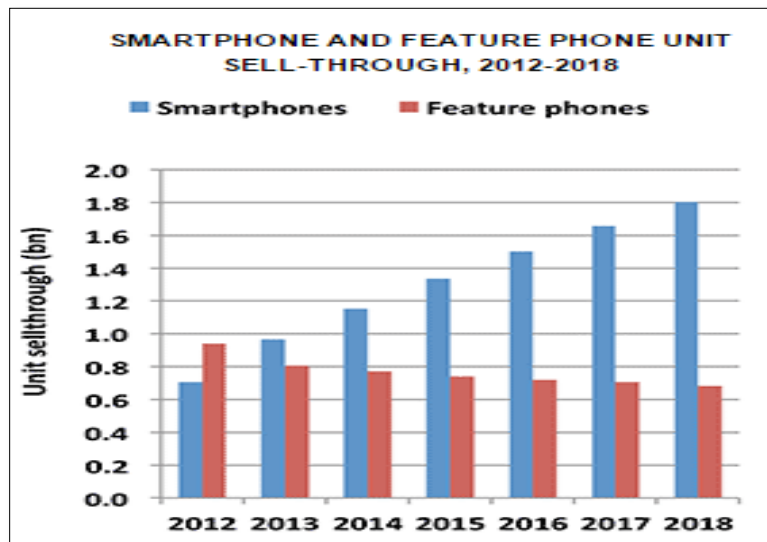
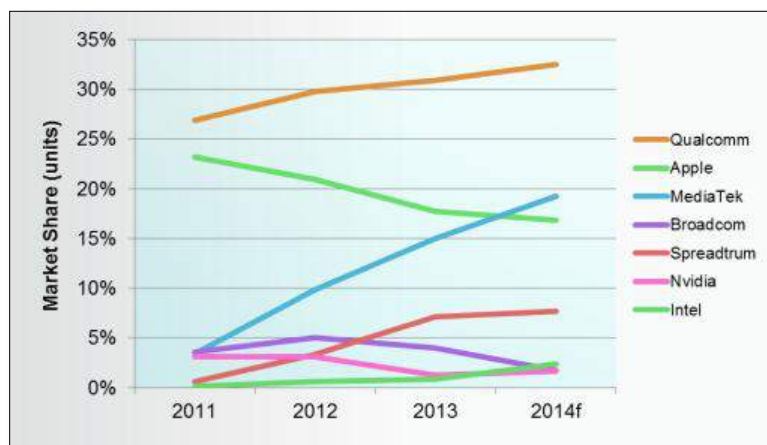
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Executive Summary

In recent years the global mobile market is has been growing noticeably with year on year growth of 23% over Q3 2013 and shipments have exceeded 300 Million unit in one quarter for the first time [1] both in terms of value and volume and is expected to continue to grow [2]. One more noticeable trend is that the market is becoming more competitive, during Q4 2013 Samsung & Apple together accounted for 48% of the market, and in Q4 2014 this had slipped to 38% [1].



In recent years Intel has been facing major obstacles and challenges as they try to gain a larger share in the smartphone processor market, currently Intel is #5 with ~3% of the

market share trailing Qualcomm (~33%), MediaTek (~19%), Apple (17%) & Spreadtrum (~8%) [3]. For this paper I will conduct interviews to understand the strategy that Intel is using to gain additional market share and use Porter's five force model to assess Intel's stand in the smartphone marketplace and to identify areas\strategies that might help Intel gain higher market share.

In this paper I attempted to analyze Intel current strategy looking at both current information and using porters five force model and I came to the following strategic recommendations:

Introduction

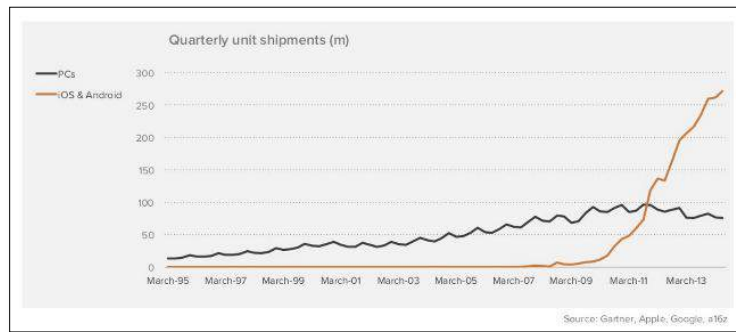
Background

Intel was founded on July 1968 by Gordon E. Moore & Robert Noyce, in 1971 Intel created the first commercially available microprocessor the Intel 4004, during those days Intel focus was mainly on DRAM but by 1983 increased competition from Japanese manufacturers and reduced profitability were among the key reasons that drove Gordon Moore to shifts that companies focus to Microprocessors. By the end of the 1980's Intel was the microprocessor provider for IBM and IBM's competitors within the rapidly growing personal computing market. By the end of the 1990's Intel's Pentium had become a household name. After 2000 the growth in demand slowed and competitors (mainly AMD) cut into Intel's market share, starting with the low end but ended up cutting into all the product range. In 2007 Intel unveiled the Core Microarchitecture, this microarchitecture was a great leap in performance and helped Intel gain back much of the market share that they lost. Moving forward Intel invested a lot in building the mobile microprocessors to power Tablets and gradually has been gaining market share in this space. Furthermore in a recent Intel SWOT analysis that has been done by MarketLine [4] product gaps in the mobility segments were highlighted and the decline in the PC market was identified as a key threat (additional details can be found in appendix 1).

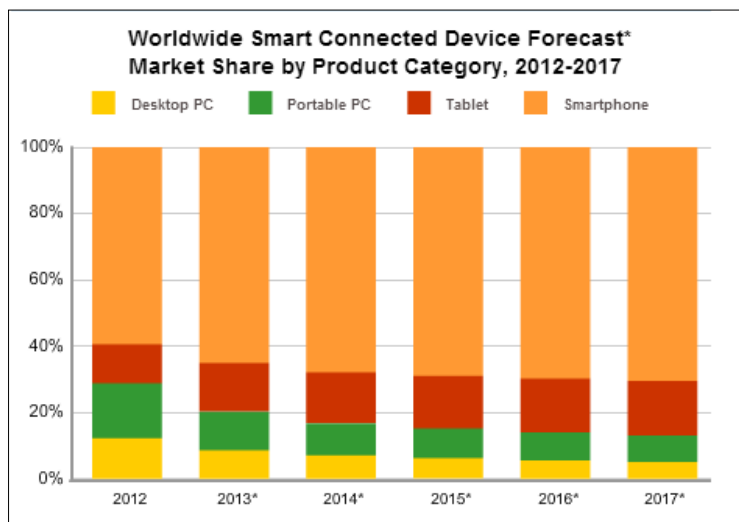
Strengths	Weaknesses
Pioneering technology Continued focus on research and development Integrated operations	Declining margins Product gaps in the mobility segment
Opportunities	Threats
Foray into the wearable device market Poised to benefit from the growing Internet of Things (IoT) Growth in the data center markets	Decline in the PC market Intense competition

Problem statement

Over the past years the PC market has been stagnant and the mobile market has been growing rapidly. Based on some estimation global smartphone adoption will attain a global compound annual growth rate of 10.41% [5]

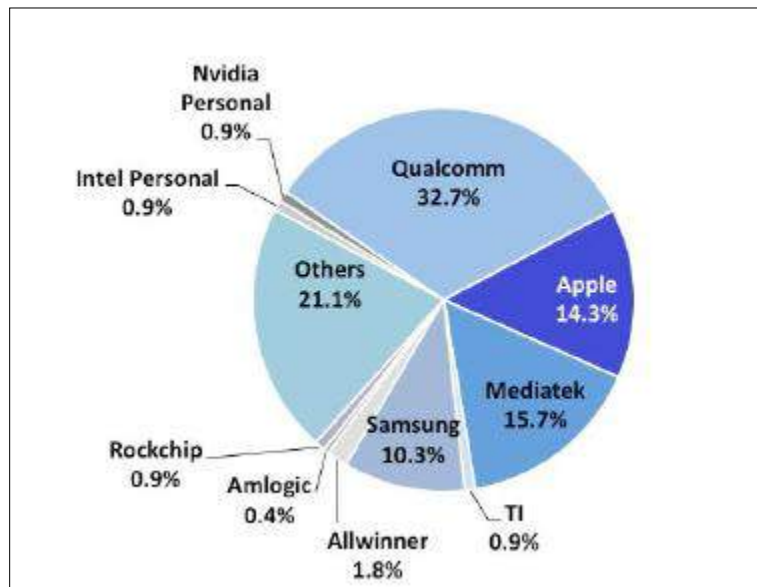


In addition IDC forecasts that by the year 2017 70% of the connected market will be smartphone [6]



In order for Intel to continue to maintain a leadership role and grows its profits Intel must grow its phone market share. Currently Intel is not considered a key player in the phone market and ranked #5 with >3% of the phone market share.

In this paper I will describe the current strategy that Intel is using to grow the market share followed by an analysis of Porters five force model to try and identify additional areas that Intel should invest in to help with the mobile growth strategy. I intend to show that Intel can incorporate additional strategies to help grow their mobile marker share faster.



Smart phone processor market share

Brief competitors background

Qualcomm

Qualcomm was founded in 1985, its first product was OmniTRACS – A satellite locating and messaging system, in 1990 Qualcomm began the design of the first CMDA-based cellular base station. 2 years later they began to manufacture CMDA cell phones, based stations and chips. In 1999 Qualcomm sold its base station business and its cell phone manufacturing and from that point they were focused on developing and licensing wireless technology and selling ASICs that implement these technologies. Today Qualcomm is the number 1 phone chip manufacturer in the world.

MediaTek

MediaTek was founded in 1997 as a spinoff of UMC (United Microelectronics Corporations), the company started designing chips for optical devices and expanded into chip solutions for DVD's, Digital TV's, mobile phone, smart phones and tablets, MediaTek launched its mobile device unit in 2004 and within 7 years they were shipping ~500M units. One of the strategies that MediaTek is using is providing extensive system engineering assistance to small companies, this strategy enabled the smaller companies to enter the phone market that was once dominated by only by the large companies. Currently accounts for 60-70% of China's smartphone solution market [7] by the end of 2014 there were over 1500 mobile models accounting for 700 million units shipped globally [8]

Apple

Apple was founded in 1976 and focused on computing devices, in 2007 Steve Jobs changed the companies name from Apple Computers to Apple Inc. to demonstrate that the company is moving to focus on consumer electronic devices and not only computers. In 2007 Apple launched the first generation iPhone device, second generation was released in 2008 followed by a new model of iPhone released almost every year. Apple provides the full eco system for iPhone smart phone, Apple develops the HW, SW, application store, music store etc... in addition Apple ensures that all the apple devices can connect and share information between themselves

Spreadtrum

Spreadtrum communication Inc. founded in 2001 is headquartered in Shanghai China is a fabless semiconductor company that develops mobile chipset platforms for mobile devices (both smartphone and feature phones) Spreadtrum combines its semiconductor design expertise with software development capabilities to deliver highly integrated baseband processors with robust multimedia functionality and power management. Spreadtrum has developed solutions based on an open development platform, enabling its customers to develop customized wireless solutions that are feature-rich, while meeting their cost and time-to-market requirements. [9]

Intel past strategies to try and enter the phone market

Over the past 10 years Intel had multiple attempts to enter the phone market, below is a brief breakdown of the phone market and a description of the multiple attempts that Intel made.

Phone market background

The phone market is divided into 4 main parts:

1. High end, dominated by Apple and Samsung with prices of \$400 and above.
2. Mid-range, small volume with prices of \$300-400.
3. Value (Low-end), 60% of the entire phone market, \$100-300 dominated by china tech.
4. Entry, below \$100

Over the recent 1-2 years the Value phones have been growing in a much faster pace than the high end especially in the china markets, these markets had grown ~77% year over year [10]

The key difference between feature phone & smart phone is that smartphones have an operating systems, which allows for advanced computing abilities, including the ability to run third-party applications.

2005 initial low-power designs

Intel's first attempt to move into the mobile space was in 2005, Intel came out with low power designs, these designs were not suitable for the phone market and Intel was only able to get few design wins from Samsung & Dell (low millions).

First strategy – Build low power design that isn't targeted specifically for phones.

2007-2009 Nokia Partnership

Intel's strategy was to partner with the number 1 OEM (at the time) Nokia and to become the supplier of both the HW and the Software (Operating System). Intel

partnered with Nokia and started to work on the new OS, called Migo. During the 2009 CES (Consumer electronics show) Intel announced the first phone (using the morestown chip), very shortly after CES Nokia got a new CEO from Microsoft and he had a new strategy that was to use the MS mobile operating system and the partnership fell through and the phone never launched.

Second strategy – Partner with top OEM & build the entire HW & SW

2010-2011 Intel as a phone manufacturer

Intel decided to try and become a phone manufacturer and partner with different carriers to provide the full phone, this introduced multiple aspects that Intel never had to deal with, for example dealing with manufacturing, ODM's and the different carriers that wanted differentiation between the phones. This strategy was very short lived and failed quickly Third strategy – Intel as a Phone OEM

2012-2013 Intel creates phone Reference design

During these years Intel attempted to created phone form factor reference designs (FFRD) and have them branded by the carriers. The OS that was used was Android, so there was no need to build your own OS. This strategy was only attractive to second tier carriers because first tier wanted to differentiate their products. The key pro of this strategy was that OEM's don't have to invest in a second architecting (most of them are using Qualcomm) Intel creates the designs for them they just take it and brand it. Using this strategy Intel had a few very limited wins, Orange had one phone, Airtowin had one phone (India), One in Russia and one in Kenia) but the market share was very very small.

2013 – Today Intel as a phone building block supplier

During that period Samsung become the number one in the market with Apple second (together Samsung & Apple have ~60% market share), number 3 only have ~3%, at that point Intel shifted the strategy again to be a building block provider (this looks like a step in the right direction, Intel is going back to deliver its core products i.e CPU's and

additional product building blocks, and not trying to create full phones) and to mainly target the low-end market, the reasons for this new shift are:

1. The low-end has ~60% of the overall phone market.
2. Take advantage of the china tech eco system, they already have an established supply chain and cost structure to support this price range.
3. The margins are small but the market share is huge!!

The strategy is to partner with Spreadtrum, RDA & Rockchip (these are the 3 top phone and tablet manufacturers in the china eco system). Spreadtrum will jointly develop mobile chips based on Intel's architecture, and Spreadtrum and RDA will sell those chips to the Chinese and global markets. In addition Intel will develop multiple FFRD's (Form factor reference designs) for the china tech eco system, partner with additional china semiconductor manufacturers to create the low cost products & use the Google BSP (board support package) that the OEM's can integrate into their products.

Porter's five forces model

Overview

The model was developed by Michael E. Porter for analyzing the industry environment, this model is known as the five force model and it helps managers to identify and analyze the competitive forces in an industry environment [11]. The five forces which are focused in this model are [12]:

- Threat of new Entrants: Profitable markets that yield high returns will attract new firms. This results in many new entrants, which eventually will decrease profitability for all firms in the industry. Unless the entry of new firms can be blocked by incumbents
- Bargaining power of Suppliers: The bargaining power of suppliers is also described as the market of inputs. Suppliers of raw materials, components, labor, and services (such as expertise) to the firm can be a source of power over the firm when there are few substitutes.

- Bargaining power of buyers: The bargaining power of customers is also described as the market of outputs: the ability of customers to put the firm under pressure, which also affects the customer's sensitivity to price changes. Firms can take measures to reduce buyer power, such as implementing a loyalty program. The buyer power is high if the buyer has many alternatives. The buyer power is low if they act independently.
- Threat of Substitutes: The existence of products outside of the realm of the common product boundaries increases the tendency of customers to switch to alternatives.
- Rivalry among Existing Firms: For most industries the intensity of competitive rivalry is the major determinant of the competitiveness of the industry.



Intel's phone strategy analysis

The analysis will be based on Porters five force model, I will analyze each force and try to identify key areas that Intel can invest in to be able to gain a larger market share of the phone market.

Threat of new entrants

If we look at the latest strategy that Intel is using to gain leadership in the phone market we can see that Intel is a new entrant in this market, although we can argue that over the past 10 years Intel has been trying to gain leadership in this market, but if we consider the major shift Intel has made in its phone strategy we can certainly say that Intel is a new entrant. As such Intel is using every advantage that they have to overcome any rival that is already in the market. The 3 key areas that Intel is using are – Manufacturing capacity, Cash availability & R&D leadership. By using these 3 strengths (see more details in Appendix 1) Intel will be able to gain a strong hold in the low end phone market and in the mobile china eco system.

Once Intel establishes itself as the leader in this market segment Intel will have to make sure that its leadership position will not be compromised, the best way for Intel to ensure that will not happen Intel should make sure that she blocks the ability of new entrants to take over, Intel should do that by continuing to innovate and invest in the phone space to ensure that the leadership position will not erode.

Bargaining power of suppliers

We can look at this from 2 directions –

1. Intel as the supplier – Intel supplies the building blocks to the phone market and as such Intel has power over the phone manufacturers, but on the other hand Intel is not the only player in this field so the manufacturers can decide to go elsewhere. But moving to the new semiconductor manufacturer with a new chip architecture is a very complex move that involves a high investment, due to this reason a phone manufacturers will be very reluctant to move to a new supplier. Intel can take advantage of this to lock the manufacturers on the Intel

architecture (they have to “help” them make the move to Intel and once they have them on Intel products they will have much higher level of “control” over the phone manufacturers)

2. Intel as a chip manufacturer – Intel relies on a large number of suppliers in order to manufacture its semiconductors, some of these suppliers are specialized and have almost no replacement in the market, and as such they have a high level of “power” over Intel. In order to reduce the risks in engaging with these types of suppliers Intel should create strategic partnerships with these suppliers to try and mitigate the risks of single supplier. On the other hand the supplier also knows that Intel is the biggest customer and if Intel decides to change a supplier the outcome might be devastating so in essence Intel and the suppliers have to maintain a strong partnership that will ensure the survival of both sides.

Bargaining power of buyers.

This is one of the areas that Intel has the highest risk, Currently Intel is spending a lot of resources (both Cash and head count) to enter and take a leadership position in the market. Intel is doing it by partnering with the 3 major China tablet and phone manufacturers. But even with this partnership if Intel will not be able to deliver what the echo system needs these companies will not hesitate to move back use its own chips. Intel has taken a few key steps In order to mitigate this risk, the first and most important Intel currently holds ~20% stake in the company and as such has some level of control on the decisions. One more area that Intel has to work on is the flawless execution, the Low cost phone & tablet market has a very quick turnaround and streaked level of quality and requirements that must be met, Intel should ensure that the execution of the joined development will be flawless to be able to provide the needed turnaround time that is expected.

Threat of Substitutes

In the phone and tablet market this is a constant threat, there is always a second option, customers can always decide to switch from one chip manufacturer to the next, this is not an easy decision for a customer to make but if Intel will not deliver what the low-end market needs they will move on without looking back and in the china echo system Rockchip and Spreadtrum will return to use their own chips and drop the Intel architecture.

Rivalry among existing firms

The only real rivalry that Intel has in the low value phone market are Rockchip and Spreadtrum, these are the two companies that Intel has a strategic partnership with for developing low cost chips. By signing these strategic partnerships Intel put her leg in the door, but once the leg is in the door you can move in two direction, push hard forward and open the door and walk in, or stay will the leg holding the door and eventually get pushed back by a stronger player.

In my opinion this is the number one area that Intel has to focus on, Intel must do everything in its power to ensure that these 2 new strategic partnerships will be successful. If needed Intel can start by offering subsidized SOC's to Rockchip and Spreadtrum. Second Intel has to be flexible and move fast to respond to customers' requests – One of the known issues with the Intel culture is that “Intel moves like a steam boat – Slow and sure, not taking any risks” In this market Intel must change and become faster, nimbler and ready to take risks in order to gain market share and stay in the game.

Conclusion

After multiple failed attempts to access and lead the phone market Intel has identified the right place and role that Intel has to play in the phone and tablet SOC market in order to become a leader in this space and is starting to do the right steps going in that direction.

The role of the building block provider for the low end phone market in the fastest growing market (China echo system) is the right place for Intel. In the tablet market Intel will also be driving hard in the low end tablet market (in the china echo system) and also continue with the higher end tablets for all OEM's & ODM's.

At this point Intel has a leg in the door, Intel has successfully signed strategic partnerships with key Chinese leaders in both low end phones and tablet space, Intel is progressing well with Tablet SOC market share. But this is not the end, it is only the beginning. Intel must understand that the world has changed, if just a few years ago Intel was the number one leader in the PC market with no competition, today it is not the case, Intel is the leader but competition is just around the corner waiting for Intel to fail. In the phone and tablet market the situation is even worse, Intel is the underdog, coming from the bottom trying to take over the market, in order to do that Intel has to take risks, move fast respond to customers' requests and always remember that Intel is replicable – This means Intel has to change its culture and they why it does business and that is not easy, Intel's CEO and other leaders are doing exactly that by bringing new talent from the outside, people that didn't grow up in Intel and that have a different view of the world, Intel is currently putting the customer as number one and trying to respond to the needs and change very quickly. One more thing that I would recommend that Intel will do in order to pull the customers in is to offer subsidies for the SOC's, if Intel will do that for the first period of time, once the customers will be hooked Intel can slowly reduce the subsidies and increase the profit.

Appendix

1. SWOT analysis details

Strengths

Pioneering technology

Intel has a strong history in terms of the advancements in the technology since its inception in 1968. In the 1970's the company introduced world's first metal oxide semiconductor static RAM, the 1101. Following this, it announced the 1103 DRAM that became the industry standard technology for the computer memory. Further, it developed PL/M, the first high level language from microprocessors. Subsequently, the company introduced the 8080 microprocessor considered as the first true general purpose microprocessor. This processor was used in one of the first personal computers. It further introduced the world's first microcontroller, the 8748 and the 8048 that combine the central processor with memory, peripherals, and input-output functions on a single piece of silicon. It later launched ICE-80 the world's first in-circuit emulator. It also launched the world's first single boards computer, the iSBC 80/10. Further, the company introduced the 2910, the first single-chip codec that became the telecommunications industry standard. In the 1980's Intel announced the world's first CHMOS DRAMs, with densities as high as 256K. Further in 2000s the company emphasized on the wireless computing with the launch of Intel XScale architecture and Intel Pro/Wireless LAN PC cards. In 2006, the company introduced the world's first quad-core processors for desktop and mainstream servers. Further in 2010, it introduced the 3-D Tri-gate transistors. The pioneering technologies introduced by the company in the nascent stages of the growth became the industry standards and enhanced the market position of the company. The technology leadership has enabled the company to sustain market leadership and enabled it to drive business growth. Intel has a strong cash position owing to its pioneering technologies. The company's cash flow conversion ratio increased from 1.7 times in FY2012 to 2.2 times in FY2013. This indicates that a higher proportion of net profits are being converted into cash. The company's investments in technology continue to reap cash and profits for the company. Despite the growing competition in the market, Intel's pioneering technologies have helped the company to sustain a strong leadership position.

Continued focus on research and development

Intel with a strong focus on research and development invested \$10.6 billion, \$10.1 billion and \$8.4 billion in FY2013, FY2012 and FY2011 respectively. The company's R&D model is based on a global organization that emphasizes a collaborative approach to identifying and developing new technologies, leading standards initiatives, and influencing regulatory policies to accelerate the adoption of new technologies, including joint pathfinding conducted between researchers at Intel Labs and business groups. Further, the company's R&D efforts are focused on advanced computing technologies, developing new microarchitectures, advancing the silicon manufacturing process technology, delivering the next generation of platforms, improving the platform initiatives, developing new solutions in emerging technologies including wearable devices and embedded applications, and developing software solutions and tools. Further, the company's investment in R&D accounted for 20.1%, 19% and 15.5% of the total sales respectively in FY2013, FY2012 and FY2011 respectively. The company's competitor, Qualcomm invested \$5 billion, \$3.9 billion and \$3 billion in FY2013, FY2012 and FY2011, respectively. Subsequently, its other competitor, Advanced Micro Devices R&D investments amounted to \$1.2 billion, \$1.4 billion and \$1.5 billion in FY2013, FY2012 and FY2011 respectively. The strong focus on research and development enhances the product portfolio at the company. It also helps the company enhance its customer base and

strengthen its market position. The company's history of success with its R&D operations and its continual investments in R&D will enable it develop sustainable competitive advantages.

Integrated operations

One of the Intel's competitive advantages is the combination of network of manufacturing, assembly and test facilities with the global architecture design teams. This network enables the company to have more direct control over the processes, quality control, product cost, production timing, performance, power consumption, and manufacturing yield. Most of the company's competitors rely on third-party foundries and subcontractors such as Taiwan Semiconductor Manufacturing Company and Global Foundries for manufacturing and assembly and test needs. Intel manufactures its products in its own facilities, which allow optimizing performance, shortening the time to market, and scaling new products more rapidly. The integration offering enhances the value proposition and the company can position itself to cater to the requirements of its clients effectively.

Weaknesses

Declining margins

The company witnessed a decline in the profit margins over the years. The net revenues of the company declined from \$53,999 million in FY2011 to \$52,708 million in FY2013 by a compound annual rate of change (CARC) of 1% for 2011-13 periods. The decline in the revenues was attributed to lower platform unit sales in the PC client group segment. The declines in the operating and net profits is more pronounced. The operating and net profits declined at a CARC of 16% and 14% respectively for 2011-13 period. Further, the operating margin declined from 32.4% in FY2011 to 23.3% in FY2013. The net profit margin declined from 24% in FY2011 to 18.3% in FY2013. Also the company's PC client group segment, other Intel architecture operating segments witnessed a decline of 4.2% and 6.5% respectively in their revenues in FY2013 compared to the revenues in FY2012. The decline in the PC client group segmental revenues was attributed to the weaker PC demand. The declining margins indicate adverse product mix or adverse cost structure among other things. Intel's margins were largely impacted by its investments in mobility and costs associated with this segment. The company is yet to come up with a successful product in this segment while it continues to impact its margins adversely.

Product gaps in the mobility segment

Intel's positioning in the mobility segment, especially the smartphone market continues to be weak. The company is a late entrant in the market and is yet to launch products that will enable it to gain market share in the smartphone segment. The company's cost has been a barrier in the market while its competitors such as ARM continue to entrench their market position. The Intel Silicon chips integrated in the Android devices are also facing challenging scenario as they do not support the changing Android software. Android is the market leading platform and the company's technical challenges are a disadvantage. Mobility market and the smartphones segment are key segments for semiconductor companies as PC business continues to witness sluggish trends. Although the company is making some progress in the tablets market, its market share in the smartphones market, according to the industry estimates, remains to be near-zero. Intel's position in the smartphone market is a competitive disadvantage and the company is likely to witness strong

competition in the entire mobility space, adversely impacting its leadership position in the semiconductor market as the mobility products continue to replace PCs.

Opportunities

Foray into the wearable device market

The wearable device market, though in infancy stages, is a fast growing industry, and is expected to expand rapidly in the coming years. According to the industry estimates, the mobile smart wearable device market is expected to reach \$19 billion by 2018 from \$1.4 billion in 2013 growing at a compound annual growth rate (CAGR) of 68% during 2013-18. Further, the technology wearables shipment volume is expected to exceed 19 million units in 2014 and reach 111.9 million units in 2018 growing at a CAGR of 78.4% during 2013-18. The company marked its presence in the wearable device market with the introduction of the wearable computer. Further in March 2014, the company acquired BASIS Science, a privately held company and a leader specializing in wearable device technologies for health and wellness applications. This acquisition accelerates Intel's wearable products focus and extends the company's capabilities in this area. Further, this acquisition marks the company's entry in to health-monitoring wearables business. Further, the company's global presence might help it to market its wearable devices to a wide customer base. The growing market and the early entry of the company into the health-monitoring wearables business would provide the company the first mover's advantage and enhance the company's position in the wearable device market.

Poised to benefit from the growing Internet of Things (IoT)

With increasing adoption of cloud services and the big data services, the IoT and machine to machine (M2M) communication trends are rapidly growing. According to industry estimates, the global IoT and the M2M communications market is estimated to grow from \$128.7 billion in 2014 to \$498.9 billion in 2019, at a CAGR of 24.4% for 2014-19 period. The growth in the IoT is being driven by convergence of connected devices, cloud economics for compute and data, and the acceleration of big data analytics. To meet the needs of the growing IoT market, the company accelerated the development and deployment of intelligent devices, creating systems of systems by connecting legacy devices to the cloud and enabling end-to-end analytics to transform businesses. In March 2014, Intel became the largest strategic shareholder and a member of the board of directors at Cloudera with a broad strategic technology and business collaboration, as well as a significant equity investment. The collaboration with Cloudera enhances both Intel data center and Internet of Things (IoT) technology initiatives and enables customers to manage and analyze machine-generated data from a variety of sources, spanning sensors to gateways and a range of devices. Further, the company offers Intel Quark SoC, Intel Atom processor E3800 and Intel Xeon processors for the intelligent devices needed for the IoT technology. Also, the company offers Intel Gateway Solutions for the Internet of Things to provide common interfaces and seamless communication between devices and the cloud, targeting industrial, energy, and transportation markets. The company is poised to benefit from the growing IoT market through its offerings and its collaborations.

Growth in the data center markets

The increasing technological advances in the cloud computing and the big data platforms have led to the robust growth of the data center markets. According to the industry estimates, the data center market is expected to grow at a CAGR of over 10.7% for 2013-17 period. Intel is one of the leading players in the data center market. Intel operates the data center group (DCG) that offers platforms that are primarily designed for the server, workstation, and storage computing market

segments; and wired network connectivity products. In addition, the DCG focuses on specific optimizations for the enterprise, cloud, communications infrastructure and technical computing segments. Mirroring the industry trends, the company's revenues from the data center segment increased by 6.9% in FY2013. The company's continued investments in enhancing its data center offerings and its established position in the data center market enables it to exploit the growing data center market.

Threats

Decline in the PC market

The PC market has been struggling since last few years. Slowing demand in emerging markets and cannibalization by tablets and smartphones has led to a downfall in PC sales. According to industry estimates, the global PC shipment volume is expected to decline from 314.2 million units in 2013 to 305.1 million units in 2017 at a CARC of 1% from 2013-17 periods. Further, the shipment volume in the mature markets is expected to decline from 132 million units in 2013 to 120.8 million units in 2017 at a CARC of 2% for 2013-17 periods. Historically, a significant portion of the company's computing solutions revenue has been related to PCs. Intel derived approximately 62.7% of its revenues from the PC client group in FY2013. Further, Microsoft has been offering its Office software to the Apple products, which will lead to the increase in the demand for the Apple's products. This would lead to a further decline the PC market and have a negative impact on the Intel's market share in the PC market. The company expects further decline in the coming quarters due to the negative trends in the PC market. Shrinking PC market and the company's dependence on this market for a significant portion of its revenues will impact its topline growth and market share in the coming years.

Intense competition

The company operates its business in an intense competitive environment. Intel faces significant competition in the development and market acceptance of technologies and products in the computing industry. The company's platforms, based on Intel's architecture, are positioned to compete across a spectrum of internet-connected computing devices, from the lowest-power portable devices to the most powerful data center servers. The company's products primarily compete based on performance, energy efficiency, integration, innovative design, features, price, quality, reliability, brand recognition and availability. Further, the company also competes with the companies that make and sell microprocessors, SoCs, other silicon components, software and platforms to businesses which build and sell computing and communications devices to end-users. Intel's competitors include Advanced Micro Devices, Samsung Electronics, International Business Machines, Oracle, as well as the ARM architecture licensees such as QUALCOMM, NVIDIA and Texas Instruments. The company's McAfee family of security products and services compete with Symantec. Intel also faces emerging business model competitors from original equipment manufacturers (OEMs) that choose to vertically integrate their own proprietary semiconductor and software assets to some degree, such as Apple and Samsung. Increasing competition could further impact Intel's market share in the coming years.

Bibliography

- [1] "Global Smart Phone Shipments Exceed 300 Million in a Quarter for the First Time," Cellular-news.com, 2014.
- [2] "Global Mobile Phones," MarketLine , April 2014.
- [3] L. Gwennap, "Year in review: Mobile Market Slows, LTE Grows," Mobile Chip reprot, Dec, 2014.
- [4] MarketLine, "Company Profile Intel Corp.," MarketLine, 2014.
- [5] L. Colombus, "Mobile Is Eating The World," in *Tech Summit 2014*, 2014.
- [6] IDC, "87% Of Connected Devices Sales By 2017 Will Be Tablets And Smartphones," Forbes, 2013.
- [7] C. C. & S. Shen, "MediaTek smartphone solution shipments to grow robustly in 2014," OfWeek, 2014 02 02. [Online]. Available: <http://global.ofweek.com/news/Sources-MediaTek-smartphone-solution-shipments-to-grow-robustly-in-2014-7158>. [Accessed 08 02 2015].
- [8] T. Green, "Mediatek: cheap, super fast processors will change the smartphone market forever," HotTopics, 27 11 2014. [Online]. Available: <http://www.hottopics.ht/stories/consumer/get-ready-for-super-mid-market-smartphone-revolution/>. [Accessed 8 2 215].
- [9] wikibusiness, "Spreadtrum Communications," [Online]. Available: <http://wikibusiness.org/company/Spreadtrum+Communications>. [Accessed 12 2 2015].
- [10] C. Arthur, "China drives smartphone growth - and low prices - as Android dominates," Dec 2013. [Online]. Available: <http://www.theguardian.com/technology/2013/nov/14/china-smartphone-android-google-iphone>.
- [11] M. Jeyarathmm, Strategic Management, Himalaya Publishing House, 2008.
- [12] M. E. Porter, "The Five Competative Forces That Shape Strategy," *Harvard Business Review*, pp. 86-104, 2008.