Flash

SoftBank Bids US$31.4 Billion to Acquire ARM, Market Watches for Additional Bidders

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IN THIS FLASH

This IDC Flash analyzes the market impact of SoftBank's US$31.4 billion bid for ARM.

SITUATION OVERVIEW

Announcement

Japan's SoftBank Group Corporation and the United Kingdom's ARM Holdings Plc. announced an agreement through which SoftBank will acquire all of ARM by paying approximately US$31.4 billion in cash. If closed, the deal would represent a premium of 42.9 percent over the price per ARM share of US$47.08 as of July 15, 2016. SoftBank plans to pay for the acquisition through US$21.5 billion in cash on hand and a US$9.5 loan. The agreement has the approval of both companies' board of directors.

As part of the agreement, SoftBank has agreed to: 1.) Maintain ARM's organization and process with no change to the senior management team, corporate culture, and business model, 2.) Keep ARM's headquarters in Cambridge, England, 3.) Double ARM's employee headcount in the United Kingdom over the next five years, and 4.) Increase ARM's employee headcount outside of the United Kingdom over the next five years. In his presentation to the media about the agreement, SoftBank chairman and CEO Masayoshi Son indicated that the deal would "maintain ARM's neutrality and independence."

SoftBank expects the closing of the deal to occur in the third calendar quarter 2016, subject to the receipt of required court and shareholder approvals.

Analysis

SoftBank and ARM

SoftBank Group Corporation is an established mobile and internet company in Japan with a broad range of investments in Internet-related companies where it sees strong growth potential. It owns the majority of Japanese telco SoftBank, US telco Sprint, and Japanese ISP Yahoo! Japan and has diverse investments in firms such as the Chinese e-commerce company Alibaba Group, South Korean e-commerce company Coupang, and Indian hotel room booking site Oyo, among others. SoftBank earned US$87 billion in revenue in its fiscal year 2015.

ARM Holdings Plc focuses on the development and licensing of intellectual property for microprocessor and microcontroller cores, graphics cores, on-chip interconnects, and other hardware

and software platforms and systems-on-chips leveraging ARM IP. ARM earned US$1.5 billion in calendar year 2015.

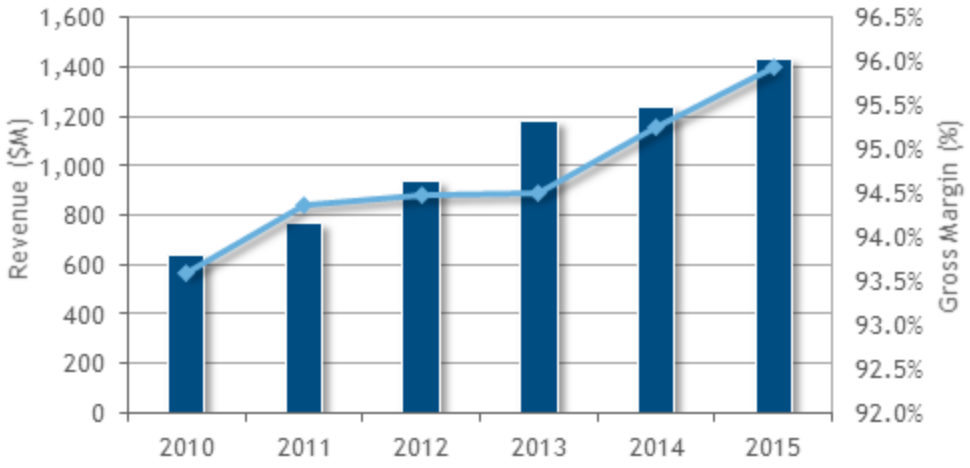
Known primarily for its processor architecture's dominance of the mobile phone processor market, the company has diversified significantly in the past few years into other mobile, computing, storage, and embedded sectors. Most notably, ARM has expanded its processor portfolio to target higher end compute and networking applications such as servers and networking, broadband infrastructure, and wireless infrastructure. ARM owns less than one percent share of the server processor space today and approximately fifteen percent share of the networking market. Much of this share today is at the low end, such as in applications providing internet connectivity in the home via home routers and WiFi gateways. However, with the introduction of the 64-bit v8 architecture by ARM, and integration into SoCs by silicon vendors such as Broadcom, Cavium, HiSilicon (Huawei) and NXP (formerly Freescale's Digital Networking Group), ARM is in a position to start challenging not only Intel's monopoly in servers, but also in the networking control plane where x86, MIPS, and POWER have been the incumbent architectures. Having a service provider like SoftBank as its owner, and the commitment by SoftBank to let ARM continue to operate as it does today, leaves ARM free to provide solutions to its silicon customer base and ride the wave of SDN and NFV beyond its success at mobile handset SoC vendors and OEMs such as Qualcomm, Samsung and Apple.

Figures 1 and 2 illustrate ARM's and SoftBank's historical revenues and gross margins.

- Over the last five years ARM has nearly doubled its revenue (2011-2015)
- In 2015, the ARM ecosystem shipped 14.8 billion units (see Figure 3)
- ARM has no debt, and maintains gross margins of 95% + while SoftBank Group's margins have been falling over the last five years.

FIGURE 1

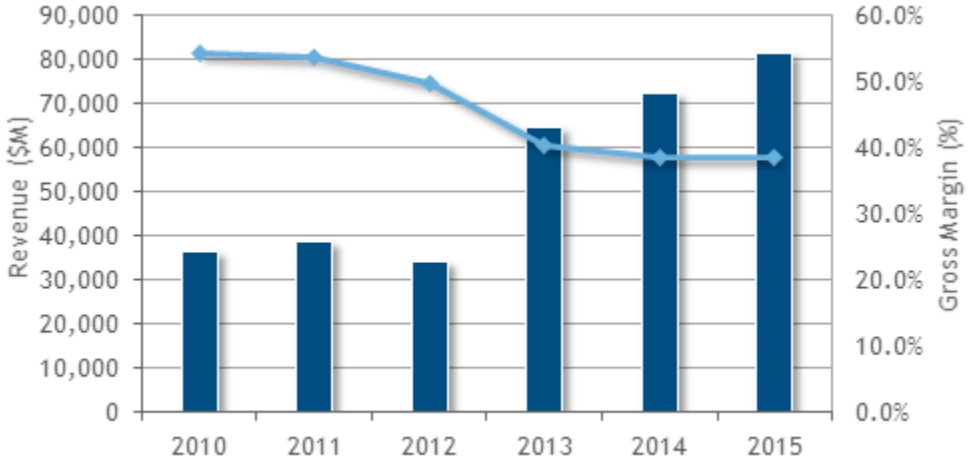
ARM Revenue and Gross Margins



Source: ARM, 2016

FIGURE 2

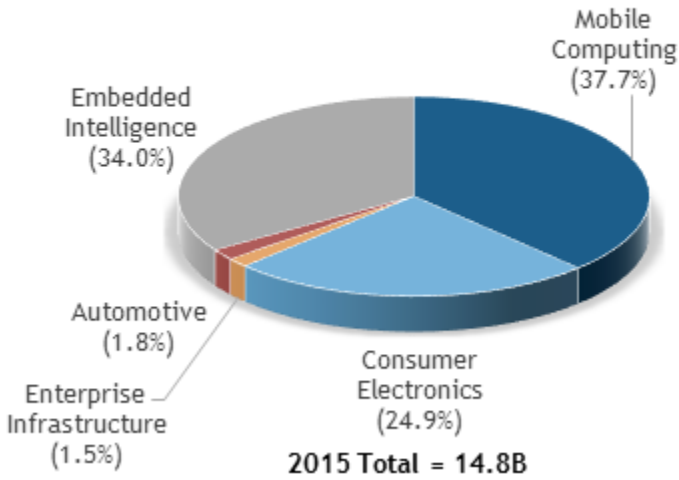
SoftBank Group Revenue and Gross Margins



Source: SoftBank, 2016

FIGURE 3

ARM Chips Industry Breakdown (% of billions of units)



Source: ARM, 2015

What the Deal Means

Barring any competitive bids for ARM, IDC expects SoftBank's bid for ARM to succeed and have no immediate impact on the microprocessor or overall semiconductor market. As a holding company, the SoftBank Group Corporation has no overlapping businesses with ARM and so regulatory issues across the regions should be minimal even in China where SoftBank has made other key strategic financial investments. SoftBank's formal endorsement and commitment to preserve ARM's business model, management team, and ecosystem should calm ARM's customers' potential concerns about the acquisition and SoftBank's intent. In fact, SoftBank's promises to double resources and investments could make ARM's ecosystem more attractive and enhance its potential to be a standard architecture in growing sectors of the large but fragmented Internet of Things opportunity. Further, US$31.4 billion represents a huge premium over ARM's collective shares' value and represents over twenty times ARM's earnings in 2015.

For SoftBank, IDC believes that the deal is being driven *initially* as a long term financial investment with the potential to take advantage of the healthy secular growth of the markets that ARM participates in and opportunity to grow the core business by doubling investments in R&D.

For ARM, the deal represents significant opportunity to accelerate investment in R&D in specific markets like automotive and IoT that the company could just not do on its own; the company has invested approximately US$150 million in IoT related companies and resources and has added about 200 employees over the last couple of years. Ironically, the company's very virtue as a small company that doesn't compete with its customers is what limits its ability to invest in its own ecosystem and brand. Given the huge size and fragmentation of the Internet of Things, ARM's limited resources to invest in R&D could have limited its ability to disrupt the incumbent vertical industries and distinct ecosystems. ARM's ability to adapt to changes in market demand forced the company to fragment its spend across industry verticals—limiting reach and access to a broader set of industries beyond mobile, thus threatening to skew ARM towards one part of its customer base or another.

A real challenge for SoftBank will be where ARM fits initially within the overall company umbrella of assets and how to leverage the broad reach of ARM's technology without compromising ARM's neutrality and focus on its diverse base of customers. ARM's small size relative to its customers and distinct business model is part of what attracts customers; ARM doesn't compete with customers and is compelled to maintain a diligent focus on the stability of the ARM instruction set and overall ecosystem across its entire portfolio of IP.

FUTURE OUTLOOK

It is hard to immediately gauge the ROI for SoftBank that justifies the $32 billion price tag for ARM because there are no obvious near-term synergies between the telecommunication and internet services business of SoftBank and ARM's processor technology. However, IDC views this acquisition in a longer term strategic context of the integration of the technology stack down to the silicon level. This trend can be seen at the major cloud and web service providers such as Google, Facebook, Amazon and Microsoft. These CSPs and WSPs were forced to take the technology roadmap in their hands because the hardware OEM vendors were unable to deliver the needs of their mega data center operations and adoption of new paradigms such as Software Defined Networking (SDN) that became crucial to operate mega data centers. Telecom service providers such as Verizon and AT&T quickly jumped on this bandwagon and are forcing commoditization of silicon to remove dependency on their hardware OEMS vendor's ASIC based solutions, notably with the Network Functions Virtualization

(NFV) effort under the auspices of the European Telecommunications Standards Institute (ETSI). The key difference, however, in the SoftBank acquisition of ARM is that SoftBank is going one level deeper into the technology stack by going after the ARM processor architecture, which is indeed unusual for an internet service operator. The ARM acquisition starts looking interesting if viewed from a service provider's perspective in light of the current trends in the telecom industry: Annual ARPU growth is anemic, hovering in the low single-digit growth rates at best for a consistent period. Telcos are therefore looking at mobile and cloud enabling new business models and creating new service revenue streams by leveraging new technologies such as AI, autonomous cars and robotics, VR/AR, and emerging IoT applications in wearable and home markets as real use cases are transforming each vertical. This is where IDC anticipates SoftBank CEO Son's vision to invest and bet on the future of the Internet of Things come into play through the ARM acquisition.

China

A major factor in the long-term success of SoftBank's acquisition of ARM will be China's disposition towards the deal. Through its thirteenth five-year plan, China's government is investing in the country's Internet economy and accordingly directing the development of the local ecosystem to support it. This effort includes directing Chinese semiconductor suppliers, OEMs, and end customers to support processor architectures that are independent of a dominant vendor (such as Intel and the x86 architecture). This support takes the form of Chinese homegrown processor architectures (such as in supercomputing) and relationships between Chinese firms and international firms, including AMD (AMD will license x86 chip technology to a new venture it has formed with Tianjin Haiguang Advanced Technology Investment), IBM and the Power architecture, and, of course ARM. In 2016, with the exception of the transportation industry, on a unit basis ARM-based host processors lead in share of all industries in China, including automotive, computing, consumer, industrial, and communications.

Given ARM's entrenchment in the Chinese market, China's desire to develop architectural and ecosystem independence, and the difficulty of transitioning away from an architecture, it is unlikely that the Chinese government or technology ecosystem will want to change direction away from ARM. In fact, China may view the SoftBank acquisition of ARM as a net positive. Alibaba Group Holding executive chairman Yun Ma is on SoftBank's board of directors and SoftBank has a very long view in terms of its investment in China.

Potential Counterbidders

One key question that arises is if other companies will bid on ARM Holdings during the counter bid window of the next 45 to 60 days. SoftBank's acquisition of ARM does not change the natural order of the ecosystem, does not create any conflicts in the ecosystem, does not raise regulatory or anti-trust concerns and as such a counter bidder with any of the aforementioned issues may be at a disadvantage.

Two or three companies may be positioned to counter bid which may create an environment where an outright bidding competition becomes likely. Although the obvious bidder is Intel, which does not want to see a more competitive ARM with an increased R&D budget, we believe that an Intel bid will have too many regulatory and anti-trust concerns associated with it to be successful. Given Apple's close relationship and history with ARM (Apple was one of the first companies to adopt the ARM architecture, and initial investor for use in its Newton product in the early 1990s), has been growing its semiconductor design resources and IP in CPU, memory, imaging, AI, and sensor; ARM would be a logical step to continue on the same path. However, we once again believe that the customer and

channel conflicts may be significant deterrent to such a deal. That said, we do believe that Apple could be forced to counterbid if any of its major Android competitors decide to bid for ARM.

We note that Microsoft and Alphabet/Google could be two companies that may consider an ARM acquisition. By controlling the processor IP for 98% of smartphones and billions of future IoT devices, both companies would gain the additional benefit of more closely coupling their operating system offerings to the processor architecture. In addition, both companies would gain access to a semiconductor ecosystem that is unrivaled in the industry. Bundling OS licensing with semi IP licensing for system and platform designs for a myriad of IoT devices may be an advantage that both Microsoft and Google would be interested to acquire, especially as both vendors continue to move toward the smart home, automotive, and embedded markets.

Microsoft already generates significant IP licensing revenue from Android, estimated to be as high as $4-$5 billion a year. In addition, with control of ARM, Microsoft would in one fell swoop a significant player in the mobile smartphone market which it could benefit from its previous attempts to enter the market. Microsoft would also gain significant GPU IP in house which could have benefits for its gaming platforms and future VR/AR gaming offerings.

Alphabet/Google, on the other hand, is already working closely with ARM and the synergies that it gains from an ARM acquisition will probably arise from controlling the direction of the ARM architecture and coupling its Android, Chrome, and application platforms to the hardened processors that ARM offers. However, we note that the entry of Google would likely create more interest from suitors like Apple and Samsung, and could face real scrutiny from regulators especially in Europe and China.

In summary, we believe that very few companies could offer the neutrality to the ecosystem and the premium that SoftBank has offered for ARM. We do not believe that other financial holding companies will be willing to pay the premium that SoftBank has put on the table and most do not have the strategic vision that Masayoshi Son brings to the table in the deal. However, we would not be surprised to see a counteroffer from Microsoft (our number one prospect for a counterbid) or Alphabet/Google.

Conclusion

If SoftBank is bidding for ARM as a financial investment, success will be in the degree to which SoftBank's investment accelerates ARM's growth beyond what ARM could've done on its own and what income SoftBank would accrue over the course of its ownership and from the eventual sale of ARM. If the only goal, then the public story that this deal took two weeks to develop is believable; the premium of the all-cash offer is substantial and immediately apparent to ARM's board and shareholders; ARM could not bring this return to shareholders based on its own growth.

If SoftBank is bidding for ARM as a long-term strategic investment that *does have* synergy—such as long-term integration of the technology stack from service providers down to the silicon level for a given ecosystem--with its portfolio of Internet investments, the measure of success would be much higher and more impactful to the industry at large. So, if Google and Microsoft each have their own ecosystems that tie services to systems to software and to silicon in the cloud and Amazon, Apple, and Facebook each have the same for consumers, what synergies might exist among SoftBank's investments?

SoftBank could be making a long-term play for the next-generation mobile market, with end service companies (e.g. Oyo in India) running on mobile service provider (e.g. SoftBank in Japan) and internet service provider (e.g. Yahoo! Japan) devices (wearables, phones, robots) and infrastructure built on

commodity ARM-based systems. Collectively, SoftBank's portfolio reaches into every region of the world.

If the next-general mobile market ecosystem is the real goal, then the vision of this deal has been in development for a lot longer than two weeks. It means that the premium SoftBank is offering for ARM fits into a long-term strategy and challenges any potential competitive bidders to scramble in only 45-60 days to gather financing, assemble a more compelling deal, and overcome likely regulatory issues. It also mitigates the concern for ARM's neutrality because, if SoftBank were to bias the ARM ecosystem in favor of its portfolio of companies, the cost to ARM's customers of switching away from ARM would be prohibitive.

About IDC

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