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Skyworks Solutions Inc SWKS

PDF Report

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Skyworks' RF chips are becoming increasingly important components in many popular smartphones.



by
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 CPA
 Sector Director

Analyst Note 07/20/2017

Skyworks Solutions reported solid fiscal third-quarter results and provided investors with a fiscal fourth-quarter outlook that was modestly ahead of our prior expectations. Business conditions appear to be healthy, as the firm expects 17% year-over-year revenue growth in its September quarter and should retain content in Apple's upcoming iPhones. We will maintain our \$98 fair value estimate and narrow moat rating for the firm, but we would continue to look for a wider margin of safety in the stock before investing.

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Revenue in the June quarter was \$901 million, beating the firm's forecast of \$890 million. Sales were up 6% sequentially and 20% year over year off of an easy comparison in 2016 when iPhone 6s inventory weighed on the mobile chip industry. Not only did Skyworks profit from greater iPhone sales than in the same period a year ago, but we estimate that Skyworks' radio frequency, or RF, chip content per phone is holding up quite well. Skyworks also saw RF revenue growth with Chinese handset makers as well. Meanwhile, broad market opportunities for RF chips continue to pile up and revenue is about to approach a \$1 billion annual run rate. Adjusted gross margins and operating margins held up well at 51% and 37%, respectively, similar to prior quarters.

For the September quarter, Skyworks expects revenue of \$980 million, which would be up 9% sequentially and 17% year over year. We view Skyworks' business as steady, as the firm hinted at additional sequential revenue growth in the December quarter. Ultimately, Skyworks remains an RF industry leader and a key supplier into not just Apple's iPhones but with handset titans like Samsung and Huawei, as well as non-smartphone markets. While Skyworks still lacks an industry leading position in high-band filters, the firm is seeing no ill effects just yet and continues to execute on a host of other important RF products in mobile devices.

Investment Thesis 04/27/2017

Skyworks is a leading supplier of radio frequency chips to smartphone makers and other electronics manufacturers. Although the company faces an intense competitive landscape, Skyworks should succeed in the coming years as the handset industry focuses on high-end 4G LTE smartphones, which usually require higher RF dollar content per phone.

Skyworks earns more than 75% of its revenue from mobile products, mostly from a variety of products that switch, filter, and amplify wireless signals in smartphones. Given the rise of advanced 4G LTE-enabled smartphones, which use a wider variety of wireless spectrum and frequency bands than in prior generations of networks, RF content per phone has grown exponentially in recent years, lifting both Skyworks and its RF competitors. Yet 4G smartphone adoption is still in its early days worldwide, so

Morningstar's Take SWKS

| Analyst | | |
|-------------------------|----------------------------|----------------------|
| Price 10-18-2017 | Fair Value Estimate | Uncertainty |
| 107.34 USD | 98 USD | High |
| Consider Buy | Consider Sell | Economic Moat |
| 58.8 USD | 151.9 USD | Narrow |

Stewardship Rating
 Standard

Bulls Say

- Skyworks should continue to see higher dollar content per phone as customers in developed and emerging markets shift away from basic handsets toward more complex 4G smartphones.
- 4G LTE networks use many different spectrum frequencies, which require more complex antenna and signal technology, allowing Skyworks to sell higher-value, more advanced RF content into smartphones and tablets.
- As more and more devices become connected to the Internet via cellular networks, Skyworks may continue to find new industries that may require additional RF chip content.

Bears Say

- Pricing on 4G RF components has been robust in recent years, but large customers like Apple and Samsung wield significant pricing power and could exert pricing pressure on vendors like Skyworks over time.
- Skyworks has significant customer concentration with Apple, and it would be a damaging blow if Apple was to ever switch to another vendor.
- Skyworks' analog business focuses on underserved niche segments, such as electrical meters and keyless entry for automobiles. However, there are many larger competitors in the analog market.

Competitors SWKS

More...

| Name | Price | % Chg | TTM Sales \$ mil |
|---|-----------------|--------------|------------------|
| Skyworks Solutions Inc | \$107.34 | -0.01 | 3,502 |
| Intel Corp | \$40.25 | 1.16 | 61,711 |
| Taiwan Semiconductor Manufacturing Co Ltd ADR | \$41.50 | 0.61 | 32,135 |
| Broadcom Ltd | \$244.00 | 0.57 | 16,928 |
| Texas Instruments Inc | \$93.43 | -0.89 | 14,184 |
| NVIDIA Corp | \$197.58 | -0.09 | 8,344 |

we see a nice runway for further RF growth for Skyworks. Meanwhile, Skyworks is one of the few RF firms with the scale to supply hundreds of millions of RF products per year, giving the firm a leg up on new entrants.

That said, in our view, Skyworks' RF prospects might not be rosy forever, due to intense competition in RF chips, and a customer base of only a handful of tech titans that could put pricing pressure on Skyworks and other RF chipmakers, especially if and when LTE networks mature. The company has significant customer concentration with Apple (40% of fiscal 2016 revenue), and it would be a damaging blow to the firm if they were to ever miss out on a future iPhone design cycle. We also don't see a winner-take-all situation in the smartphone RF space, as handset makers have split their business enough among these RF firms to prevent a single firm from dominating the market over time.

We're highly encouraged by Skyworks' diversification into nonhandset end markets, especially as connectivity is becoming more ubiquitous in other industries such as automotive. Although the firm has seen robust growth from these end markets, we still suspect that the company's fortunes will remain tied to the wireless industry for quite some time.

Economic Moat 04/27/2017

We believe that Skyworks has a narrow economic moat based on intangible assets around the design, manufacturing, and packaging of a variety of non-silicon radio frequency (RF) products, including Surface Acoustic Wave (SAW) filters, power amplifiers, and integrated front end modules used in many 4G-enabled smartphones.

We are modestly concerned about the firm's customer concentration with Apple, which made up 40% of Skyworks' revenue in fiscal 2016. While business with Apple remains strong and is still a large chunk of revenue, we estimate that it is more likely than not that Skyworks can earn excess returns on capital over the next decade even if it were to lose all of its business with Apple over the next couple of years (although we don't see this doomsday scenario playing out).

Ultimately, RF leaders like Skyworks have years, if not decades, of RF expertise, both in design and, perhaps more important, in chip manufacturing, packaging, and testing, which we view as especially valuable since most RF products are based on more specialized materials (for example, non-silicon). Skyworks' ability to integrate a variety of RF parts into a single package, like its SkyOne suite of products, has been difficult for many others to replicate, and Skyworks has reaped the rewards with healthy profitability and earnings growth.

Looking at Apple and the rest of the smartphone market, Skyworks' supplier relationship with Apple appears secure, if not strengthening, as we believe that RF relations like Skyworks are working with Apple for phones to come out two years from now. Given the low price of RF filters (each single filter costs less than \$0.50), we still anticipate smartphone leaders like Apple going with best-of-breed filters for its designs. We doubt that Apple or others would run the risk of poor connectivity within its smartphones just to save a few pennies on a lesser filter, or by taking a chance on a startup without the size and scale to manufacture and supply hundreds of millions of filters for its marquee device launch. Meanwhile, looking past Apple, we see all other smartphone makers building more advanced 4G LTE-enabled phones that require additional RF content per device than in years past.

Wireless carriers throughout the globe (but especially in China) continue to roll out more advanced 4G LTE networks. LTE networks are poised to gain adoption throughout the world, from 1.9 billion smartphone subscriptions in 2016 to 4.6 billion by 2022 (per Ericsson). LTE networks are based upon a wide variety of wireless spectrum frequencies (over 40 bands and counting) and RF filters are required for each of these bands in order to capture precise wireless signals for processing. Longer-term, we still view LTE signals as being pieced together from a rising number of different frequencies, or bands. In turn, 4G phones will continue to require tens of filters per device. We see only a handful of firms, including Skyworks, with the size, scale and product depth to supply hundreds of millions of RF parts to these smartphone makers over time. We also don't see a winner-take-all situation where a

single firm captures every single filter within every single LTE smartphone going forward, so we see Skyworks maintaining a decent share of RF content well into the future.

Meanwhile, we think that Skyworks has some stickier design wins in a host of non-smartphone applications. The company is a leading RF supplier into a wider array of other industries, such as industrial, medical, and networking and wireless infrastructure equipment. In these industries, Skyworks appears to be profiting from longer product life cycles and steadier pricing due to fewer volume discounts.

On the other hand, a variety of industrywide dynamics within the smartphone RF space do not typically lend components makers to carve out economic moats. First, as discussed, Skyworks has significant customer concentration with Apple. If Skyworks were to ever completely miss out on an Apple design cycle and lose 100% of its business with Apple for an extended period of time, the company's results would clearly suffer, but we still calculate that Skyworks' returns on capital could still hover above the firm's cost of capital. Second, even if Skyworks maintains its share with smartphone leaders, tech titans like Apple and Samsung might be able to exert significant pricing pressure and ask for hefty volume discounts from Skyworks and others in the long term. Finally, product life cycles in the smartphone industry are exceptionally short, so hard-fought design wins one year might not translate to a steady revenue stream in the long term. These dynamics prevent us from assigning Skyworks or other RF players with wide economic moats.

We also recognize that a high-end smartphone like the iPhone 7 uses filters from several different RF suppliers, including Skyworks' fiercest competitors, in order to ensure connectivity with the 20-plus different bands needed to ensure LTE connectivity across a global wireless carrier base. Thus, we can't rule out the possibility that Skyworks is displaced within an iPhone at some point in the future. Since other smartphone leaders sell dozens of different phone models each year, it would take hefty share gains at other Android-based device makers to make up for a design loss within the iPhone.

Looking at the RF product landscape, in filters, we find a few different types of products that can be found in a global, high-end LTE smartphone. At the high end, we find two types of filters--BAW (Bulk Acoustic Wave) filters from firms like Qorvo and FBAR (Film Bulk Acoustic Resonators) filters from Broadcom, both of which are appropriate at high spectrum frequencies above 2 Gigahertz (FBAR is a type of BAW filter). At lower frequencies below 2 GHz, we find SAW (Surface Acoustic Wave) filters from firms like Skyworks (which the company acquired from Panasonic) and Qorvo. Skyworks also offers TC-SAW (temperature-controlled surface acoustic wave) filters that are starting to creep up the frequency scale, yet are cheaper than BAW filters. Murata, TDK (acquired by Qualcomm) and Taiyo Yuden are also prominent SAW filter vendors.

Although the use of FBAR and BAW filters for frequencies below 2 GHz would be a bit of overkill today, it is possible that these other filter technologies could come down the cost curve and supplant SAW filters in leading-edge smartphones. However, Skyworks just announced that it intends to deliver BAW filters to customers by 2017, either from internal production or (more likely) by buying filters from outside suppliers and integrating them into its existing modules. Skyworks offered BAW filters in the past, and with IP from the filter business recently acquired from Panasonic, as well as partnerships with filter vendors like TDK and Taiyo Yuden, we think Skyworks has a good chance of integrating high-quality BAW filters into its all-in-one solutions over time.

All else equal, we think of filters at higher frequencies (BAW, FBAR) as more proprietary than SAW products and perhaps TC-SAW filters, as well. Thus, we don't think of Skyworks' intangible assets in filters as best-in-class, but perhaps this can change if BAW production works out. Instead, we think that Skyworks' sustainable competitive advantage lies within its expertise in RF integration, design, packaging, and other RF parts like power amplifiers. Nonetheless, it is possible that we are overestimating the value of Skyworks' expertise in RF products and integration.

We also can't rule out competition from non-traditional RF players. Qualcomm is striving to enter the RF space with its RF 360 products and acquisition of TDK's filter

business in order to enter the filter side of the market. Qualcomm also lacks the manufacturing capabilities and expertise in non-silicon materials that are needed to deliver high-performance RF parts. Startups have attacked the RF space in years past, but given the hefty startup costs to design such filters and achieve the necessary manufacturing scale, none of these firms made a dent in the market share of larger players. These startups focused on silicon-based products that offered lower costs (but with lower performance), and most of these startups were acquired by market leaders like Skyworks and Qorvo.

Yet in the end, we view Skyworks as one of a small number of firms within a shrinking, consolidating industry that can supply the necessary volumes of increasingly valuable RF parts to smartphone makers, all while generating excess returns on capital over the next decade.

Valuation 04/27/2017

We are raising our fair value estimate for Skyworks to \$98 per share from \$92. This new fair value estimate implies fiscal year 2017 price/adjusted earnings of 16 times and fiscal year 2017 price/free cash flow of 14 times. Skyworks' saw tremendous revenue growth earlier this decade, but the good times halted with only 1% growth in fiscal 2016 due to lower than expected demand for Apple's iPhone 6s. However, Skyworks should experience a bounce back in fiscal 2017 with content gains at Samsung and Huawei, along with a revival in sales from its top customer, Apple. We forecast 10% revenue growth in fiscal 2017 and 9% in fiscal 2018. Longer term, we model 3% revenue growth; Skyworks should continue to benefit from the rapid adoption of smartphones and tablets and further expand into nonhandset opportunities, but we are concerned that pricing may face some headwinds as LTE technologies mature and smartphone makers like Apple possibly exert pricing pressure over RF components suppliers. Higher sales levels have enabled Skyworks to benefit from operating leverage in recent years, and we expect this trend to continue in the long term. On an adjusted basis, the company earned a 38% operating margin in fiscal 2016 and we project further expansion to 40% in the long term. Our fair value uncertainty rating for Skyworks is high, considering the cyclical nature of the semiconductor industry and the company's highly concentrated customer base.

Risk 04/27/2017

In our view, Skyworks' greatest risk revolves around customer concentration with Apple, which made up 44% of revenue in fiscal 2015. It would be a damaging blow to Skyworks if it was to entirely lose its business with Apple. Skyworks will also have to fend off intense competition within wireless, both from radio frequency, or RF, specialists like Qorvo and Avago, as well as threats from broad wireless leaders like Qualcomm. Even if Skyworks was to retain its fair share of design wins, Apple, Samsung, and others could wield significant pricing power which could make these design wins less lucrative in the long run. Meanwhile, design wins with other smartphone makers could be less profitable as well, particularly in low-end LTE-enabled smartphones. Finally, although Skyworks has done well to diversify a portion of its business into nonhandset opportunities, the firm squares off against a host of well-capitalized firms in the analog chip space with decades of design experience.

Management 04/27/2017

We view Skyworks as a well-run company and good stewards of shareholder capital. Liam Griffin became Skyworks' CEO in May 2016, replacing longtime CEO David Aldrich, who held the role since June 2002. Aldrich shifted into an executive chairman role, and we are pleased to see Skyworks retain his expertise. Griffin was an executive vice president of Skyworks since 2011 and president of the company since 2014, and we see his ascension to the CEO role as a logical progression for the company.

Skyworks has generated solid sales growth and profitability over the past few years and we like the firm's dividend policy and focus on buying back shares in a

reasonable manner. Overall, we like Skyworks' mergers and acquisitions track record. Skyworks made two big moves in 2011, acquiring SiGe Semiconductor and Advanced Analogic Technologies in order to diversify and expand its product portfolio. At this point, it appears that both moves have paid off, as the firm has generated strong revenue growth in nonhandset end markets, all while continuing to expand operating margins. The firm's acquisition of Panasonic's filter business also helped the firm secure a steady supply of high-quality SAW filters used in the firm's front end modules, and should aid in further gross-margin accretion, and perhaps development of new types of filters like bulk acoustic wave filters used to manage higher 4G wireless frequencies. The one black mark on management's M&A track record, in our view, was a failed bid to acquire PMC-Sierra under prior management. We're relieved that Skyworks was outbid for PMC and that the firm walked away from a bidding war, but we struggled to see the clear strategic fit of the deal in the first place.

Overview

Profile:

Skyworks Solutions produces semiconductors for wireless handsets that are used to enable wireless connectivity. Its main products include power amplifiers, filters, and integrated front-end modules that support wireless transmissions. Skyworks' customers are mostly large smartphone manufacturers, but the firm also has a growing presence in nonhandset applications.

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