The $750 billion converged living room: a plateau approaches

Deloitte predicts that global sales of smartphones, tablets, TV sets and video game consoles will exceed $750 billion in 2014, up $50 billion from 2013 and almost double the 2007 total (see Figure 1). Combined global sales of these five products have grown remarkably since 2003, with trailing five-year compound annual growth (CAGR) of 6-12 percent per year over a decade (see Figure 2) (although year-over-year growth has fluctuated from a high of 27 percent in 2010 to a low of -3 percent in the recession year of 2009). In contrast, the growth rate for the global semiconductor industry was only 3.1 percent between 2000 and the end of 2012. However a plateau appears likely: sales are expected to continue growing, but at a slower rate than over the past 10 years, with an estimated ceiling of about $800 billion per year.

These five categories of consumer electronics devices are closely related in that they are currently the five largest by dollar value, are all multi-functional, and each plays a key role in entertainment and media consumption. Also, all five of these devices have benefited from common technology such as processors and screens (except for video game consoles, all of the devices make use of high resolution LCD technology). In contrast, other large segments such as portable video games devices, eReaders and feature phones tend to focus on a single function and thus have a narrower impact on general media consumption and entertainment.

Figure 1: Combined global sales revenues of smartphones, tablets, PCs, TV sets, video game consoles (1999-2018)

Source: Deloitte, 2013
The simultaneous growth of these five devices created a virtuous circle over the last decade. For example, to supply the massive volumes of LCD screens required for large, flat HDTVs, manufacturers built plants capable of producing 400 million square meters of screens annually by 2013. This drove prices for laptop screens down, which in turn focused research and development on better, smaller screens; which eventually led to high resolution screens for smartphones and tablets that made those devices much more appealing and useful.

There has also been a virtuous circle with solid state memory: the need for gigabytes of flash memory for each of a billion smartphones and tablets led to new manufacturing capacity and increased production volumes that lowered prices, which helped enable the creation of powerful gaming systems and ultrabooks. Also, massive economies of scale drove down prices for lower-end PCs, tablets and smartphones such that large numbers of less affluent families in emerging and developed markets could afford them. This further increased scale and enabled even less expensive devices, such as the $100 smartphone. Further, the virtuous circle doesn’t merely enable the low-cost smartphone; it makes possible the perennially improving smartphone, as well as the $100 tablet.

These mutually beneficial forces allowed the five categories to grow at an aggregated average CAGR of 11.8 percent between 2004 and 2014 (estimated), almost four times faster than the underlying semiconductor industry, and almost twice as fast as global GDP, which in constant dollars grew at an annual rate of six percent between 2004-2014 (estimated). However, this impressive growth rate appears to be reaching a plateau.

Between 2006 and 2012, annual PC industry sales oscillated within a narrow band of $210-$240 billion. But in 2013, sales declined by 12 percent to under $200 billion, and many analysts forecast an additional 2013. This drove prices for laptop screens down, which in turn focused research and development on better, smaller screens; which eventually led to high resolution screens for smartphones and tablets that made those devices much more appealing and useful.

The market for TV sets has also been shrinking since peaking at over 115 billion dollars in 2011: 3D technology, integrated connectivity, and voice and gesture control have not enticed consumers to upgrade their TV sets more frequently or at a higher price. Television set ASps have been declining slowly since 2007; however, that erosion might be slowed or even reversed over the next five years by demand for Ultra High Definition (UHD) 4K TV sets, which are likely to command premium prices. Yet even with this possible boost, TV set sales in 2018 are expected to rise by less than $10 billion over the 2014 forecast of $105 billion.

New video game consoles were introduced in late 2013. Although early combined sales figures in markets where the new devices have been released have been higher than for prior generations of consoles, the console business, at around $10 billion per year, is unlikely to make much of a difference on the more than $750 billion base.

These trends suggest that smartphones and tablets need to be the main engines for growth in the connected living room market.

Sales of smartphones should continue to grow, in units and revenues, but the rate of growth is likely to decline. Globally, feature phones are now a minority of sales: the steepest part of the growth curve for transition to smartphones has already occurred. The smartphone upgrade cycle is lengthening: while some people still line up to be the first to own the latest phone, the average consumer is happy with their current phone for longer than in 2008 and 2009, when each new model was a dramatic improvement over the previous model. Between 2007 and 2013, the handset upgrade cycle lengthened by over 25 percent, from less than 19 months to more than 24 months.

The majority of smartphone sales over the next five years are likely to be in the developing world. These price-sensitive buyers are already having an impact on ASps: in late 2013 the decline in smartphone ASps dragged down overall mobile phone ASps by four percent. While smartphone sales in 2014 are expected to rise to about $375 billion, a 12 percent year-on-year increase, smartphone sales in 2018 are only expected to rise to about $385 billion, a 15 percent increase over four years.

Source: Deloitte, 2013

Figure 2: Five year CAGR (2003-2018) for combined global sales revenues of smartphones, tablets, PCs, TV sets, video game consoles

7 “…both systems sold more units in November than their predecessors did in the first three to four months following their launches.” People Are Taking Longer To Upgrade Their Smartphones, and That Spells Trouble For The Mobile Industry, Business Insider, 6 September 2013: http://www.businessinsider.com/the-smartphone-upgrade-cycle-grows-longer-2013-9
8 For a view on PC shipments, see: IDC Forecasts PC Shipments to Fall By Double Digits In 2013: Above 300 Million Units per Year, But With No Significant Recovery, IDC, 2 December, 2013: http://www.idc.com/getdoc.2013-02-x.jsp?containerId=prUS24466513
9 “...the area of a 32-km pitch, or the entire land area of Vienna, Austria or Denver, US. Such a screen, assuming a 9:16 aspect ratio, would be about 27 km by 16 km with a diagonal of 33 km. The average viewing distance is likely to be 100 km, so the screen would be viewable from about 100 km up, which is the internationally defined limit of outer space. See: Administrator, Wikipedia, 2013: http://en.wikipedia.org/wiki/K%C3%A1rm%C3%A1n_line
10 For a view on LCD/LCD screens, see: Kármán line, Wikipedia, 2013: http://en.wikipedia.org/wiki/K%C3%A1rm%C3%A1n_line
11 Each of a billion smartphones and tablets led to new manufacturing capacity and increased production volumes that lowered prices, which helped enable the creation of powerful gaming systems and ultrabooks.

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In 2014, tablet sales are expected to reach 285 million units and surpass $100 billion. Falling ASPs are being driven by the growing share of compact tablets (8.5 inches or smaller), which are typically lower-priced. ASPs of classic format tablets (nine inches or larger) are declining. Overall tablet ASPs fell 10 percent in 2013, and if that price decline continues then annual tablet sales are likely to remain near the $100 billion level through 2018.

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Revenues for each individual category may turn out to be somewhat higher or lower than expected, but combined sales across all five categories are likely to be fairly steady and predictable – plateauing at roughly $800 billion annually after a decade of double digit growth.
One interesting effect could be a deceleration in research and development costs for hardware manufacturers, as many consumers might refuse to pay for incremental technology improvements such as 100 megapixel cameras when 50 megapixels is good enough. At the same time, in a world of increasingly commoditized technology, spending on advertising might rise to stimulate demand and improve differentiation.

It is unclear what the implications might be for chip design: will device manufacturers respond to a plateau in growth by offering a new processor only every second generation, or will they try to claim a bigger piece of the same size pie by attempting to differentiate through even faster new processors?

The past decade has been especially challenging for those developing apps, content or software for devices. Sales growth was accompanied by an explosion in formats, aspect ratios, resolutions and operating systems, with developers forced to create a new version for every combination and permutation, or pick and choose likely winners. A plateau might provide a much needed respite for them, while helping to create a more stable environment with less fragmentation.