

# TOP 3 PREDICTIONS FOR DEVICES IN 2023

**After rapid pandemic-related growth,  
the PC market will shrink in 2023**

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## ▼ FOLLOWING THE PANDEMIC-RELATED SURGE IN PC SALES AND AUR, VENDOR REVENUE AND MARGINS WILL BE LOWER IN 2023

2023 will see a return to normal PC market conditions, but with a changed role for PCs. The pandemic changed the way people work, including how they work with PCs. TBR believes the work changes will have lasting effects. While some people and some companies are returning to pre-pandemic workstyles, the pandemic permanently accelerated the existing trends toward hybrid workplaces and a greater reliance on PCs for work and collaboration.


Most importantly for PC vendors, buyers and users have greater respect for PCs. Not only have PCs been essential for collaboration and maintaining productivity under changed working conditions, they also have been greatly enhanced. While many of these improvements preceded the pandemic, the greater reliance on PCs has made such advances important. The solid-state drive (SSD), now ubiquitous, makes PCs faster and more reliable, as well as contributing to reducing weight and power consumption. PCs are thinner, lighter and brighter and have a much longer battery life.


Buyers are more willing to spend on these more productive PCs, as well as on attached services and accessories. This has contributed to large increases in average unit revenue (AUR) and to higher margins, but buyers also are keeping their PCs longer because of greater reliability and greater satisfaction with performance.


The increase in PC life cycle, combined with PC supply catching up with demand for the first time in four years, will challenge PC vendors' revenue and margins in 2023.

## ▼ PREDICTIONS

### PC REVENUE WILL DECREASE

 **Trend:** Decreasing PC revenue

 **Driver:** After the pandemic-related surge in PC buying, the market has been saturated with new PCs.

 **Result:** PC revenue will fall approximately 10% if there is no recession— and more if there is one.

The pandemic-related PC shortage was primarily a result of increased demand. There were problems in the supply chain, but vendors and their suppliers produced and sold more PCs than in previous years. Sales growth was in the midteen percentages, beyond the planned capacity of the supply chain, and was caused by increased utilization; more people were using more PCs for work, learning and entertainment. TBR believes these changes in utilization rate are permanent, so that the total available PC market is larger than before and will not regress to previous conditions.

While the total market has increased in size, most users now have relatively new PCs. At the same time, they will keep those PCs longer than was common in the past. When the recently purchased PCs become older and start being replaced, in around 2Q24, the vendors will enjoy a larger market. Until users start to refresh pandemic PCs, the available market will be smaller, resulting in a revenue decline.

The size of the decrease will depend on the state of the global economy. Under recession conditions, buyers defer replacing their PCs. If businesses shrink, used and refurbished PCs will flood the market, allowing cost-sensitive buyers to get almost up-to-date PCs at much lower prices and cutting out the vendors.

TBR believes PC revenues will decline approximately 10% annually if there is no recession. The decrease will be approximately 20% under a recession, or greater if the recession is severe.

## PRICE COMPETITION WILL REDUCE MARGINS



**Trend:** Decreasing PC margins



**Driver:** Following the pandemic-related PC surge, supply is catching up with demand.



**Result:** Margins will recede to just above pre-pandemic levels.


PC margins began to decrease in 2Q22. TBR believes this decline will continue through 2H22 and, by 1H23, be only one or two points higher than prior to 2H18.

The reason is simple: because PCs were in short supply, competitive price pressures were much lower than in normal times, when PCs are plentiful. PC supplies have not met demand since 2H18, leading to backlogs, a reduction in price competition and an expansion of PC margins. In 2Q22, PC vendors all reported a softening in demand and improvements in the supply chain. Backlogs have returned to normal levels. Margins are still higher than prior to 2H18, but lower than in the past year.

PCs were in short supply starting in 2H18, two years before the pandemic, because Intel was not able to execute on its plans to bring a new production process online. Without the new capacity, Intel's CPU supplies were limited, reducing PC supply and helping PC vendors avoid tough price competition. Margins rose.

CY23 margins will be higher than prior to 1H18 because buyers have migrated to higher-priced, higher-margin premium PCs and are now in the habit of attaching purchases of services and accessories. Because services revenue is recognized over the length of the contract, higher-margin services revenue from purchases made during the pandemic will continue for many quarters going forward, depending on the length of the contracts.

## THE NEXT ADVANCES IN PCS WILL BE CELLULAR CONNECTIVITY AND AI-BACKED FEATURES

 **Trend:** Increased adoption of cellular connectivity in PCs

 **Driver:** Security, productivity and convenience

 **Result:** Increased PC AUR, increased communications service provider (CSP) revenue

PCs have improved so much over the last decade that it is hard for vendors to improve them further enough to tempt buyers to upgrade. That was not true 10 years ago. Now, it is not clear that making them even thinner or lighter would make a difference, and further extending battery life does not make much difference to users. Nevertheless, vendors try to find attractive new capabilities.

Cellular connectivity has been available as an option on PCs for many years but has never been very popular. TBR believes that the widespread adoption of 5G will help to propel buyer interest in this feature, despite the fact that the long-established LTE protocol provides enough bandwidth for most users. Nevertheless, because today's PCs are more important to users and because buyers have become accustomed to premium devices, TBR believes that, with decent marketing, vendors will be able to sell cellular connectivity. The current buyer cost for 5G capability in a PC is more than \$100, which will inhibit adoption somewhat at first, until prices fall.

TBR also believes that AI applications, running on PCs, will become more prevalent. Most PC AI, like Microsoft's Cortana, is server-based, but PCs have considerable capacity for AI processing in their graphics processing units (GPUs). HP Inc. uses PC AI to filter out keyboard noise from PC microphones and detect the user's presence — nice features, but not ones that drive purchasing decisions. It will take an undiscovered "killer app" to move the market, and developers are undoubtedly pursuing that opportunity. We expect to read about interesting PC AI productivity applications in 2023.



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