

TROUBLE IN PARADISE FOR SEMICONDUCTORS?

Quite frankly, no. We are about to outline the reasons why, but first, let's begin with a recap of what happened with Samsung's disastrous quarterly profits.

Samsung Recap

Samsung's memory chip division experienced a disastrous quarter, with a loss of approximately USD 3.4 billion due to decreasing demand and excessive inventories. This loss, stemming from the company's usually most profitable unit, led to a 95% drop in Samsung's quarterly operating profit to around \$478 million.

The poor financial performance is attributed to a struggling semiconductor industry, which is central to the company's operations. Factors contributing to the downturn include weak demand, increased inventories, and falling prices driven by a global recession. Memory chips, in particular, performed poorly due to a drastic drop in prices as Samsung's customers adjusted their inventories amidst inventory valuation losses. In other words, due to the pandemic, electronics manufacturers hoarded chips to avoid supply issues as demand surged – but they now face significant inventory surpluses as consumer demand declines amid high inflation and broader global economic uncertainties.

Even so, Samsung is still ramping up investments into production facilities and into R&D – about USD 7.4 billion, and USD 4.9 billion, respectively. Why? Well, other than Samsung's stated intention to solidify its tech leadership, for several reasons we will now address.

Revival in Demand Anticipated

Samsung anticipates a strong revival in the chip industry during the latter half of the year. By that time, current inventories are projected to be depleted, and the release of new smartphones and PCs will boost demand. This expectation is also linked to the potential economic recovery in China, the world's largest market for PCs and smartphones. In other words, the current short term challenges that Samsung faces are expected to get resolved later this year.

The Overall Semiconductor Industry

Long story short, while the semiconductor industry is now facing short-term challenges due to difficult current macroeconomic factors, the reality is that mid- and long-term growth prospects remain highly promising. Semiconductors play a crucial role in economic competitiveness and national security, driving technological advancements in areas like digital transformation, AI, 5G communications, AR/VR, IoT, Industry 4.0, and self-driving vehicles.

First, let's not forget that the semiconductor industry is known for its cyclical nature with periodic short-term weaknesses – and this current downturn is no different than previous downturns, fitting the long-term trend. In this light, a recent study by SIA and the Boston Consulting Group projects that global demand for semiconductor manufacturing capacity will grow by 56% until 2030. McKinsey concurs, estimating that the semiconductor industry will become a USD 1 trillion dollar industry by the end of the decade (from about USD 600 billion last year). The market seems to think so too: Samsung's share price seems to have mostly recovered since the bad news, and our Solactive Semiconductor Indices also seem just fine.

As the long-term trend of rising chip demand continues, semiconductor companies will need to invest more in research, design, and manufacturing. The key question is not whether more chip manufacturing facilities (fabs) will be constructed, but rather where they will be built. Finally, chips are essential for emerging or future technologies in the context of medical innovations, climate solutions, or 6G. As the world becomes increasingly reliant on these small silicon components, the semiconductor industry's importance and growth potential will only continue to rise.

Automotive applications are expected to be the most important driver of demand, as an electric car uses about eight times more chips than an internal combustion car, and starting from 2035, the EU will only produce electric cars – not even mentioning self-driving cars, which bristle with tech and chips. Other than automotive, the following strongest drivers of growth will be wireless applications (IoT), computation, and data storage.

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Contact

Solactive AG

German Index Engineering
Platz der Einheit 1
60327 Frankfurt am Main
Germany

Tel.: +49 (0) 69 719 160 00
Fax: +49 (0) 69 719 160 25
Email: info@solactive.com
Website: www.solactive.com

Solactive Research Team

Email: research@solactive.com

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Timo Pfeiffer

Chief Markets Officer

Tel.: +49 (0) 69 719 160 320
Email: timo.pfeiffer@solactive.com

Fabian Colin

Head of Sales

Tel.: +49 (0) 69 719 160 220
Email: fabian.colin@solactive.com

Konrad Sippel

Head of Research

Tel.: +49 (0) 69 719 160 321
Email: konrad.sippel@solactive.com

Emanuel Cozmanciuc

Research Associate

Tel.: +49 (0) 69 719 160 325
Email: emanuel.cozmanciuc@solactive.com