27 March 2024

Global Markets Research

Research Alert

Positive on electronics and electrical sector

E&E sector is set for a comeback despite the recent setback in Malaysia's export numbers

Positive global & regional trends; global PMI and semiconductor sales have improved

Inventory drawdown, capex spending, product replacement cycle supports our view

Glimpses of turnaround in E&E exports in the region

Despite the setback in Malaysia's trade numbers for February, we maintain our view that export orders of electronics and electrical (E&E) goods have bottomed out and are set for a comeback. In fact, regional peers and major E&E exporting countries like Singapore, Taiwan and South Korea have shown signs of a turnaround, with Singapore's NODX of E&E expanding for the second month and by a faster pace of 5.2% y/y (Jan: +0.6% y/y), South Korea's exports of semiconductor registering strong growth of 66.7% y/y (Jan: +56.2% y/y), while Taiwan's exports orders for E&E registered double digit growths in January.

Projections and forward-looking indicators suggest that Malaysia's E&E exports should follow suit soon

Lending further support to our optimism that Malaysia's E&E sector is riding on an upward trajectory are:

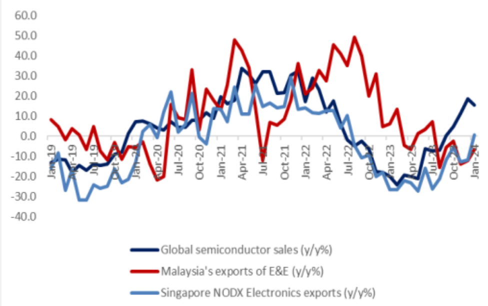
1. ***The Semiconductor Industry Association (SIA) expects sales to grow by 13.1% y/y for 2024,*** rebounding from -8.2% y/y in 2023. As it is, global sales recorded its fifth consecutive month of expansion and three consecutive months of double-digit growths since November 2023 (Nov: +11.4% y/y vs Dec: +18.7% y/y vs Jan: +15.2% y/y), led by strong double-digit y/y sales for China, Americas and Asia Pacific region. For Malaysia, E&E exports typically lagged global semiconductor sales by about 5 months with a correlation of 0.67, suggesting that it is due for a turnaround as soon as March (Please refer to Figure 1).

2. According to International Data Corporation's (IDC) "Semiconductor Market Outlook: Investment and Innovation Accelerate Next Growth Cycle" report, ***next-generation computing architectures and AI will accelerate a replacement cycle in smartphones and PCs in 2025***. Historically, our in-house estimates product replacement cycle of around 3.5-4.0 years for E&E (Please refer to Figure 2). With global semiconductor sales last peaked in mid-2022, this suggests that semiconductor will peak towards end-2025 for this cycle.

3. With a strong correlation of 0.87, global manufacturing PMI had broadly led global semi-conductor sales by 2-5 months since 2021. With PMI turning expansionary in January, we expect global semi-conductor sales to accelerate further towards mid-year (Please refer to Figure 3).

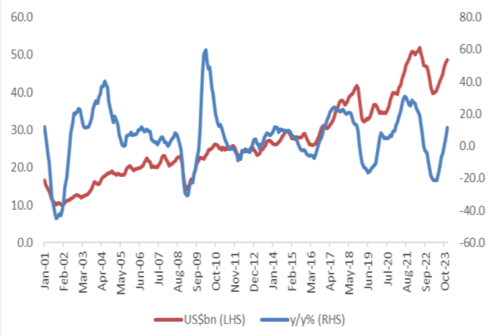
4. Although fab utilization has remained low, capital expenditures and fab utilization rates are expected to see a mild recovery starting in 1Q as automotive and industrial elevated inventory levels returns to normal, while electrification and AI drives long-term content growth. According to the Semiconductor Manufacturing Monitor (SMM) report, prepared by SIA and TechInsights, memory capex is projected to increase 9% q/q and 10% y/y in 1Q, while non-memory capex is expected to climb 16% during the quarter. Fab utilization rates also saw a modest improvement from 66% in 4Q of 2023 to 70% in 1Q, and fab

Figure 1: Malaysia's E&E exports tend to lag global semiconductor sales by five months, suggesting a possible turnaround as soon as March



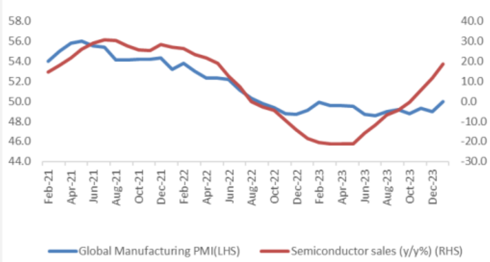
Source: Bloomberg

Figure 2: IDC projects a replacement cycle in smart phones and PCs in 2025



Source: Bloomberg

Figure 3: Global manufacturing PMI typically leads 2-5 months, turned expansionary in January



Source: Bloomberg

capacity grew 1.3% 4Q of 2023 and is projected to match those gains in 1Q. (Please refer to Figure 4)

Shift in market dynamics

More importantly, over a longer-term perspective, there has been a continuing shift in the dynamics, drivers and trends in the E&E sectors, which could benefit Malaysia, or not.

1) Early adoption of vehicle electrification and autonomous driving, as well as declining cost of EV vehicles have benefited corporates like BYD and the yuan.

2) Rising prevalence of chronic diseases and shifts to homecare settings, will drive demand for portable devices as well as increased investment in medical technology companies. According to Fortune Business Insights, while North America continued to dominate this industry (accounting for 38.3% of the global share and expected to expand at a 10-year CAGR of 5.9% by 2030), Latin America and the Middle East & Africa are expected to register a substantial CAGR going forward due to rapidly developing healthcare infrastructure in countries like Brazil and Saudi Arabia.

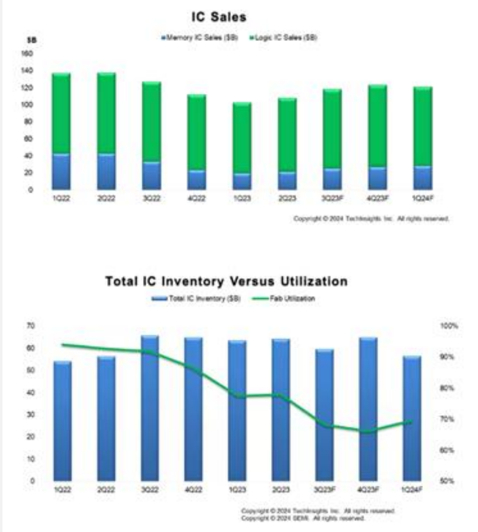
3) A geopolitical shift - ***US and European tech companies have started to diversify its supply chains from China*** after US added sanctions to curb the advancements of China's tech capabilities and after Washington's plans to lessen dependence on chipmaking hubs. This could potentially benefit countries like India and those in South East Asia. Already, US Commerce Secretary Gina Raimando has already urged the doubling of chip plants in the Philippines, A&T will officially open its first plant in Kulim, Malaysia while TSMC opened its first chip plant in Japan as it diversifies supply chains away from Taiwan amid intensifying U.S.-China trade tensions.

   The ***CHIPS and Science Act was enacted in 2022 and is expected to provided $52.7bn for American semiconductor research, development, manufacturing, and workforce development***. This includes $39bn to bolster chip making in the US, with the latest being the $8.5bn grant awarded to Intel. While this is positive for the US economy and Dollar, growing talent gap has emerged as a headwind recently, with TSMC saying that it is delaying production at its $40bn plant due to lack of workers.

4) Nvidia and AI - Nvidia's blockbuster results have not only sent tech stocks and the broader US equity markets rallying, but also drove Stoxx Eur 600 and Nikkei 225 to their record highs recently. This is not surprising given that it is one of the "Magnificent Seven" and with a market cap of $2.3tn, easily accounting for 5% of Nasdaq's market cap.

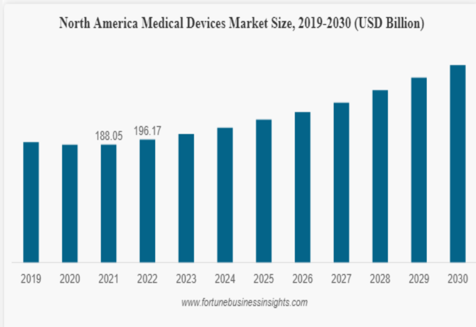
   As such, it is only apt we use Nvidia as bell-weather for the industry. As widely known and reaffirmed by Nvidia's results, ***the industry will be driven by accelerating demand for AI servers and AI-enabled end point devices.*** SEC filing showed that Nvidia's result have been largely driven by data centres, doubling in revenue at least, accounting for approximately 80% of its revenue from say, 43% two years and more importantly, what caught our eye and the market by surprise, was the revenue breakdown by region which showed that revenue from Singapore quadrupled from $0.5bn to $2.7bn within the span of one year, probably explaining the strong SGD, and its share of revenue increased from 9% to 15%. This is compared to US, Taiwan and China (including Hong Kong) at 35%, 24% and 22% (Prior year: 36%, 19% and 19%).

Figure 4: Capex and fab utilization rates to see mild recovery starting in 1Q



Source: https://www.semi.org/en/news-media-press-releases/semi-press-releases/global-semiconductor-manufacturing-industry-poised-for-2024-expansion-semi-reports

Figure 5: While North America continued to dominate, Middle East & Latin America is expected to register substantial growth



https://www.fortunebusinessinsights.com/industry-reports/medical-devices-market-100085

Figure 6: The US is way ahead in data center share of global trade

Source: United States International Trade Commission

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