Texas Instruments Inc.
KLA Corp.
ASML Holding N.V.
TXN / KLAC / ASML

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Texas Instruments Inc. (TXN)

Investment review

Texas Instruments Inc. (TXN)

Current thesis

The net result of TXN's capacity expansion plans have significant implications for the trajectory of TXN gross margins. Given that the company does not manage its business to optimize to gross margins (but rather to optimize FCF per share growth), TXN will likely prioritize growth in capacity rather than gross margins, yielding some downside risk in the short-/medium-term. From a market share perspective, it has become increasingly apparent that TXN has lost share in the analog segment over the last two years due to a multitude of factors (lack of supply, intentional de-prioritization of businesses, etc.).

Despite softness near-term, management has confidence (as does the market, thus far) that the uptick in long-term growth is achievable, implying that any analog share loss over the prior two years will likely reverse. The massive capex and its implications for margins and cash flow makes me nervous, but at the same time, investors have taken it in stride (thus far). TXN remains a high quality business with very shareholder-friendly capital return policies.

Catalysts

1. Revenue growth acceleration
   - > Long-term revenue growth outlook on the back of capital deployment (10% per year from 7% per year) is significant
   - > Would drive FCF
   - > If TXN appears on the path to execute, market will appreciate it
2. Higher capex / depreciation offset by investment tax credit
   - > Higher capex spending is largely offset by the 25% investment tax credit ($4bn or $1bn/year)
     - > Does not factor in semi manufacturing incentives from the US CHIPS Act
   - > Would allow the firm to gradually improve FCF margin as the team scales their revenue into new manufacturing footprints
3. Direct model / TI.com drives higher design wins and gross margins

Risks

1. Higher capex / depreciation / capital intensity
   - > New capex target of $5.0bn / year through 2026 should be beneficial long-term, but may test the patience of investors shorter-term
   - > Company also hinted at the possibility for higher capital intensity beyond 2026
   - > Ongoing cycle dynamics coupled with elevated capital investments may depress FCF and constrain shareholder return

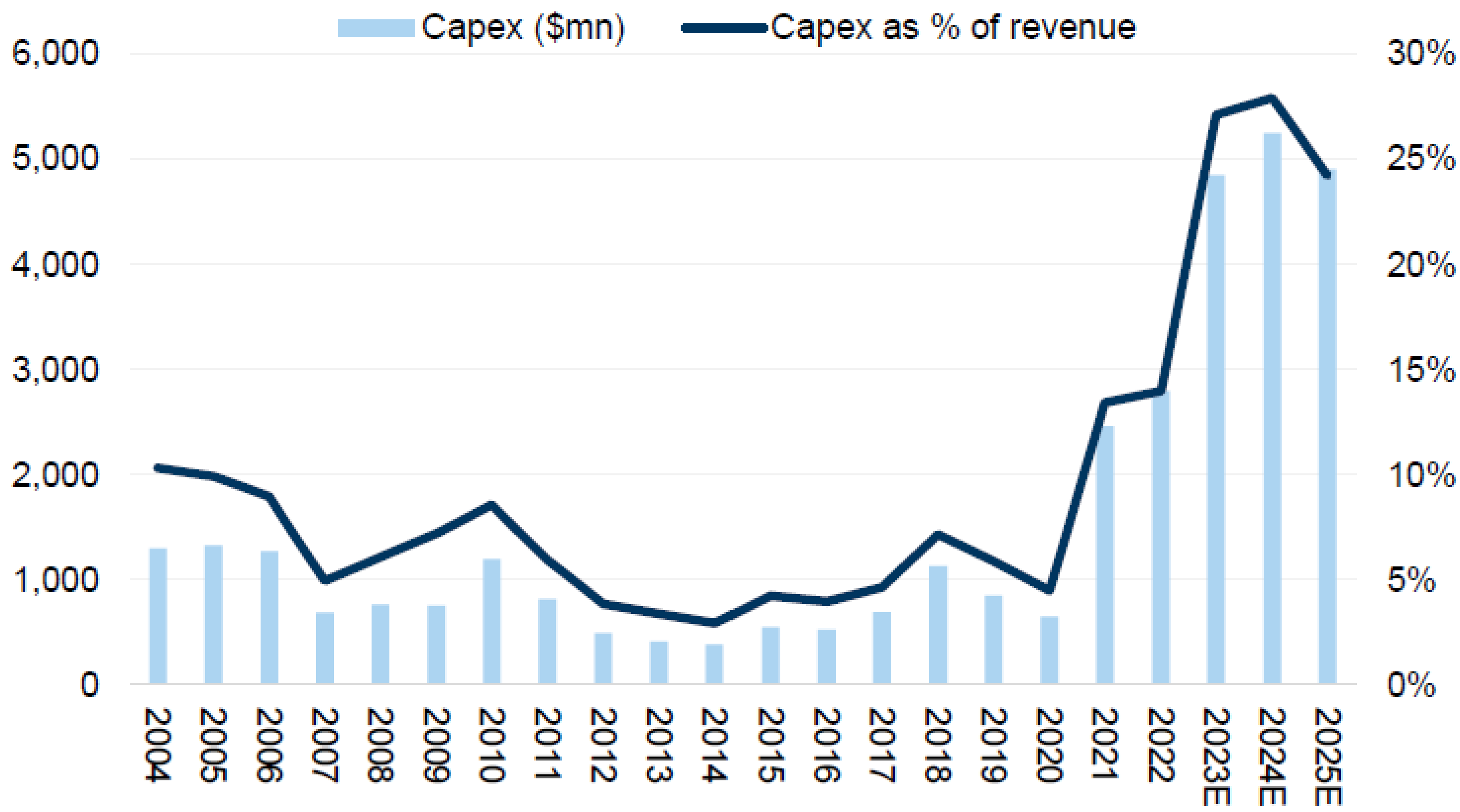
Source: Blue Chip Partners with data from Bloomberg and Texas Instruments. As of 12 April 2023.

Investment review

Texas Instruments Inc. (TXN)

Capex to increase , both absolute and relative to revenue

> Texas Instruments is building out multiple facilities
> Firm anticipates evolution in manufacturing capacity will support ~$30bn/~$45bn in revenue by 2026/2030 (+10% CAGR)
> Previous guidance was for $24bn/$34bn in revenue by 2025/2030 (+7% CAGR)



Source: Blue Chip Partners with data from Goldman Sachs Global Investment Research. As of 3 February 2023.

KLA Corp. (KLAC)
ASML Holding N.V. (ASML)

Investment review

KLA Corp. / ASML Holding N.V. (KLAC / ASML)

Where does KLA fit into the manufacturing process? --> Everywhere

- Throughout the chip production process, the wafer is measured and inspected for errors
- These measurements are fed back to the systems and are used to optimize and stabilize the equipment

1 Deposition

Layers of insulating or conducting materials (chemicals) are sprayed or deposited onto a silicon wafer

Dominant players:
Applied Materials (~50%)
Lam Research
Tokyo Electron

2 Lithography

Inside a Step-and-Scan system (or stepper), special lights (similar to lasers or x-rays) are shined through a photomask to transfer designs developed by engineers unto the wafer

Dominant players:
ASML (~90%)
Canon
Nikon

3 Etching / cleaning

Some of the material on the wafer is etched away to create desired patterns during the etching and the unwanted materials are removed during the clean process

Dominant players:
Lam Research (~57%)
Tokyo Electron
Applied Materials

Process Control

Dominant players:
KLA Corp. (~55%)
Applied Materials
Lam Research

Source: Blue Chip Partners with data from Bloomberg. As of 21 August 2023.

Investment review

KLA Corp. / ASML Holding N.V. (KLAC / ASML)

KLA Corp. – current thesis

As device manufacturing complexities increase, the need to analyze defects and metrology issues at critical points in the semiconductor manufacturing processes increases significantly. KLA holds a dominant position in this role, and with a wide moat, is well positioned to benefit from strong demand trends as industry dynamics re-accelerate.

KLA has a solid historical track record of outperforming the industry, even during downturns, on the strength of its resilient services business bolstered by its dominant share position in process control and healthy exposure to foundry/logic.

Continued expansion of its end markets, market share gains, technological leadership, and a premium margin profile should enable the company to outgrow the overall market and drive an EPS CAGR of mid to high double digits over the next three years. Robust profitability will fund continued dividend payments, which have grown >14% per annum over the last 5 years.

Catalysts

1. Services
   - Growth in the higher-margin, subscription-based services business likely would be a major driver
   - On a rising installed base, could be a greater need for KLA to support higher capacity utilization and extension of useful life
2. Demand cycle
   - Robust expansion of capacity ($210bn announced in the U.S. alone) would lead to additional opportunity sets
3. AI, 5G, AV, IoT
   - Emerging opportunities can maintain or increase the relevance of equipment demand
   - Especially as these broader end markets have more varied performance, efficiency, and connectivity requirements

Risks

1. Cyclicality / demand
   - Semiconductor cycle is notoriously cyclical
   - Timing, length, and demand impact of down cycles are difficult to predict
   - Softening demand as the industry has ramped up capacity bears monitoring
2. Technology
   - KLA must maintain its technological edge through constant innovation in emerging areas
   - Failure to do so would harm its industry-leading position
3. Competition
   - Missteps could lead to ceding share
   - Potential for the other equipment segments (deposition, lithography, etch) to incorporate process control techniques into their tools

Source: Blue Chip Partners with data from Bloomberg. As of 21 August 2023.

Investment review

KLA Corp. / ASML Holding N.V. (KLAC / ASML)

ASML Holding N.V. – current thesis

ASML is in a sweet spot with the main semi equipment technology transition being the shift to EUV in logic, followed by shift to EUV in memory. These trends will mean that lithography will now secularly increase as a percentage of semiconductor equipment spending until this transition is completed. ASML is the sole supplier of EUV tools and its market share in lithography segment should continue in monopolistic fashion. Long-term, ASML's positioning in the industry and secular forces should provide a winning recipe for shares, shares which have become increasingly shareholder-friendly thanks to robust dividend increases (30% CAGR over the last 5 years).

ASML will always command a premium valuation given the company's market share, and while the company is not trading cheap relative to history, it does not appear expensive either. There is near-term risk dependent on how the summer months have fared with regards to order flow, but we view trying to time an entry point as less impactful given the company's monopolistic market share in a space poised for secular growth.

Catalysts

1. Inflection point in orders
   - Customers are cautious at current, and this caution is expected to continue 1-2 quarters at least
   - Should we find an inflection point, shares will likely rerate higher
2. China
   - China wants to build strategic independence in semis from the outside world and is investing significantly
   - Since China's investments are due to strategic reasons (not driven by ongoing market demand), ASML could see sustainability of this demand into 2024 and beyond
3. AI is mid- / long-term driver
   - Need for EUV tools to facilitate leading edge should be a driver longer term, but not in the near-term

Risks

1. Economic downturn
   - Broad sweeping slowness could hinder manufacturing expansion, thus lowering need for ASML's equipment
2. End demand weakness
   - Current rumblings indicate potentially no growth in 2024
   - Management has said there is an "opportunity" for growth in 2024, but has not committed
   - Highly dependent on end market trends through this summer
   - ASML has not provided an outlook for 2024 citing macro uncertainties in the 2H23 which would likely shape the timing and slope of recovery in spending from its major customers

Source: Blue Chip Partners with data from Bloomberg. As of 21 August 2023.

Investment review
KLA Corp. / ASML Holding N.V. (KLAC / ASML)

Disclosures

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