Jefferies

Semiconductors

Auto Semis in 2H20 - the WFH plays of 1H20?

June 9, 2020

Key Takeaway

In our May 12 Note (link), we argued WFH and Analog/MCU plays in semis would mean revert, and while that has started, we think there is more to go, particularly for Auto-semi plays. We note: 1) US Auto inventories have declined by 28% since March peak, 2) Auto semi revenues are forecasted to be 6%-to-36% below trendline in 2Q-4Q20, 3) Auto-semi stocks have underperformed YTD, 4) COVID-19 may be an Auto-semi adder. We favor ON, NXPI and MXIM on this theme.

WFH vs Analog/MCU Mean Reversion Semis Trade Has Started to Work. In Our May 12th note, "1Q20 Week 3: Why Are Semis Outperforming?", we observed that WFH plays were all up YTD (at the time), but analog/MCU plays had declined, and argued that stock leadership in semis would shift to Analog/MCU through 2020. We highlighted ON, NXPI and MCHP as plays on this mean reversion thesis based on the idea that they had both underperformed and lowered expectations ("Come to the confessional."). Since May 14th, ON, MCHP and NXPI have outperformed the SOX by 22%, 13% and 7% respectively. The question is what to do now.

We Think the Mean Reversion Trade Continues to Play Out - Particularly for Auto Semi Stocks. YTD, the SOX is up 6%, but despite the recent outperformance, the top four Automotive semiconductor plays in our coverage universe have underperformed YTD. NXPI (50% Auto), ON Semi (33% Auto) and MXIM (25% Auto) have declined by 10%, 15% and 1% YTD, respectively, while STM (30% Auto) has appreciated by only 2%. Therefore, we think there is more room for mean reversion to play out for these stocks.

US Auto Inventories Are Declining. According to Motor Intelligence, US Car Dealer inventories in May declined by 28% from March 2020 peak levels. It has often paid to buy semis that supply into end markets that have suffered an inventory correction.

Auto Semis Forecasted to be 6-36% Below Trendline in 2Q-4Q20, Setting Up for Acceleration Off Bottom. Our bottom up forecasts for ON, NXPI, MXIM and STM indicate Auto-semiconductor revenues to be 6% to 36% below the longer term trendline in 2Q20-4Q20. Some of that decline is from lower demand, but we think that much of it is from production undershooting sales leading to an inventory correction. Once COVID-19 is contained, we expect Automotive semiconductor sales to march back to the longer term trendline, driven by 1) the secular trends around safety, ADAS and infotainment, and 2) an inventory restocking cycle in the Automotive supply chain.

COVID-19 May Ultimately Add to the Auto-Semis Cyclical Recovery Story. Anecdotes of busy car dealers in the SF-Bay area due to increased concerns of ride-sharing lead us to look at data for leading indicators of car sales. SafeGraph reported foot traffic at new car dealers had returned to 90% of pre-COVID-19 levels. Also interesting is data from China which has seen its manufacturing return to normal levels. GTCOM has reported that urban traffic congestion in China is back to pre-COVID-19 levels, however, mass transit is only at 80%, supporting the notion that concerns about catching a virus on mass transit may lead to more car travel and higher car sales.

Links to Related Notes:

1Q20 Week 3: Why Are Semis Outperforming? (May 12)

1Q20 Preview: Favor WFH Plays Going In - Analog/MCU as They Cut (Apr 20)

Semis on Fire: Summary of Recent Semi Notes [Watch the Video] (Jun 1)

25-May-20: Notes from 3 Channel Checks

Supply Chain Expert Update: 18-May-20

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^Prior trading day closing price unless otherwise noted.

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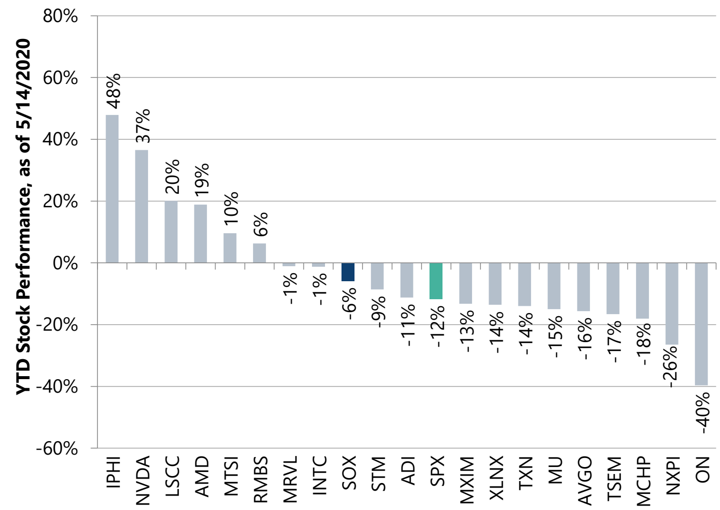
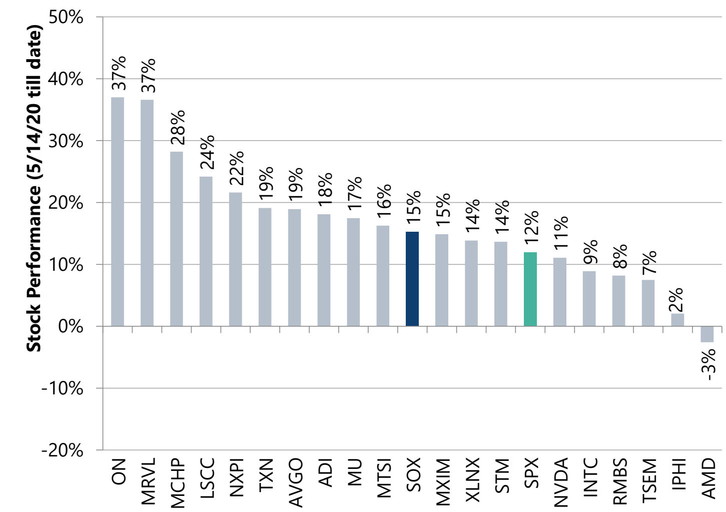
Chart 1 - YTD Stock Performance as of May 14 2020



Source: Jefferies, FactSet

As of May14, 2020, WFH plays largely outperformed while companies with broad-based exposure to industrial, auto and consumer markets underperformed. In our 1Q20 Week 3: Why Are Semis Outperforming? note, we argued that the leadership in the group would shift as we move through 2020 to the analog/ MCU complex from WFH plays.

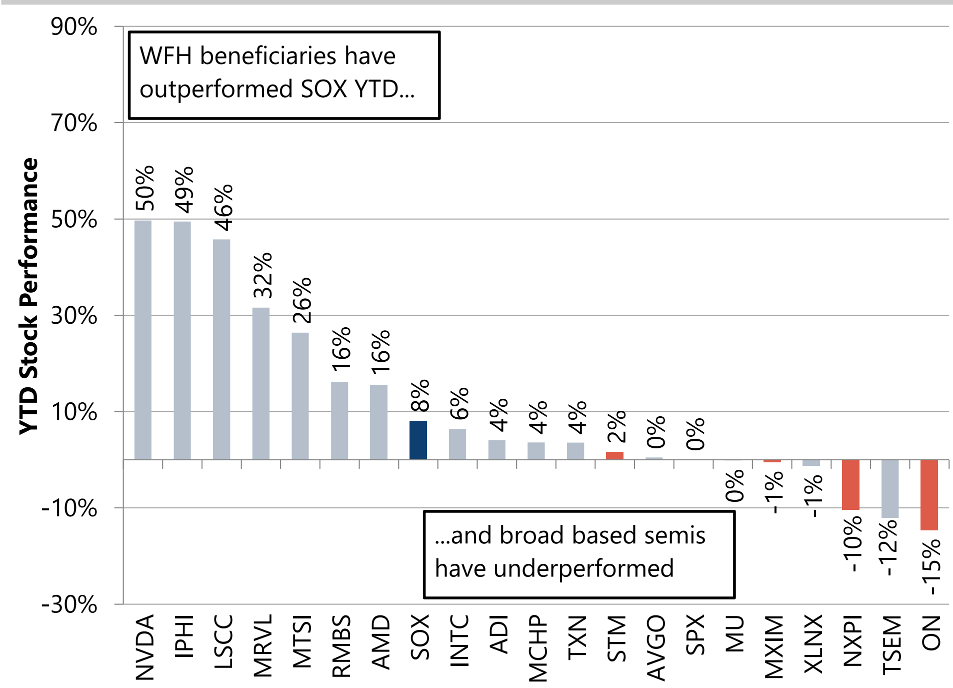
Chart 2 - Stock Performance since May 14, 2020



Source: Jefferies, FactSet

Since May 14, 2020, analog stocks have largely outperformed and WFH plays have largely underperformed

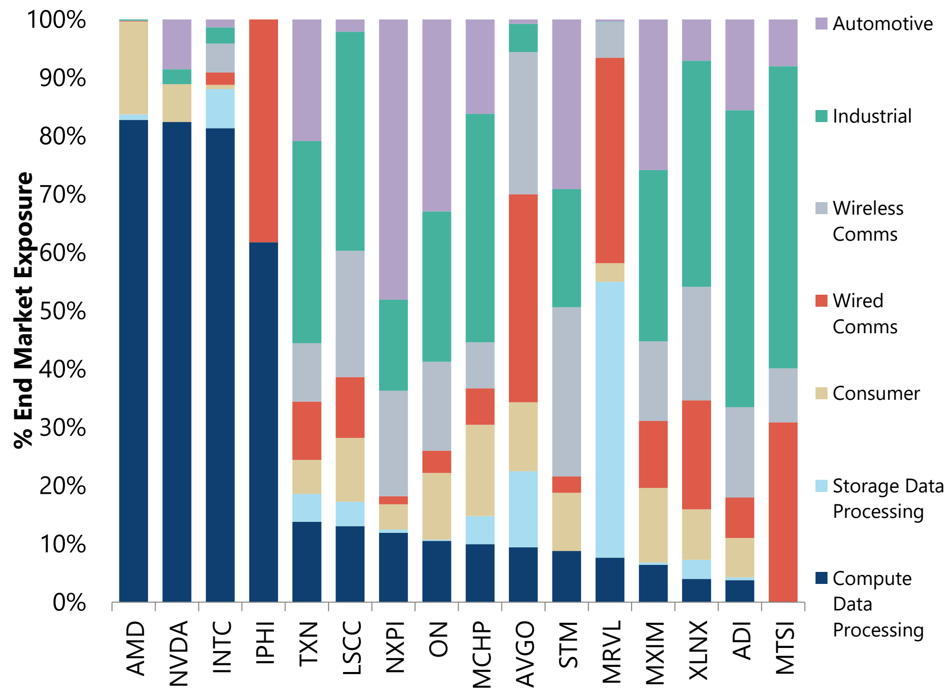
Chart 3 - Stock Performance (2020 YTD)



Source: Jefferies, FactSet

The recent outperformance of the analog/MCU complex since May 14th notwithstanding, analog/MCU stocks in general, and Automotive analog/MCU stocks specifically, have still largely underperformed YTD. We think there is opportunity for the recent outperformance of analog/MCU stocks to continue, particularly for those stocks with higher exposure to Auto markets such as ON (33% Auto exposure), NXPI (50%) and MXIM (25%)

Chart 4 - End-Market Exposure



Source: Jefferies, Gartner, Company data

We show vertical market exposure for our coverage universe. Semiconductor stocks with the highest Automotive exposure are: NXPI (50%), ON (33%), STM (30%) and MXIM (25%)

Chart 5 - Channel Check Commentary

Expert	Commentary
UK Based Component Broker	**Lead Times Stretched, and Stretching.** Lead times for passive components have stretched, with MLCCs and relays having increased from 16 weeks two months ago to 99 (ninetynine) weeks recently. Consistent with our checks earlier this week, analog components are particularly tight, with lead times stretched for components from companies like TXN, NXP, CY, LFUS, ADI, STM, MXIM
Richard Kwartek, a Supply Chain Expert	**Lead Times Stretching.** Lead times across a variety of different products have stretched to 16 weeks from 10 weeks, with the most noticeable increase in the "linear" chips used in medical and telecom markets, e.g., from TXN, ADI, MXIM, as well as from pressure sensors for respirators (NXPI, Honeywell, STM), power MOSFETS (VSH, STM), CPUs (INTC, AMD), discretes (ON), MLCCs and fans.

Source: Jefferies

Our most recent channel checks at the end of May indicated that analog/MCU components were in a tight supply situation

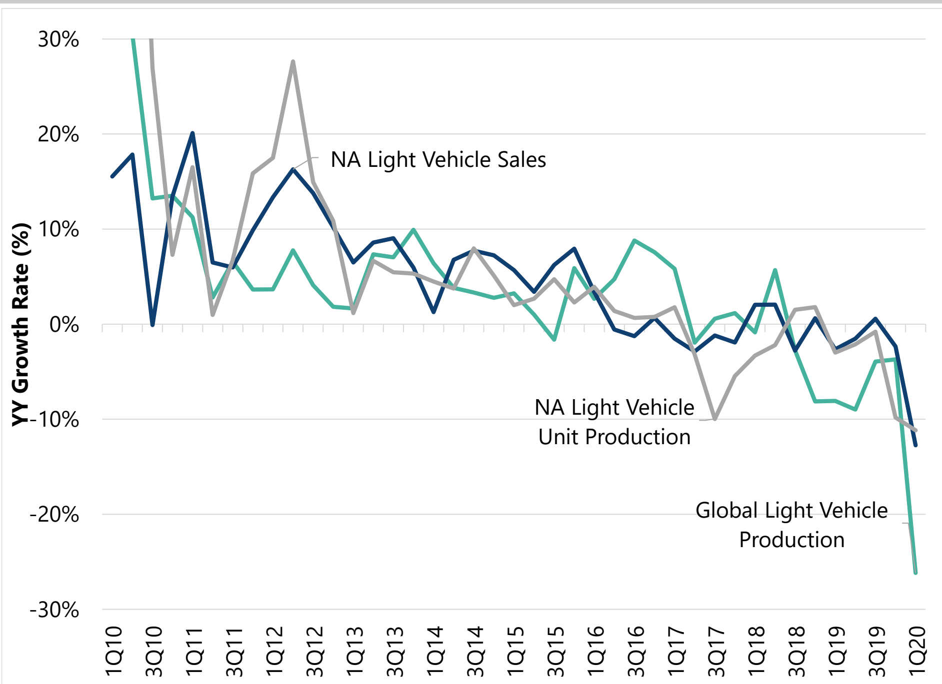
Chart 6 - Announced Cash Preservation Measures

Company	Cash Preservation Measures
INTC Apr 23, 2020	- Suspended buyback
MCHP May 8, 2020	- 10% salary cut for employees and 20% salary cut for the President and other executive staff - Reduced work hours and rotating time offs for factory workers
NXPI Apr 28, 2020	- Minimizing variable costs, in particular incentive payments - Suspend buybacks until TTM Adjusted EBITDA improves and NXPI are at 2x leverage ratio
ON May 11, 2020	- Temporary cost savings of $50m through the rest of the year, incl. reduction in executive salaries, board compensation, 401K matching in US, etc. - Suspend share buyback until conditions improve
STM Apr 22, 2020	- Decrease dividend in 2020 - Suspend buyback for the second half of the year - "Expenses solidarity initiatives" with management base salary reduction
XLNX Apr 22, 2020	- Conservatice buyback activity - Control expenses by means other than job elimination
ADI May 20, 2020	- Temporarily suspended buyback

Source: Jefferies, FactSet, Company data

A number of analog/MCU companies have taken proactive actions to conserve cash and/or lower their cost structures

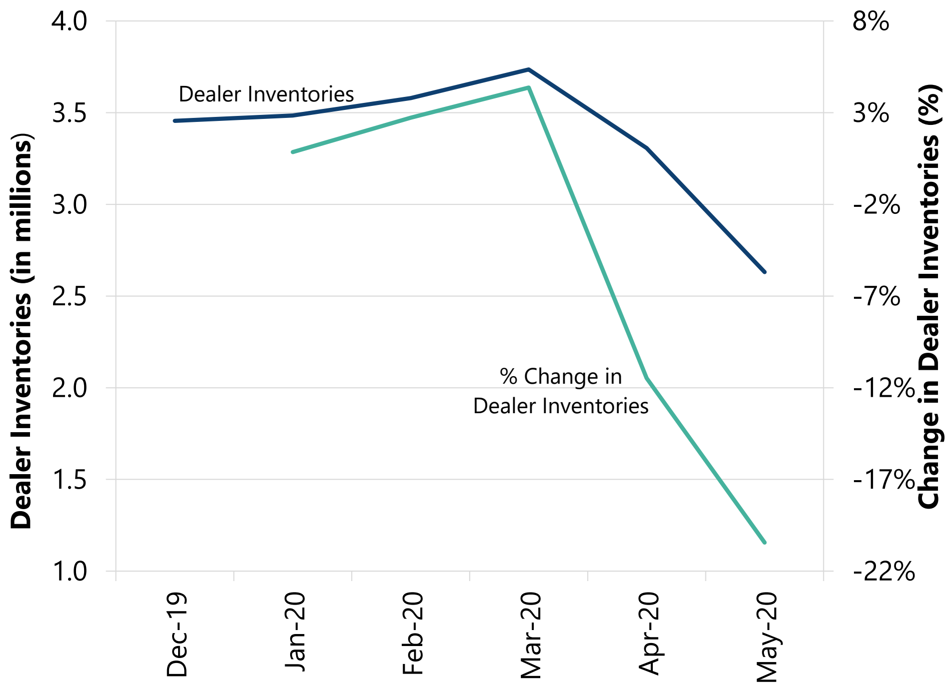
Chart 7 - Light Vehical Production vs. Sales YY Growth



Source: Jefferies, BIS

During the March 2020 quarter, North American Light Vehicle Sales and Unit Production declined by 10-13% YY. Global Light Vehicle Production declined by 25%.

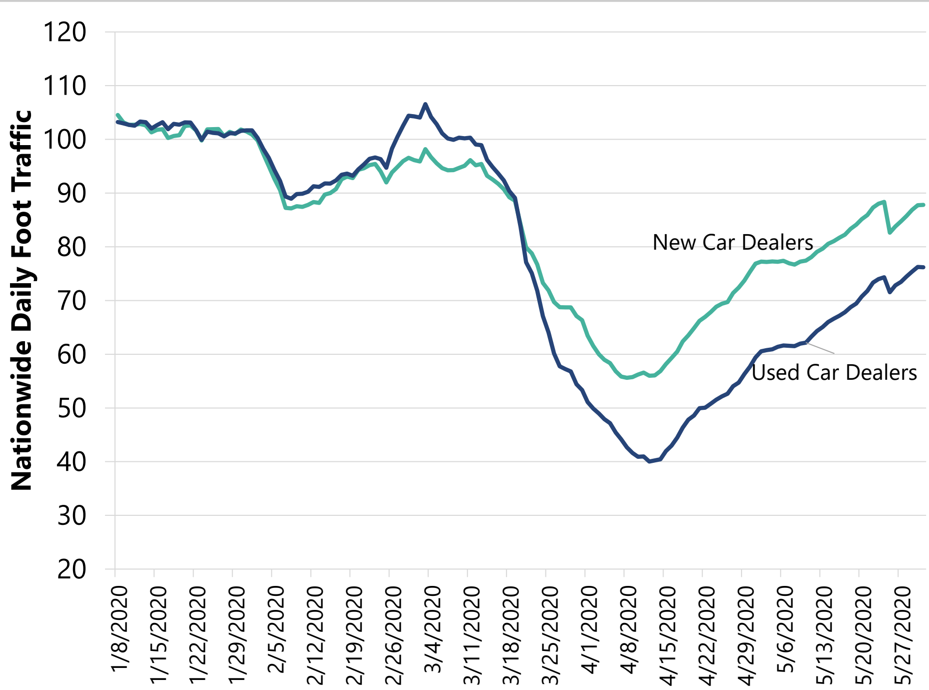
Chart 8 - US Dealer Inventories



Source: Jefferies, Motor Intelligence

Since March peak, US dealer inventories declined by 12% in April, and then by 20% in May, according to Motor Intelligence.

Chart 9 - Visits to New & Used Car Dealers

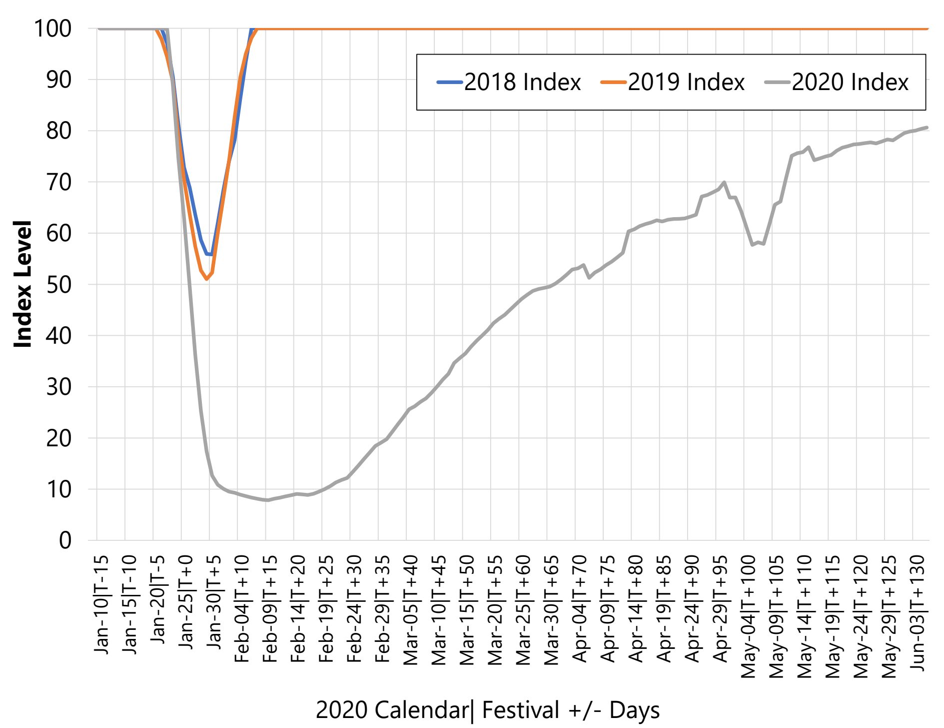


Source: SafeGraph, Jefferies

According to SafeGraph, US foot traffic to "New Car Dealers" is approaching 90% of pre-COVID-19 levels

Nationwide daily foot traffic to new car dealers (~45 brands, ~17k locations), and used car dealers (~10 brands, ~750 locations). 100 represents 'normal' level based on pre-pandemic observations, while grey shading highlights a level <50% of 'normal'. Aggregated and normalized by Jefferies and sourced from SafeGraph.

Chart 10 - Metro Passenger Trans. Index (China)

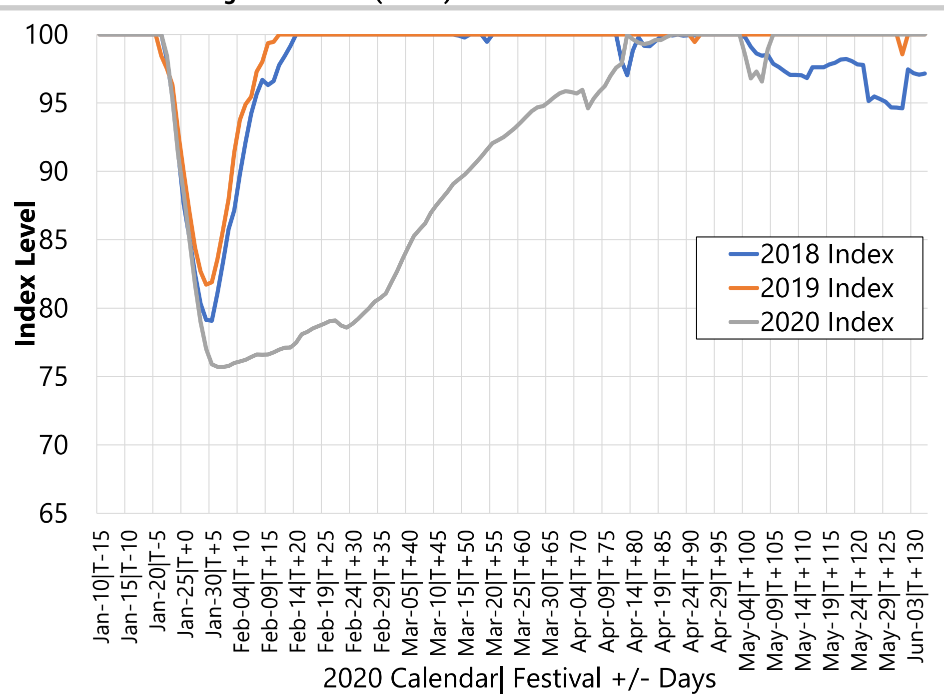


Source: GTCOM

Since China appears to have largely contained COVID-19, we think assessing transportation behavior in China is instructive in understanding what changes in transportation behavior the rest of the world may embrace once COVID-19 is contained. According to GTCOM, Metro Passenger ridership is only at about 80% of pre-COVID-19 levels.

Daily subway passenger ridership within Tier-1/Tier-2 cities. 100 represents 'normal' level based on observations prior to CNY each calendar year and t=0 represents the start of CNY. Aggregated by GTCOM and sourced from transport agency official Weibo accounts

Chart 11 - Urban Congestion Index (China)

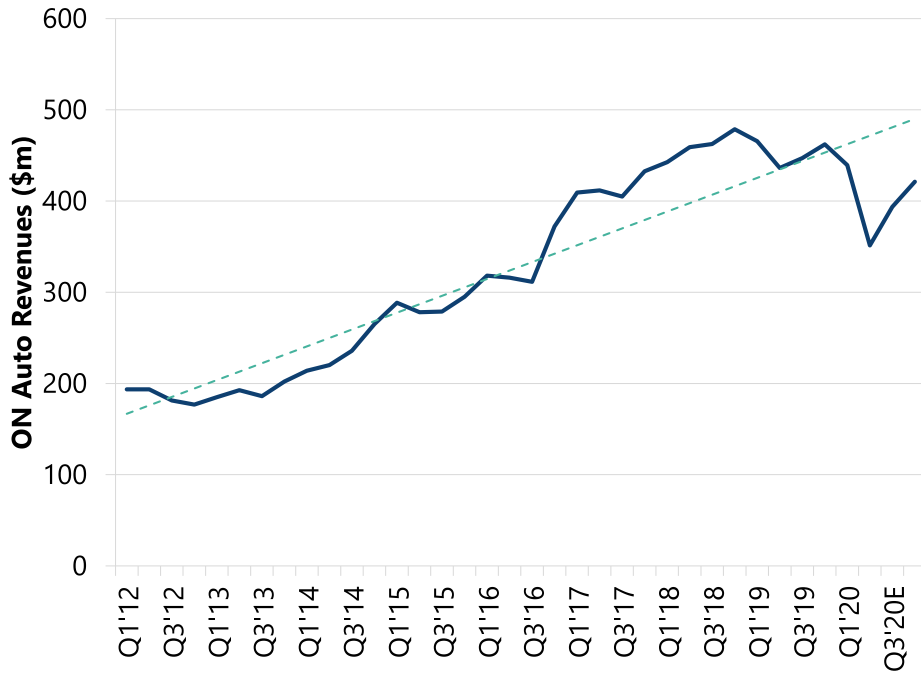


Source: GTCOM, AutoNavi

According to GTCOM, urban traffic congestion returned to pre-COVID-19 levels by early April.

Daily traffic congestion from 41 of the largest cities with a DAU base covering ~33% of vehicles of China. 100 represents 'normal' level based on observations prior to CNY each calendar year and t=0 represents the start of CNY. Aggregated by GTCOM and sourced from AutoNavi.

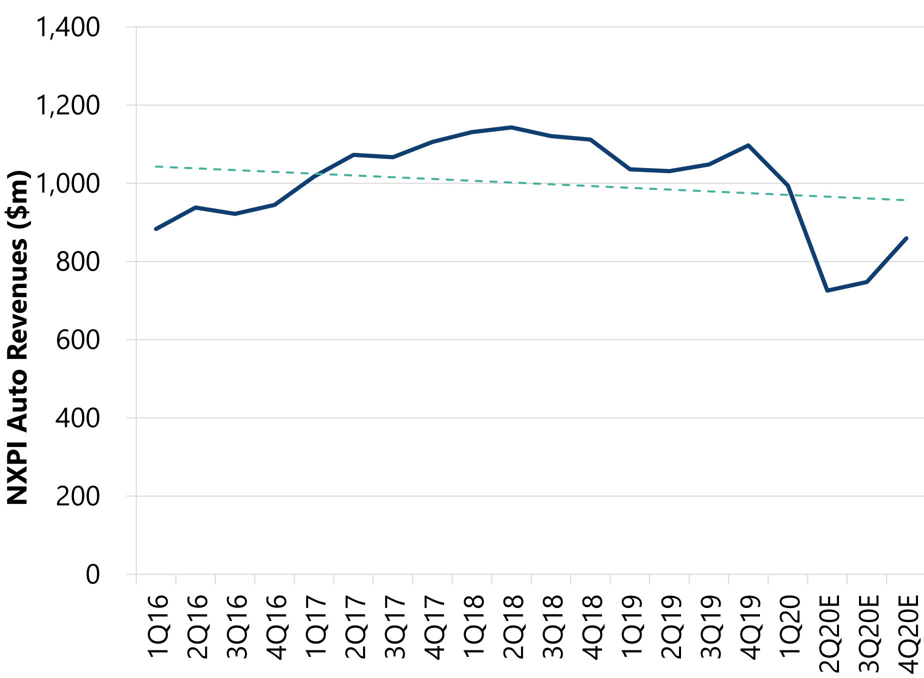
Chart 12 - ON Auto Revenues ($m)



Source: Jefferies, Company data

We forecast ON Auto revenues will be 26% below the long term trendline in 2Q20, and 14% below in 4Q20

Chart 13 - NXPI Auto Revenues ($m)

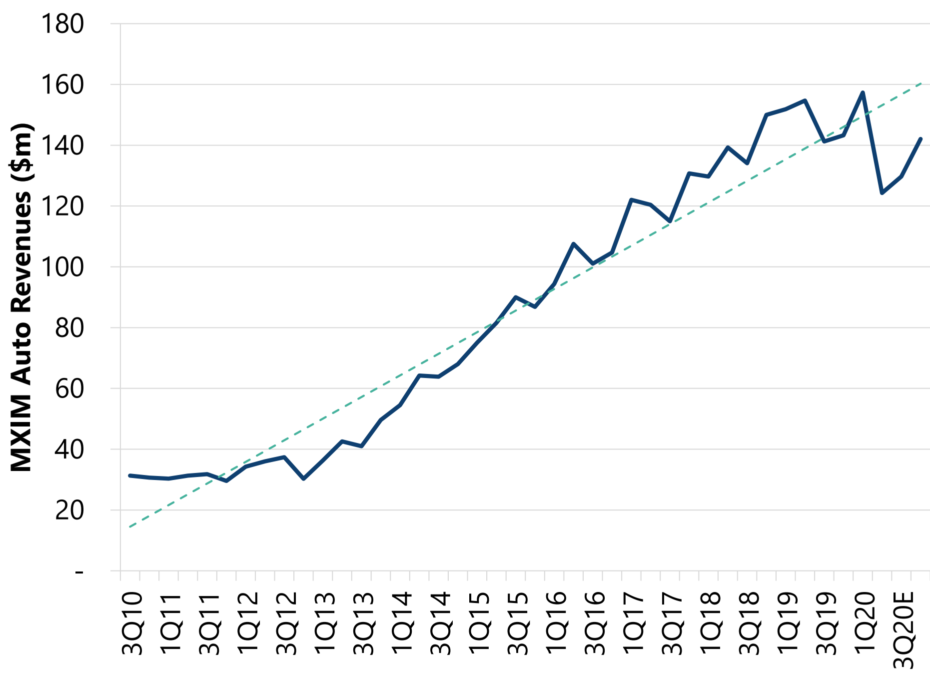


Source: Jefferies, Company data

We forecast NXPI Auto revenues will be 36% below the long term trend in 2Q20, and 13% below in 4Q20

Please see important disclosure information on pages 9 - 15 of this report.

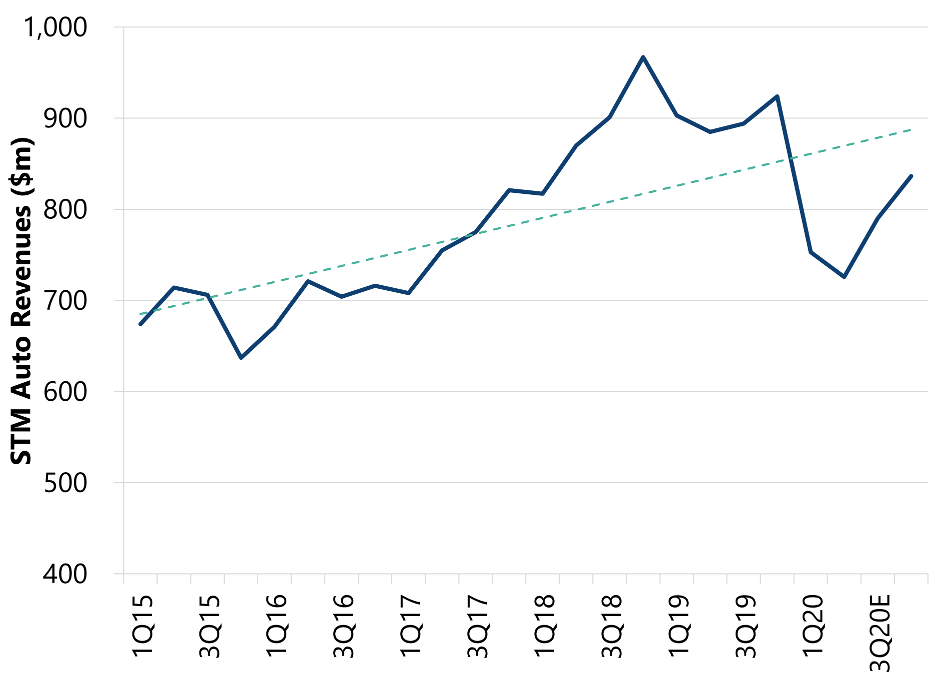
Chart 14 - MXIM Auto Revenues ($m)



Source: Jefferies, Company data

We forecast MXIM Auto revenues will be 19% below the long term trend in 2Q20, and 13% below in 4Q20

Chart 15 - STM Auto Revenues ($m)



Source: Jefferies, Company data

We forecast STM Auto revenues will be 18% below the long term trend in 2Q20, and 6% below in 4Q20

Company Valuation/Risks

Maxim Integrated Products, Inc.

Our $65 PT assumes a P/E multiple of 26x applied to our CY2021 EPS estimate of $2.49, at the top of 5yr PE range of 15.5x-26x. Downside risks include prolonged demand destruction and supply chain constraints beyond 2020 due to COVID-19, share loss at mobile/wearables OEMs, a slowdown in its Auto or Industrial businesses, extended inventory recession or macro-driven downturn.

NXP Semiconductors NV

Our price target of $118 implies a 19x P/E on our CY21 EPS (incl. SBC) estimate of $6.20. 19x P/E is above the top half of the 5-year range of 8x-18x. Downside risks include prolonged demand destruction and supply chain constraints beyond 2020 due to COVID-19, weaker automotive sales associated with lower global auto SAAR, weaker smartphone unit sales, faster-than-expected decline of digital networking products.

ON Semiconductor Corporation

Our ON price target of $20 is based on C2021 EPS of $1.53 and a P/E ratio of 13x, above the top of the 5-yr range of 8x-15.5x, which we think is justified due to 1) recovery phase of the inventory correction cycle 2) ON's competitive positioning and our view that the analog group in general and ON specifically will benefit from demand dynamics described in our "4th Tectonic Shift in Computing Thesis," and our view that it will benefit from a sustained period of upward revisions 3) GM margin expansion potential based on our view that analog industry consolidation will positively impact the pricing environment and ON's margins combined with additional margin tailwinds from ON's recently announced M&A deals and margin mix shift in 2H19 3) bottoming out fundamentals. Downside risks include 1) prolonged demand destruction and supply chain constraints beyond 2020 due to COVID-19; 2) share loss; 3) inventory correction; and 4) ASP compression.

STMicroelectronics N.V.

Our price target of $25 is based on C2021 EPS of $1.26 and a P/E ratio of 20x, which falls in the middle of the 5-yr range 9x-25x, which we think is justified as we move into the growth stage of the cycle. Risks include: 1) prolonged demand destruction and supply chain constraints beyond 2020 due to COVID-19, 2) share loss at Apple, 3) stronger than expected ASP pressure in the discrete components, 4) slowed growth in Industrial and lackluster GP MCU business performance, 5) Auto and consumer growth decelerates due to macro uncertainty.

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(Article 3(1)e and Article 7 of MAR)

Recommendation Published	June 9, 2020 , 02:39 ET.
Recommendation Distributed	June 9, 2020 , 02:39 ET.

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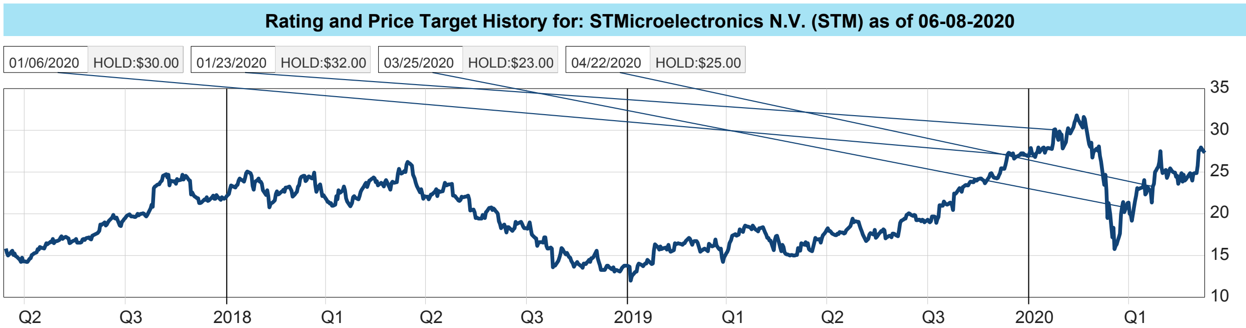
Other Companies Mentioned in This Report

- Maxim Integrated Products, Inc. (MXIM: $61.19, BUY)
- NXP Semiconductors NV (NXPI: $114.10, BUY)
- ON Semiconductor Corporation (ON: $20.82, BUY)
- STMicroelectronics N.V. (STM: $27.34, HOLD)

Rating and Price Target History for: Maxim Integrated Products, Inc. (MXIM) as of 06-08-2020

Rating and Price Target History for: NXP Semiconductors NV (NXPI) as of 06-08-2020

Rating and Price Target History for: ON Semiconductor Corporation (ON) as of 06-08-2020



Notes: Each box in the Rating and Price Target History chart above represents actions over the past three years in which an analyst initiated on a company, made a change to a rating or price target of a company or discontinued coverage of a company.

Legend:

I: Initiating Coverage

D: Dropped Coverage

B: Buy

H: Hold

UP: Underperform

Distribution of Ratings

Distribution of Ratings						
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UNDERPERFORM	162	6.65%	1	0.62%	1	0.62%

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