US Semiconductors

3Q Analog Market Update: Still Upside To Analog Cycle

Equities

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We again combine and update our three most fundamental pieces of analog research (detailed below). In combination, these suggest: **1)** demand expectations among customers remain strong, though downticked slightly from Q2; **2)** both direct buyers and distributors are reporting that supply is becoming a concern; **3)** the majority of customers anticipate price increases for analog components, and **4)** distributor inventories declined modestly once again, ergo this segment of the customer base has yet to even start rebuilding inventories. Taken together, this all reaffirms our view that there is still quite a bit of upside to the analog cycle despite what has been weaker investor sentiment as of late. Looking ahead, Street estimates are generally set to ~200-300bps above normal seasonal for CQ4 (Figure 3), which we think is fine and we see generally favorable earnings set-ups - particularly for TXN and ADI. TXN remains our top pick in analog given its inventory position, share (re)gain potential, and FCF inflection as capex rolls over.

Analytical Details

We update our three most fundamental pieces of analog research: **1)** the UBS Evidence Lab B2B semiconductor purchaser survey (>Access Dataset), **2)** the UBS Evidence Lab distributor inventory monitor with SKU-by-SKU detail on $14B and 38B units of catalog parts at 100+ distributors (> Access Dataset), and **3)** our financial statement deep dive into the inventory cycle through the lens of analog company balance sheets.

Our **B2B survey** highlights strong demand indicators, although this is slowing down slightly for both distributors and direct buyers after an extremely strong 2Q (Figure 14, Figure 15). That said, we believe this is a reflection of demand holding steady at already strong levels rather than conditions worsening. More importantly, direct buyers indicate insufficiency of supply relative to demand, perhaps suggesting pockets of tightness (Figure 28) and more broadly, respondents remain overall concerned over shortages in the next six months (Figure 31). Finally, the majority of customers still expect price increases over the next six months - albeit less in 3Q than in 2Q (Figure 35).

The **Distributor Inventory Monitor** saw ASP pricing up HSD%-LDD% Q/Q in both True Analog and Power Analog after a relatively flattish 2Q, while MCU pricing was down 7%. Discretes stood out as a positive outlier - with pricing up 34% Q/Q. By company, TXN again remains a positive outlier - with pricing up in true and power analog and holding steady in MCU (Figure 56, Figure 63, Figure 69). Surprisingly, MCHP's pricing was down LSD% Q/Q across all three categories, while ON is seeing pricing strengthen in true analog after multiple quarters of declines. Analog unit inventories were again down modestly from a quarter ago, but we expect a reversion in declining disty inventory over the coming iterations of our monitor as supply starts to tighten.

Finally, our **inventory deep dive** suggests analog companies increased production 7% Q/Q vs revenue +11% Q/Q in 2Q, with aggregate inventory flattish. As the upcycle advances in industrial - and data center provides a structural tailwind - we believe the industry as a whole is biasing towards the offensive (Figure 72) while keeping a close eye on inventory levels. That said, TXN continues to hold substantially higher FGI than its peers, while MCHP continues to work down both die bank and finished goods as it executes on its 9-point plan (Figure 74).

This report has been prepared by UBS Securities LLC. **ANALYST CERTIFICATION AND REQUIRED DISCLOSURES, INCLUDING INFORMATION ON THE QUANTITATIVE RESEARCH REVIEW PUBLISHED BY UBS, BEGIN ON PAGE 43.**

Figure 1: Summary of key indicators

UBS Semiconductor Purchaser Survey - Market Indicators

Metric	Value	1Q Chg	2Q Chg	1Y Chg	2Y Chg	Metric definition
Near future net increase in demand	**+79%**	-10%	+1%	-	-3%	net % respondents expecting demand increase minus % expecting demand decrease over the next 6 mos
Recent net increase in demand	**+75%**	-12%	-1%	-3%	-3%	net % respondents who have increased demand minus % who have decreased demand over the last 6 mos
Recent net % seeing price increases	**+68%**	-16%	-5%	+2%	+3%	net % for whom prices have increased minus % for whom prices have decreased over the last 6 mos
Net % expecting price increases	**+65%**	-11%	-	+5%	-4%	net % for whom prices expected to increase minus % for whom prices expected to decrease next 6 mos
Lead time momentum	**+65%**	+3%	+9%	+13%	+9%	net % for whom lead times have been increasing minus % for whom lead times have been decreasing
Recent net change in semi availability	**+32%**	+2%	-11%	-16%	-32%	net % of respondents saying semiconductor availability has increased last 6 months minus % for whom decreased
Net supply sufficiency vs company needs	**+14%**	+4%	+10%	-1%	-13%	net % of respondents oversupplied with semis relative to their customer needs minus % undersupplied
Analog inventory vs target	**-19%**	-16%	-9%	+7%	-13%	net % of respondents below target inventory levels minus % above target
Overordering	**-24%**	-1%	-1%	-11%	-8%	% of respondents overordering to ensure supply, expressed as a negative (less overordering = better market)
Average	**+39%**	**-6%**	**-1%**	**-0%**	**-7%**	Simple average of all indicators

UBS Distributor Inventory Dataset (indexed to 1Q24 = 100)

Metric	Value	1Q Chg	2Q Chg	1Y Chg	2Y Chg	Comments
True Analog Unit Inventory	**85**	-7%	-13%	-15%	-27%	True analog comprises of signal converters, sensors, amplifiers, and RF ICs
True Analog ASP	**158**	+12%	+12%	+26%	+50%	
Power Analog Unit Inventory	**76**	-10%	-14%	-18%	-24%	Power Analog comprises of power management ICs and power discretes
Power Analog ASP	**149**	+9%	+9%	+19%	+33%	
MCU Unit Inventory	**91**	-5%	-13%	-3%	-25%	
MCU ASP	**112**	-7%	+5%	+12%	+5%	

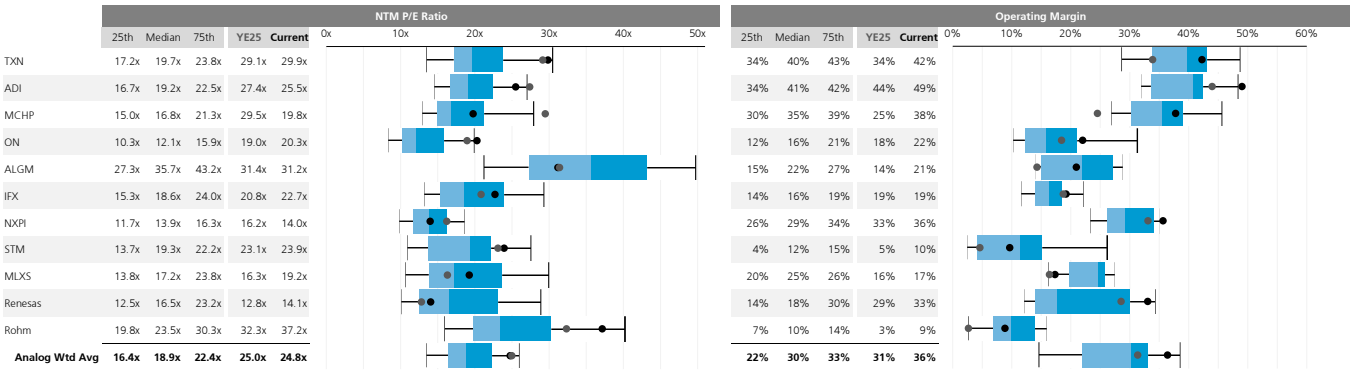
Inventory Financial Reporting Deep Dive

Metric	Value	1Q Chg	2Q Chg	1Y Chg	2Y Chg	Comments
Aggregate headline days of inventory	**159 Days**	-12 Days	-11 Days	-18 Days	-14 Days	
Aggregate Production	**$13.5B**	+7%	+5%	+8%	+17%	We back into implied production, calculated as COGS plus the difference between ending and beginning inventory levels

Source: UBS research, UBS estimates, UBS Evidence Lab (> Access Dataset).

OVERVIEW

Figure 2: Analog Cycle Overview - Multiples and Margins vs Historical Ranges



Source: Company reports, UBS research, FactSet.

Figure 3: Earnings Expectations vs Seasonality

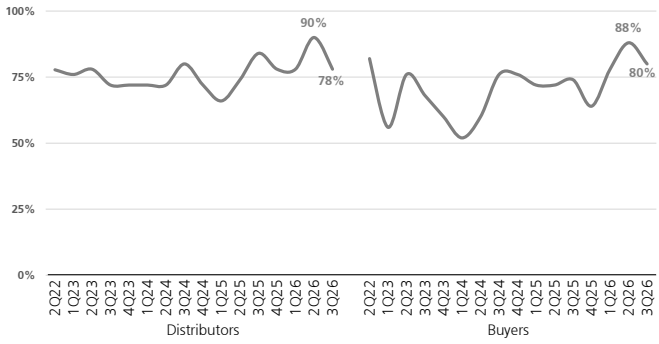
3Q26 Results	UBSe Q/Q	Street Q/Q	Seasonality	Delta vs UBSe	Delta vs Street
ALGM	6.0%	4.6%	7.1%	-1.1%	-2.5%
MCHP	8.5%	8.1%	4.3%	4.2%	3.8%
ON	5.4%	6.2%	4.0%	1.4%	2.1%
TXN	10.7%	8.3%	6.1%	4.6%	2.2%
ADI	8.5%	6.8%	4.6%	3.9%	2.2%

4Q26 Guidance	UBSe Q/Q	Street Q/Q	Seasonality	Delta vs UBSe	Delta vs Street
ALGM	4.6%	2.1%	-5.0%	9.6%	7.1%
MCHP	1.8%	1.0%	-1.8%	3.6%	2.8%
ON	1.1%	1.9%	-1.8%	2.9%	3.7%
TXN	-3.7%	-3.1%	-5.1%	1.5%	2.1%
ADI	-1.5%	0.6%	-1.9%	0.4%	2.5%

Source: Company reports, UBS estimates, FactSet

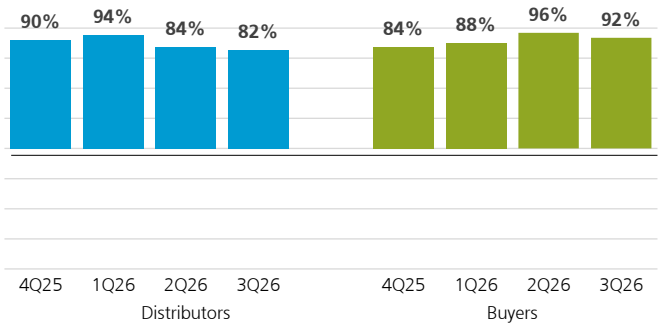
Key Charts

Figure 4: Demand expectations for buyers and distributors decelerating after extremely strong 2Q



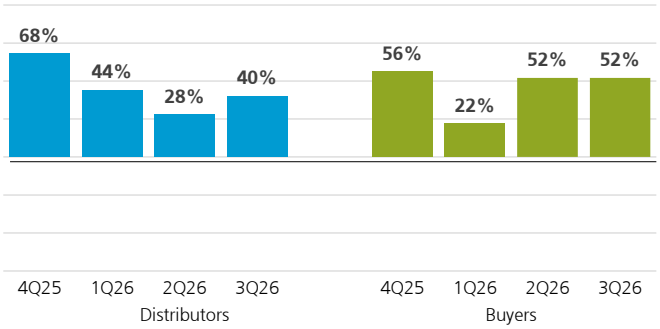
Source: UBS Evidence Lab (> Access Dataset). *Net % responding increase minus % decrease

Figure 5: Net booking expectations over the next 3 months are strong among both distributors and direct buyers



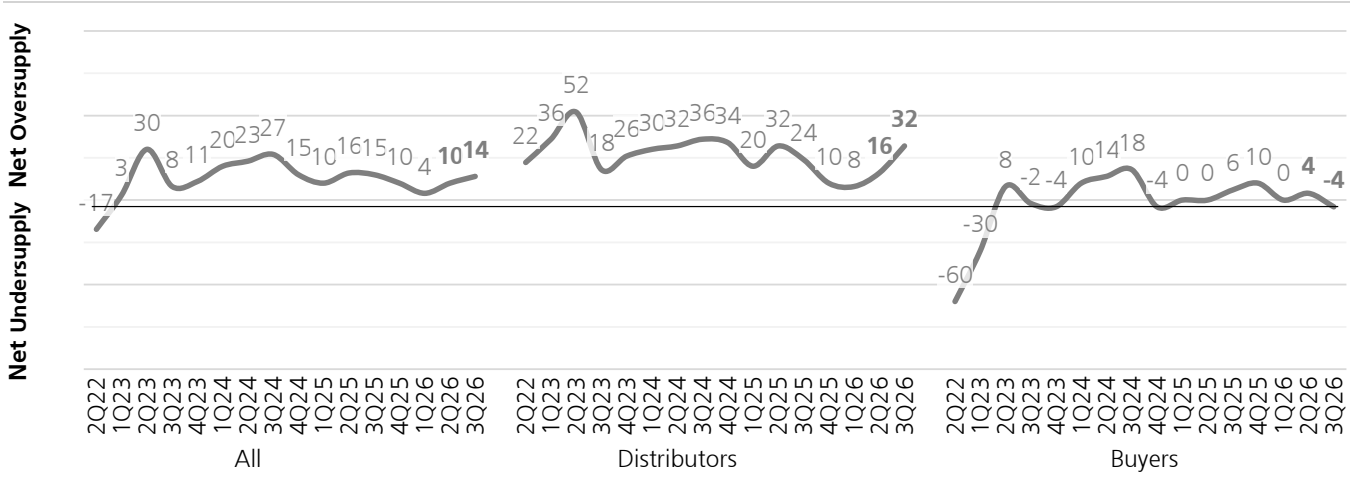
Source: UBS Evidence Lab (> Access Dataset). *Survey Question: Do you think that the overall number of semiconductor bookings will increase or decrease over the next 3 months in comparison to now or will this stay about the same?

Figure 6: Both distributors and direct buyers demonstrate concern over supply shortages in next 6 months



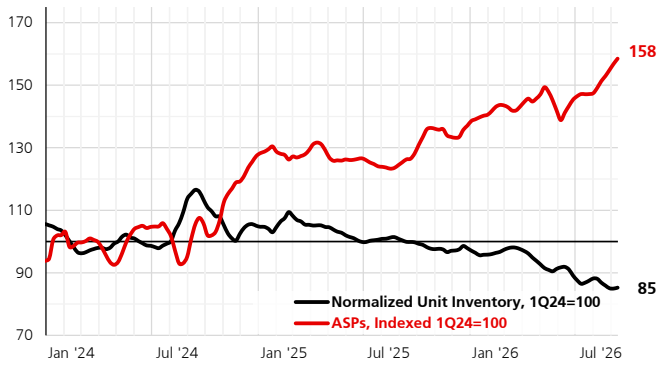
Source: UBS Evidence Lab (> Access Dataset). *Net % responding concerned minus % not concerned

Figure 7: Supply remains sufficient in fulfilling customer demand among distributors, but direct buyers in slight undersupply territory



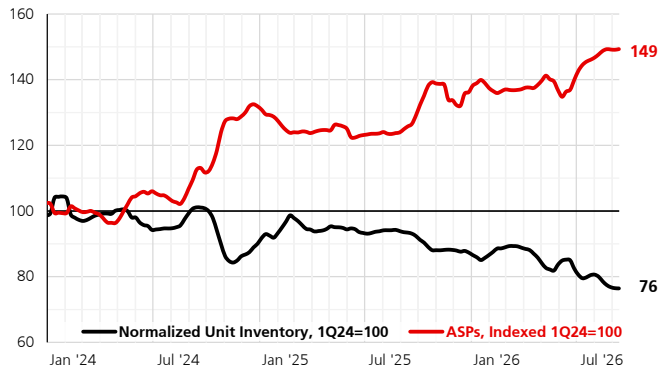
Source: UBS Evidence Lab (> Access Dataset). *Net % reporting/expecting increases minus decreases

Figure 8: True Analog ASPs and Unit Inventory Levels, indexed 1Q24=100



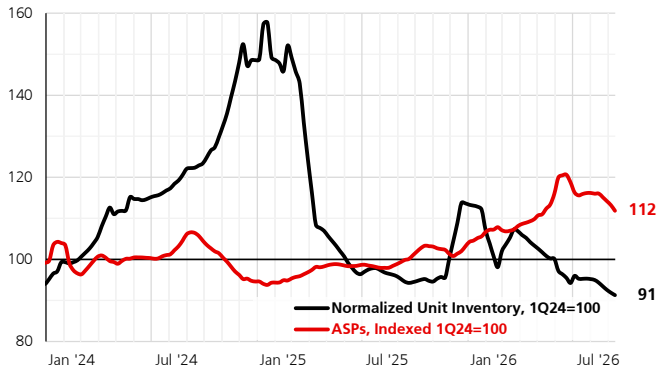
Source: UBS research, UBS Evidence Lab (> Access Dataset)

Figure 9: Power Analog ASPs and Unit Inventory Levels, indexed 1Q24=100



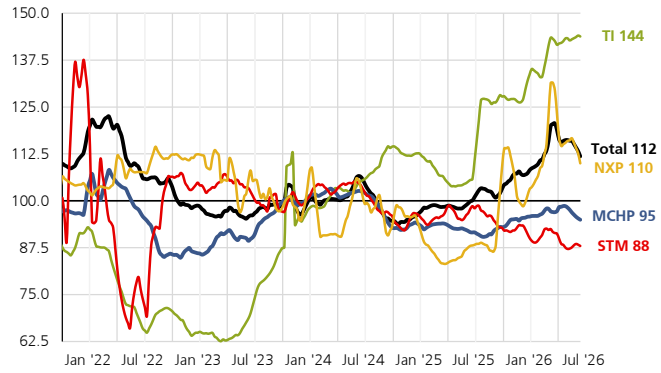
Source: UBS research, UBS Evidence Lab (> Access Dataset)

Figure 10: MCU ASPs and Unit Inventory Levels, indexed 1Q24=100



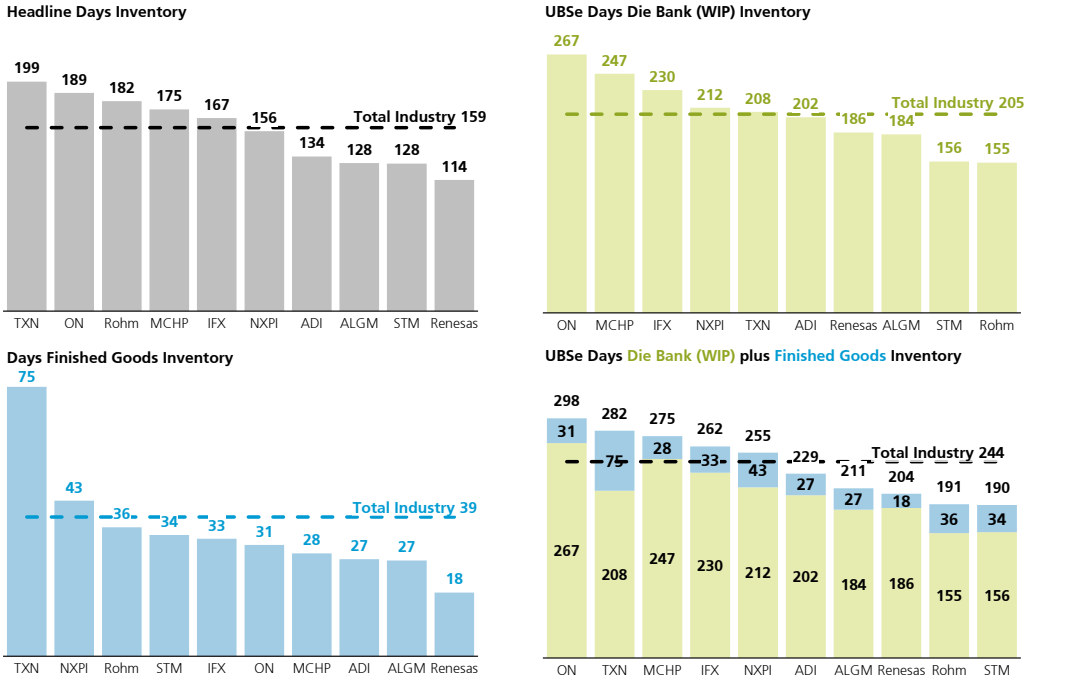
Source: UBS research, UBS Evidence Lab (> Access Dataset)

Figure 11: MCU Pricing by company, indexed 1Q24=100



Source: UBS research, UBS Evidence Lab (> Access Dataset)

Figure 12: Analog companies' 2Q26 days of inventory in perspective



Source: Company reports, UBS research, FactSet, Visible Alpha

SEMICONDUCTOR PURCHASER SURVEY

Key survey results

- **Demand:** Demand signals slowed down slightly after an extremely strong 2Q survey, with a greater number of respondents indicating demand expectations staying the same (rather than increasing). In particular, distributors reporting net increase in demand over the past six months went from +88% to +72% and from +90% to +78% for next six month expectations (Figure 15). Similarly, direct buyers reporting net increase in demand over the past six months went from +86% to +78%, and from +88% to +80% for next six month expectations. Overall, we believe demand expectations are holding steady at strong levels as respondents indicating worsening demand conditions remain at LSD-MSD% levels. Bookings expectations over the next quarter remain at strong levels for both distributors and direct buyers (Figure 18).
- **End Markets:** End market demand expectations were mixed as Telecom and Autos were up Q/Q to +60%/+50%, respectively, while DC, Consumer, Industrial, and A&D all experienced Q/Q declines (Figure 20). The weakening expectations in Industrial and A&D are somewhat surprising given strengthening commentary from the analog companies.
- **Supply:** 38% of distributors (up 5% Q/Q) and 26% of direct buyers (up 15% Q/Q) now feel their supply on hand is above their target levels - still a somewhat cautious read (Figure 27). However, sufficiency of supply relative to demand weakened for direct buyers - perhaps suggesting direct buyers are facing pockets of supply tightness (Figure 28). More importantly, the majority of respondents expressed concern for supply shortages over the next 6 months (70% of distributors, 76% of direct buyers) - up 3% Q/Q (Figure 31). Our survey suggests lead times extending (Figure 32), while panelists are more concerned with certainty of supply rather than price negotiations (Figure 36).
- **Pricing:** The majority of our semiconductor purchasers have seen prices tick higher and expect this to continue over the next six months, although we also note an uptick in respondents suggesting pricing to remain the same after a strong 2Q (Figure 35). In response to price increases, the large majority of respondents suggested passing on increasing costs to customers.

Figure 13: Summary of Key Market Indicators from UBS Semiconductor Purchaser Survey

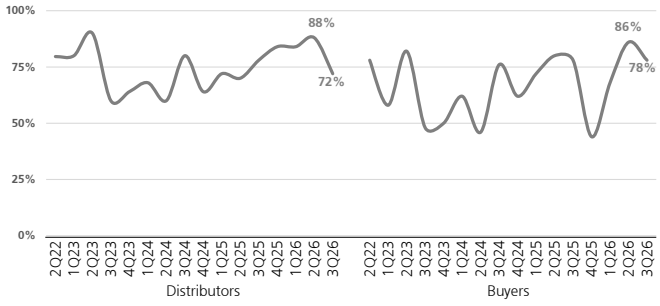
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Overordering	**-24%**	-1%	-1%	-11%	-8%	% of respondents overordering to ensure supply, expressed as a negative (less overordering = better market)
Average	**+39%**	**-6%**	**-1%**	**-0%**	**-7%**	Simple average of all indicators

Source: UBS Evidence Lab (> Access Dataset) .

Healthy demand dynamics in 3Q26 after extremely strong indicators in 2Q26

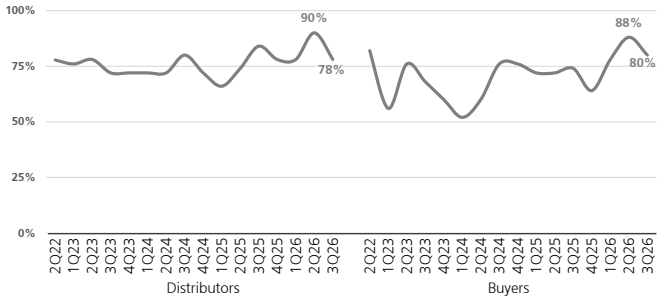
- 3Q26 demand outlook remains at healthy levels, with a greater number of respondents indicating demand staying the same after strengthening indicators in 2Q26. Direct buyers went from +86 % to +78% net demand for past six months and +88% to +80% in the next six months. Distributors exhibited similar trends - with net demand decreasing from +88% to +72% - while next six month expectations decreased from +90% to +78%. Overall, we believe demand expectations are holding steady at strong levels as respondents indicating worsening demand conditions remain at LSD-MSD% levels.
- Overall demand expectations by end market were mixed. In particular, Telecom was up 9% Q/Q and Autos +2% Q/Q, followed by Data Center and Consumer down 2-3% Q/Q. Industrial was down 15% Q/Q and A&D down 12% Q/Q after multiple quarters of strengthening commentary from the analog companies.
- Ordering behavior diverged between distributors and direct buyers, with more distributors reporting under-ordering (from 14% to 22%) and ordering in-line with demand (from 58% to 66%), and fewer reporting over-ordering (from 24% to 12%). However, more direct buyers report over-ordering (22% to 36%) and fewer report under-ordering (from 8% to 4%).
- Expectations for net bookings over the next three months declined slightly among both distributors (from 84% to 82%) and direct buyers (from 96% to 92%). Overall, the numbers of respondents expecting bookings to increase remain at healthy levels.

Figure 14: Distributors' and direct buyers' trailing demand decelerating after strong 2Q



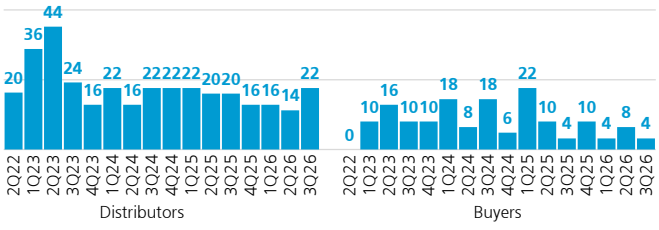
Source: UBS Evidence Lab (> Access Dataset). *Net % responding increase minus % decrease

Figure 15: Expected change in overall demand over next 6 months declining for distributors and direct buyers



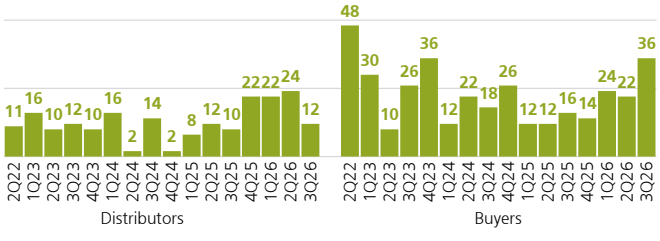
Source: UBS Evidence Lab (> Access Dataset). *Net % responding increase minus % decrease

Figure 16: Under-ordering declined for direct buyers, increased for distributors



Source: UBS Evidence Lab (> Access Dataset). *% of respondents pulling back on orders relative to demand

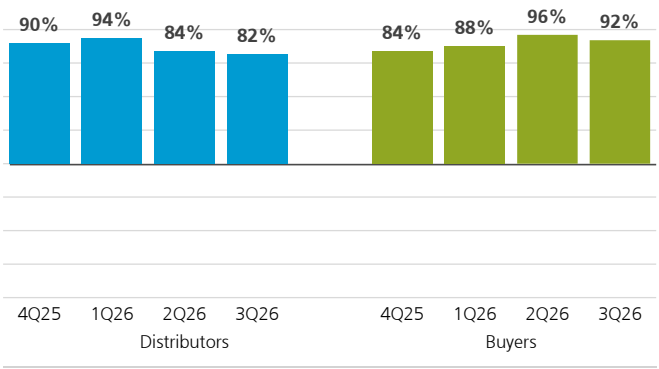
Figure 17: Over-ordering increased for direct buyers, decreased for distributors



Source: UBS Evidence Lab (> Access Dataset). *% of respondents over-ordering due to lead times

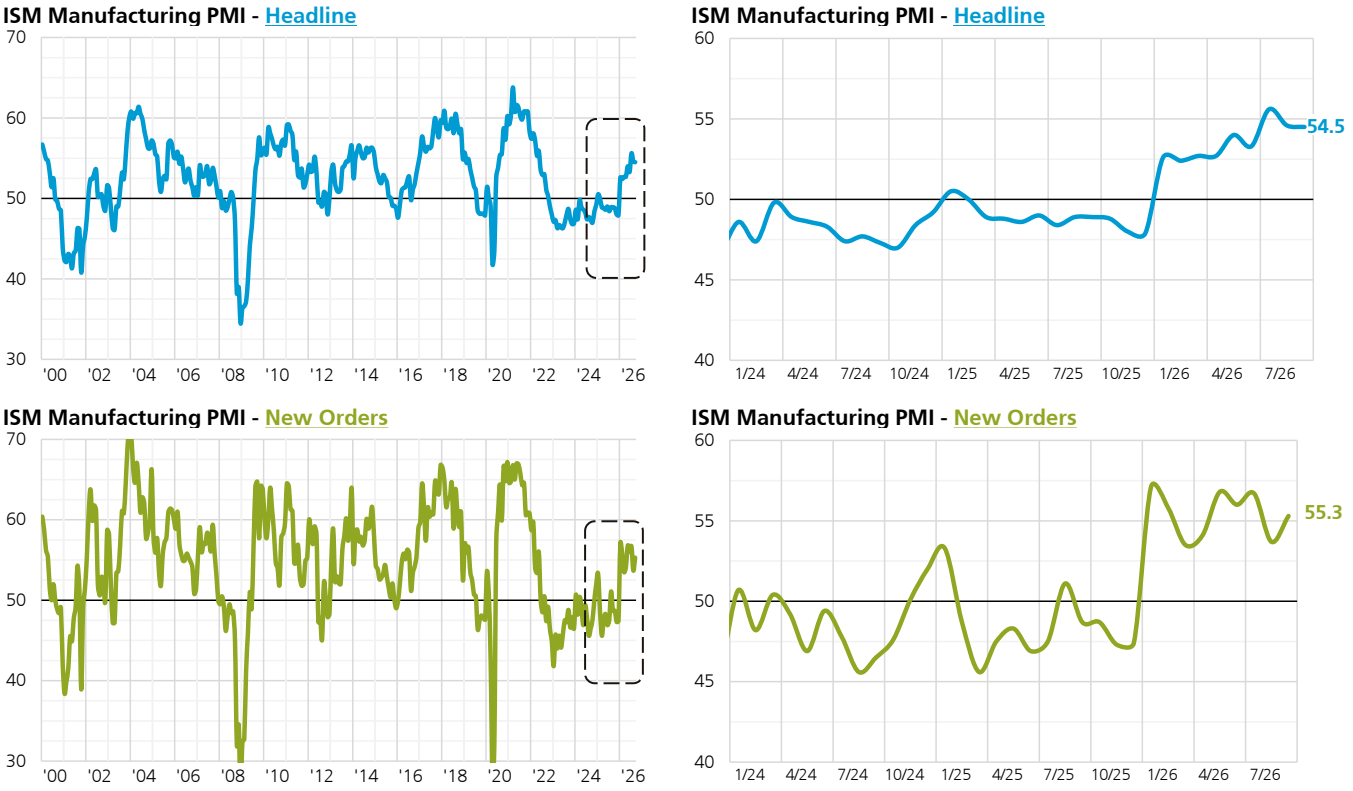
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Figure 18: Net booking expectations over the next 3 months are strong among both distributors and direct buyers



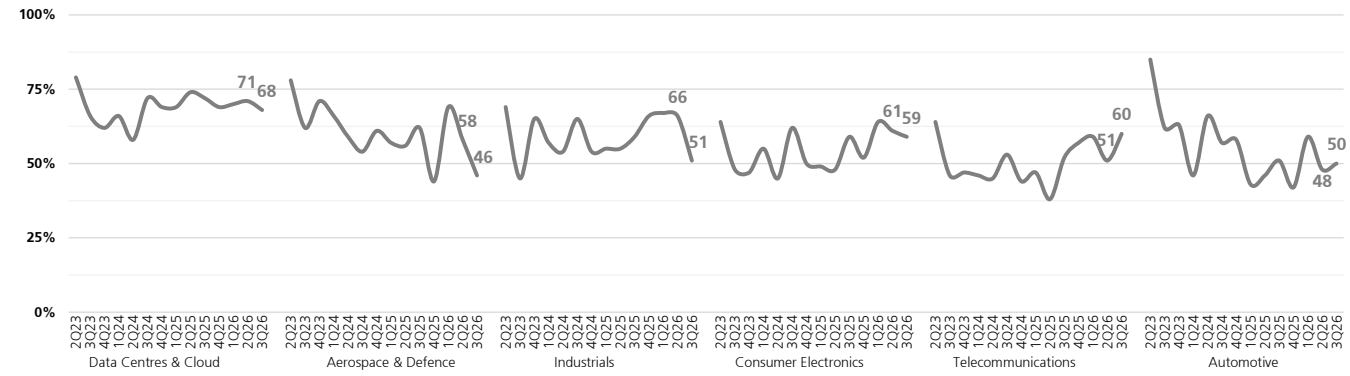
Source: UBS Evidence Lab (> Access Dataset). *Survey Question: Do you think that the overall number of semiconductor bookings will increase or decrease over the next 3 months in comparison to now or will this stay about the same?

Figure 19: PMI was flattish in September to 54.5 while key New Orders component increased to 55.3 - both remaining in expansionary territory



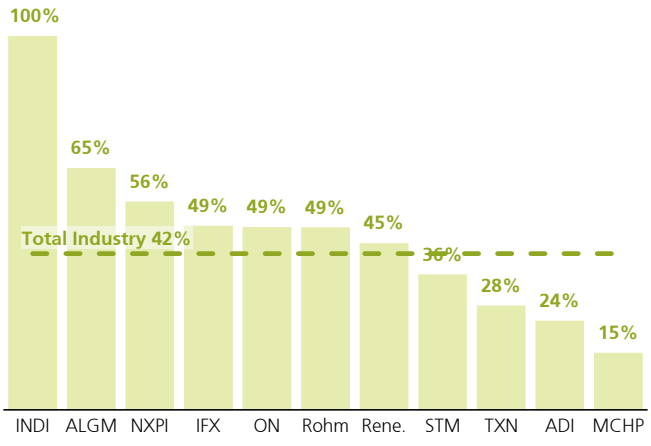
Source: UBS research, FactSet.

Figure 20: Demand signals lower in Industrial and A&D, better in Telecom and Auto



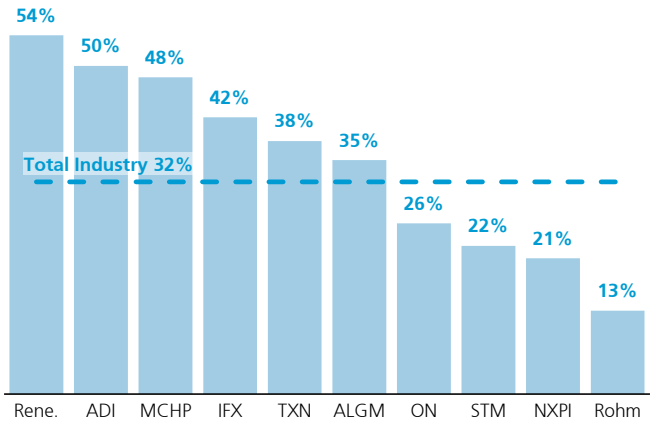
Source: UBS Evidence Lab (> Access Dataset). *Survey Question: Do you think that overall demand for semiconductors from each of the following sectors will increase or decrease over the next 6 months in comparison to now or will this stay about the same? (Net % responding increase minus % decrease)

Figure 21: INDI, ALGM, and ON are most levered to autos within our coverage



Source: Company reports, UBS research, FactSet, Visible Alpha. Based on C26E revenue.

Figure 22: ADI and MCHP are most levered to industrial within our coverage

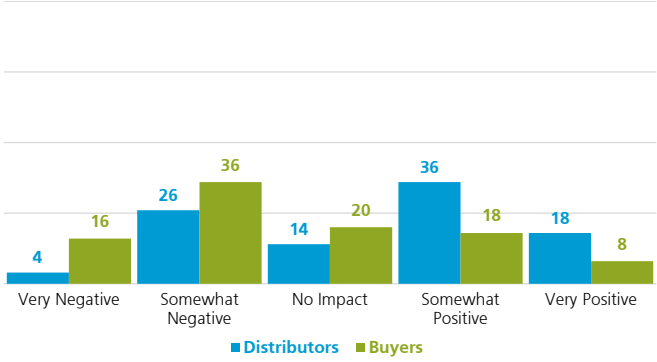


Source: Company reports, UBS research, FactSet, Visible Alpha. Based on C26E revenue.

Supply chain negative on tariffs in 3Q26, with purchasing budgets expanding

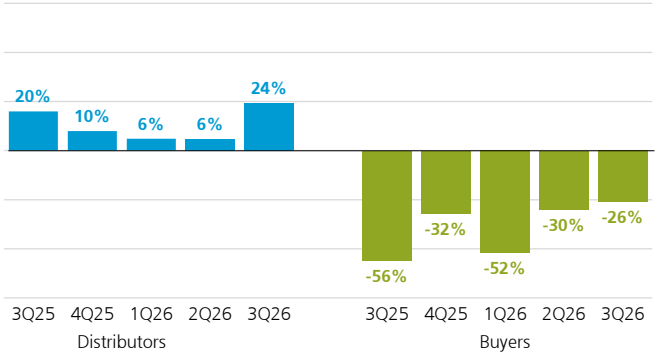
- Distributors still tend to view tariffs as a positive in 3Q26 - perhaps reflecting their ability to offer geographical flexibility in some cases or the need to hold higher inventory levels as safety stock - while buyers view tariffs negatively.
- Most respondents expected MSD-HSD% increases in their purchasing budgets over the next six months as a result of tariffs.
- Mitigation strategies were diverse with ~47% of respondents renegotiating pricing, followed by ~37% altering supply chain locations, ~36% shifting manufacturing locations, ~36% passing on costs, and 29% exploring alternative sources.

Figure 23: Distributors view tariffs as largely positive while they are a negative for direct buyers



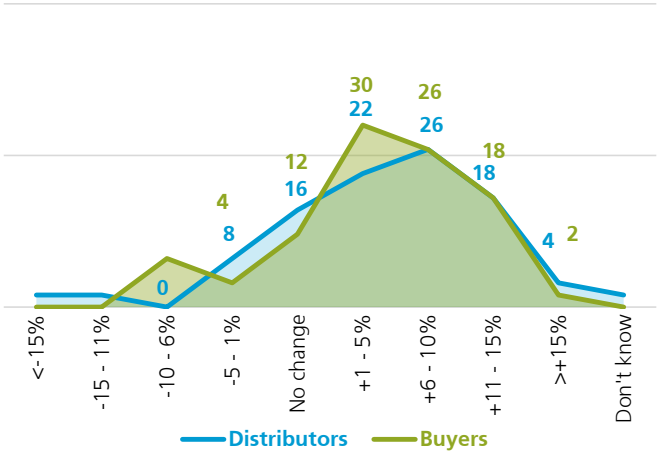
Source: UBS Evidence Lab (> Access Dataset). *Survey Question: Do you expect uncertainty around tariffs to have a positive or negative impact on your business over the next 6 months?

Figure 24: Disties tariff sentiment increased; direct buyers overall still cautious



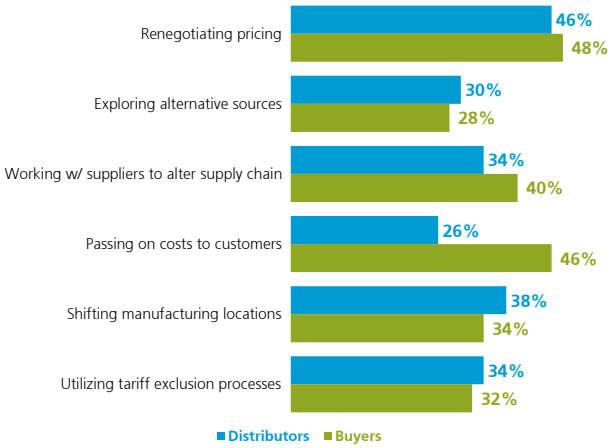
Source: UBS Evidence Lab (> Access Dataset). *Net % responding positive impact minus % negative impact

Figure 25: Most respondents expect MSD/HSD purchasing budget increases from tariffs over the next 6 months



Source: UBS Evidence Lab (> Access Dataset). *Survey Question: Do you expect the uncertainty around tariffs to affect your purchasing budget over the next 6 months?

Figure 26: Respondents considered a diverse set of alternatives to mitigate tariff impacts

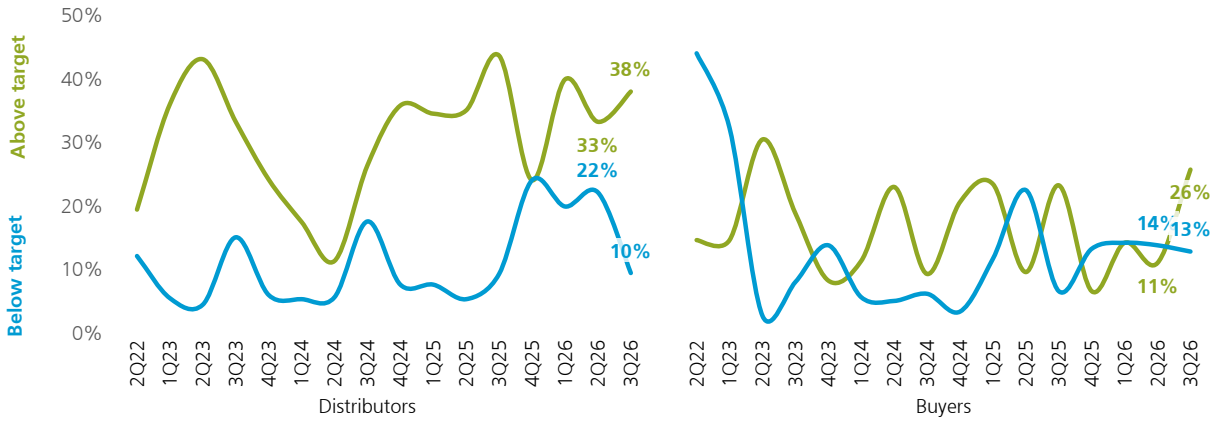


Source: UBS Evidence Lab (> Access Dataset) .

Inventory trending above target levels, although direct buyers facing pockets of tightness

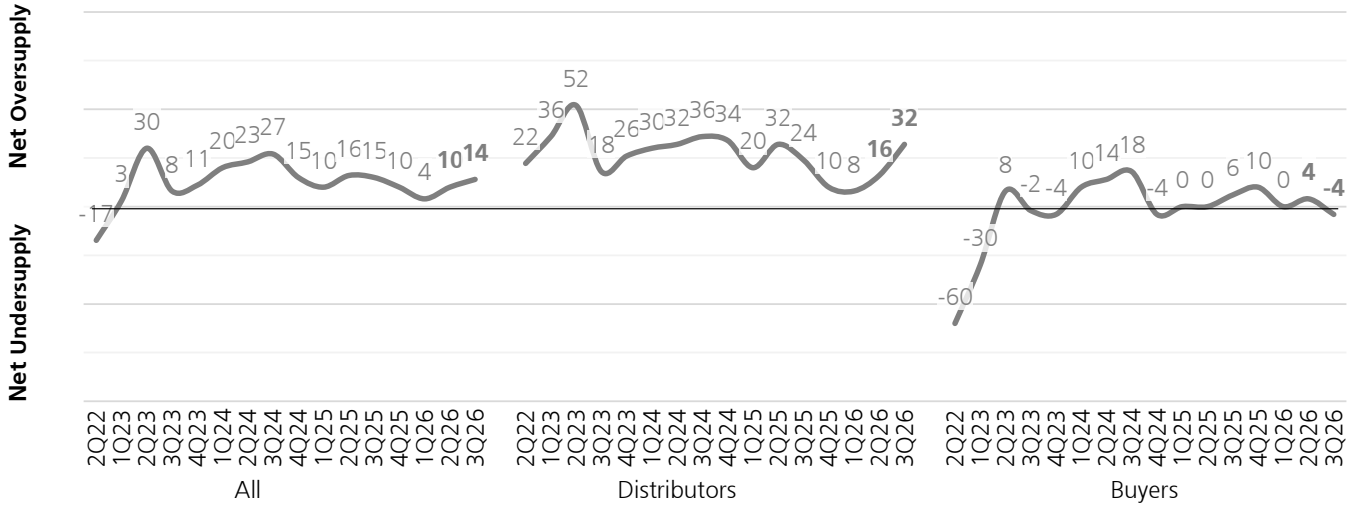
- 38% of distributors felt that their semiconductor supply on hand was now above their target levels, up 5pts Q/Q, and the number below target decreased 12% Q/Q. For direct buyers, 26% felt that their semiconductor supply on hand was now above target - up 15% Q/Q - while 13% felt that semiconductor supply on hand was below their target, down 1% Q/Q.
- Asked about the sufficiency of supply on hand relative to demand, this improved sequentially for distributors (from net +16 to net +32), but weakened for direct buyers (from net +4 to net -4) - perhaps suggesting that direct buyers are facing pockets of supply tightness.
- Among those with excess inventory, new/expanded supply partnerships were the top reason followed by speculative anticipation of higher future demand.

Figure 27: Current analog semiconductors inventory levels (above target vs below target)



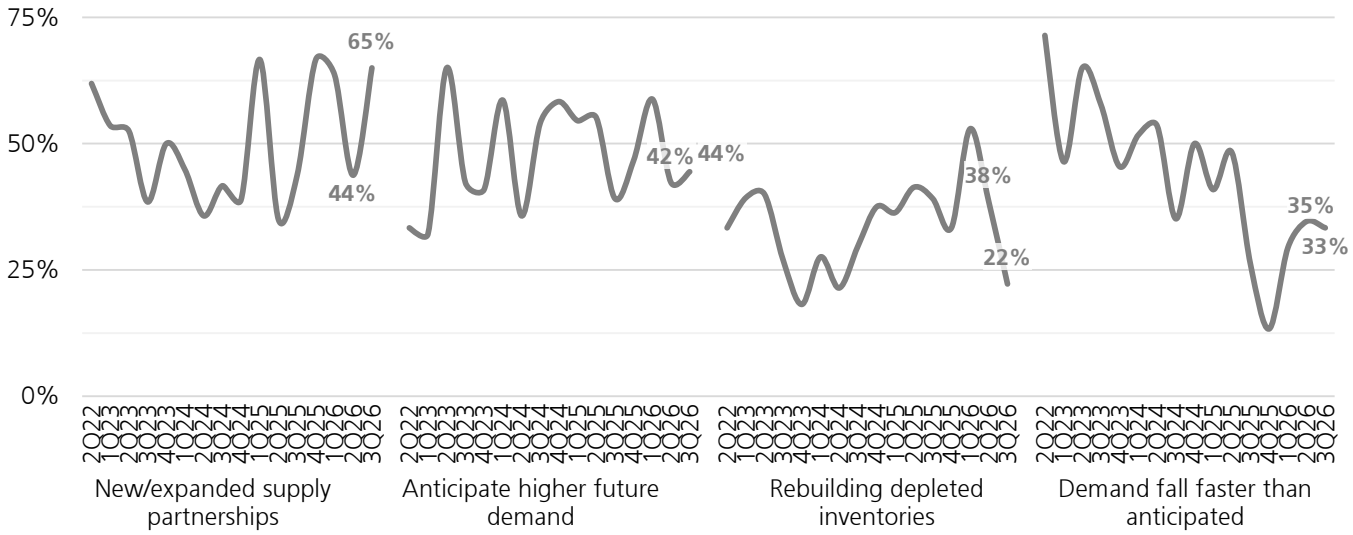
Source: UBS Evidence Lab (> Access Dataset) .

Figure 28: Supply remains sufficient in fulfilling customer demand among distributors, but direct buyers in slight undersupply territory



Source: UBS Evidence Lab (> Access Dataset). *Survey Question: Thinking about the current demand for semiconductor products/your products you are seeing from customers… Is your supply able to fulfill your current customer demand? (Net % responding oversupply minus % undersupply)

Figure 29: Reasons supply currently exceeds current customer demand (among respondents with excess supply)

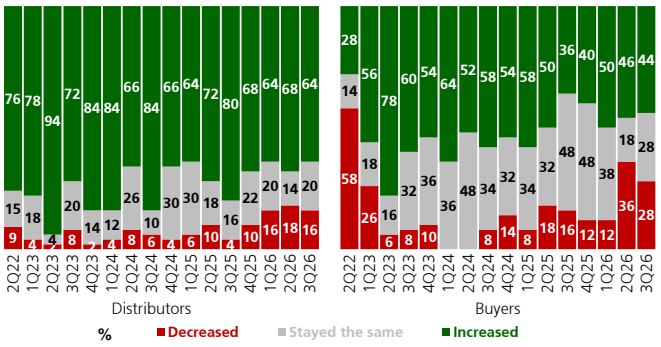


Source: UBS Evidence Lab (> Access Dataset) .

Supply availability ticked higher, although future shortages remain a concern

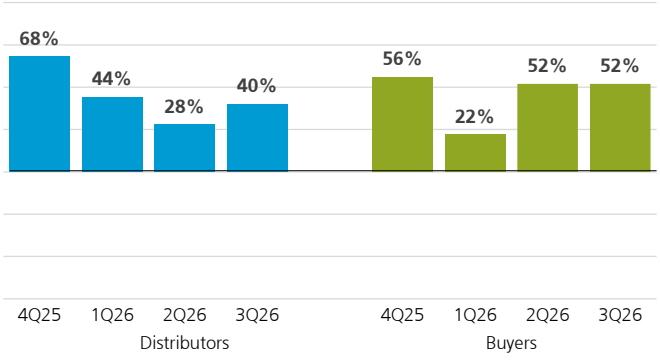
- Supply availability ticked higher Q/Q with 84% of distributors and 72% of direct buyers reporting availability improving or staying the same over the last 6 months (vs 82% of distributors and 64% of direct buyers in 2Q).
- The majority of respondents expressed concern for supply shortages over the next six months as ~73% indicated being fairly or very concerned (70% of distributors, 76% of direct buyers), up 3% Q/Q. Concerned purchasers are securing LTSAs or holding more inventory.
- Wait times trended higher again in 3Q, with 65% of our panel experiencing lengthening wait times over the last 6 months (up from 62% in 2Q and 56% in 1Q), while forward expectations of increases declined slightly at 54% (from 58% in 2Q).
- On-time performance ticked up a little with 21% early delivery, 61% on time, and 18% late (vs 19% early, 59% on time, and 22% late in 2Q).

Figure 30: Availability of semiconductors ticked higher for both distributors and direct buyers



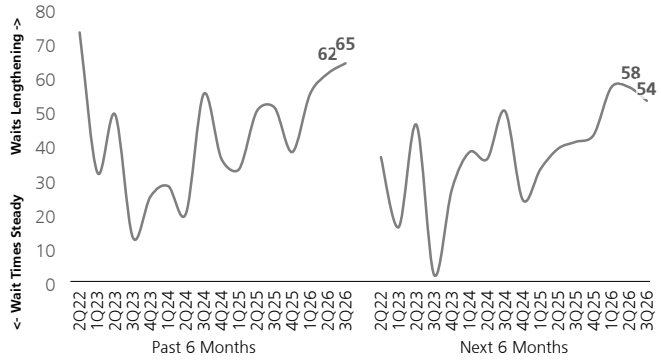
Source: UBS Evidence Lab (> Access Dataset). *% reporting increases, decreases, and no change

Figure 31: Both distributors and direct buyers demonstrate concern over supply shortages in next 6 months



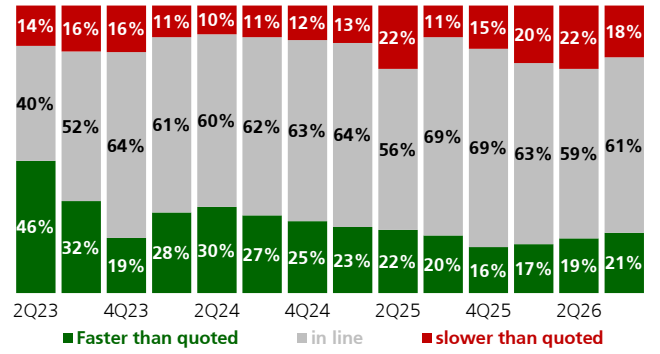
Source: UBS Evidence Lab (> Access Dataset). *Net % responding concerned minus % not concerned

Figure 32: Average lead times vs 6 months ago increasing while future expectations slightly lower



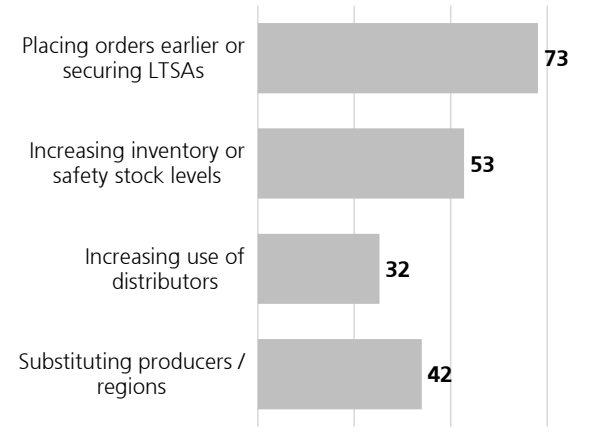
Source: UBS Evidence Lab (> Access Dataset). *Net % responding getting longer minus % getting shorter

Figure 33: On average, products typically tend to arrive in line with lead times



Source: UBS Evidence Lab (> Access Dataset). *Net % responding getting longer minus % getting shorter

Figure 34: Respondents opting to secure LTSAs or increase inventory levels as a result of shortages concern

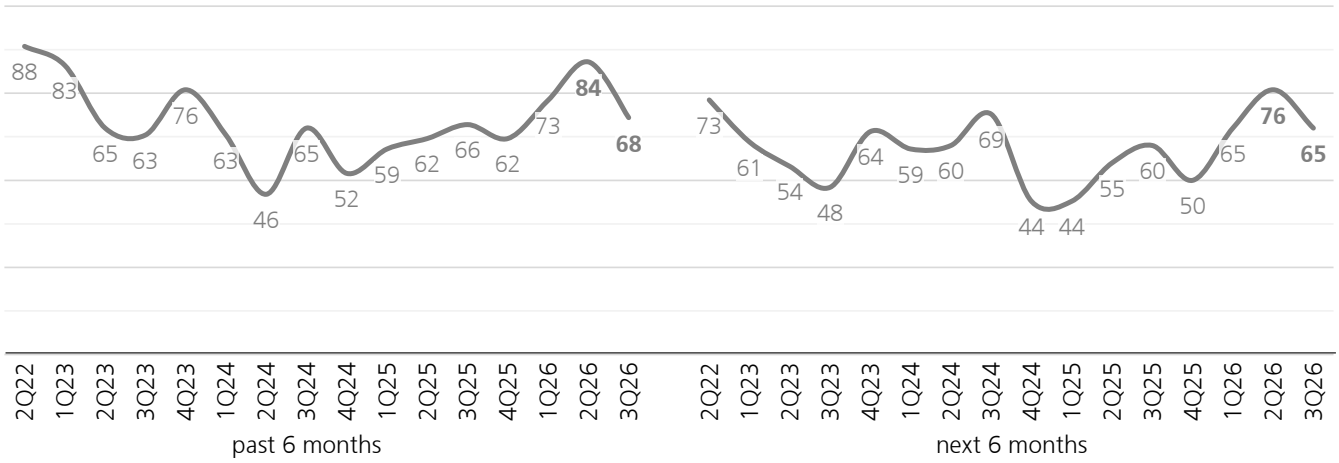


Source: UBS Evidence Lab (> Access Dataset).

Majority of respondents still expect price increases; supply certainty remains a focus amid geopolitical concerns

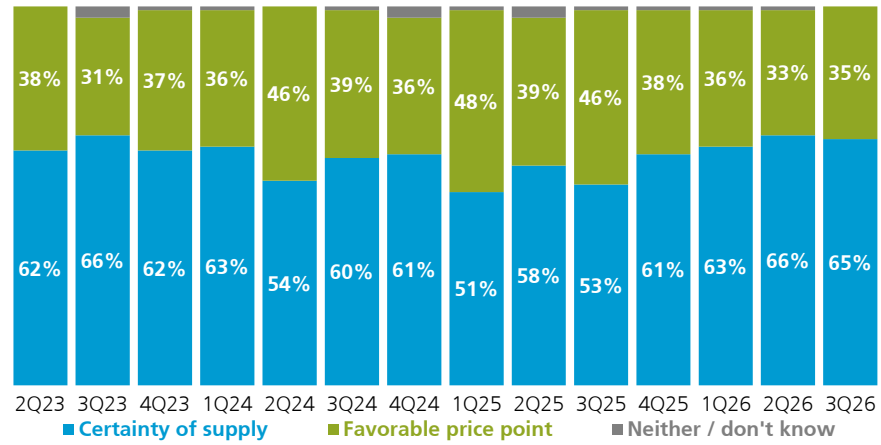
- A net +68% of our panel experienced price increases over the last 6 months, down from +84% last quarter. In particular, 71% of respondents indicated price increases, 26% no change, and only 3% indicated price declines. Similarly, forward price expectations ticked lower from net +76 to +65 as 70% of respondents expect price increases, 25% no change, and 5% indicated price declines.
- Supply chain certainty has continued to be an increasing focus among respondents vs favorable price.
- In response to semiconductor price increases, 64% of semi purchasers expect to raise their own prices, 43% intend to adjust procurement volumes, 36% will pursue second sourcing, and 36% will absorb the costs.

Figure 35: Majority of respondents still expect price increases after strong indicators in 2Q



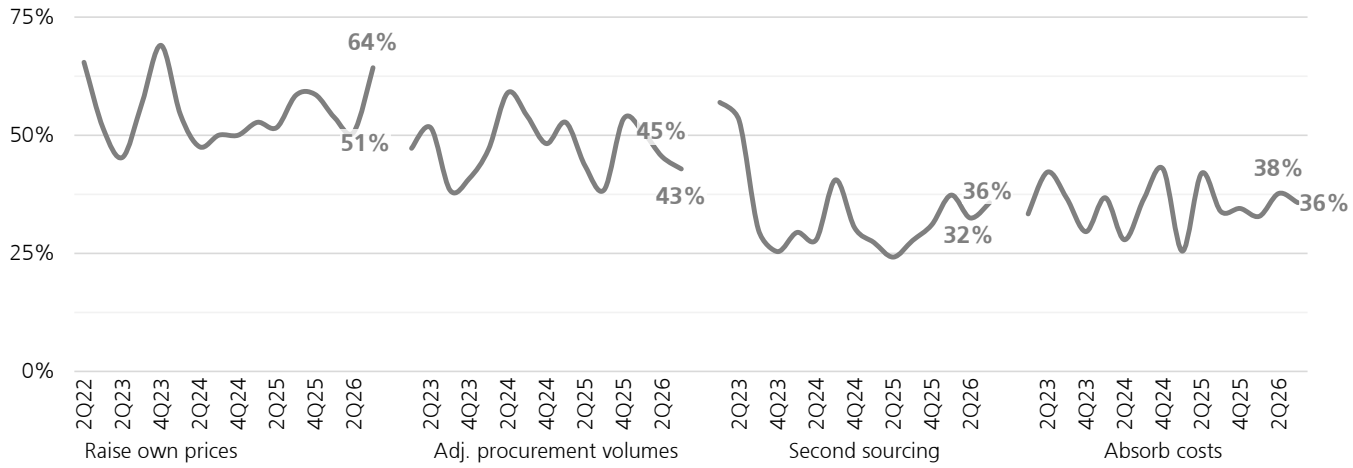
Source: UBS Evidence Lab (> Access Dataset). *Net % reporting/expecting increases minus decreases

Figure 36: Supply chain certainty favored over better pricing among respondents



Source: UBS Evidence Lab (> Access Dataset). *Survey Question: Which ONE of the following is currently most important to you when purchasing semiconductor products?

Figure 37: Majority of respondents passing on price increases to their customers

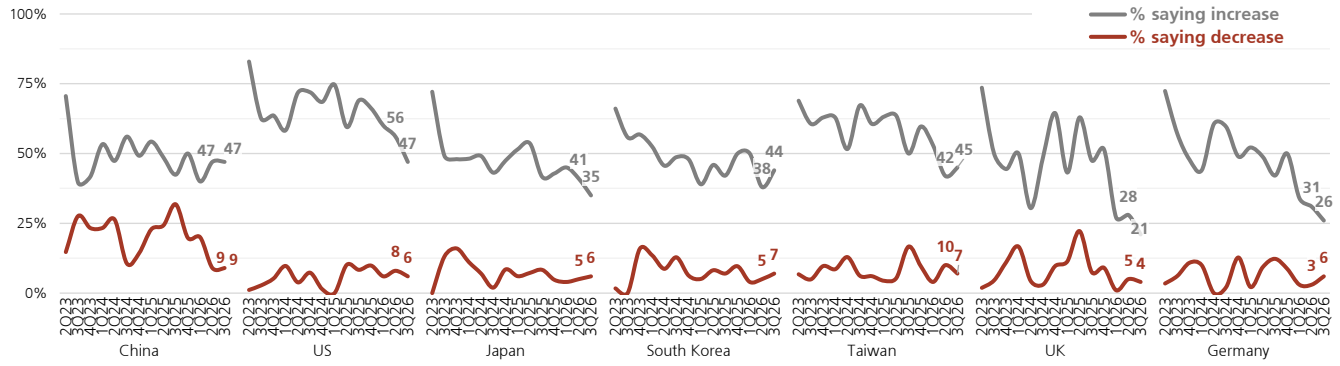


Source: UBS Evidence Lab (> Access Dataset) .

Regional purchase intents mixed, giving no clear geopolitical read

- The survey has no clear read on geographical uncertainty; only South Korea and Taiwan upticked for the fraction of respondents looking to increase supply, while the US, Japan, UK, and Germany all downticked modestly (but we would not overreact to this single data point without more confirmation).

Figure 38: Purchase intent from most regions declining



Source: UBS Evidence Lab (> Access Dataset). *Net % respondents indicating increase of purchase intent in key regions minus % indicating decrease