

Semiconductor

Q3 REVIEW 2020

▶ SHARP THINKING, STRAIGHT TALKING
TECH SECTOR SUCCESS

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Welcome

In the third quarter issue of Acuity's semiconductor market report, we analyse the key changes in the semiconductor industry over the past year.

This report is divided into two sections. We will look at semiconductor IC suppliers by end market application, and then examine those suppliers servicing chip companies. This includes EDA, IP, design services, capital equipment providers and the microchip manufacturing foundries.

Overview

SEPT 2019 - SEPT 2020

There is no doubt that the last 12 months have seen significant winds of change blow through global tech, bringing great uncertainty to the semiconductor market.

Not only have trade tensions between the US and China challenged existing supply chains, but the pandemic has exposed a range of previously unrecognised risks. China, the powerhouse of the world's electronics manufacturing industry, is at the eye of the storm. The country is currently responsible for only 15% of the world's integrated circuit production, yet is desperately developing its own domestic semiconductor foundries to manufacture advanced chips.

Semiconductor Market By End Application

Chart 1: Share Price Performance Over LTM Period

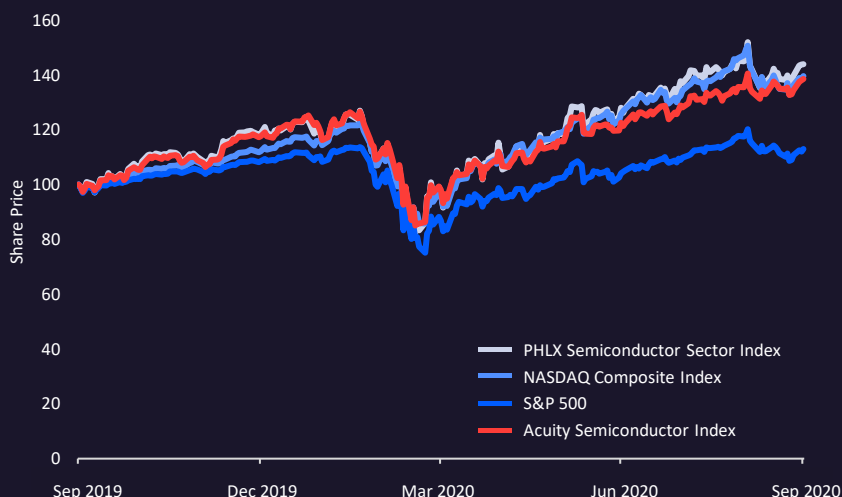
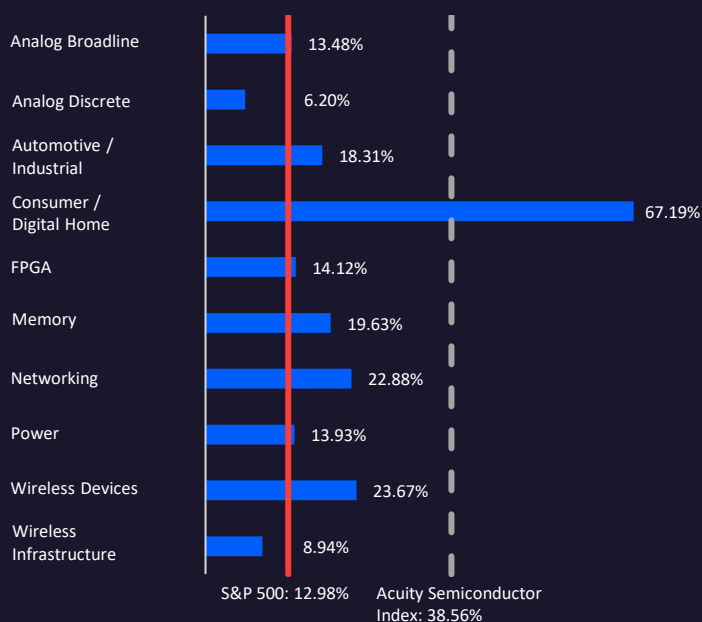


Chart 2: Share Price Performance Over LTM Period By Sub-Sector



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Market Dynamics

MEGADEALS MARK SHIFTING SENTIMENT

After a strong start in 2020 with \$9.8 billion in chip deals announced in the first quarter, deal-making almost stalled in the second quarter with only \$2.5 billion agreements announced as the pandemic spread to the West.

Nevertheless, deal-making continued albeit at a slower pace, with focus shifting towards mid-market transactions and strategic acquisitions to fuel growth in a post Covid-19 world. Although valuations are very target specific, the data shows consistent multiples, with EV / Revenue medians at 3.0x and EV / EBITDA median levels hovering around 21x.

By the nine-month mark, bullishness had returned to the semiconductor market. September saw chip market deals climb to a combined value of \$78.3 billion — just \$46 billion less than the record of nearly \$125 billion set in 2016.

The bulk of this valuation consists of two agreements inked in July and September: Analog Devices' \$22.8 billion acquisition of rival integrated chipmaker Maxim, followed by Nvidia's \$38.6 billion purchase of processor-design technology supplier ARM from SoftBank. Together, these account for roughly 78.4% of the M&A dollar value in 2020, reflecting growing confidence in the market as the effects of the pandemic became clearer.

Semiconductor Market By End Application

VALUATION BY SUB-SECTOR

Chart 3a: EV / Revenue Multiples By Sub-Sector For The LTM Period Ending 30/06/2020

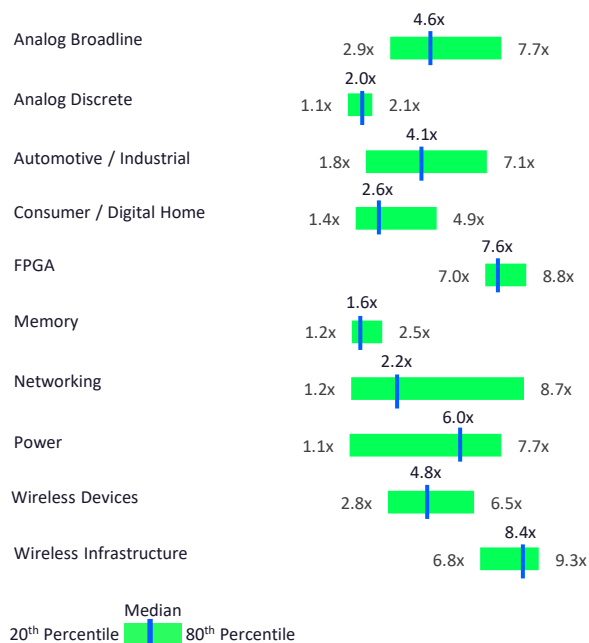
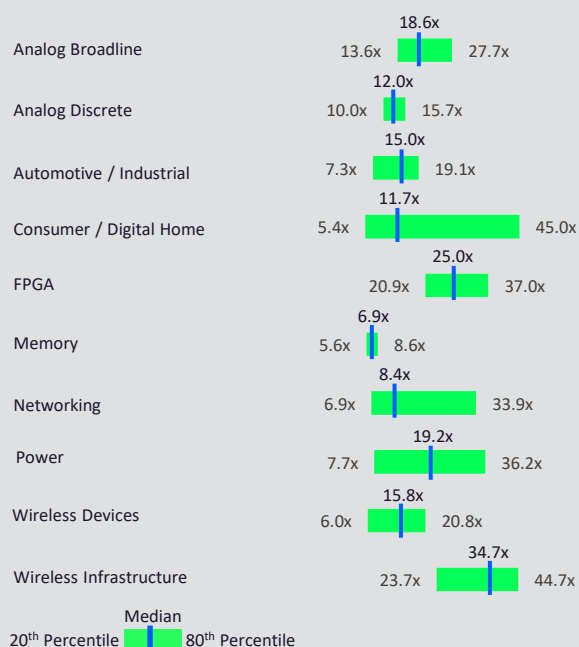


Chart 3b: EV / EBITDA Multiples By Sub-Sector For The LTM Period Ending 30/06/2020



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Market Dynamics

MEGADEALS MARK SHIFTING SENTIMENT

Covid-19 has catalysed shifts in demand — causing steep declines and sudden ascents across different markets. In consumer electronics, demand for semiconductors surged as people sought creature comforts to make lockdown easier to bear. Gaming devices, audio equipment, and kitchen appliances saw a dramatic rise in interest, and video conferencing and virtual offices came into vogue as social distancing moved offices into cyberspace. This trend could be expected to continue, and is likely to lead to strong performance for this subsector well into 2021.

On the flipside, falling demand for new vehicles has put the brakes on sales of semiconductors for automotive applications. Although the drop in market share is consistent across the sector, it is particularly noticeable with electric vehicles, which along with autonomous cars, are much more reliant on semiconductors. Some estimates place the number of chips in electric autonomous vehicles as much as six times higher than the average number found in a combustion engine vehicle today.

Semiconductor Market By End Application

SEMICONDUCTOR INDUSTRY LTM M&A ACTIVITY

Chart 4 : LTM M&A Deal Value & Volume By Sub-Sector

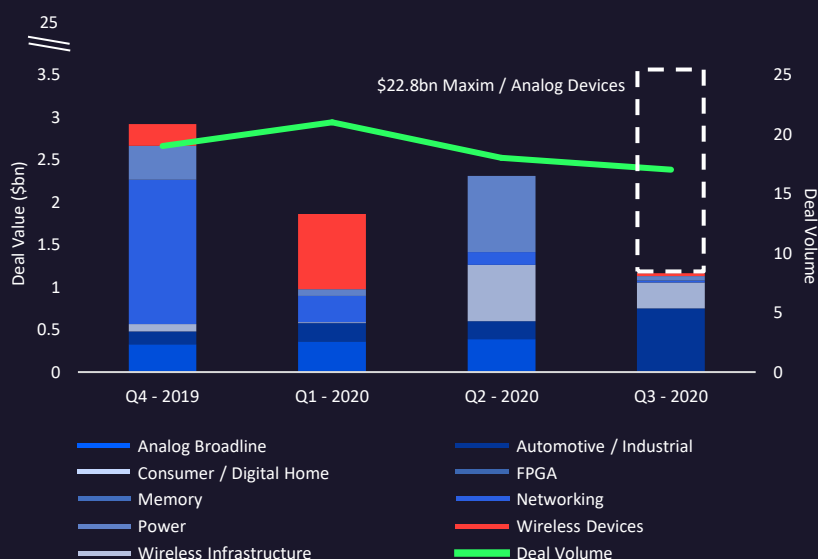
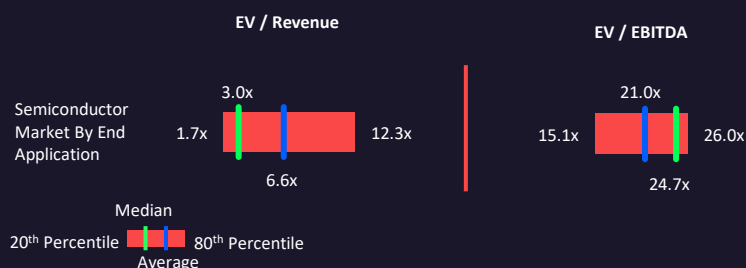


Chart 5: Precedent Semiconductor End Application Market Transaction Multiples for LTM



Source: Capital IQ, LTM Period: 30/09/2019-30/09/2020. Note 1: Due to the number of undisclosed transaction multiples within the M&A data and in order to reach a more statistically valid conclusion, analysis of the transaction multiples has not been conducted for each sub-sector

Key Q3 2020 Deals

<p>maxim integrated.</p>	<p>Date: 13/07/2020</p> <p>Value: \$22.8bn</p>	<p>DisplayLink</p>	<p>Date: 20/07/2020</p> <p>Value: \$305m</p>
<p>ACQUIRED BY</p> <p>ANALOG DEVICES</p>	<p>EV/Revenue: 9.7x</p> <p>EV/EBITDA: 26.1x</p>	<p>ACQUIRED BY</p> <p>Synaptics</p>	<p>EV/Revenue: 3.2x</p> <p>EV/EBITDA: 6.0x</p>
<p>BeSpoon</p>	<p>Date: 16/07/2020</p> <p>Value: n/a</p>	<p>ascatron</p>	<p>Date: 12/08/2020</p> <p>Value: n/a</p>
<p>ACQUIRED BY</p> <p>STMicroelectronics</p>	<p>EV/Revenue: n/a</p> <p>EV/EBITDA: n/a</p>	<p>ACQUIRED BY</p> <p>II-VI</p>	<p>EV/Revenue: n/a</p> <p>EV/EBITDA: n/a</p>

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Market Dynamics FOUNDRIES SHOW RESILIENCE

The silicon foundry business has held up well against uncertainty. In particular Taiwan Semiconductor Manufacturing Co saw its stock surge after taking on the bulk of Apple's production and delivering a beat-and-raise second-quarter report before outlining ambitious plans to make chips at ever-smaller sizes.

Across the market as a whole, few transactions were made in the second quarter, with volatile valuations of EV / Revenue median at 1.8x and EV / EBITDA median levels around 12.4x reflecting specific acquisition targets more than the general state of the market.

Aside from the pandemic hitting manufacturing lines, the biggest event impacting foundries is likely to be Nvidia's move to buy Cambridge chip designer ARM in a \$38.6 billion deal. This threatens to jeopardise the broader tech sector by giving Nvidia control of designs that are currently used in 90% of smartphone chips, and could set China's domestic foundry market back even further.

By licensing ARM's chip architecture, Nvidia would be able to combine ARM's designs with Nvidia's specialty in graphics processors (GPU), to create efficient, high-performance chips that could dominate in applications as far flung as datacenters, street lights, and washing machines.

Semiconductor Supply Chain Market

Chart 6: Share Price Performance Over LTM Period

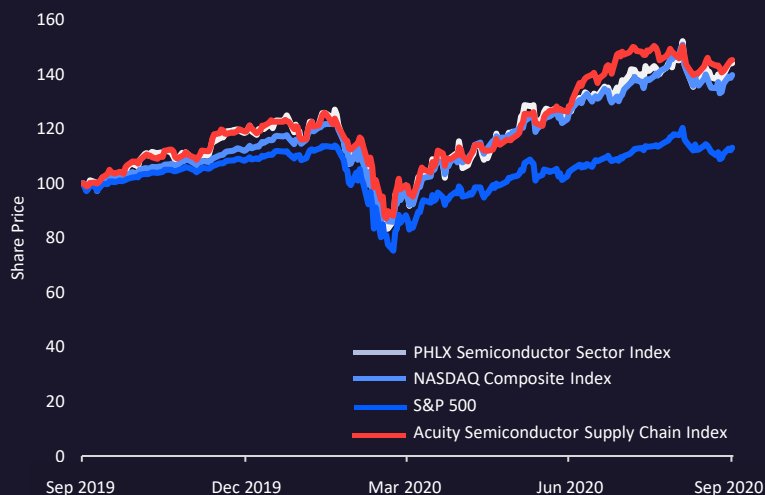
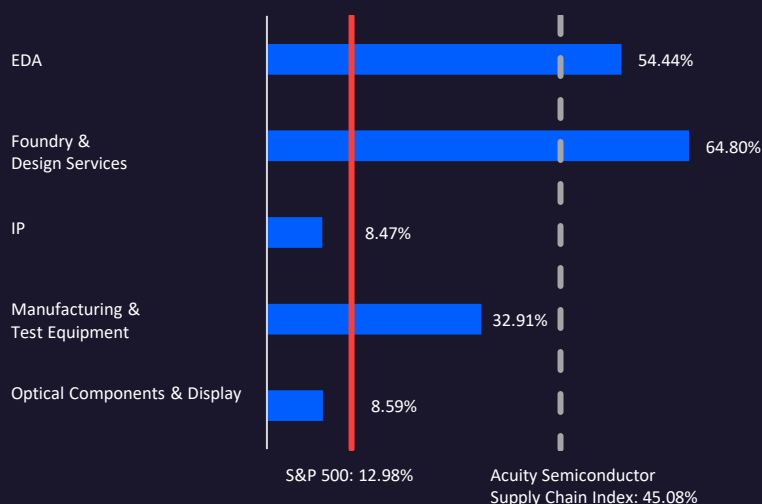


Chart 7: Share Price Performance Over LTM Period By Sub-Sector



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Semiconductor Market WEATHERS THE STORM

China is likely to take decades to substitute European and US capital equipment for home-grown or acquired equivalents, and so remains entirely dependent on foreign sources for the production of its own integrated circuits. Beijing's efforts to change this by investing in SMIC, China's biggest chipmaker, already looks set to be foiled by sanctions levied by the Trump administration.

Despite these turbulent times, tech firms including the semiconductor sector are weathering the storm particularly well. Chart 1 [Share price performance for the LTM] shows that despite falling harder than the S&P 500 in March 2020, semiconductor firms have since rebounded to outperform the broader market.

This optimism is reflected in the presence of mega deals, with two major agreements making 2020 the second-largest year in history for semiconductor deal-making so far, according to IC Insights.

Semiconductor Supply Chain Market VALUATION BY SUB-SECTOR

Chart 8a: EV Revenue Multiples By Sub-Sector For The LTM Period Ending 30/06/2020

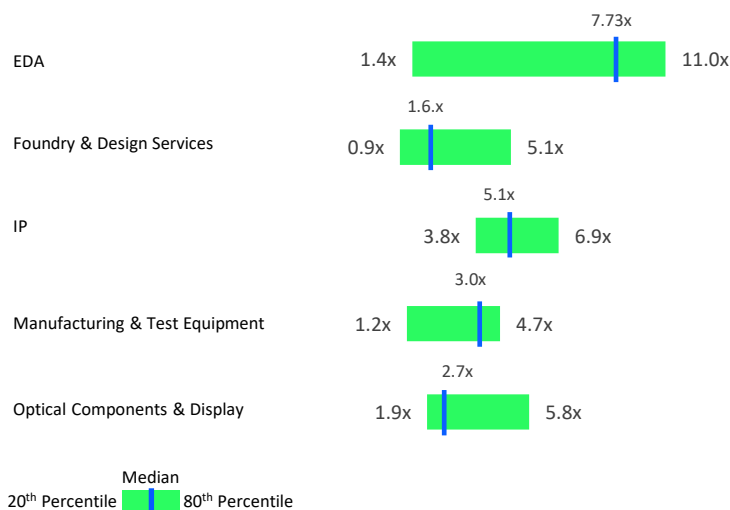
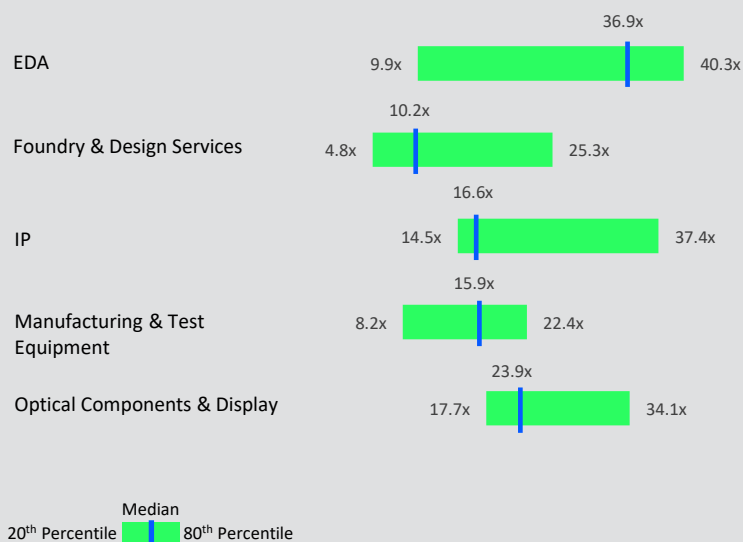


Chart 8b: EV / EBITDA Multiples By Sub-Sector For The LTM Period Ending 30/06/2020



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Looking Ahead

As we move into the final quarter of 2020, the ongoing pandemic and US trade war are likely to remain the dominant themes of the semiconductor market, along with regulatory scrutiny over the Nvidia deal.

But while these factors might momentarily curb market momentum, the flow of innovation is likely to continue driving relentless demand for semiconductors.

The mainstreaming of 5G handsets, next generation connectivity with IoT and 5G, artificial intelligence (AI), and the insatiable appetite for data are all demanding faster processors and higher density memory, spurring demand that is likely to keep the industry buoyant regardless of what storms may come to pass.

Acuity Advisors SEMICONDUCTOR EXPERTISE

▶ THE MOST SUCCESSFUL INVESTMENT BANK IN THE MID-MARKET SEMICONDUCTOR SECTOR.

A bold claim, but backed-up by an impressive track record of cross border M&A transactions spanning over a decade. Having worked with over 50 semiconductor companies we have experience of end-markets including wireless, automotive, consumer and telecommunications.

Semiconductor Supply Chain Market

SEMICONDUCTOR SUPPLY CHAIN LTM M&A ACTIVITY

Chart 9: LTM M&A Deal Value & Volume By Sub-Sector

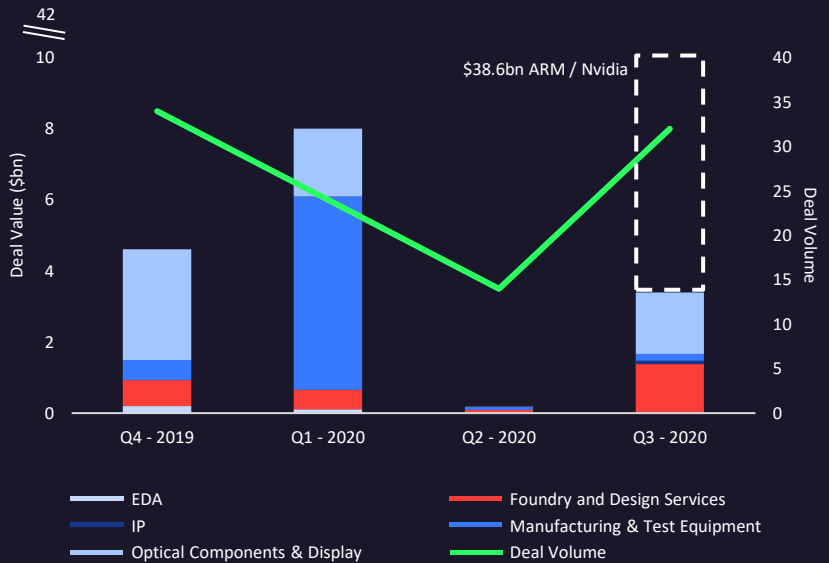
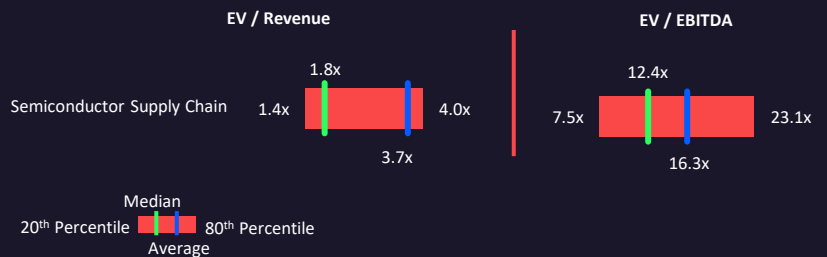


Chart 10: Precedent Semiconductor Supply Chain Market Transaction Multiples For LTM



Source: Capital IQ. LTM Period: 30/09/2019-30/09/2020. Note 1: Due to the number of undisclosed transaction multiples within the M&A data and in order to reach a more statistically valid conclusion, analysis of the transaction multiples has not been conducted for each sub-sector

Key Q3 2020 Deals

		Transaction by:
		Acuity
	Date: 14/09/2020 Value: \$38.6bn	
ACQUIRED BY	EV/Revenue: n/a	
	EV/EBITDA: n/a	
ACQUIRED BY	EV/Revenue: n/a	
	Date: 09/09/2020 Value: \$96.8m	
ACQUIRED BY	EV/Revenue: n/a	
	EV/EBITDA: n/a	
ACQUIRED BY	EV/Revenue: 1.5x	
	EV/EBITDA: 23.2	

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Acuity Advisors

SEMICONDUCTOR EXPERTISE

We work internationally with clients in both Europe and the US, delivering their strategic objectives. We have sold businesses to most of the world’s largest semiconductor companies, typically involving a trade sale, but also with venture capital and private equity fundraising.

With over 25 years’ experience in the industry, the team has cultivated deep-rooted relationships with many of the senior executives across the industry. It is these relationships, combined with both a technical understanding and genuine market insight that deliver successful outcomes for our clients.

Whether you are a fabless ASSP or ASIC provider, licence IP, offer consulting services, EDA tools or manufacture semiconductor capital equipment it is well worth having a conversation with us. We are always willing to share our perspective on the market and any insights we may have.

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Acuity Advisors Recent Transactions

 ACQUIRED BY 	 ACQUIRED BY 	 ACQUIRED BY 	 ACQUIRED BY 	 ACQUIRED BY Global Semiconductor Company
 ACQUIRED BY 	 RECEIVED INVESTMENT 	 ACQUIRED BY 	 ACQUIRED BY 	 ACQUIRED BY

About Acuity Advisors



27 STRONG TEAM

- We are a highly experienced European M&A and Debt Advisory team
- Partner-led approach to every engagement



160+ EXITS

- Expertise and experience in the technology sector
- The Acuity Advisors team has sold over 400 businesses



16 MANDATES

- We are focused on European and US sell-side exit processes in the mid-market to both trade and private equity
- Selective equity raising and buy-side work
- Debt financing



INTERNATIONAL

- Offices in London (UK), Munich (Germany) and Shanghai (China)
- 70%+ of exits are cross border



48% UPLIFT

- We see an average 48% increase in price
- Achieved through a tenacious approach, creative documentation and strong negotiation skills



86% SUCCESS

- Industry-leading metric: 86% of our mandates complete successfully
- A proven ability to deliver maximum value and certainty

Contact Details



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