



Seale & Associates

25 years

SEMICONDUCTORS INDUSTRY
Q4 2024
VALUATION UPDATE

Introduction

We are pleased to share our Semiconductor Industry Multiples Valuation Update for Q4 2024.

At Seale & Associates, we are committed to providing process-driven solutions designed to optimize value and achieve our client’s strategic objectives in a range of transactions, including **Mergers, Acquisitions, Divestitures and Carve-Outs, Business Sales, Recapitalizations, and Joint Ventures**, among other corporate finance and strategy consulting services.

Over the course of 25+ years, we have successfully served clients all over the world, and we are delighted to continue providing investment banking advisory services to our clients who are looking to grow through acquisitions or optimize their portfolios through strategic divestitures.

Seale has extensive experience advising leading multinational companies, private equity firms, and family-owned businesses across a wide range of industries.



James A. Seale | President
jseale@sealeassociates.com



Brett M. Carmel | Senior Managing Director
bcarmel@sealeassociates.com



Robert Whitney | Managing Director
rwhitney@sealeassociates.com



Sergio Garcia del Bosque | Managing Director
sgarcia@sealeassociates.com



Carlos Hernández Goudet | Managing Director
chernandez@sealeassociates.com



Alejandro Montemayor | Vice President
amontemayor@sealeassociates.com



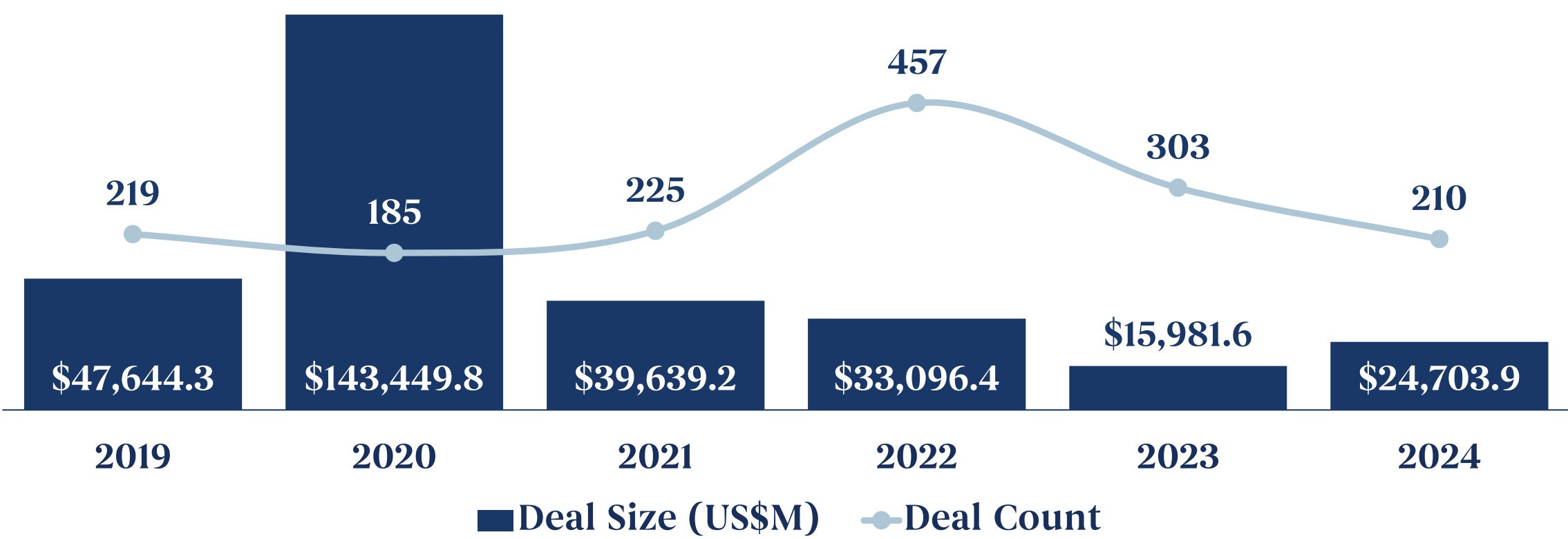
Armando Rios | Vice President
arios@sealeassociates.com

Semiconductor Industry Overview, M&A Trends and Market Intelligence

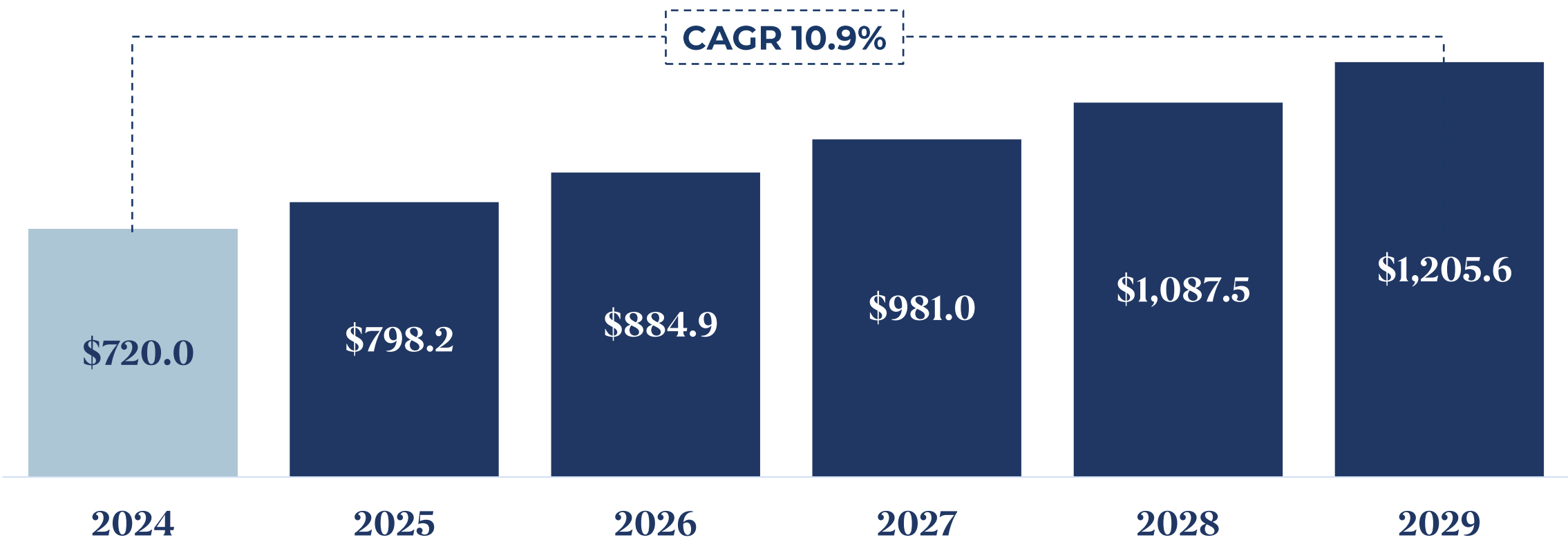
Industry Overview

- The semiconductor industry is expected to grow at a **CAGR of 10.9% from 2024 to 2029**, as semiconductors become **fundamental devices** for the development of technological equipment
- The growth of the industry is mainly influenced by **artificial intelligence (AI)**. This trend has driven the **demand for chips** in electronic equipment and emerging technologies, such as **digitization**, the **Internet of Things (IoT)**, **5G**, among others
- The **smartphone market** is the leading end-market revenue generator in the semiconductor industry, with a projected 20.2% of total revenue by 2025. Likewise, revenue from the **server, data center and storage** segment is expected to grow at a **CAGR of 32.0% between 2023 and 2025**
- Within mergers and acquisitions (M&A) activity, **strategic buyers** are seeking for acquisitions that **align with their overall corporate strategy**, with the objective of **specializing in their field**. On the other hand, **financial buyers**, particularly private equity funds, are seeking for companies that are **leveraging emerging technologies** in their operations
- **Electronics component manufacturers** have acquired semiconductor companies to improve **efficiency within the supply chain** through **strategic acquisitions**. In addition, the semiconductor supply chain had been concentrated in key regions but recently, companies began **to expand their businesses to leverage emerging markets**

Semiconductor Industry M&A Deal Size and Volume












Semiconductor Industry Market Size in Billions of USD











Source: Mordor Intelligence, Statista, SCRM, BGC, SPEL, Elmos Semiconductors, Capital IQ






Manufacturers Global Comparable Public Companies

Company		Country	Market Cap. US\$M	Enterprise Value US\$M	Revenue US\$M	EBITDA Margin	Annual Average EV/EBITDA		Fourth Quarter Dec. 31, 2024 EV/ EBITDA		EV/ Revenue
							2022	2023			
Infineon Technologies AG		DEU	\$42,234	\$45,306	\$15,195	33.0%	10.2x	8.6x	9.0x		3.0x
Intel Corporation		USA	\$86,476	\$116,978	\$53,101	20.4%	5.5x	15.0x	10.8x		2.2x
Micron Technology, Inc.		USA	\$93,769	\$99,468	\$29,094	43.0%	4.2x	16.8x	8.0x		3.4x
NVIDIA Corporation		USA	\$3,288,762	\$3,260,500	\$113,269	64.5%	41.8x	99.4x	44.6x		28.8x
NXP Semiconductors N.V.		NLD	\$52,826	\$60,196	\$12,614	37.2%	12.6x	11.4x	12.8x		4.8x
QUALCOMM Incorporated		USA	\$170,672	\$172,812	\$40,696	29.8%	11.2x	10.7x	14.2x		4.2x
SK hynix Inc.		KOR	\$81,113	\$90,363	\$44,808	41.9%	3.5x	11.0x	4.8x		2.0x
Texas Instruments Incorporated		USA	\$171,050	\$176,872	\$15,641	44.9%	14.5x	15.0x	25.2x		11.3x
Taiwan Semiconductor Manufacturing Company Limited		TWN	\$850,448	\$816,598	\$88,295	62.2%	10.7x	8.8x	14.9x		9.2x
■ Excluded from mean						Mean	9.1x	12.2x	10.6x		3.3x
■ NM: Not Measurable						Median	10.7x	11.4x	12.8x		4.2x





Chip Designers Global Comparable Public Companies

Company		Country	Market Cap. US\$M	Enterprise Value US\$M	Revenue US\$M	EBITDA Margin	Annual Average EV/EBITDA		Fourth Quarter Dec. 31, 2024 EV/ EBITDA		EV/ Revenue
							2022	2023			
Advanced Micro Devices, Inc.		USA	\$196,019	\$193,713	\$25,785	18.2%	28.9x	41.8x	41.3x		7.5x
Broadcom Inc.		USA	\$1,086,717	\$1,146,285	\$51,574	49.5%	15.0x	17.5x	44.9x		22.2x
Intel Corporation		USA	\$86,476	\$116,978	\$53,101	20.4%	5.5x	15.0x	10.8x		2.2x
Marvell Technology, Inc.		USA	\$95,572	\$99,046	\$5,376	22.7%	37.1x	31.6x	81.0x		18.4x
MediaTek Inc.		TWN	\$68,803	\$63,889	\$16,186	23.8%	8.4x	10.0x	16.6x		3.9x
NXP Semiconductors N.V.		NLD	\$52,826	\$60,196	\$12,614	37.2%	12.6x	11.4x	12.8x		4.8x
QUALCOMM Incorporated		USA	\$170,672	\$172,812	\$40,696	29.8%	11.2x	10.7x	14.2x		4.2x
Renesas Electronics Corporation		JPN	\$23,326	\$31,390	\$8,577	36.5%	8.4x	7.8x	10.0x		3.7x
■ Excluded from mean						Mean	10.2x	12.1x	12.9x		4.4x
■ NM: Not Measurable						Median	11.9x	13.2x	15.4x		4.5x

Production Equipment Manufacturers Global Comparable Public Companies








Company		Country	Market Cap. US\$M	Enterprise Value US\$M	Revenue US\$M	EBITDA Margin	Annual Average EV/EBITDA		Fourth Quarter Dec. 31, 2024 EV/EBITDA EV/Revenue	
							2022	2023		
Advantest Corporation		JPN	\$43,254	\$42,775	\$4,345	25.2%	11.5x	17.0x	39.0x	9.8x
Applied Materials, Inc.		USA	\$132,330	\$129,464	\$27,176	30.8%	11.9x	13.5x	15.5x	4.8x
ASML Holding N.V.		NLD	\$276,165	\$275,863	\$29,261	32.2%	31.3x	28.7x	29.3x	9.4x
KLA Corporation		USA	\$84,285	\$86,481	\$10,847	39.7%	14.1x	14.6x	20.1x	8.0x
Lam Research Corporation		USA	\$92,937	\$91,854	\$16,209	32.0%	11.4x	13.2x	17.7x	5.7x
Tokyo Electron Limited		JPN	\$70,751	\$67,408	\$14,778	28.0%	12.2x	13.6x	16.3x	4.6x
■ Excluded from mean						Mean	12.2x	14.4x	19.8x	6.8x
■ NM: Not Measurable						Median	12.0x	14.1x	18.9x	6.8x

Material Providers Global Comparable Public Companies















Company		Country	Market Cap. US\$M	Enterprise Value US\$M	Revenue US\$M	EBITDA Margin	Annual Average EV/EBITDA		Fourth Quarter Dec. 31, 2024 EV/EBITDA EV/Revenue	
							2022	2023		
BASF SE		DEU	\$39,234	\$62,714	\$67,564	10.3%	5.2x	11.6x	9.0x	0.9x
DuPont de Nemours, Inc.		USA	\$31,869	\$38,320	\$12,386	25.9%	9.8x	11.4x	12.0x	3.1x
Shin-Etsu Chemical Co., Ltd.		JPN	\$66,685	\$56,408	\$16,036	37.8%	6.7x	6.4x	9.3x	3.5x
Sumitomo Chemical Company, Limited		JPN	\$3,633	\$12,524	\$16,187	NM	6.4x	12.0x	NM	0.8x
						Mean	7.0x	10.3x	10.1x	2.1x
						Median	6.5x	11.5x	9.3x	2.0x

Excluded from mean
NM: Not Measurable

Testing & Packaging Global Comparable Public Companies

Company		Country	Market Cap. US\$M	Enterprise Value US\$M	Revenue US\$M	EBITDA Margin	Annual Average EV/EBITDA		Fourth Quarter Dec. 31, 2024 EV/EBITDA EV/Revenue	
							2022	2023		
Amkor Technology, Inc.		USA	\$6,336	\$6,264	\$6,318	18.1%	3.7x	4.5x	5.5x	1.0x
ASE Technology Holding Co., Ltd.		TWN	\$21,444	\$26,252	\$18,164	16.6%	4.5x	5.1x	8.7x	1.4x
BE Semiconductor Industries N.V.		NLD	\$10,919	\$10,818	\$629	36.9%	13.2x	28.8x	46.6x	17.2x
ChipMOS TECHNOLOGIES INC.		TWN	\$696	\$754	\$692	29.4%	3.2x	4.4x	3.7x	1.1x
Cohu, Inc.		USA	\$1,245	\$1,010	\$402	3.0%	6.6x	8.8x	82.8x	2.5x
Powertech Technology Inc.		TWN	\$2,781	\$3,257	\$2,237	31.1%	3.1x	4.1x	4.7x	1.5x
Rorze Corporation		JPN	\$1,716	\$1,681	\$746	29.1%	9.7x	7.7x	7.7x	2.3x
■ Excluded from mean						Mean	4.2x	5.8x	6.1x	1.6x
■ NM: Not Measurable						Median	4.5x	5.1x	7.7x	1.5x

Semiconductor Industry – Global Transactions

Date	Target	Country	Description	Buyer	Seller	% Acquired	Size US\$M	EV/ EBITDA	EV/ Revenue
Dec-24		DEU	AEMtec , a manufacturer of micro and opto-electronic modules, has merged with aSpect Systems , a provider of prototyping and outsourced manufacturing services, to accelerate innovation and enhance their current offering		-	Merger	-	-	-
Dec-24*	QSIL GmbH Quarzschmelze Ilmenau	DEU	SCHOTT , a producer of glass, glass-ceramic and polymer components, agreed to acquire a quartz glass production facility in Ilmenau from QSIL , a manufacturer of high-melting and high-temperature-resistant			100.0%	-	-	-
Dec-24		SWE	Virtium , a designer and manufacturer of industrial storage and memory solutions, has acquired Embedded Artists , a manufacturer of ARM based modules, to strengthen its position as a provider of Edge AI system solutions		-	100.0%	-	-	-
Nov-24	US Solar Manufacturing Assets	USA	FREYR Battery , a provider of clean energy solutions, has acquired the U.S. solar manufacturing assets of Trina Solar , a manufacturer of solar panels, energy storage systems, and smart energy solutions			100.0%	-	-	-
Nov-24		USA	Macom , a designer and manufacturer of semiconductor products for the Telecommunications, Industrial and Defense and Datacenter industries, has acquired ENGIN-IC , a provider of MMIC and module solutions, to strengthen its position		-	100.0%	\$14.2	-	-
Nov-24		USA	Diodes , a manufacturer and supplier of discrete and mixed-signal components, has acquired Fortemedia , a developer of voice processing technology for communications, to enhance its offering in voice processing technologies			100.0%	\$60.8	-	-
Oct-24		FRA	Ardian , a private investment house, has acquired IBS , a provider of innovative ion implantation solutions		-	100.0%	-	-	-
Oct-24		GBR	WJ Group , a road marking company, has acquired Sunstone , a developer of solar power technologies, to enhance its intelligent traffic solutions offering		Bright Minds Capital Partners	100.0%	-	-	-

*Announced transactions pending approval and other customary closing conditions

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JAMES A. SEALE

President and Founder | Washington, DC

  +1 (703) 623-9253

32+ years of global M&A experience, Attorney, CPA Arthur Andersen, and Professor of Global Investment Banking at George Washington University
University of Virginia - JD
University of Kentucky - BS in Accounting



BRETT M. CARMEL

Senior Managing Director and Co-founder | Miami, FL

  +1 (703) 294-6530

25+ years of global M&A experience and Professor of M&A at Johns Hopkins University
The George Washington University - MBA International Business and MA - International Affairs
University of Florida - BA in Political Science with High Honors



SERGIO GARCIA DEL BOSQUE

Managing Director | Mexico City, Mexico

  +52 (55) 8000-7463

16+ years of global M&A experience
IPADE - MBA
Instituto Tecnologico y de Estudios Superiores de Monterrey
BS in Industrial Engineering



ROBERT E. WHITNEY

Managing Director | Washington, DC

  +1 (703) 801-8939

19+ years of global M&A experience, CPA Deloitte & Touche, Corporate Audit and Assurance Services
University of Richmond - BS Business Administration in Accounting



CARLOS HERNANDEZ GOUDET

Managing Director | San Luis Potosi, Mexico

  +1 (571) 482-3432

15+ years of global M&A experience
Columbia University - MBA
Instituto Tecnologico y de Estudios Superiores de Monterrey
BS in Industrial Engineering



FELIPE BUENO

Senior Director | Monterrey, Mexico

  +52 (84) 4432-4444

32+ years with Grupo Industrial Saltillo with experience as Director, Corp. Dev. and extensive global commercial experience
Instituto Tecnologico y de Estudios Superiores de Monterrey
MBA and BS in Industrial Engineering



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