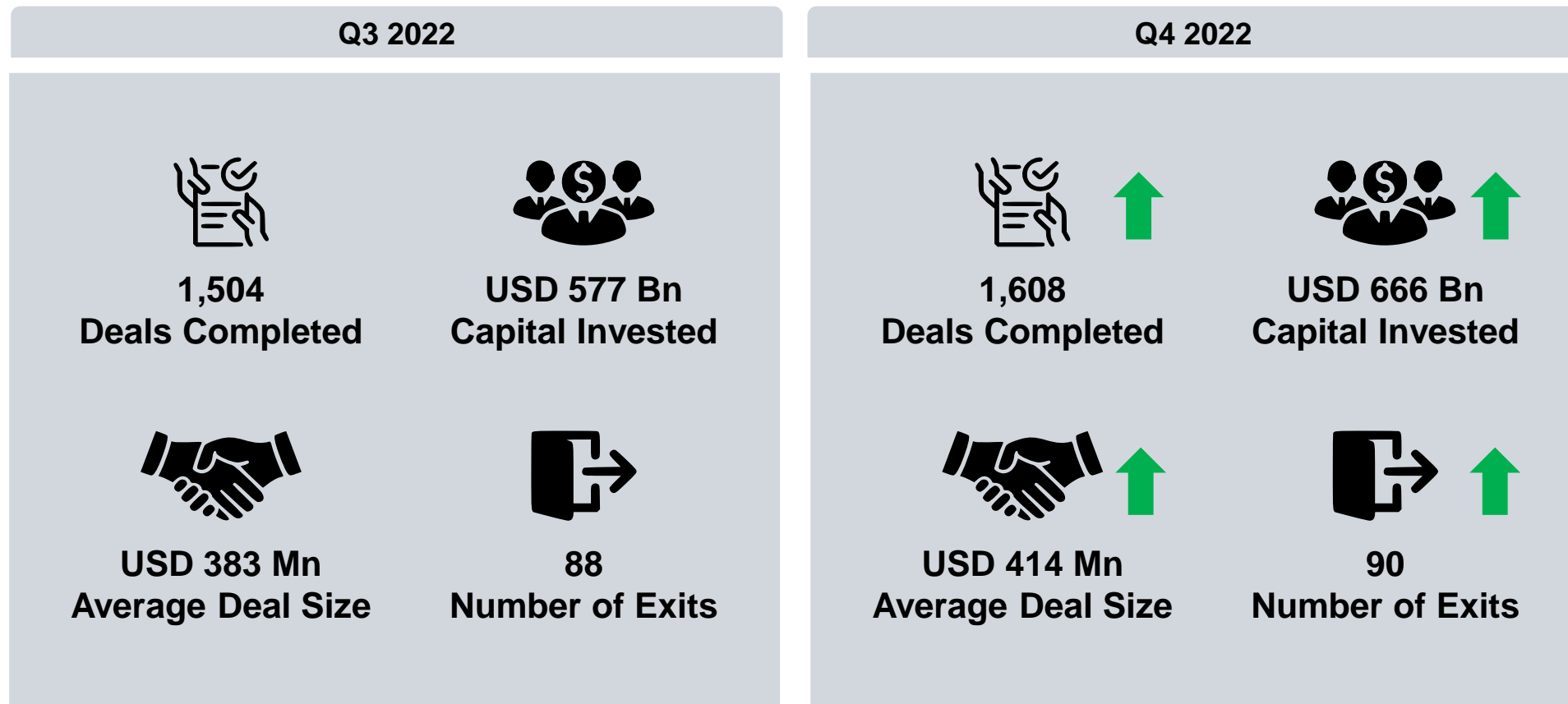


Global Private Equity Factbook – Q4 2022



Private equity activities expanded in Q4 2022 despite macroeconomic headwinds; High-ticket deals led to 8% rise in average deal size



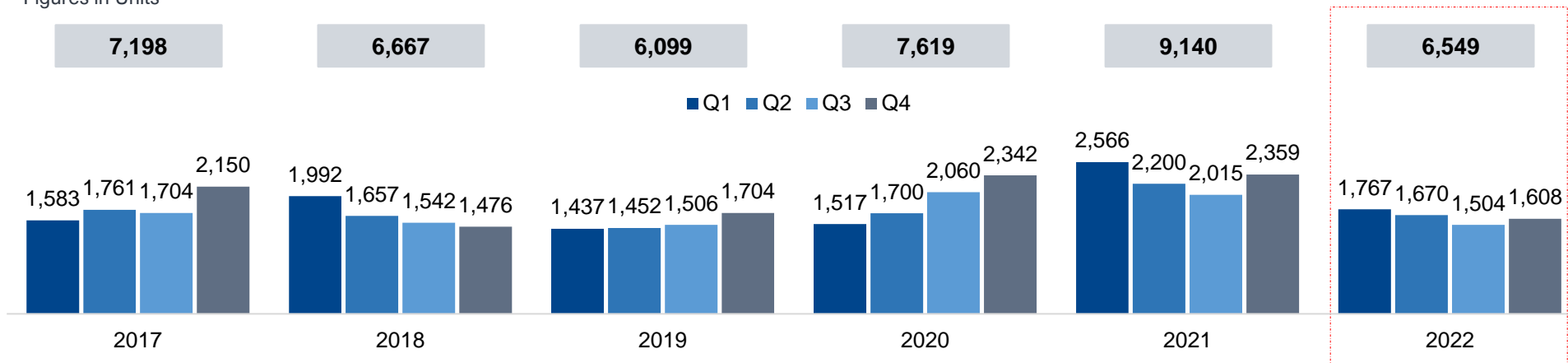
Source: Pitchbook, Aranca Analysis

Note: Quarter represents the calendar year.

Deal volume increased 7% in Q4 2022 after decline in Q1–Q3 2022 closing the year at pre-COVID levels; PE focused on public companies and add-on targets

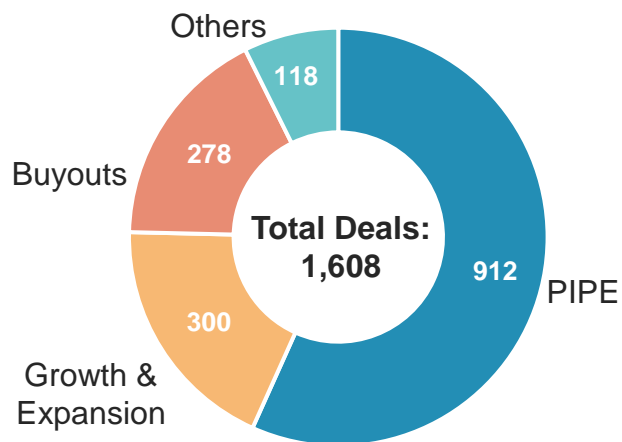
Number of Deals

Figures in Units



Type of Deals – Q4 2022

Indicates annual/YTD deals completed



- Private equity (PE) deals rose primarily due to an increase in add-on deals
- About 60% of total deals in 2022 were add-on deals, i.e., 12% higher than the yearly average
- This trend is likely to continue as PE investors are focused on creating value for their existing portfolio companies
- PIPE and growth and expansion deals account for about 75% of total deals as PE investors seek lower valuations amidst a volatile macro environment

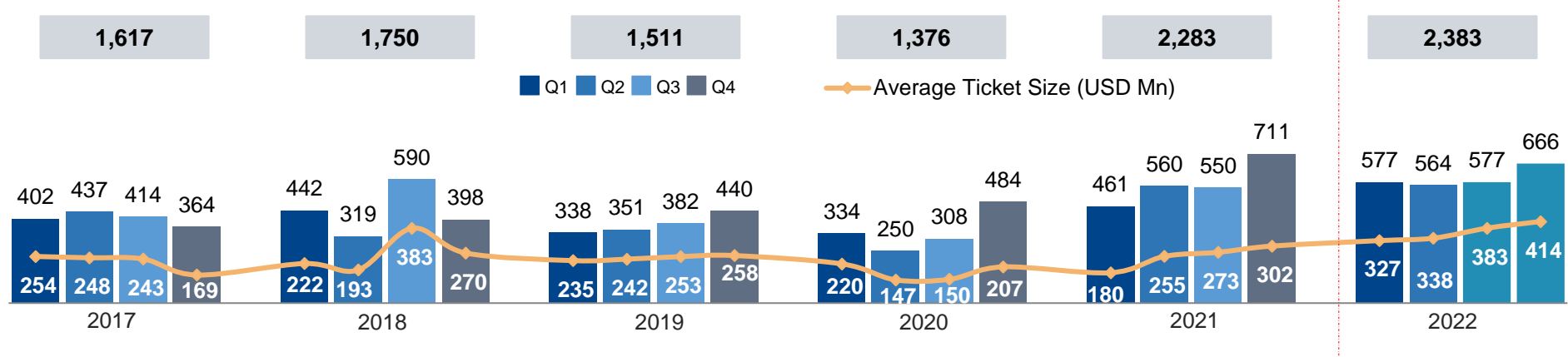
Source: Pitchbook, Aranca Analysis

Note: *PIPE: Private Investment in Public Equity

Capital invested surged ~15% in Q4 2022 to outpace annualized investments since 2017; increased investments led by easy access to private credit

Capital Invested

Figures in USD Bn



Indicates annual/YTD capital invested

Top Deals – Q4 2022

Company Name	Deal Size (USD Bn)	Investors
Twitter	44.0	A.M Management & Consulting, Aliya Capital Partners, and others
Atlantia	19.7	Blackstone, Edizione
Toshiba	19.4	-
The Nielsen Company	16.0	Brookfield Business Partners, Evergreen Coast Capital
Emerson Electric	14.0	Abu Dhabi Investment Authority, Blackstone, GIC

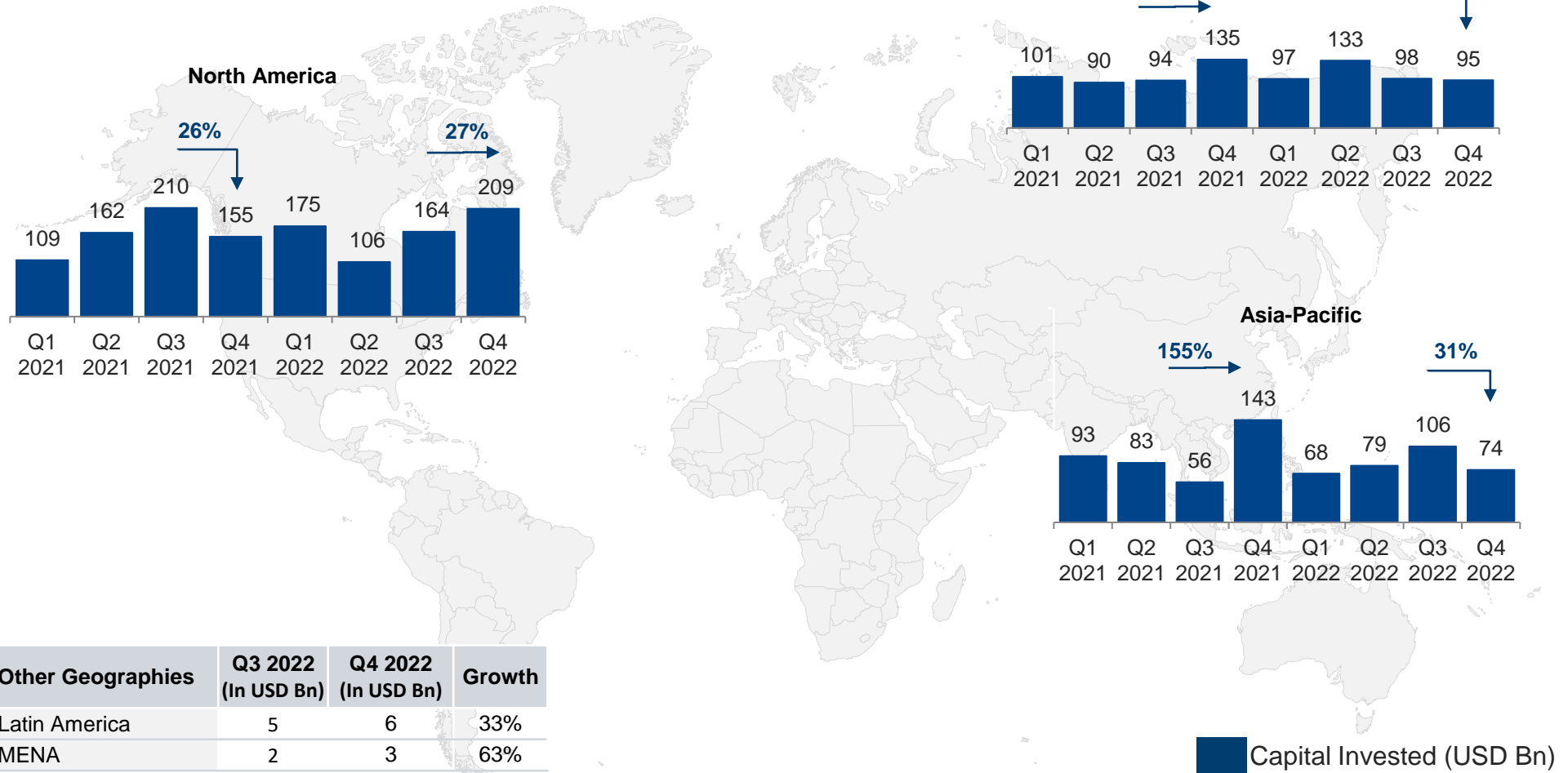
- PE investors faced difficulties in securing finances for leveraged buyouts deals
 - Banks are at high debt risks due to lower valuations; consequently, many banks are now cautious about buyout transactions
- However, soaring private credit through direct lenders (non-banking institutes) boosted PE capital investments in Q4 22, accounting for a major share of financing for PE transactions

Source: Pitchbook, Aranca Analysis

Note: *PIPE: Private Investment in Public Equity

Deal activity grew in North America, Latin America, and MENA region, whereas investments in Europe and Asia-Pacific declined in Q4 2022

Key Geographies

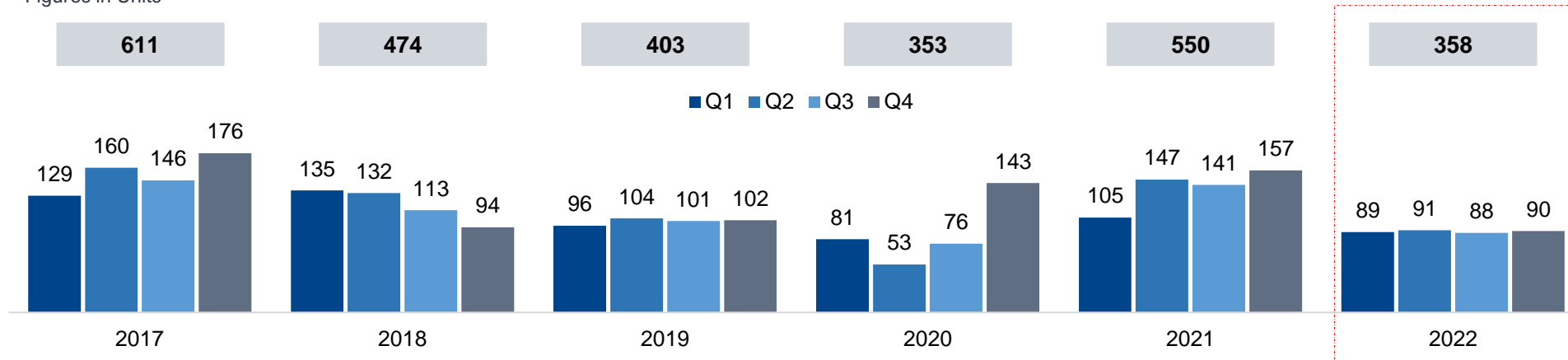


Source: Pitchbook, Aranca Analysis

Despite a marginal rise in Q4 2022, exits declined 35% (yoy) as PE investors remain cautious of market volatility and low valuations

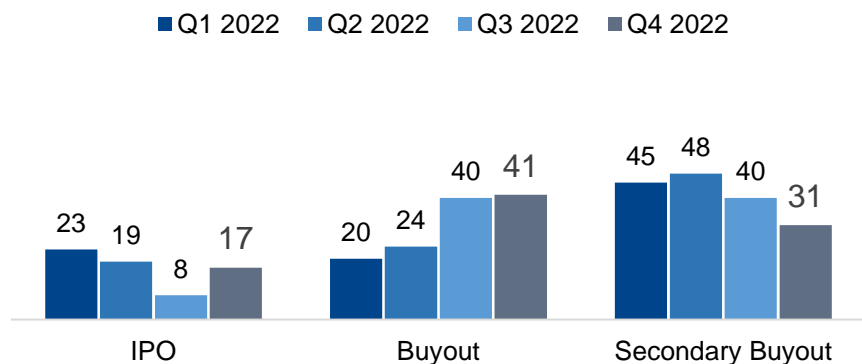
Number of Exits

Figures in Units



Key Exit Routes

Figures in Units



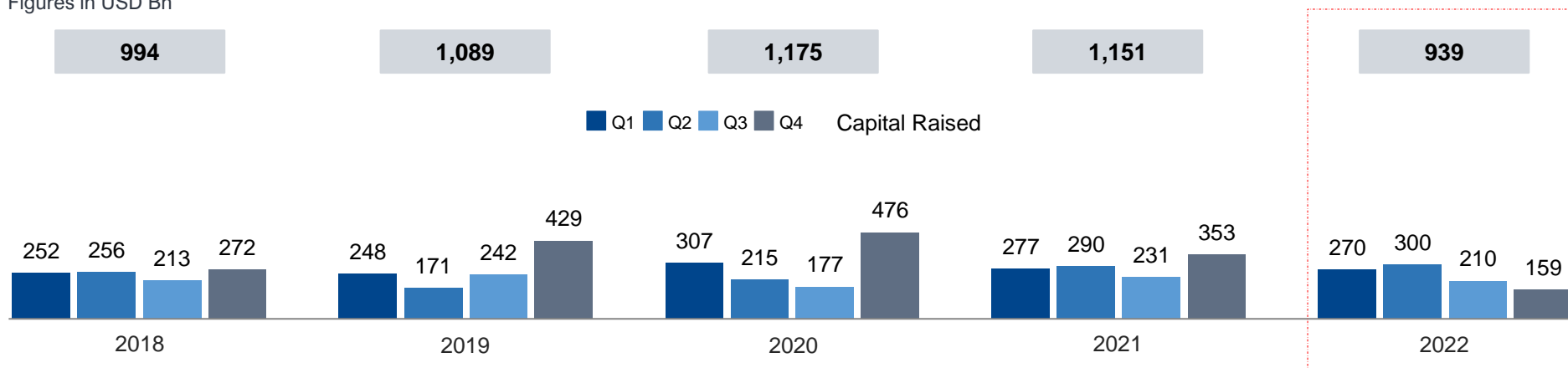
- PE exits decelerated 35% through 2022 due to high interest rates, high market volatility, and low company valuations
- Exits through buyouts and secondary buyouts accounted for 46% and 35% of the total exits in Q4 2022, respectively, as IPO became less attractive

Source: Pitchbook, Aranca Analysis

PE fundraising remained subdued and declined 24% in Q4 2022

Capital Raised

Figures in USD Bn



Key Companies by Total Capital Raised – Q4* 2022

PE Name	Investor Type	Fund Name	Total Capital Raised (USD Bn)	Company Headquarters
Thoma Bravo	Buyout	Thoma Bravo Fund XV, Thoma Bravo Discover Fund IV, and Thoma Bravo Explore Fund II	32.0	US
Advent International	Buyout	Advent International GPE X	25.0	US
KKR	Buyout	KKR North America Fund XIII	19.0	US
Insight Partners	Buyout	Insight Partners XII	17.2	US
Brookfield Asset Management	Growth and Expansion	Brookfield Global Transition Fund	15.0	Canada

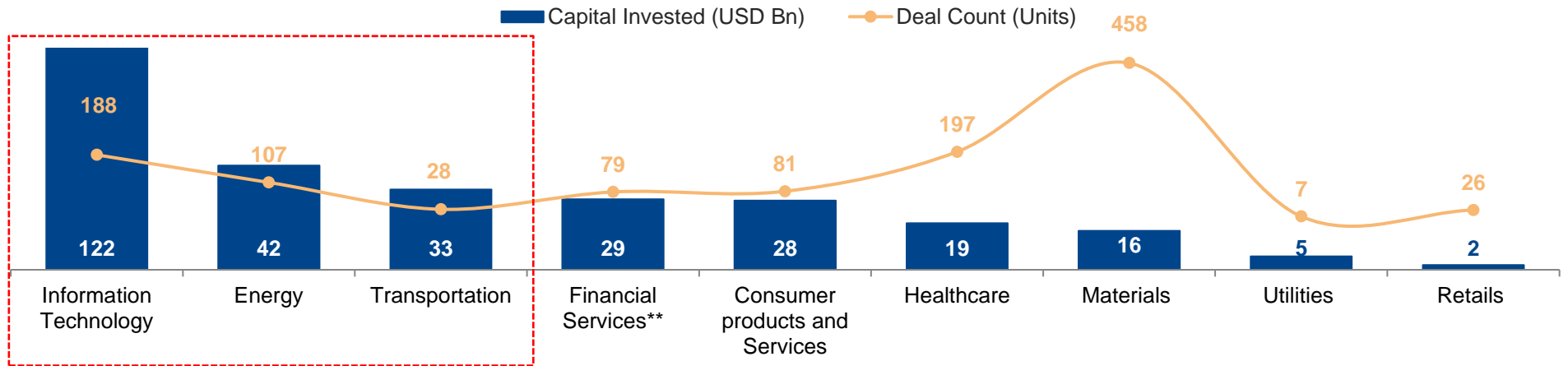
* Information is available till mid-December

Source: Pitchbook, Aranca Analysis

- Institutional limited partners (LPs) posted poor performance of their assets leading to selective allocation of funds in private capital markets
- Majority LPs reached their annual allocation targets in the first nine months of 2022
- Further, the slowdown in exits inhibited investors to commit investments in PE funds

IT, energy service, and transportation deals accounted for 67% of total capital invested by PE firms in Q4 2022a

Top Sectors* – Q4 2022



Note: *Only includes deals for which sector-level information is available. Deals include completed and announced

“We are still in the early innings of this digital transformation, and we are expecting one in three private equity deals to be technology-or-software related by 2025. Covid has accelerated some adoption, but at the end of the day, if you believe we are facing a recessionary environment, then technology and software should continue to attract investment from customers because it is one of the only place where companies can create massive productivity gains and operating leverages.”

– A asset management firm (specializes in private credit)

“In the short term, the war in Ukraine has only increased the geopolitical importance of gas supply, making Origin more valuable than ever.”

– A climate focused media company

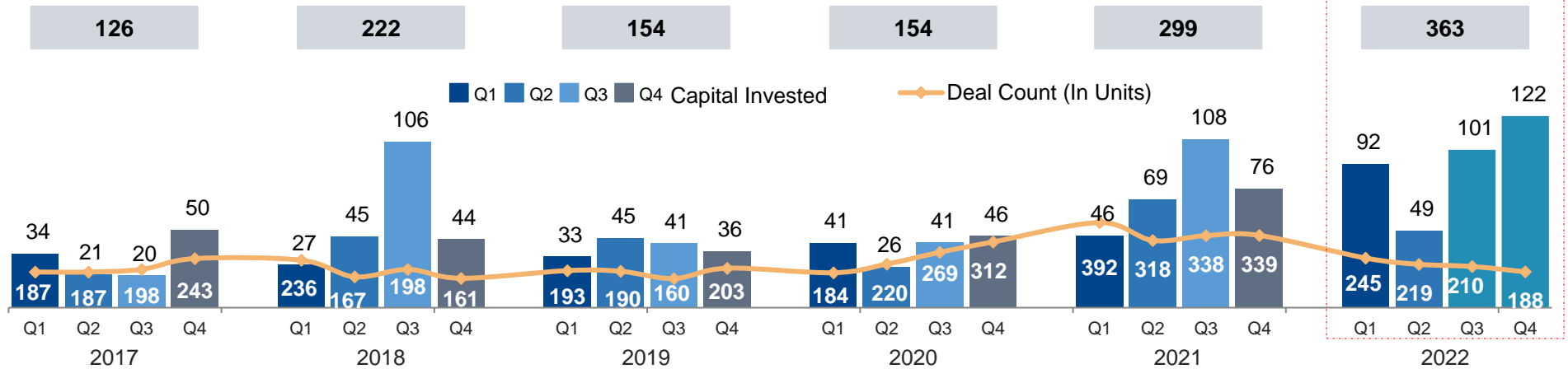
Source: Pitchbook, Aranca Analysis

Note: **Financial services does not include investments done in real estate investment trust

PE investments in the IT sector increased ~21% QoQ due to focus on digital transformation in the post-COVID era

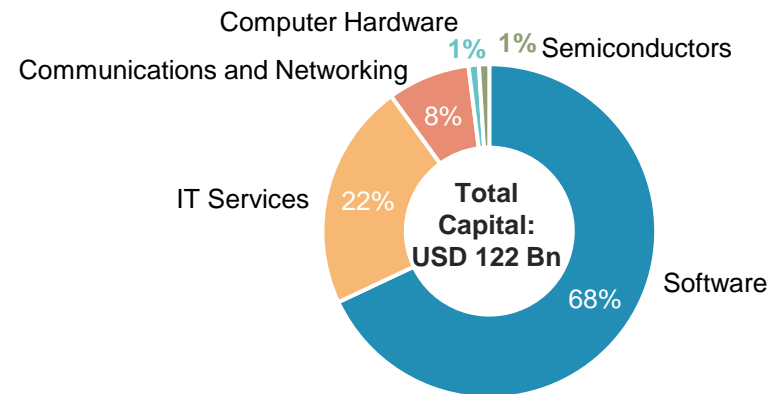
Top Sectors – Information Technology (IT)

Figures in USD Bn



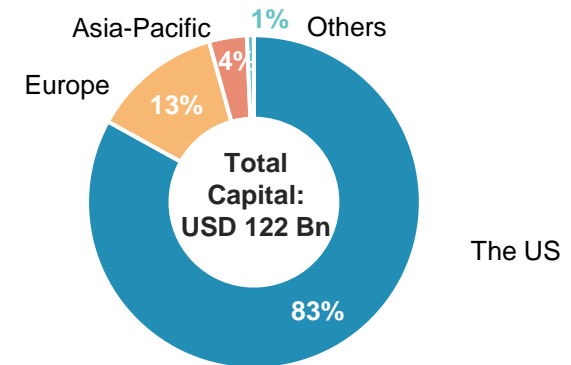
IT by Primary Sectors in Q4 2022

Figures in Percentage and USD Bn



IT by Geography in Q4 2022

Figures in Percentage and USD Bn



Source: Pitchbook, Aranca Analysis

*Note: Deals include completed and announced

Top PE investments in IT sector in Q4 2022 *(Illustrative)*

IT Sectors	Subsectors	Company Name	Company Description	Geography	Deal Size (USD)	Deal Type	Investors	EV/ EBITDA	EV/ Revenue
Software	Social/Platform Software	Twitter	A social media company	the US	44.0 Bn	Buyout	A.M Management & Consulting, Aliya Capital Partners, and others	8.14x	72.28x
	Business Software	Zendesk	A customer engagement software solutions developer	the US	10.2 Bn	Buyout	Abu Dhabi Investment Authority, GIC Singapore, and others	5.58x	-
IT Services	Systems and Information Management	Switch	A technology infrastructure company	the US	11.0 Bn	Buyout	Digital Bridge Group, IFM Investors	16.39x	16.83x
		Global Switch Holdings	A data centers operating company	the UK	10.0 Bn	Buyout	-	-	-
Communications and Networking	Wireless Communication Equipment	Maxar Technologies (NYS: MAXR)	An integrated space and geospatial intelligence company	the US	6.4 Bn	Buyout	Advent Technologies	3.65x	15.89x
	Internet Service Provider	Westconnect	A broadband network service provider	Germany	714.0 Mn	Buyout	Igneo Infrastructure Partners	-	-
	Telecommunication services	Spark TowerCo	A mobile towers operating company	New Zealand	516.0 Mn	Buyout	Ontario Teachers' Pension Plan	-	-
Computer Hardware	Electronic Equipment	Movella	A motion sensors developer	the US	379.0 Mn	PIPE	Francisco Partners	-	-
	Other Hardware	RS Technologies	A composite utility poles manufacturer	Canada	110.0 Mn	Growth/Expansion	Energy Impact Partners	-	-
Semiconductors	Application Specific Semiconductors	Shanghai Orient-Chip Technology	An integrated circuits manufacturer	China	304.0 Mn	IPO	Citic Securities Investment	-	-
		GRINM Semiconductor Materials	A semiconductor silicon materials manufacturer	China	257.0 Mn	IPO	Beijing Industrial Investment, China Resources Microelectronics, and others	-	-
	Median							6.86x	16.83x

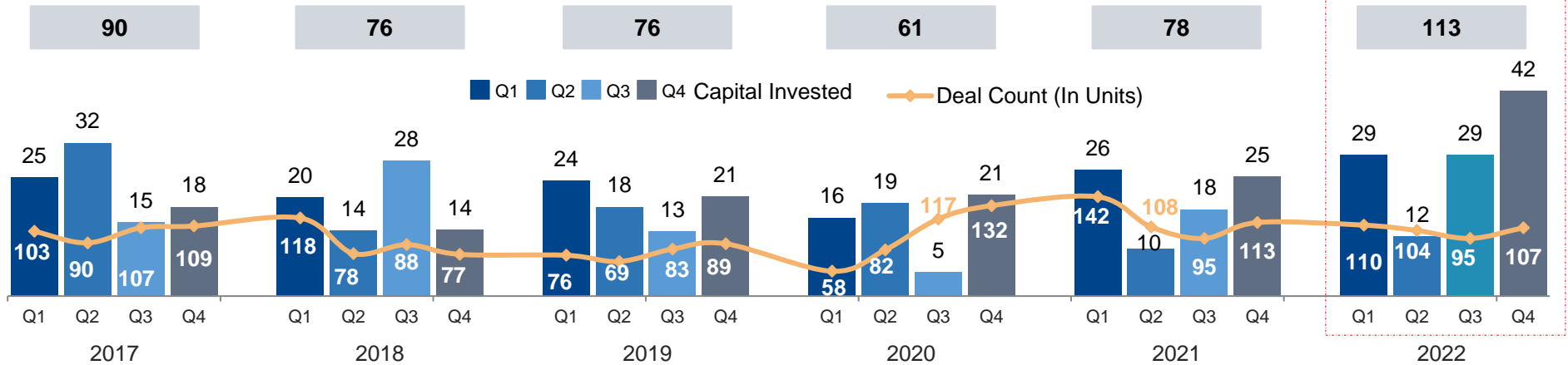
Source: Pitchbook, Aranca Analysis

*Note: Deals include completed and announced

Energy sector posted the best quarter in last six years with 46% investment growth, driven by increased focused on building independent production capabilities

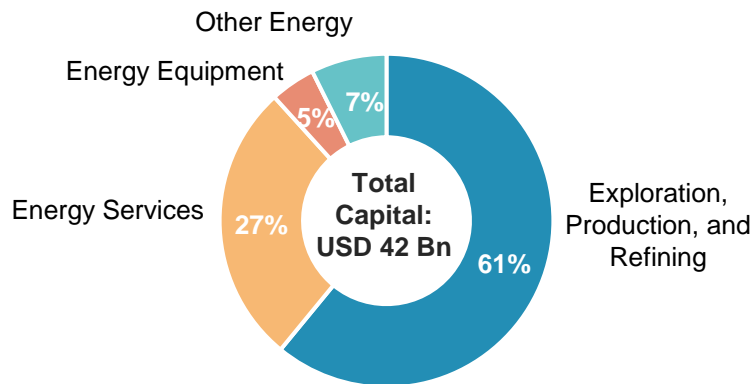
Top Sectors – Energy

Figures in USD Bn



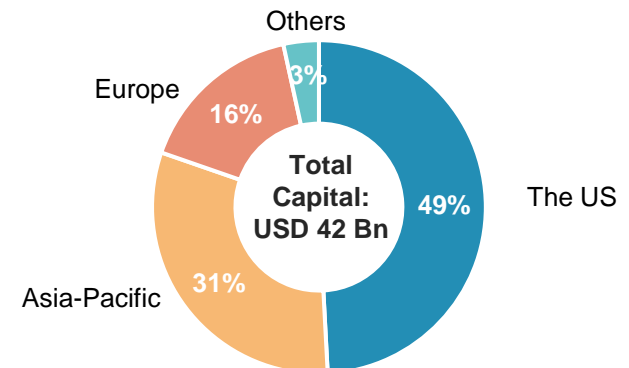
Energy by Primary Sectors in Q4 2022

Figures in Percentage and USD Bn



Energy by Geography in Q4 2022

Figures in Percentage and USD Bn



Source: Pitchbook, Aranca Analysis

*Note: Deals include completed and announced

Top PE investments in energy sector in Q4 2022 *(Illustrative)*

Energy Sectors	Subsectors	Company Name	Company Description	Geography	Deal Size (USD)	Deal Type	Investors	EV/ EBITDA	EV/ Revenue
Exploration, Production, and Refining	Energy Exploration	Origin Energy (ASX:ORG)	A utility service provider	Australia	7.4 Bn	Buyout	Brookfield Asset Management, MidOcean Energy	0.72x	-
	Energy Production	CEP Renewables	A renewable energy asset manufacturer	Australia	2.6 Bn	Buyout	Squadron Energy	-	-
		Contour Global	A power generation company	the UK	2.1 Bn	Buyout	Kohlberg Kravis Roberts	0.61x	1.71x
Energy Services	Other Energy Services	Westinghouse Electric Company	A nuclear technologies and infrastructure development service provider	the US	8.0 Bn	Buyout	Brookfield Renewable Partners, Cameco	-	-
	Energy Marketing	GreenYellow	An energy supply service provider	France	1.4 Bn	Buyout	Ardian, Bpifrance, and others	-	-
	Energy Infrastructure	Scout Clean Energy	A developer and operator of solar, wind, and renewable power projects	the US	1.3 Bn	Buyout	Brookfield Renewable Partners	-	-
Other Energy	Other Energy	Energy Power Partners	A portfolio of 30 gas-to-electric facilities	the US	1.1 Bn	Buyout	NextEra Energy	-	-
		SK Materials Company	A gas production facility	South Korea	708.0 Mn	Buyout	Brookfield Asset Management	-	-
		Pembina Gas Infrastructure	A natural gas distribution company	Canada	493.0 Mn	Buyout	Stonepeak Infrastructure Partners	-	-
Energy Equipment	Other Equipment	Ansaldo Energia	A power generating equipment manufacturer	Italy	567.0 Mn	Growth/ Expansion	-	-	-
		Gridspertise	A digital meters and intelligent grid service provider	Italy	314.0 Mn	Buyout	CVC Capital Partners	-	-
	Alternative Energy Equipment	California Bioenergy	A renewable energy company	the US	500.0 Mn	Growth/ Expansion	Brookfield Asset Management	-	-
Median								0.67x	1.71x

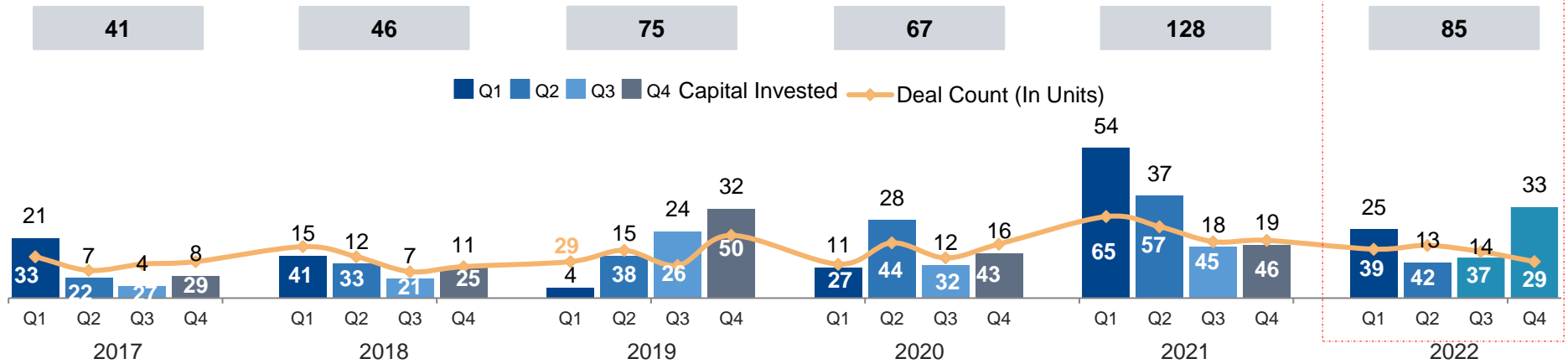
Source: Pitchbook, Aranca Analysis

*Note: Deals include completed and announced

PE investments in transportation sector grew 126% in Q4, with ~80% deals focused on building transportation infrastructure and manufacturing auto components

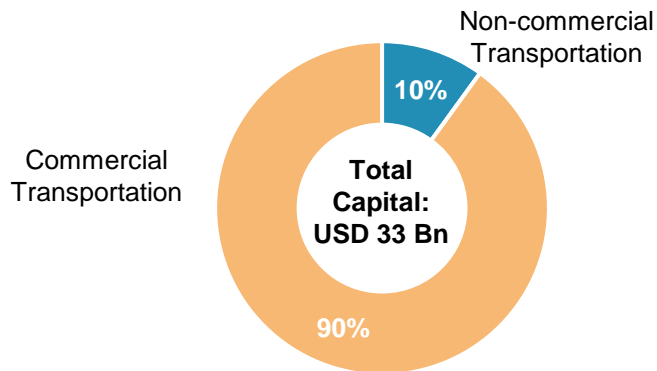
Top Sectors – Transportation

Figures in USD Bn



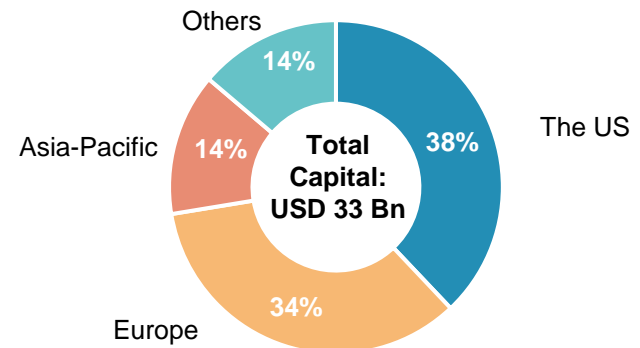
Transportation by Primary Sectors in Q4 2022

Figures in Percentage and USD Bn



Transportation by Geography in Q4 2022

Figures in Percentage and USD Bn



Source: Pitchbook, Aranca Analysis

*Note: Deals include completed and announced

Top PE investments in transportation sector in Q4 2022 *(Illustrative)*

Transportation Sectors	Subsectors	Company Name	Company Description	Geography	Deal Size (USD)	Deal Type	Investors	EV/ EBITDA	EV/ Revenue
Transportation	Air	Air India	An air transportation service provider	India	1.0 Bn	Growth/ Expansion	-	-	-
	Automotive	Lucid Group (NAS: LCID)	An automotive company	the US	915.0 Mn	PIPE	Ayar Third Investment Company	-	-
		Cary Group	A vehicle glass repair and replacement provider	Sweden	580.0 Mn	Buyout	CVC Capital Partners, Nordic Capital	2.54x	15.53x
		Getaround	A car-sharing platform developer	the US	175.0 Mn	PIPE	Mudrick Capital Management	-	-
		Doga	A manufacturer and distributor of automobile parts	Spain	105.0 Mn	Buyout	Nazca Capital	0.67x	5.88x
		Mobileye (NAS: MBLY)	A developer of autonomous driving and other technologies	Israel	100.0 Mn	PIPE	General Atlantic	-	-
Commercial Transportation	Infrastructure	Atlantia	An airports and motorways operator	Italy	19.7 Bn	Buyout	Blackstone, Edizione	1.77x	4.82x
	Road	Tenneco	An automotive components manufacturer	the US	7.1 Bn	Buyout	Apollo Global Management	0.36x	7.46x
	Marine	Daewoo Shipbuilding and Marine Engineering	A commercial and specialty ships manufacturer	South Korea	1.5 Bn	PIPE	Hanwha Energy, Hanwha Impact, Hanwha Systems	-	-
		Lloyd's List Intelligence	A maritime information service provider	the UK	362.0 Mn	Buyout	Montagu Private Equity	-	-
	Air	TCR Group	An aviation management service provider	Belgium	377.0 Mn	Buyout	3i Infrastructure	-	-
Median								1.22x	6.67x

Source: Pitchbook, Aranca Analysis

*Note: Deals include completed and announced

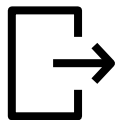
Aranca View



- High interest rates, rising inflation, and concerns relating to recession to weigh on PE deal environment



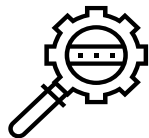
- LPs considering to decrease risk in portfolios by reducing allocations to PE that is likely to slow down the fundraising activities



- Exits to decelerate in 2023, which may impact the LP's ability to make new commitments



- High levels of PE dry powder in the US and Europe is anticipated to drive small-sized transactions in 2023



- PE deals to focus on software and health industry as they are economically resistant to recession

Source: Aranca Analysis



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