

# Needs-Based Climate Finance Project

*Enhancing mobilization of and access to international public climate finance*

Cairo, November 6, 2019

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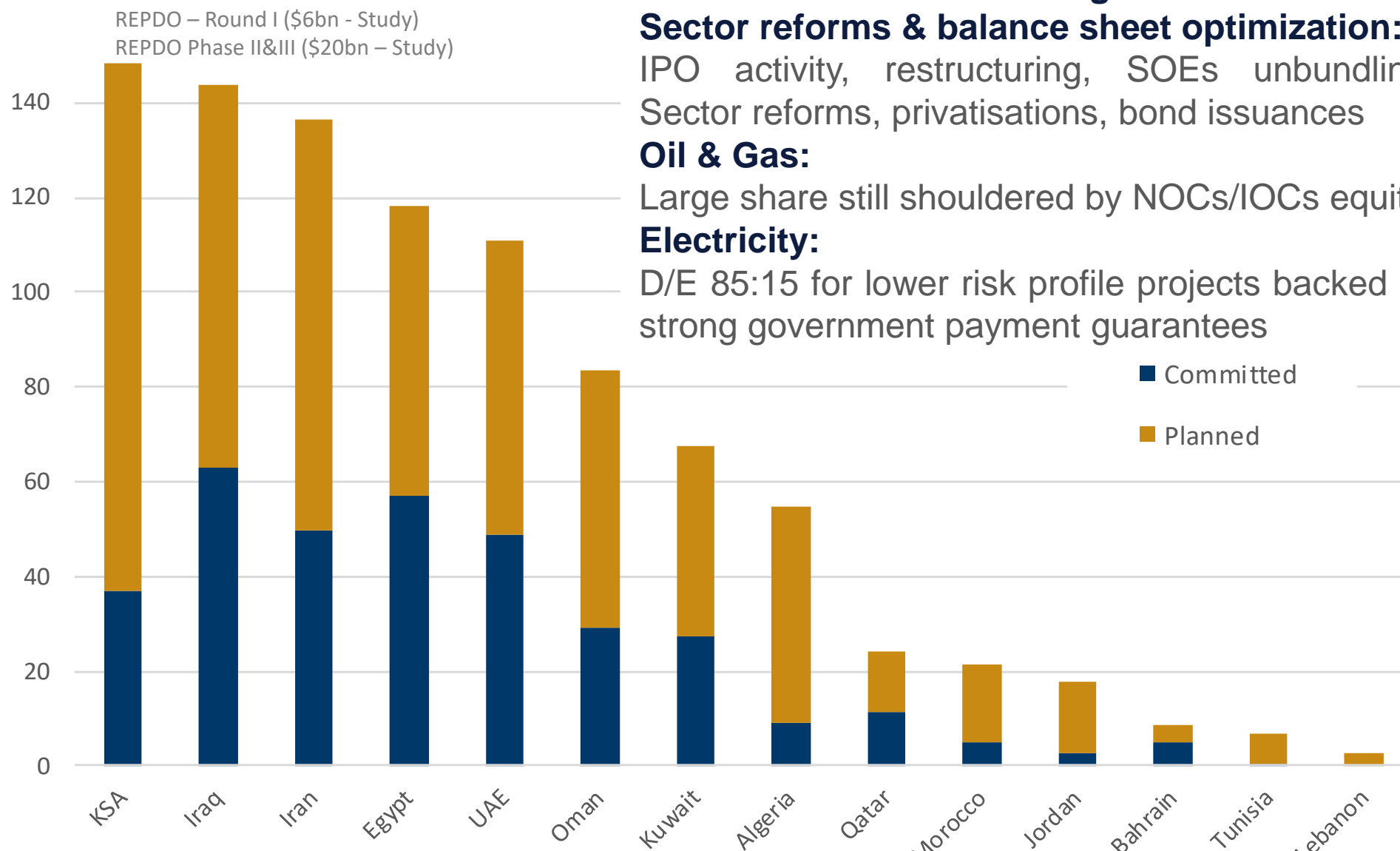


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APICORP



- 1. MENA Energy investments and funding needs**
- 2. Needs and priority areas of financing**
- 3. Instruments used**
- 4. Access requirements: for the energy and private sectors**

# MENA energy investments: \$961 billion in next 5 years



## Private sector share: slow growth

### Sector reforms & balance sheet optimization:

IPO activity, restructuring, SOEs unbundling, Sector reforms, privatisations, bond issuances

### Oil & Gas:

Large share still shouldered by NOCs/IOCs equity

### Electricity:

D/E 85:15 for lower risk profile projects backed by strong government payment guarantees

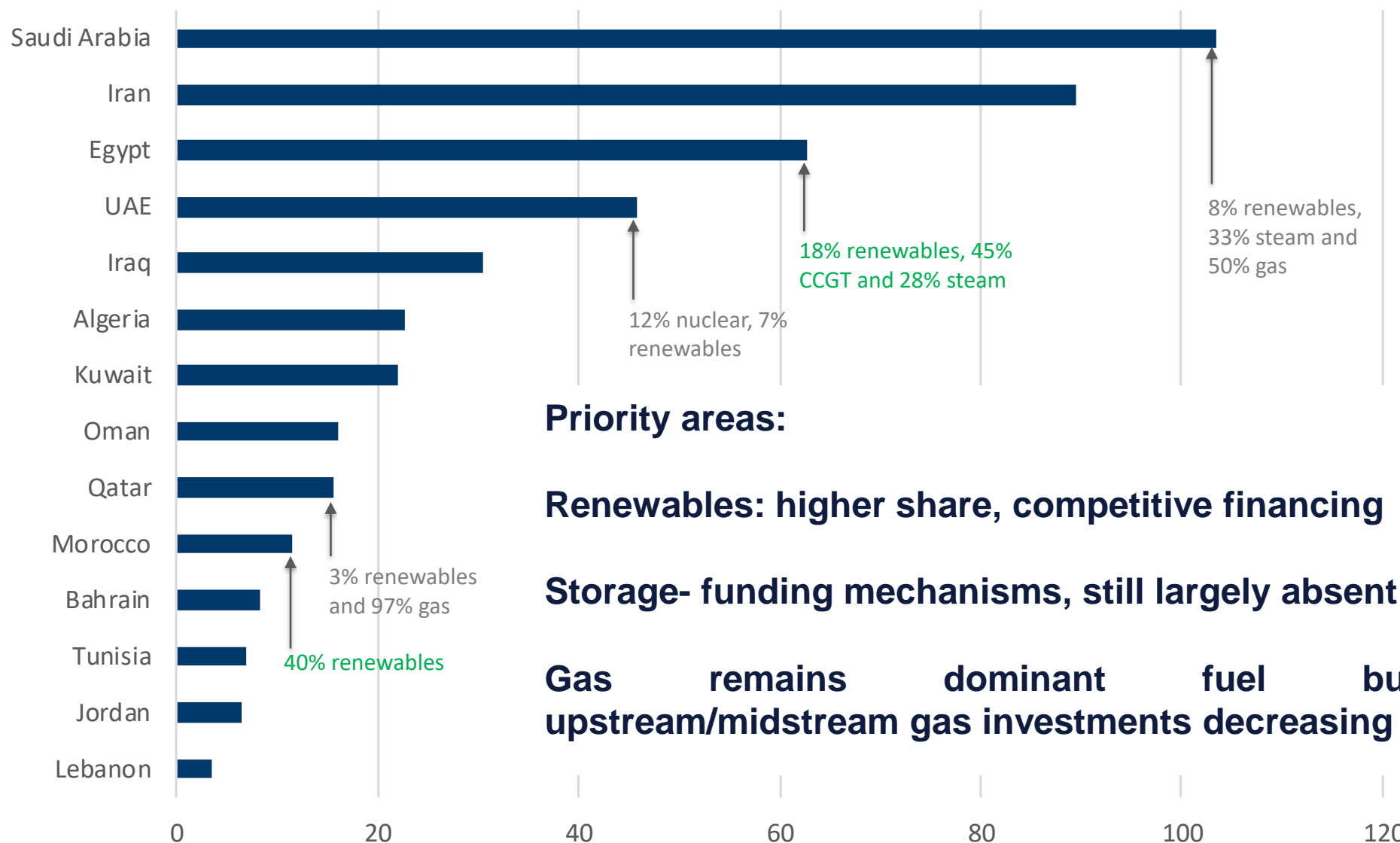
Total planned and committed MENA energy investment 2019-23 (USD billion)

Source: APICORP

# Electricity capacity: need to add 88GW or +4% yearly 2019-2023



MENA Required Capacity 2023 (GW)



## Priority areas:

**Renewables: higher share, competitive financing**



**Storage- funding mechanisms, still largely absent**



**Gas remains dominant fuel but upstream/midstream gas investments decreasing**



Source: APICORP

# Instruments used: sector in focus- Highly leveraged power



## Selected project financing details

	Capacity, technology	PPA	Investment	conditions
	(MW)	(years)	(USD million)	
Shams 1	100, CSP	25	765	22 year, 80% debt
MBRAMSP II	200, PV	25	326	27 year, 86% debt, avg 180 bps over Libor
MBRAMSP IV	700, CSP & 250, PV	35	4,360	70% debt
Noor Abu Dhabi	1177, PV	25	870	26 year, 75% debt, +120 bps over Libor
Al Dur II IWPP (CCGT)	1500	20 (PWPA)	1,050	23 year, 75% debt
Tanajib IPP (gas, cogeneration)	850-940	20 (Energy conversion agreement)	1,000	22/23 year, 85% debt

Source: APICORP

# Instruments used: Country in Focus- Iraq 14 GW (\$21 bn) by 2023



## Major issues and successes

#1: Infrastructure rehabilitation as important as capacity additions. How much in T&D?

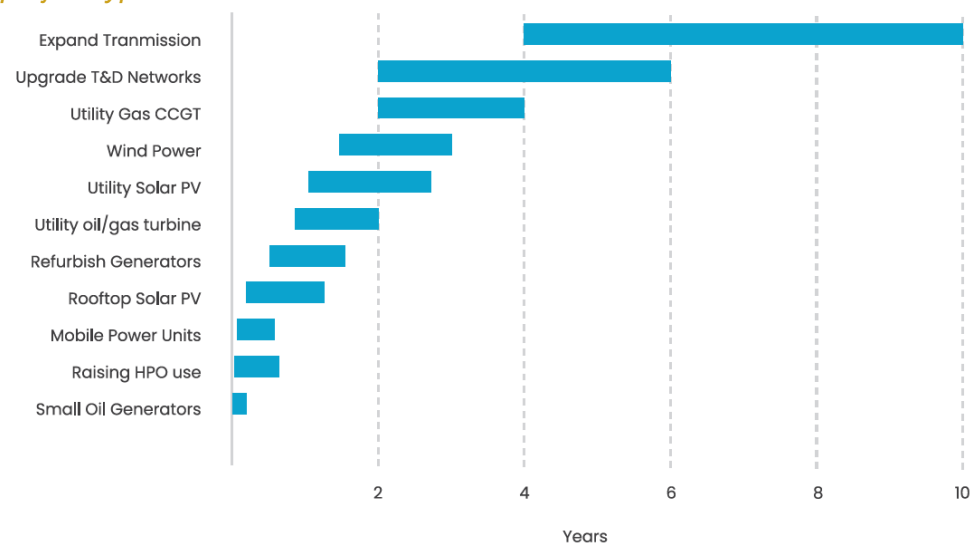
#2: short-term solutions (mobile units, rooftop PV, HSFO) with demand management (price reform)

#3: Grid provides majority of electricity for HH, +90% of HH bill = neighbourhood generation

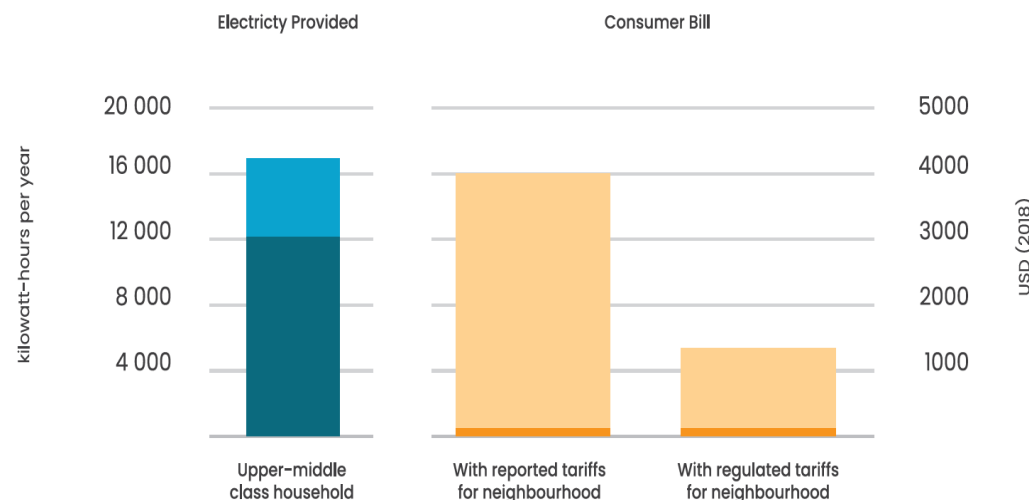
#4: Despite junk rating (Caa1 – Moody's) - Iraq power loans as competitively as KSA

#5: 2 bonds (2023) trading less than 7% - due to maturity (7.5% in 2018)

Technology options to improve electricity supply by time to complete project type



Consumer bills and electricity provided from the grid and neighbourhood generation for an upper-middle class household, 2018



Notes: T&D = Transmission and distribution. CCGT= combined-cycle gas turbines. PV= photovoltaics. HFO= heavy fuel oil.

Source: IEA

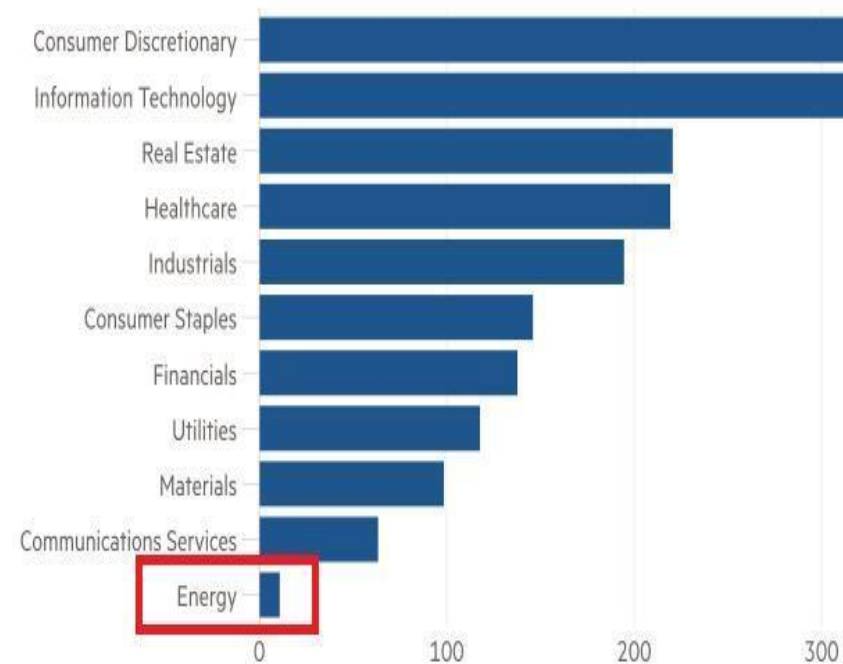
# Access requirements: the dilemma of the energy sector



## S&P 500 Sector Returns

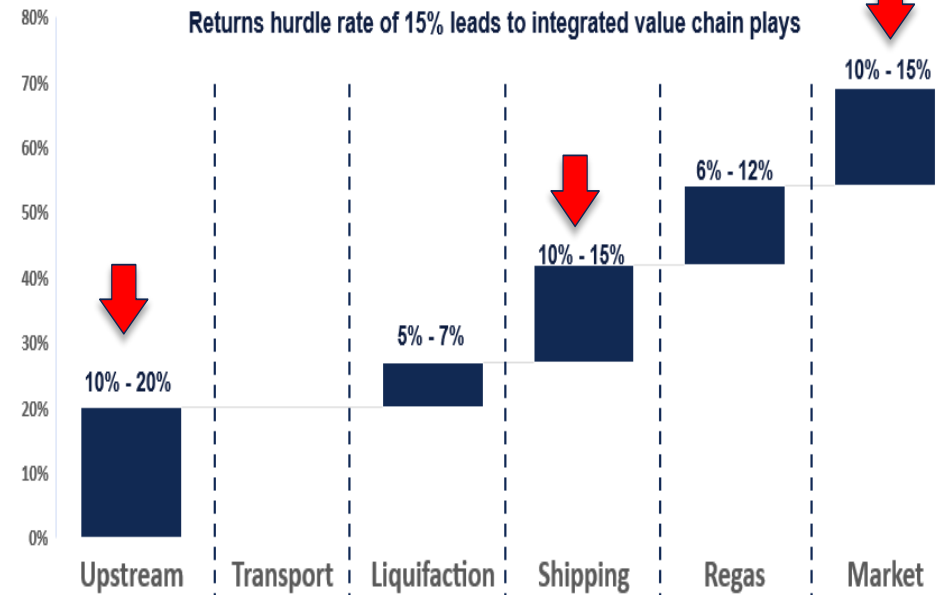
Total Return (%)

■ Total Return



## Gas Value Chain Options and Typical Returns

Returns hurdle rate of 15% leads to integrated value chain plays



Sept. 6, 2009 - Sept. 6, 2019

Source: Bloomberg

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## Dependant on the oil and gas industry (including NOCs)

- **Natural gas value chain, CCUS**
- **Increase conversion of hydrocarbons produced** (vertical integration into refining and petrochemicals, Crude to chemicals (70% conversion))
- **Low-cost low emissions fuels/engine technologies**

# Access requirements: The private sector's counterpart risk



## Dependant on the private sector

- **Solar, wind, distributed energy:** need storage (technology choices/tendering)
- **Energy efficiency, ESCOs, decarbonizing industry**

*Distributed Generation- Market diversification & Counterpart risk  
(example- sanitized for confidentiality)*

Offtaker	Rating	Maturity (years)	Size (MW)	Industry / Sector	Commercial Operation Date
	5 (Euler) 6 (Ellipro)	13	3,7	Food & Beverage	December 2019
	5 (Euler) 6 (Ellipro)	20	0,301	Cooling Service Provider	DONE v
	5 (Euler) 6 (Ellipro)	20	0,69	Premium Glass Manufacturer	DONE v
	NA	20	0,508	Lubricants	January 2020
	5 (Euler) 6 (Ellipro)	20	3,38	Logistics	April 2020
	5 (Euler) 6 (Ellipro)	20	2,739	Logistics	November 2019
	5 (Euler) 6 (Ellipro)	20	1,42	Food & Beverage	January 2020
	5 (Euler) 6 (Ellipro)	20	2,5	Plastic Manufacturer	June 2020
	5 (Euler) 6 (Ellipro)	20	0,107	Plastic Manufacturer	June 2020
	5 (Euler) 6 (Ellipro)	20	0,5	Surf Board Manufacturer	June 2020
	5 (Euler) 6 (Ellipro)	20	0,5	Logistics	May 2020
	5 (Euler) 6 (Ellipro)	20	3,043	Logistics	June 2020
	5 (Euler) 6 (Ellipro)	20	2,4	Luxury Retail	August 2020
<b>Total</b>		<b>21,78</b>		<b>Granularity</b>	<b>7,7%</b>