Macquarie Infrastructure

Infrastructure Investing

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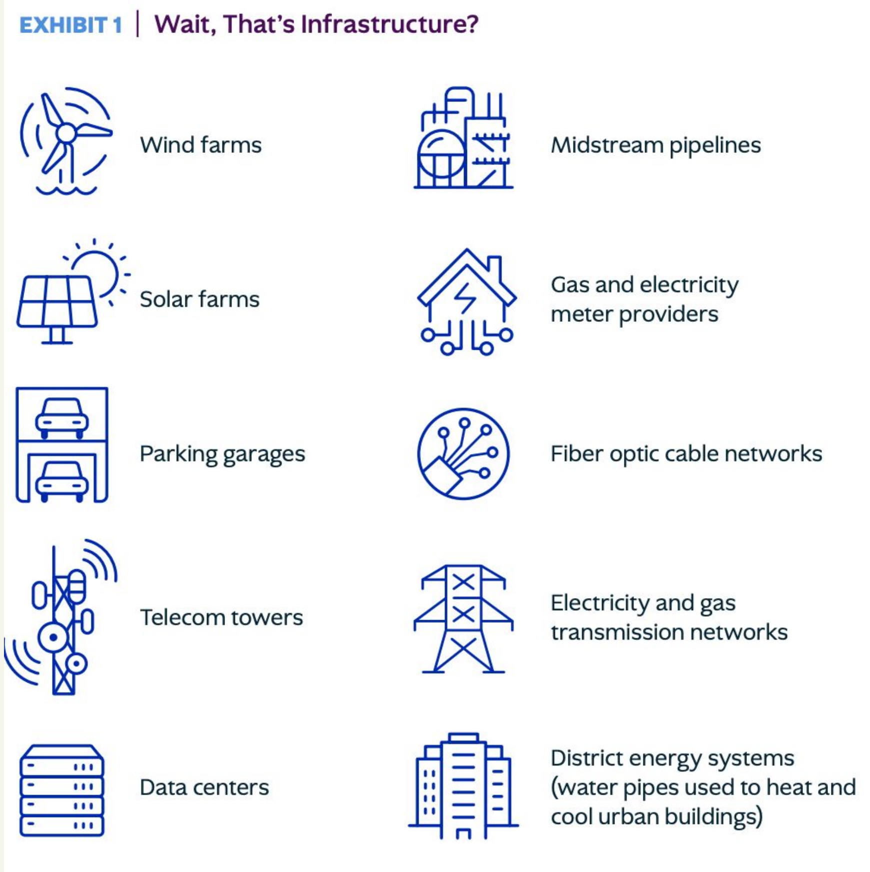
What is Infra?

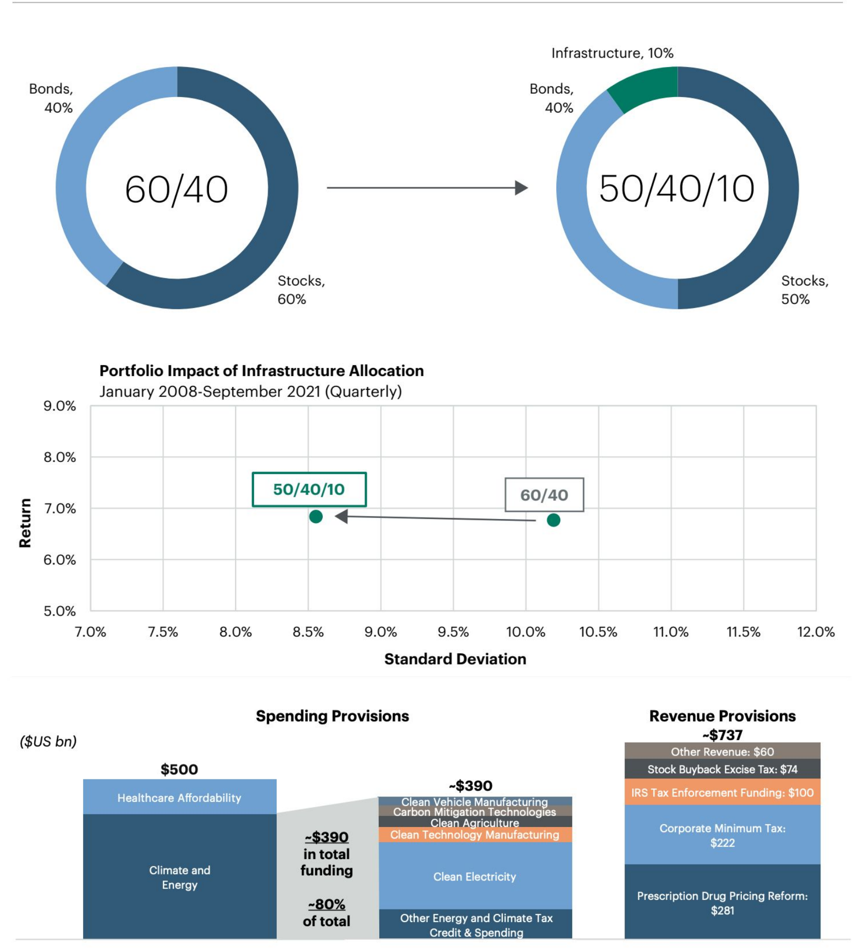
- Investment vehicles pooling capital to invest in essential assets (transportation, water rights, energy production & storage, digital infrastructure)
- Project Finance: deals where a cash flow waterfall approach is taken
- Assets are securitized and tranched to accommodate desired risk profile
- The notes are secured by the assets and other structural protections exist for investors



Source: KKR

Why Infra?

- Stable long-term cash flows with inflation-linked revenue and Government or highly rated institution lends credit rating to the project
- Lower correlation with traditional asset classes – Diversification!
- Need for core infrastructure provides compelling opportunities for return (digital infra for AI)
- Significant growth of the asset class over time, especially with initiatives like Inflation Reduction Act (IRA)



Source: Senate Democratic Leadership, U.S. Senate Committee on Environment and Public Works, Apollo estimates based on CBO guidance for related BBB provisions.

Four Forces Supporting Private Infrastructure Demand

Digital Infrastructure

Estimated compound annual growth rate (2018-2022), global internet traffic **30%**

Data is the fastest-growing commodity in the world, and access to education, work, and basic services increasingly requires a high-speed internet connection.

Infrastructure potential:
- Fiber optic networks
- Data centers
- Telecom towers

Source: Telegeography as of February 3, 2023.

Decarbonization

Estimated size of the investment opportunity related to the transition to net zero emissions by 2050 **$200tn**

Companies and governments will need cleaner, greener infrastructure solutions to keep pace with the energy transition and meet net-zero emissions targets.

Infrastructure potential:
- Solar/wind technology
- Water/wastewater management
- Electric/gas assets

Source: BloombergNEF as of December 7, 2022.

Deconsolidation

Large corporations and industrial companies account for a large portion of infrastructure investment, and they are under pressure to sell infrastructure assets. Some of today's fastest-growing infrastructure sectors began as corporate carve-outs.

Infrastructure potential:
- Manufacturing
- Mining
- Chemicals
- Other industrial sectors

Transportation and Supply Chain

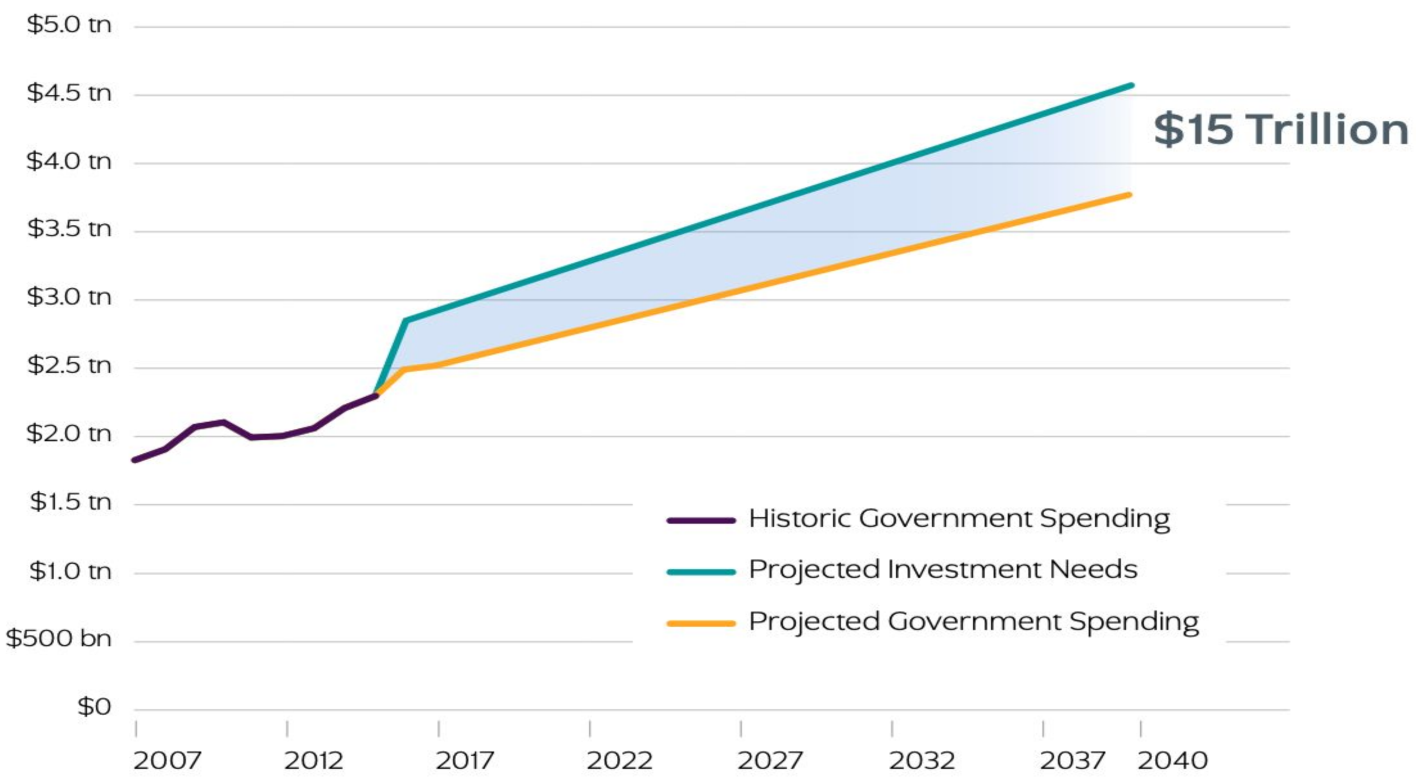
Estimated growth in global passenger and freight transportation activity, respectively, by 2050 **79%/~100%**

Building out charging infrastructure and upgrading the power grid to accommodate more electric vehicles and alleviating congestion in cities will all require significant private infrastructure investment.

Infrastructure potential:
- EV charging stations
- Electrical grid
- Public transit

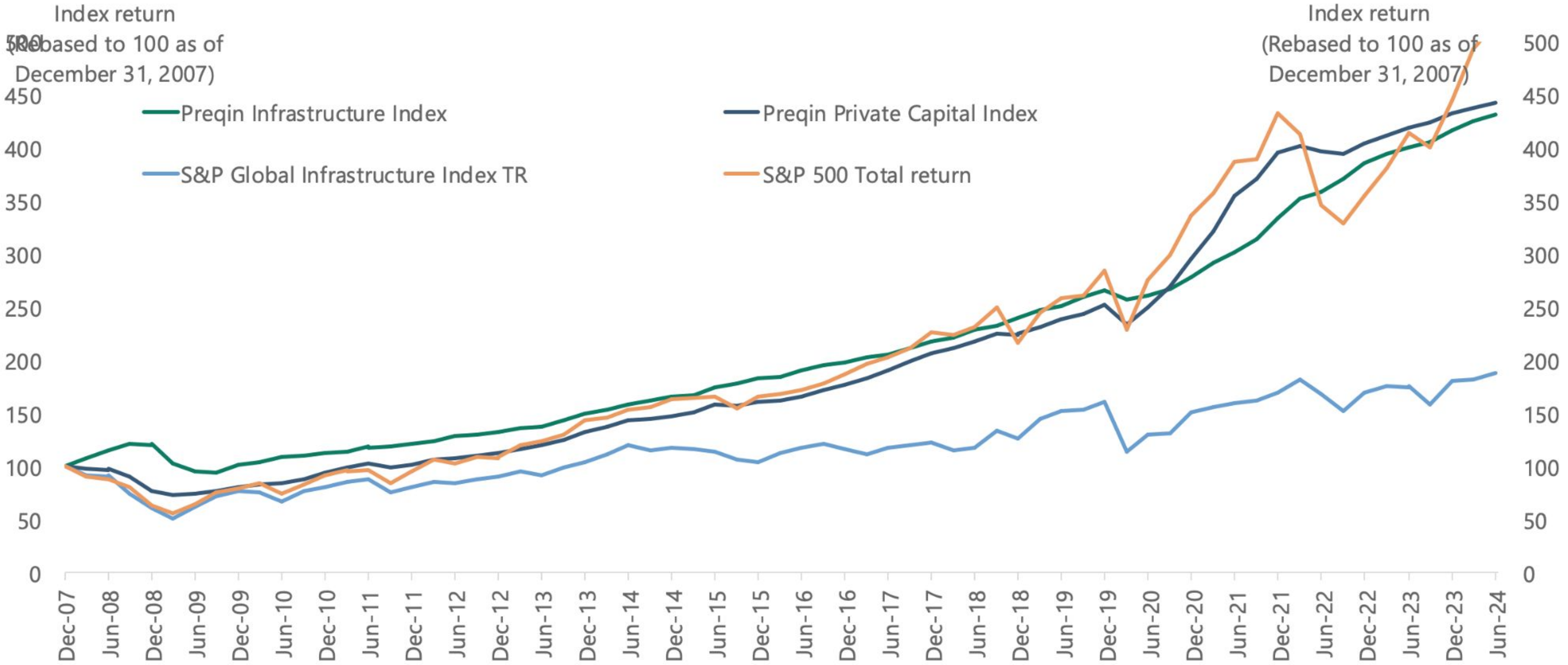
Note: Activity is measured in tonne-kilometers.
Source: OECD International Transport Forum Outlook 2023

EXHIBIT 2 | **A Growing Gap Between Government Infrastructure Spending and Society's Needs**

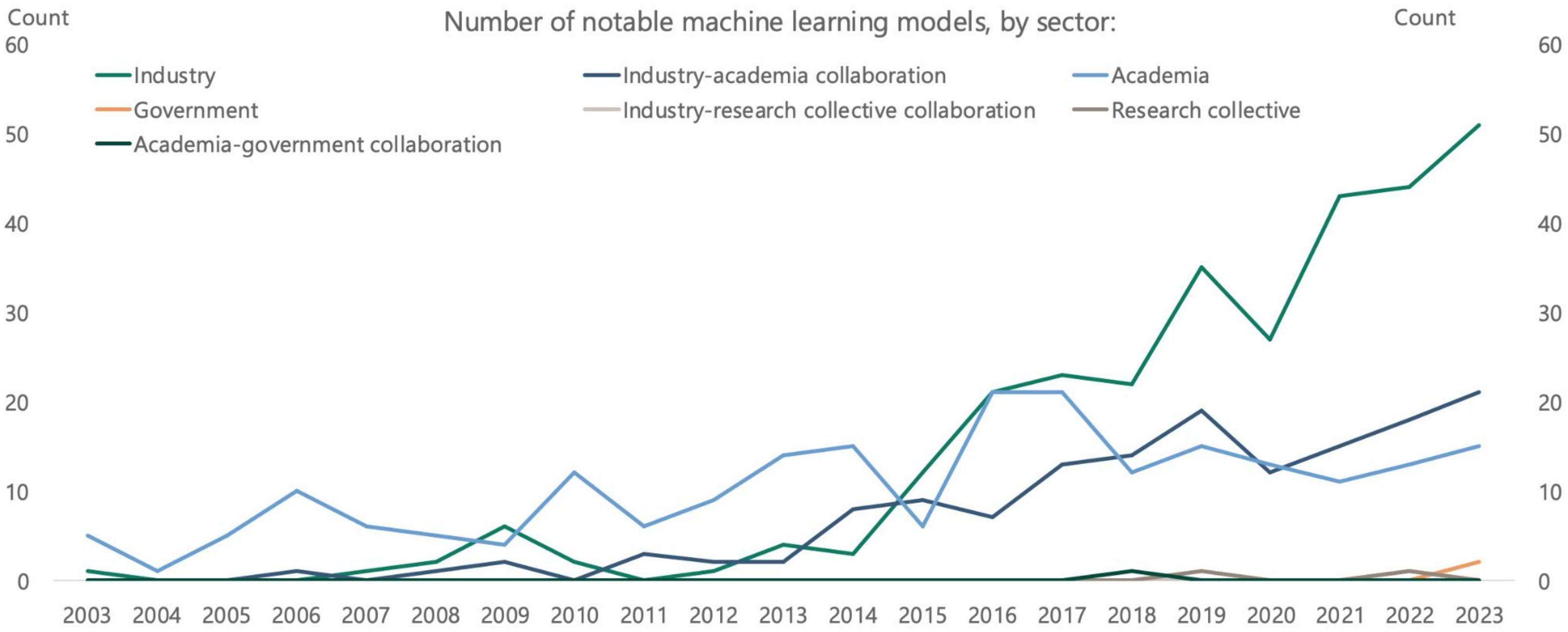


Source: KKR

Infrastructure index returns



Number of notable machine learning models, by sector



Source: Source: Epoch, 2023, https://aiindex.stanford.edu/report/, Apollo Chief Economist

Macquarie Asset Management

$A916.8 bn AUM

Macquarie manages +170 Infrastructure portfolio companies and 2,400+ people in 24 markets – 55 years of unbroken profitability - focus on stable, inflation-protected, long-term investments

Infrastructure

Core infrastructure, green investments, agriculture, secondaries, and real estate

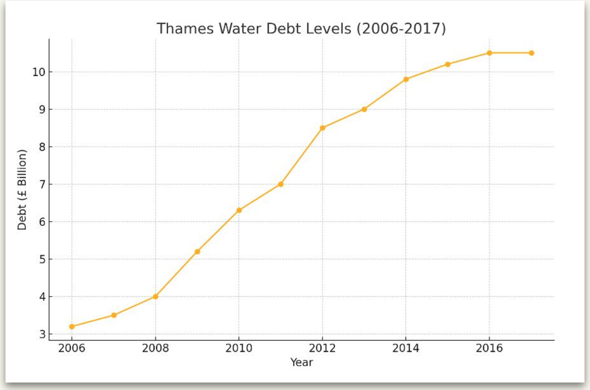
Credit & Equities

Investing across the capital stack ~$A564 bn AUM

Proven Manager

Founded in 1969, specializing in infrastructure - transportation, energy, utilities, digital infra

Thames Water



Acqusition from RWE

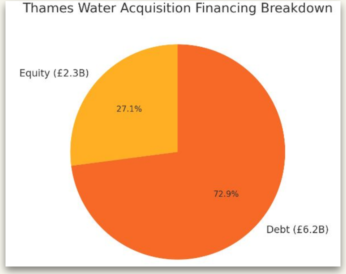
In 2006, Macquarie-led consortium acquired Thames water for £8.5 bn with a stake of ~11%

Highly Levered

EV: £8.5 bn
Equity Contribution: ~£2.3 bn
Debt Financing: ~£6.2 bn

£250 mn

Macquarie, through its funds, contributed ~ £250 mn, with the remaining capital from pension funds/institutional investors



Financial Engineering

Debt ballooned from £3.2 bn to £10.5 bn by 2017 and the Macquarie consortium extracted £2.8 billion in dividends while Thames Water paid management fees to Macquarie

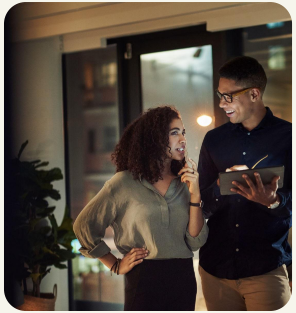
2017 Exit

Sells stake to OMERS and USS - Macquarie made many multiples on its investment, though Thames has been plagued with debt and claims on insufficient investment

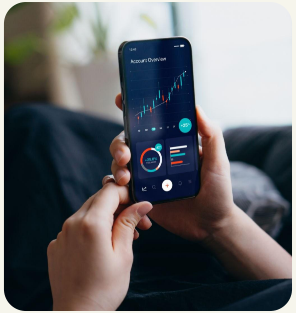
Category			
Investment	**Unit**	**2007-17**	**2018-22**
Macquarie supported the company to invest over £11 billion in its network, c. 90% of cash generated post financing, equivalent to over £1 billion a year during its ownership – the highest level by any metric including per customer investment level of all water companies in England and Wales during that period.			
Total capex at outturn prices	£m, outturn	11,304	5,799
Average capex at outturn prices	£m, outturn	1,028	1,160
Total capex adjusted for inflation to allow for comparison over time	£m, 2021/22 prices	14,921	6,204
Average capex adjusted for inflation to allow for comparison over time	£m, 2021/22 prices	1,356	1,241
Average capex adjusted for inflation to allow for comparison over time during:			
Pre-privatisation (1984-1988)	£m, 2021/22 prices	392	
Publicly listed company (1989-2001)	£m, 2021/22 prices	704	
RWE ownership (2001-2006)	£m, 2021/22 prices	814	
Regulated Capital Value ("RCV") at the start of the period	£m, outturn	5,890	12,944
Regulated Capital Value ("RCV") at the end of the period	£m, outturn	12,944	16,641
% growth p.a.	%	7.4%	5.2%
Average RCV	£m, outturn	9,806	14,875
Average RCV	£m, 2021/22 prices	12,821	15,903
Average capex / average RCV (outturn)	%	10.5%	7.8%
Average capex / average revenue	%	57.7%	55.6%
Debt	**Unit**	**2007-17**	**2018-22**
During Macquarie's part-ownership, Thames Water more than doubled its regulated asset base from c.£6.2 billion to c.£13 billion thanks to the record levels of investment in the network. This was partly funded by additional debt, which increased from c.£6 billion to c.£11 billion over the same period. The initial leverage of c 6.5x was consistent with listed utilities leverage levels today. At all times during Macquarie's investment the regulated entity of Thames Water maintained an investment grade credit rating. From 2009 onwards we supported the company in reducing the ratio of debt to the value of its assets.			
Opening Group net debt	£m, outturn	6,162	11,530
Opening Group debt-to-RCV	%	94.8%	89.1%
Opening Group debt-to-EBITDA	x	6.6x	11.2x
Closing Group net debt	£m, outturn	11,530	14,648
Closing Group net debt-to-RCV	%	89.1%	88.0%
Closing Group net debt-to-EBITDA	x	11.2x	15.7x
% reduction in net debt-to-RCV	%	5.8%	1.0%
Average Group net debt	£m, outturn	8,629	13,197
Average Group net debt-to-RCV	%	88.7%	88.7%
Closing regulated company (TWUL) net debt	£m, outturn	10,550	13,421
Closing regulated company (TWUL) net debt-to-RCV	%	81.5%	80.6%
Closing regulated company (TWUL) net debt-to-EBITDA	x	10.3x	14.4x
Average regulated company (TWUL) net debt	£m, outturn	7,357	12,170
Average regulated company (TWUL) net debt-to-RCV	%	73.5%	81.9%
Average inflation (RPI) during the period	%	3.0%	3.8%
Credit ratings at end of period for TWUL:			
Moody's (Corporate Family Rating)	Rating	Baa1	Baa2
S&P (Class A/B)	Rating	A- / BBB-	BBB+ / BBB-

Category			
Distributions	**Unit**	**2007-17**	**2018-22**
The dividend yield to equity shareholders earned from our funds' investment was in line with listed UK water utility companies. The total dividends received by underlying equity investors totalled £1.1 billion between 2006 and 2017 (equivalent to a c. 5% average annual yield on the equity invested by the original underlying investors) This was also only c. 7% of total cash and debt generated over the period before capex and third party interest costs.			
Thames Water			
Regulated company (TWUL) dividends to Kemble Holdings (total) net of HoldCo interest	£m outturn	2,688	242
Regulated company (TWUL) dividends to Kemble Holdings (average p.a.) net of HoldCo interest	£m p.a., outturn	244	48
As % of average RCV	%	2.5%	0.3%
As % of average Regulated Equity[1]	%	6.2%	0.8%
As % of average capex	%	23.8%	4.2%
Group (Kemble Holdings) dividends to shareholders (total)	£m outturn	1,156	-
Group (Kemble Holdings) dividends to shareholders (average p.a.)	£m p.a., outturn	116	-
As % of RCV	%	1.2%	-
As % of Regulated Equity[1]	%	2.9%	-
As % of capex	%	11.3%	-
Industry			
Listed companies' dividend yields (% RCV)	%	3.4%	2.7%
Listed companies' dividend yields (% of Regulated Equity)[1]	%	9.4%	6.8%
Listed companies' dividend yields (% of capex)	%	41.7%	43.4%
Performance	**Unit**	**2007-17**	**2018-22**
Thames Water delivered significant improvements across all of its key KPIs. Water quality was ranked amongst the sector's best, security of supply increased from 22 to 100 (the maximum possible score), water leakage reduced by c. 22% (the second-best improvement in the sector over this time period), and pollution incidents declined by 75% compared to 2008.			
Thames Water Security of Supply Index (SoSI) at the start of the period	#	22	100
Thames Water Security of Supply Index (SoSI) at the end of the period	#	100	100
Improvement by Thames Water over the period	#	78	-
% improvement by Thames Water over the period	%	355%	0.0%
Thames Water leakage at the start of the period[2]	mL/d	862	677
Thames Water leakage at the end of the period[2]	mL/d	677	594
Improvement by Thames Water over the period	mL/d	185	83
% improvement by Thames Water over the period	%	21.5%	12.3%
% improvement by the industry over the period	%	12.8%	5.6%
Average % improvement by the industry over the period	%	8.1%	7.8%
Thames Water average pollutions (Category 1-3)[3,4]	# per 10,000km of sewers	63	27
At start of the period	# per 10,000km of sewers	96	24
At end of the period	# per 10,000km of sewers	24	25
% improvement over the period	%	74.7%	(6.9%)
Thames Water operating efficiency (operating expenses as % of RCV) at the start of the period	%	10.0%	7.7%
Thames Water operating efficiency (operating expenses as % of RCV) at the start of the period	%	7.7%	7.0%
% improvement	%	23.0%	9.8%

Thoughts?



Increased infra investment by ~11bn GBP - per customer investment highest in UK water sector



Improved operational efficiency through modernization and large scale projects like the Victorian mains replacement program

Strong returns for investors - estimated 15.5-19% IRR

Debt pileup and potentially malevolent financial engineering - the debt increase was partly due to dividend extraction and leveraged refinancing

Issues including price gouging, reduced service, and contaminating rivers with 1.4 bn litres of untreated sewage

Regulatory issues including a 20 mn GBP fine for pollution incidents and talks of re-nationalization