4D Infrastructure

Revisiting the Midstream sector

March 2020

Sydney, Australia

Disclaimer

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Information is current as at January 2019.

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What are midstream assets?

Definition of midstream assets

- We classify midstream assets as the infrastructure used in transportation, storage, extraction, and refining of natural gas, Natural Gas Liquids (NGLs), and crude oil. Midstream is the 'glue' between upstream E&P and downstream distribution;
- As can be seen below, there can be an extensive infrastructure value chain to transport from site of extraction via gathering lattice networks to processing plants, and to downstream markets via large volume transportation pipelines. At downstream terminals the commodities can be transported to the end customer via pipeline or rail or ship, further refined at fractionation facilities, stored or further manufactured.
- Midstream assets are therefore heterogeneous by nature. <u>Determination of investability is determined by quality / monopolistic characteristics of the asset, and the contractual basis on which they are remunerated</u>.

Upstream	Midstream	Downstream
Exploration recovery and production of oil, natural gas and NGL's	Processing, storage, gathering and transport of oil, natural gas and NGL's	Distribution and sale of oil, natural gas and NGL's to end users
O&G Drilling, Wellhead Production	Pipelines, Rail cars, Processing plants	Local utilities

Higher ← **Return Potential** → **Lower**

Midstream asset classification

Highest Quality

Asset	Description	Long contract length	High barriers to entry	Counterparty/ contract risk	Commodity price exposure risk	Volume risk exposure	Example companies
Transportation pipelines	Large volume transportation pipelines	Highest Quality	Highest Quality	Highest Quality	Highest Quality	Highest Quality	Williams Co (Transco), Enbridge (Line 3)
Export terminals	Other gas and liquid export shipping facilities	Average	Highest Quality	Above average	Highest Quality	Above average	Cheniere (LNG export); Keyera (propane export)
Fractionation	Splits NGLs into contributing gases (e.g. propane, butanes, ethane, and natural gas)	Above average	Average	Average	Above average	Average	Targa (Houston Gulf)
Storage	Gas and liquid storage facilities at terminals	Below Average	Average	Highest Quality	Highest Quality	Average	Gibson (Hardisty); Kinder Morgan (Houston Gulf)
Gathering & Processing	Lattice pipeline network to extract commodity and initial processing facilities	Highest Quality	Highest Quality	Below Average	Average	Below Average	Targa (Permian basin); Pembina (Redwater, Alberta)

Lowest quality

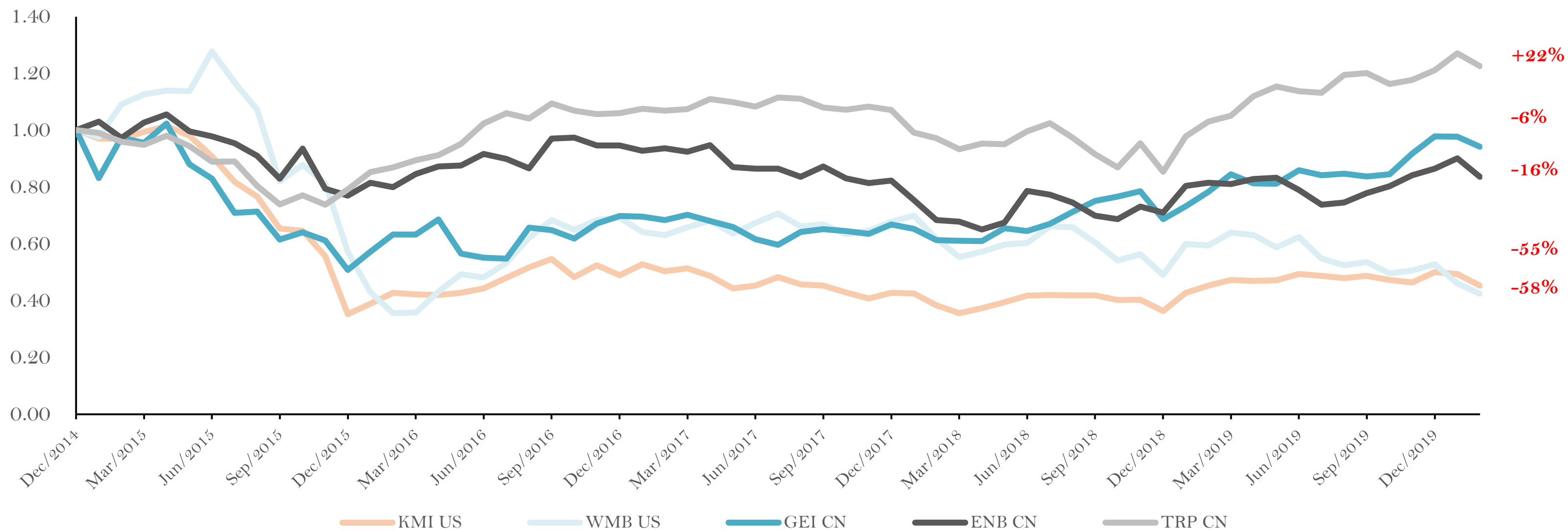
- There can be variances in risk exposure between asset types based on contract structures

Source: 4D Infrastructure

Highest Quality **Above average** **Average** **Below Average**

Midstream sector was last downgraded around 2015

Dividend cuts and credit concerns drove retail and generalist investors away from the sector



- The share price revisions from 2015 outlined above were primarily driven by concerns regarding the credit of companies. These issues were driven by:
  - Weakness in commodity prices specifically crude and NGLs
  - Contract structures exposing companies to commodity price movements – the fall in oil prices in 2015 drove down earnings
  - Management distributed cash proceeds to shareholders and financed investment capital and M&A with debt issuances – significantly increasing indebtedness
  - Earned significant earnings from marketing and trading businesses which dried up when commodity prices reduced
  - Invested in non-core businesses which underperformed
  - Undertook "mega projects" with high regulatory risk associated – regulation and permitting of assets has become more difficult
  - Structural changes resulting in some assets becoming less utilised and sometimes redundant

Steps taken to reduce business and financial risk in the sector

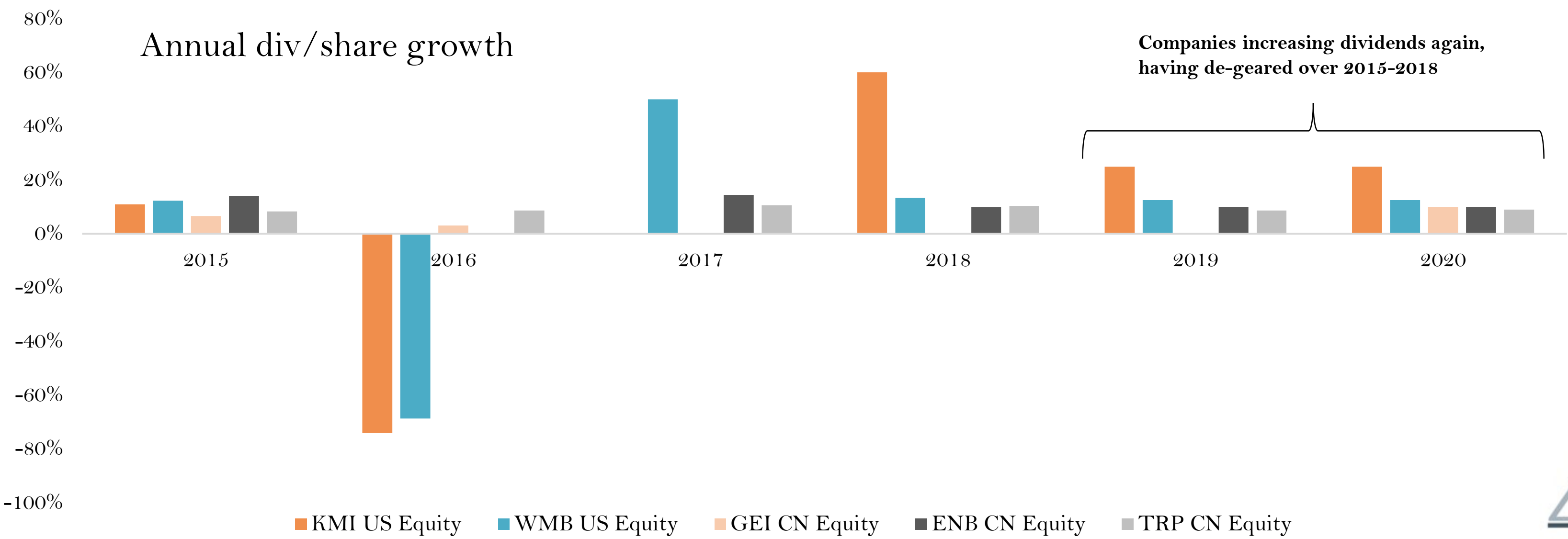
Issue	Explanation	Examples
Dividend cuts	Companies initially cut dividends heavily in response to the oil price fall, and credit concerns. Companies have now given guidance of significant dividend increases out to 2021.	KMI - 72% dividend cut; WMB - 69% dividend cut.
Contract restructurings	Companies have restructured contracts with oil and gas shippers to remove commodity exposure, implement minimum volume commitments and extend maturities.	GEI has negotiated new contracts on terminals to extend their maturities
Debt reductions	Most companies have significantly de-geared their balance sheets improving their balance sheet strength. A higher proportion of investment is financed from internal cashflow rather than external debt.	KMI, WMB and Enbridge Debt/EBITDA multiples targeting 4.5x from c.6.0x in 2015
Non core asset sales	Companies have looked to exit assets that are not core to their strategy, they do not have complementary assets attached to, or expose them to commodity price movements. This has provided a source of liquidity to pay down debt.	ENB divested all its Gathering & Portfolio assets in May – July 2018
Capital discipline	Companies are portraying greater investment discipline in requiring contractual commitments prior to Final Investment Decisions (FID) and rejecting investment proposals that don't fit into their core strategy	TRGP exit the Whistler gas pipeline project; and KMI exit TransMountain expansion

Improved risk and return characteristics

Companies are now in much better shape and are returning capital to shareholders through dividend increases and share repurchases

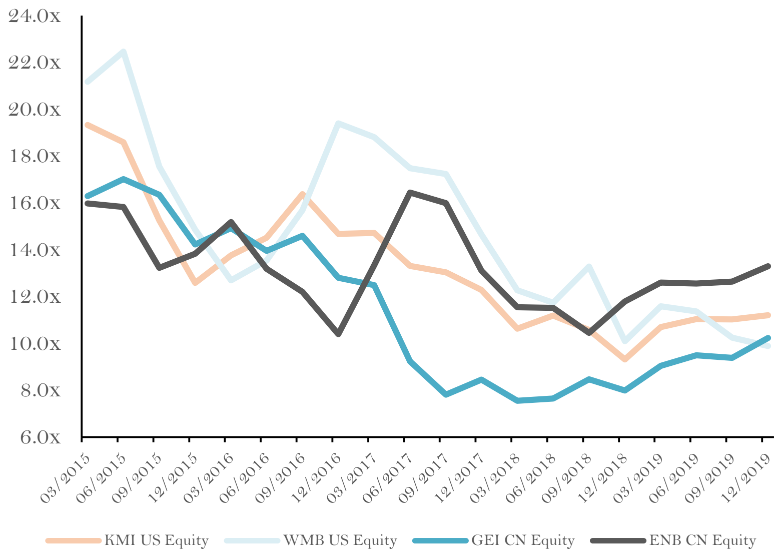
Company	Debt/EBITDA	Interest cover	Credit rating	Yield %	EV/EBITDA	12M TSR %
KINDER MORGAN	4.5x	4.2x	BBB	7.7%	8.4x	-41.0%
Williams	4.5x	4.2x	BBB-	11.8%	7.6x	-49.9%
Gibson Energy	2.7x	6.2x	BBB-	8.2%	7.7x	-46.6%
ENBRIDGE	5.0x	4.9x	BBB+	7.5%	10.9x	-27.2%
TransCanada	5.3x	4.0x	BBB+	5.4%	10.8x	-23.7%

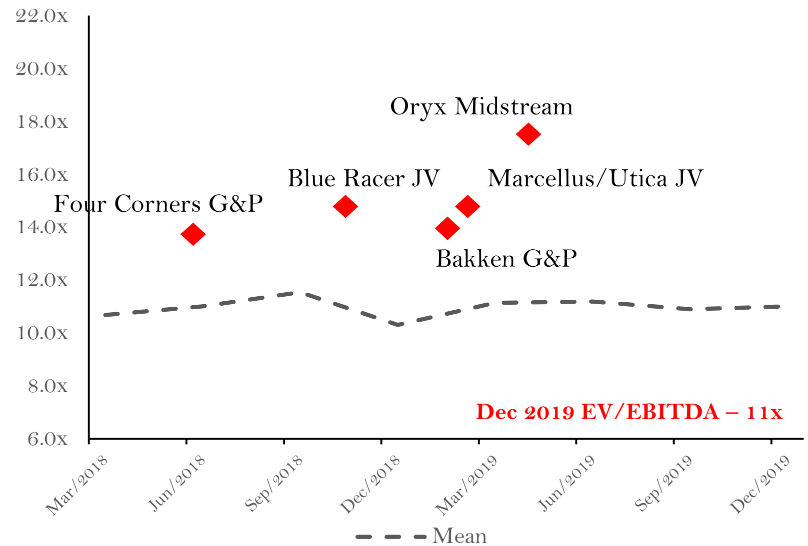
Source: Bloomberg as at 20 Mar 2020



Midstream sector transaction multiples – private vs listed markets

A basket of midstream shares are valued significantly lower than private market transactions



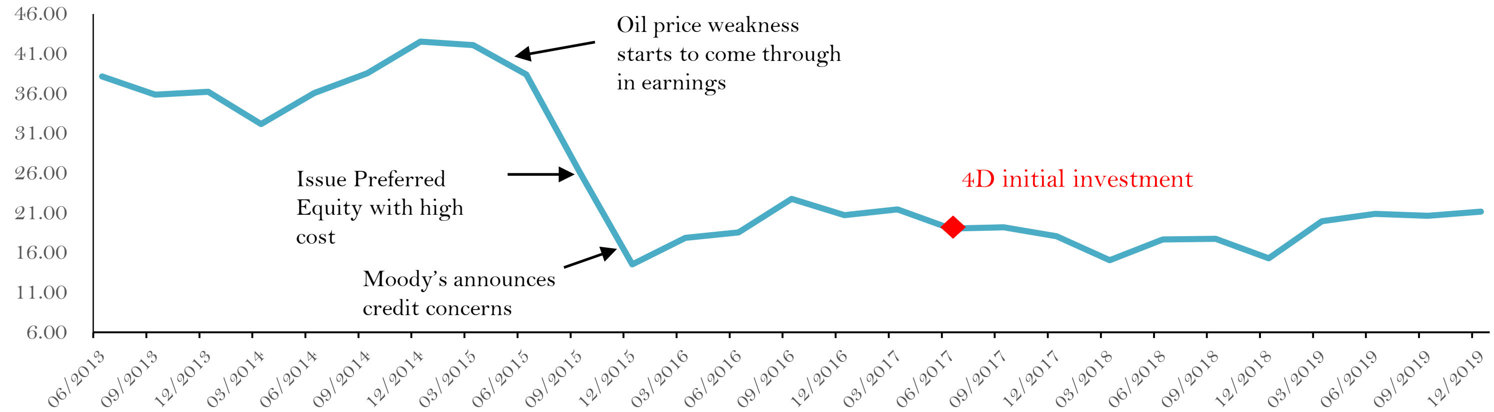


Recent private market transactions in Midstream assets

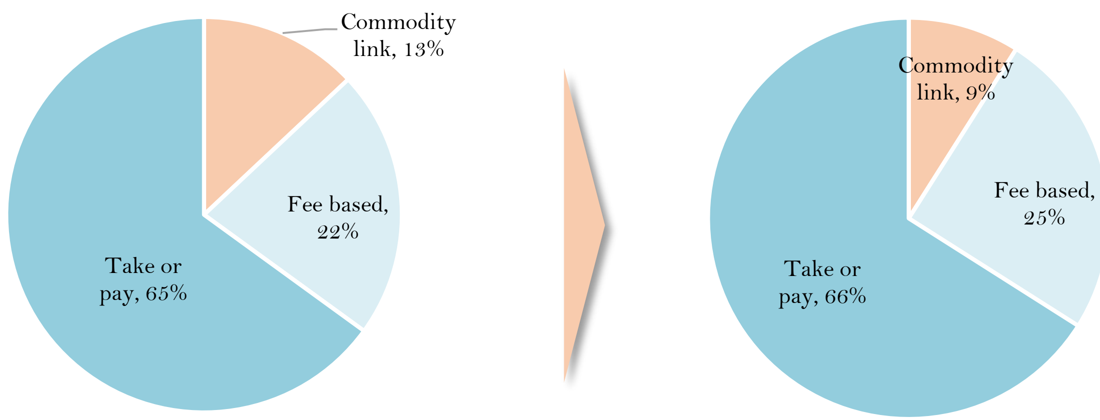
- June 2018: Williams divestment of **Four Corners G&P** assets for $1.125 billion to Harvest Midstream – implied EV/EBITDA multiple of **13.7x**
- November 2018: Dominion Energy sold its 50% stake in the **Blue Racer JV** including G&P assets in the Utica basin to First Reserve for $1.5 billion – implied EV/EBITDA multiple of **14-16x**
- February 2019: Blackstone and GSO Partners acquires 45% stake in crude G&P assets in the **Bakken** basin from Targa Resources for $1.6 billion – implied EV/EBITDA multiple of **13-15x**
- March 2019: CPPIB invests $1.34 billion for a 35% interest in a JV with Williams Co to own and operate G&P assets in the **Marcellus/Utica** basins – implied EV/EBITDA of the transaction is **14-16x** EV/EBITDA
- April 2019: Stonepeak Infrastructure acquires **Oryx Midstream** representing crude gathering & storage assets in the Permian basin for $3.6 billion from Concho Resources, WPX Energy and private investors – potentially as high EV/EBITDA multiple as **17x**

Case Study: Kinder Morgan

- Kinder Morgan (KMI) experienced a significant share price reduction triggered in mid 2015 as a result of earnings weakness and credit concerns expressed by ratings agencies – both driven by excessive debt and a fall in commodity prices (crude and NGLs)



- Upon review in June 2017, 4D Infrastructure concluded that KMI had made sufficient improvements through reduced commodity exposure of cashflows (depicted below); improved credit position; and represented an attractive investment proposition at its reduced price



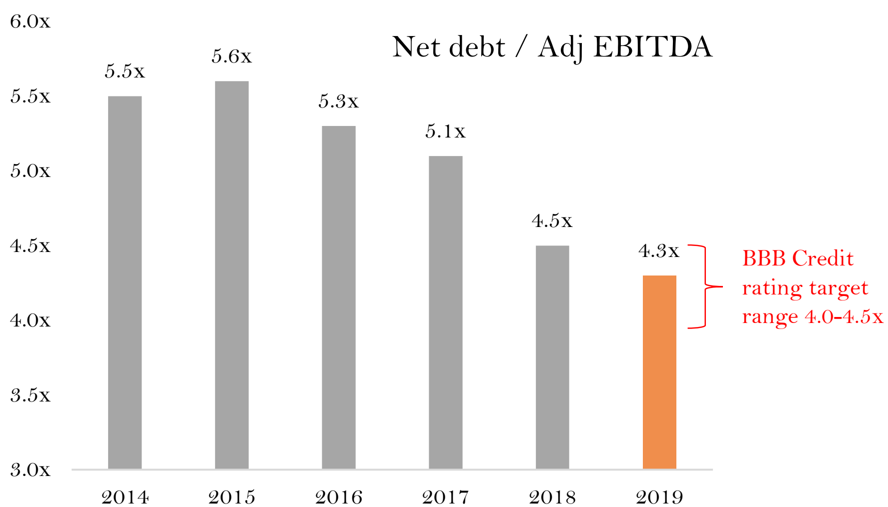
2015 Cash flow exposures

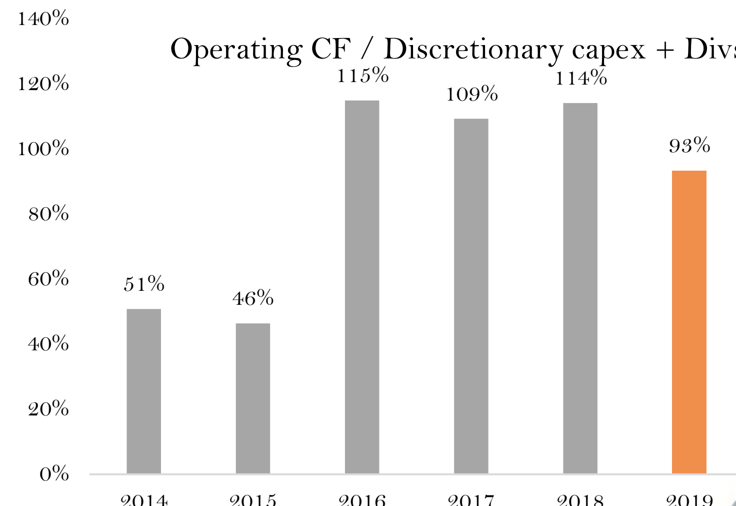
2019 Cash flow exposures

Case Study: Kinder Morgan

- Since 4D Infrastructure made its investment, KMI has further reduced its debt gearing levels and reduced future earnings uncertainty
  - Sale of Trans Mountain Express pipeline (TMX) to the Canadian government for $3.4 billion removed regulatory risk and provided further cash to reduce debt

Asset sold	Buyer	Sale proceeds $M	Rationale
50% Southern Natural Gas (SNG)	Southern Company	1,470	Raise capital to improve credit
30% Kinder Morgan Canada	IPO - Public investors	1,300	Provide financing for TMP expansion
Trans Mountain Express (TMX)	Canadian Government	3,400	Remove significant regulatory risk
20 Bulk terminals sale	Watco Companies	100	Non core asset sale





Midstream can be infrastructure – our positioning

- Post the corporate restructures of 2016/17 4D got comfortable that a number of the midstream players met our infrastructure definition
- Our positioning reflected a combination of bottom-up valuation upside and midstream asset quality / hierarchy

Company	Asset mix	Commodity mix*	Contract mix	Tier-1 asset?
CHENIERE	100% export terminals	100% gas	100% take-or-pay / tolling	Sabine Pass / Corpus Christi Texas, US
KINDER MORGAN	53% pipelines; 10% G&P; 15% product pipelines; 15% storage; 7% other.	61% gas / 16% oil & NGLs / 6% crude / 17% other	66% take-or-pay; 25% contracted / volume risk; 9% commodity risk (half hedged).	Natural Gas Pipeline of America (NGPL) / Tennessee Gas Pipeline (TGP) - US
ENBRIDGE	80% pipelines; 15% (gas) transmission & distribution; 5% renewables	53% oil / 45% gas / 2% other	47% regulated, or take-or-pay 47% cost of service 6% other;	Mainline / Line 3 Alberta, Canada
Williams	63% Pipelines ; 37% G&P.	91% gas and NGLs / 9% crude	62% take-or-pay; 34% contracted / volume risk; 4% commodity risk.	Transco Pipeline – US
PEMBINA	70% pipelines; 15% fractionation; 15% G&P	80% NGLs / 10% oil / 10% other	65% take-or-pay; 20% contracted / volume risk; 15% spot / commodity risk.	Peace Alberta, Canada
GIBSON ENERGY	100% storage	100% oil	100% take-or-pay	Hardisty Alberta, Canada
TARGA	50% G&P; 33% fractionation & pipelines; 10% export terminal; 7% other	100% gas and NGLs	65% G&P (volume + commodity exposure) 35% fee based (volume risk with minimum commitments)	Grand Prix Pipeline Texas, US

** Commodity Mix outlines commodity actually transported/serviced – the commodity price exposure is not available for all companies*
Source: 4D Infrastructure

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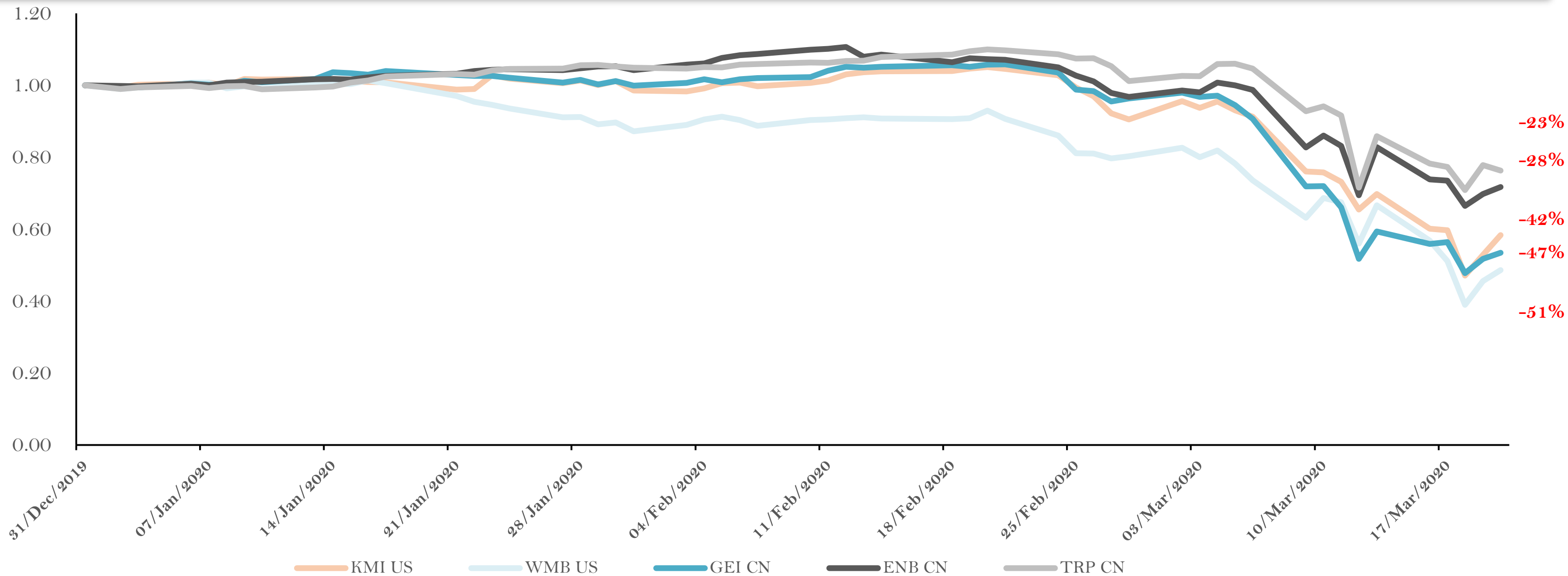
The 2020 midstream sell-off – Why?

Expected earnings revisions and credit concerns drove investors away from the sector



- The share price revisions in March 2020 have been driven by declining commodity prices as COVID-19 drives a demand/supply imbalance which was exacerbated by disagreement between the Russian and Saudi oil majors on production targets. The Midstream (infrastructure) sector was negatively impacted, due to misperception of earnings being significantly impacted by
  1. Counterparty risk (e.g. financial distress)
  2. Direct impact of (lower) oil prices
  3. Indirect impact of prices on (lower) oil volumes
  4. Deferral of growth capital

Data in graph above is correct as of 20th March 2020
Source: Bloomberg and 4D Infrastructure

Midstream sector correlation to oil price?

COVID-19 and OPEC lead to significant commodity price weakness

- Over the last ten years, 2010-to-2019 world oil consumption has increased from ~88.7m barrels per day in 2010 to ~100.7m barrels per day in 2019 (CAGR +1.3%) growing year on year for the entire decade. Through this period, North American oil became the marginal supplier of oil with production increasing significantly. US oil production increased from 5.7 to 12.8m bpd and Canadian oil production increased from 2.8m bpd to 4.9m bpd respectively, which in turn, increased demand for transportation and storage infrastructure (midstream sector). **Increase in total production occurred despite WTI oil price varying significantly and structurally rebasing to a lower level**;

- With COVID-19 as a backdrop (with implied short-run weaker demand), in March 2020, OPEC failed to reach agreement on constraints for April 2020 supply. Subsequently large players Saudi Arabia and Russia signalled increased production leading to significant oil price weakness;

- Economic theory translates this to a temporary / short-run 'price shock' due to:

  1. No evidence of long run / structural changes in demand (e.g. there is low take-up / penetration of substitutions);
  2. No evidence of long run / structural changes in supply (e.g. no technological change in cost curve supporting ~c.US$30 oil price long run)

Source: BP Statistical Review of World Energy, Canada Energy Regulator (CER), Reuters

Midstream sector correlation to oil price?

COVID-19 and OPEC leads to significant market inefficiency

1. **Counterparty risk (due to financial distress) is mitigated due to:**
    - Customers are predominantly large / investment grade - offer less opportunity for default on obligations
    - Infrastructure assets located at higher quality / lower production cost basins (e.g. Permian, US / Athabasca, Canada).
        - It is not entirely certain that US and Canada oil production will be displaced if oil prices remain lower for longer (e.g. c.US$30). US and Canada oil production has been built on significant technological change (i.e. fracking and steam assisted gravity drainage) and moreover have continued to optimise.

Company	Counterparty % investment grade?	Oil directed basins*
CHENIERE	>~100%% investment grade >=BBB-	NA
KINDER MORGAN	>~78% investment grade >=BBB-	Tier 2
ENBRIDGE	>~93% investment grade >=BBB-	Tier 1
Williams	>+80% investment grade on firm commitments >=BBB-	Tier 3
PEMBINA	>~79% investment grade >=BBB-	NA
GIBSON ENERGY	>~85% investment grade >=BBB-	Tier 1
TARGA	> Of top 25 customers 77% are investment grade or LCs >=BBB-	Predominantly Tier 1

* Have characterised basins as Tier 1, 2 and 3 with Tier 1 being the most productive

Source: 4D Infrastructure; investment grade as at market close 16th March, 2020

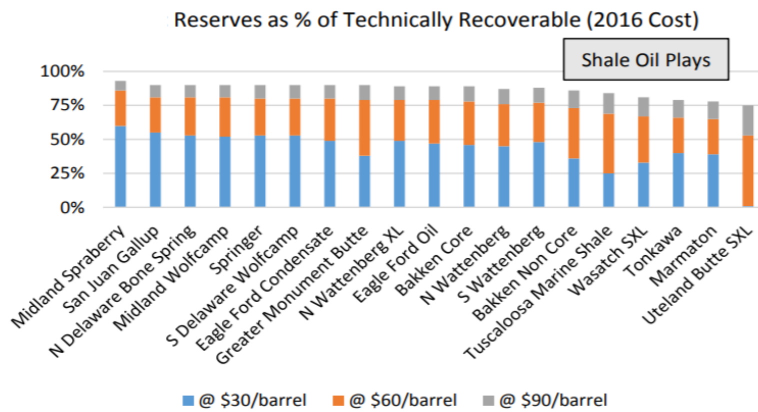
Midstream sector correlation to oil price?

While it is difficult to accurately determine an oil production cost merit order, industry reports highlight:

US Energy Information Administration (EIA);

https://www.eia.gov/

- **'Even at prices as low as US$30/barrel, about 50% of the technically recoverable resource found in the major plays remains economically viable'**



Canadian Energy Research Institute (CERI);

https://ceri.ca/

'Costs of crude bitumen for oil sands greenfield SAGD and an expansion phase SAGD' are C$40.61/bbl and C$27.60/bbl respectively (equivalent US$29.17 and US$19.83) excluding transportation and blending

	SAGD 10% ROR (a)	Expansion SAGD 10% ROR (a)
Fixed Capital (Initial & Sustaining)	$18.59	$9.67
Operating Working Capital	$0.38	$0.20
Fuel (Natural Gas)	$4.63	$4.63
Other Operating Costs (incl. Elec.)	$7.07	$7.07
Royalties	$7.04	$4.18
Income Taxes	$2.21	$1.17
Emissions Compliance Costs	$0.67	$0.67
Abandonment Costs	$0.03	$0.01

E&P production likely to be maintained at US$30/bbl in certain wells or where capital has been deployed, but not sustainable for long run

Source: EIA / CERI

Midstream sector correlation to oil price?

COVID-19 and OPEC leads to significant market inefficiency

2. Midstream assets have limited oil price linkage. Contractual terms underpinned by:

i. **Take or pay**

- A contract provision obligating the buyer to pay for a certain minimum quantity of product, whether or not the buyer actually takes that quantity during the stated period. Usually stated in terms of an absolute quantity, or a percentage of total contract quantity, over a specified period of time;

ii. **Cost of service**

- A contract provision representing total cost of providing service, including operating and maintenance expenses, depreciation, amortization, taxes, and return on capital / rate base. Generally, the cost of service is the same as its revenue requirement. Importantly, lower throughput or revenues lead to higher tolls as the pipeline's costs are shared by the remaining shippers on the system

iii. **Fee for service**

- A contract provides for a fixed fee per unit of production sold or service provided not subject to commodity price risk but subject to volume risk;

iv. **Fixed toll**

- A contract which does not vary with changes in throughput. Fixed tolls are usually based on fixed costs and throughput for a test year;

Midstream sector correlation to oil price?

COVID-19 and OPEC leads to significant market inefficiency

3. **Midstream sector has volume risk but historically has managed to maintain volumes through commodity price weakness:**

During historical crude price collapses like 2015-2016 and 1997-1999 the below actions helped support continued drilling volumes. With demand, as well as supply side factors now having unprecedent affect – it remains to be seen if companies can maintain volumes.

- Oil E&P companies responding by:
  - Lowering marginal cost of production by increasing volumes (e.g. optimising / increasing production on existing wells);
  - Optimising costs (e.g. negotiating better rates with oilfield service companies and consolidating volumes to third-party infrastructure), and
  - De-leveraging balance sheets (e.g. divesting infrastructure);
- Midstream volumes protected by:
  - Fully integrated into supply chain / essential service
  - Contractual terms (e.g. take-or-pay)
  - New producers take up displaced volumes in economic basins of financially distressed E&P players

4. **Deferral of growth capital is a prudent response to price shock, but it does not imply midstream sector is ex-growth:**

- Midstream sector assets are capital-intensive / long-lived with capital allocation based on long run ROIC. E&P companies are still incentivised to endorse midstream sector capital due to:
  - Economies of scale / lowering unit cost;
  - Access to new markets (e.g. export terminals)
  - Increasing value of product (e.g. propane dehydrogenation)

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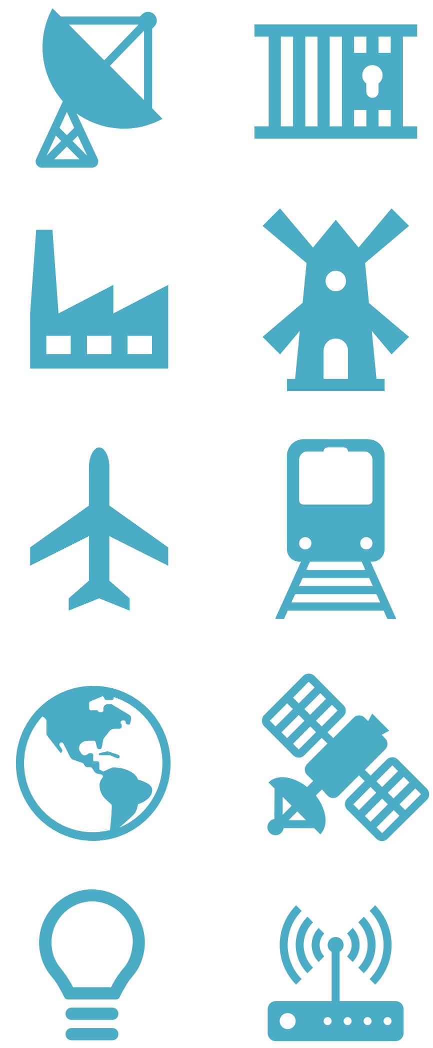

Midstream remain infrastructure, not a commodity link

4D Infrastructure have analysed from a top down, as well as bottom up basis the fundamental earnings impact from the combined demand/supply impact on prices from:

- The economic impact of COVID-19 (demand side)
- Artificially lowered crude prices on a lower for longer basis (around $30/Bbl) (supply side)

We have stress tested both our macro assumptions and stock specific earnings drivers (case studies in following slides) and conclude that

- The sector will be subject to ongoing price volatility until the market can recognise the disconnect between select company earnings and commodity pricing – this should play out over time
- Certain sub-sectors of the midstream value chain have greater exposure to downside than others (eg G&P, marketing) while others are largely immune (pipelines)
- Factoring in worst case scenario's, regardless of where a company operates along the value chain, the sector has been over sold
    - The current market seems to be pricing in a significant probability of financial distress – none of 4D Infrastructure's investment companies appear at significant risk of this scenario in the near term
    - Considering revised base case scenarios, and prevailing share prices, all companies represent five year IRRs in excess of 20% - makes them a Strong Buy according to 4D Infrastructure's methodology
- A risk to achieving these returns exists if private investors, with significant capital and longer term investment horizons, opportunistically bid for these companies at their depressed share prices. A "healthy" premium could get a transaction done but still represent a significant discount to fundamental valuation
    - Company Boards and management teams hopefully exercise strong governance and good judgement in insisting that real fundamental valuation is recognised and paid by potential acquirers

Midstream remain infrastructure, not a commodity link

We see significant medium-long term value in the sector and in particular in the following names for reasons discussed in the following case studies…

Company	Share price @ 20/03/2020	IRR %	Worst Case Scenario IRR Var	4D Qualitative rating	Year to date TSR*
CHENIERE	US$35.04	>20%	-4.4%	A	-43%
KINDER MORGAN	US$12.35	>20%	-5.3%	A	-41%
ENBRIDGE	C$37.05	>20%	-4.0%	A	-27%
Williams	US$11.53	>20%	-3.5%	B	-50%
PEMBINA	C$23.12	>20%	-10.5%	B	-52%
GIBSON ENERGY	C$14.21	>20%	-6.0%	C	-47%
TARGA	US$7.30	>20%	-23.4%	C	-82%

* The YTD TSR is as of 20th March 2020

The share market sell-off of these names YTD has been overdone (the minimum share price reduction is 27%) – they all now represent Strong Buys at this share price

Source: Bloomberg and 4D Infrastructure

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Cheniere Energy – Strong Buy

Investment Thesis

- ✓ Natural gas (often delivered via LNG) is playing an increasing role in the global energy solution and replacing coal as an energy source (eg. in China)
- ✓ Cheniere is the first of the US LNG export projects to come on-line and therefore has first-mover advantage
- ✓ Cheniere's output is underpinned by long-term, take-or-pay contracts, with high quality counterparties paying fixed fees
- ✓ The company's execution to-date has been flawless in delivering the projects on-time and on budget
- ✓ The business has a number of expansion options at its existing facilities

Cheniere is the leading producer of liquefied natural gas in the United States

<u>Negatives/Risks</u>

- ➢ Global LNG prices depressed as demand catches up with first phase of US LNG supply. Trade war and Coronavirus also impacting demand and pricing overseas
- ➢ Possible cost overruns on remaining, incomplete LNG plants

Highly contracted business model with substantial expansion opportunities – overall a quality business with an excellent management team

 Source: 4D Infrastructure / company presentations

Cheniere Energy – Strong Buy

Stress Testing

- ✓ Oil price weakening, and poor overseas demand negatively impacting global LNG pricing. This only impacts Cheniere's uncontacted LNG volumes which move to 10% of total volumes as new trains enter contracting period
- ✓ Assume cost blow outs on development of LNG trains remaining to be developed – only Corpus Christi Train 3 and Sabine pass Train 6 are yet to be developed
- ✓ Corpus Christi Phase 2 has not reached FID and remains upside to the valuation

Oil price crash scenario

Scenario?	Sensitivity	IRR
LNG price weakness	- Assume global LNG price – US$4.50/MBtu	**-2.4%**
LNG price weakness + Capex overspend on remaining development	- Assume global LNG price – US$4.50/MBtu - 20% overspend on remaining development projects	**-4.4%**

Fundamental valuation not significantly impacted by current market dynamics - core portfolio position

 Source: 4D Infrastructure / company presentations

Kinder Morgan – Strong Buy

Investment Thesis

- ✓ One of the largest natural gas transport companies in the US, connecting major resource plays to key demand centres – moves ~40% of U.S. natural gas consumption & exports
- ✓ Significant contractual protections against reductions to natural gas and refined product prices and volumes
- ✓ Achieved appropriate debt gearing at sub 4.5x Debt/EBITDA and solid investment grade credit rating at BBB
- ✓ Increasing return of cash to shareholders through dividend increases (25% planned for 2020) and opportunistic share repurchases

Kinder Morgan is a major diversified energy commodity player in the US, with a focus on natural gas

Negatives/Risks

- Exposure to movements in crude prices and volumes through the CO_2 and Product Pipeline business segments – hedging reduces this exposure significantly in 2020
- Some volumetric exposure to natural gas and NGL volumes

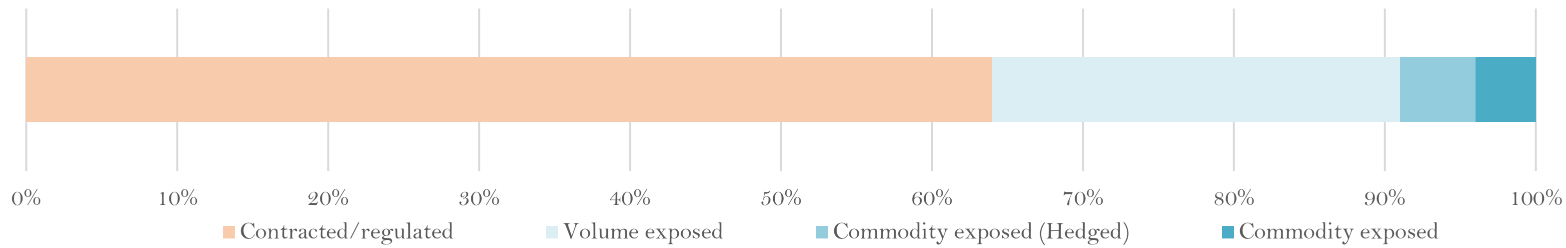
Key player in the transport of energy from production to demand centres across the US – significant contractual protections provide cashflow stability during price/volume volatility

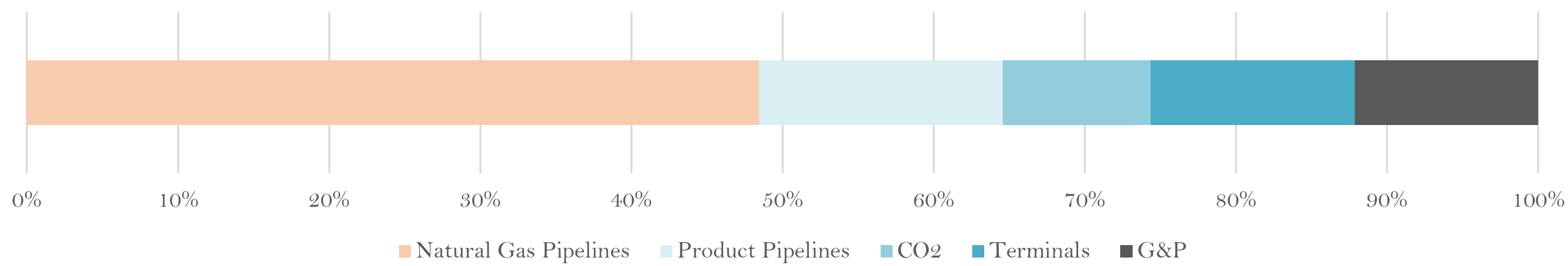
 Source: 4D Infrastructure / company presentations

Kinder Morgan – Strong Buy

Earnings Exposure

- Even though Kinder Morgan is diversified across multiple energy commodities from crude, to NGLs and CO_2, the company is
  - 1) primarily focused on Natural gas; and
  - 2) has a number of contractual protections which insulate earnings from direct commodity price movements, and the indirect impact on volumes serviced
- This is summarised below – only c.27% of Kinder Morgan's EBDA will be indirectly impacted by commodity prices in volumes; and 5-9% of EBDA directly from price movements (approximately 5% of exposure is hedged for 2020)
- Kinder Morgan's FY20 budgeted EBDA is represented below:





 Source: 4D Infrastructure / company presentations

Kinder Morgan – Strong Buy

Current commodity price scenario testing

- The current commodity price environment is most likely to affect the following segments of Kinder Morgan's business
  1. The CO_2 business segment has direct price exposure as well as indirect volume exposure and represents about 9% of total EBDA. The direct price exposure is largely hedged for FY20 but exposed thereafter. Volume protections exist for the transportation of CO_2 which represents about 30% of this business' earnings – have assumed crude prices in line with analyst forecasts, and aggressively cut drilling volumes
  2. A reduction in oil directed G&P volumes of Kinder Morgan's Natural Gas Business and Products businesses – this represents operations in the Eagle Ford and Bakken basins – reduced G&P volumes (12% of total EBDA) aggressively

Scenario?	Sensitivity	IRR
Low crude prices impact on CO_2 business segment – prices and volumes	- Adjust crude price to US$35 Bbl in FY20 and US$50 Bbl in the longer term - Adjust volumes down 25%; 50%; 25% in FY20, FY21; FY22 compared to FY19	**-1.2%**
CO_2 impact + Impact on Eagle Ford G&P volumes	- Assume above scenario - Reduce G&P volumes by 25%; 50%; 25% in FY20; FY21; FY22 AND reduced Product Pipeline volumes	**-4.6%**
CO_2 impact + Extreme G&P volumes impact	- Assume CO_2 business scenario - Reduce G&P volumes by 50%; 65%; 25% in FY20; FY21; FY22 AND reduced Product Pipeline volumes	**-5.3%**

The downside scenario still represents good value – maintain as core investment holding

Enbridge – Strong Buy

Investment Thesis

- ✓ Enbridge (ENB CN) is a diversified midstream based out of Canada, with its largest EBITDA segment being oil pipelines ~53% and remainder being gas transmission and distribution ~43% and other ~4%.
- ✓ Tier-1 asset is the Mainline pipeline between Canada and US. It provides significant export capacity of heavy oil from Canada to US (which is only used domestically and is demand pulled from US refineries);
- ✓ 94% of EBITDA is underpinned by contracts / regulation / cost of service agreements with counterparties of which 93% are investment grade
- ✓ Underappreciated value in associates which are steadily being monetised;
- ✓ Facilitating access to new markets through 1) provision of transport to LNG export terminals; 2) oil export terminals;
- ✓ IRR / valuation and investment thesis based on:
  - Balance sheet normalisation post large / strategically important M&A
  - Asset rationalisation improving quality of earnings
  - Disciplined capital allocation and shareholder focus as growth capex declines

Enbridge facilitates ~70% of oil transport between Canada and US

Negatives/Risks

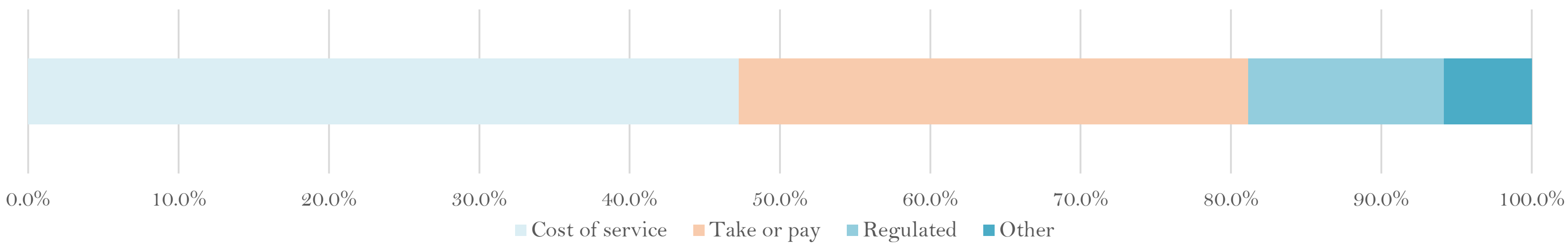
- ➢ Increasing ESG risk associated with existing pipeline footprint (e.g. spills) and new pipeline build (e.g. Line 3 replacement)

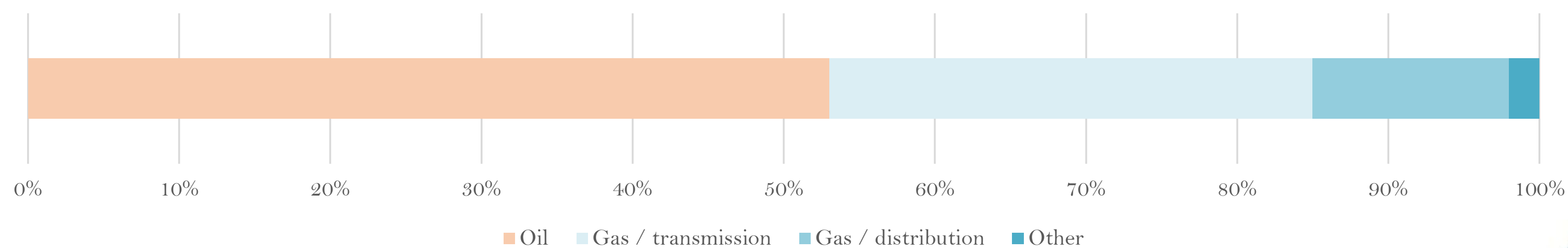
Source: Enbridge company materials

Enbridge – Strong Buy

Earnings Exposure

- Enbridge is a diversified midstream based out of Canada. While its largest segment (~55% of EBITDA) is oil transport and storage, it also has a large gas transmission and distribution segment;
    - Oil transport and storage is underpinned by cost of service contracts. This implies some volume risk due to displacement of marginal Canadian oil barrels. Unlike US oil production, the majority of Canadian oil is considered 'heavy' which historically has been solely for (US) domestic consumption and does not compete with 'light' oil being exported;
- Enbridge FY19 EBITDA decomposition below:





Source: 4D Infrastructure / company presentations

Enbridge – Strong Buy

Sensitivities

- Scenario testing included:
  1. Oil price shock (oil price at US$20-to-30) short run (e.g. 1 year). Assuming ~10% curtailment of Canadian oil production ~(0.5m bpd) due to predominantly being 'heavy' oil, prior to recovery.
  2. Oil price shock (oil price at US$20-to-30) leading to lower oil price long run (e.g. perpetuity). Assuming ~10% curtailment of Canadian oil production ~(0.5m bpd) no recovery / no growth;
  3. Oil price shock as represented in scenario 2 above and contract re-opening whereby price / contract duration 'blend & extend' leading to ~10% reduction in price and longer contract terms on Mainline

Scenario?	Sensitivity	IRR impact (~)
(lower) oil price and volumes (short-run)	No additional capacity modelled; Mainline loss of ~10% of volumes, with recovery	**-1.5%**
(lower) oil price and volumes (long-run)	No additional capacity modelled; Mainline loss of ~10% of volumes, with no recovery / no growth	**-3.0%**
(lower) oil price and volumes (long-run) and price 'blend & extend'	No additional capacity modelled; Mainline loss of ~10% of volumes, with no recovery / no growth Mainline reduce price but increases contract duration	**-4.0%**

ENB's sensitivity to oil price shock is minimal due to diversity of earnings, quality of assets / contractual agreements, and lack of exposure to commodity prices

 Source: 4D Infrastructure / company presentations

Williams Company – Strong Buy

Investment Thesis

- ✓ Owns and operates a set of irreplaceable natural gas pipeline assets including Transco which serves much of the East and Southeast of the US
- ✓ Significant contractual protections against reductions to natural gas and NGL prices and volumes
- ✓ Operating in the lowest production cost gas basins in the US in the Marcellus/Utica and the Haynesville – most likely to service growing domestic and global demand
- ✓ Strong management team delivering operational performance and cost efficiency – has managed to execute on a number of attractive, value accretive transactions

<u>Negatives/Risks</u>

- ➢ Indirect volumetric exposure to gas prices – mitigated by Williams' presence in the lowest cost gas basins meaning producers continue drilling in low price environments
- ➢ Some smaller exposure to weaker oil directed basins such as the Wamsutter and Southeast Wyoming
- ➢ Some counterparty risk in less productive basins (although minimal)

Williams owns and operates the arterial pipeline serving much of the east coast of the US

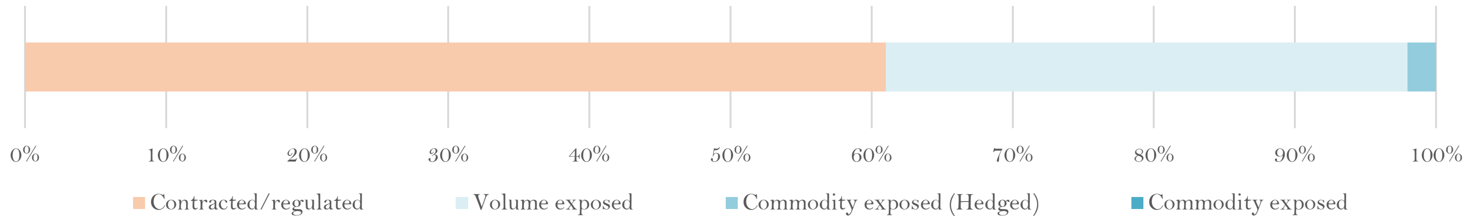
Vertically integrated midstream natural gas company that is central to provision of gas to demand centres on the east coast of the US

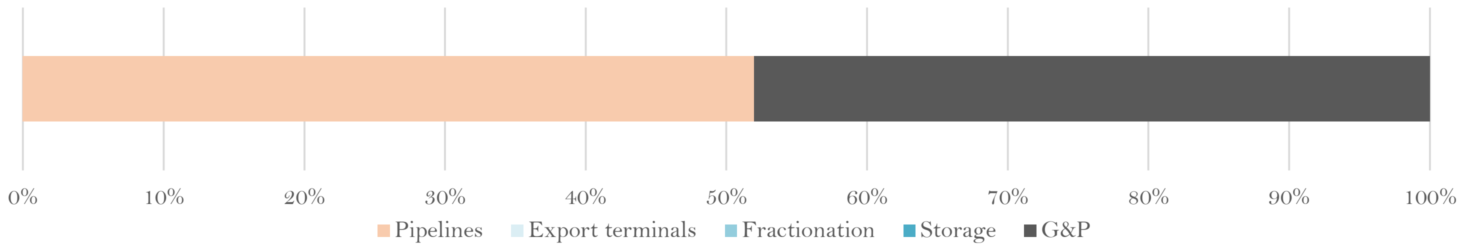
Source: 4D Infrastructure / company presentations

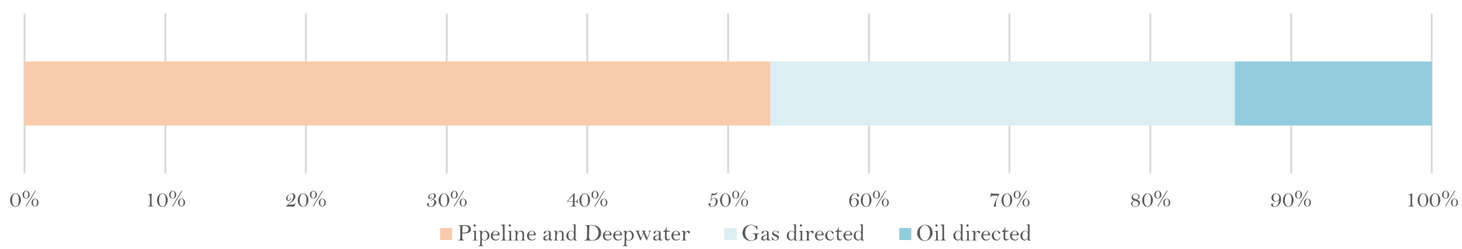
Williams Company – Strong Buy

Earnings Exposure

- Williams' direct exposure to commodity prices is very small representing about 2% of Gross margin
- Indirect volume exposure to commodity prices is largely isolated to Williams' G&P business and represents about 37% of FY20 Budget Gross margin.
- Oil price driven volume exposure is 14% where gas price driven volume exposure is 33% of Gross margin respectively
- Williams FY20 Guidance Gross margin represented below:







Source: 4D Infrastructure / company presentations

Williams Company – Strong Buy

Current commodity price scenario testing

- The key risk of the current commodity price environment is that low crude prices result in producers pulling back crude production, affecting Williams' oil directed G&P volumes. This is a relatively small part of Williams' business ~14% - have adopted aggressive oil directed production cuts
- Gas directed G&P volumes are assumed to be flat in FY20 compared to FY19 as producers are not likely to cut production in these high quality basins in the current price environment – this may change if prices withdraw further
  - Gas prices are supported by the assumed cut in associated gas volumes – driven by aforementioned cuts in crude production

Scenario?	Sensitivity	IRR
Downside scenario – reduce oil directed G&P volumes at risk	- Reduction of G&P volumes in the West business segment by -25%; -50%; and -25% in FY20; FY21 and FY22 compared to 2019 volumes	**-2.7%**
Deepest cut – reduce oil directed volumes by greater amount	- Reduction of G&P volumes in the West business segment by -25%; -75%; -50%; and -25% in FY20; FY21; FY22; and FY23 compared to FY19 volumes	**-3.5%**

Potentially the only "winner" as a result of the recent cuts to global crude prices by OPEC – supports natural gas prices

Pembina Pipeline – Strong Buy

Investment Thesis

- ✓ Pembina Pipeline (PPL CN) is a midstream company based out of Canada providing natural gas liquids (NGL) processing, transportation, fractionation, and storage;
- ✓ Its Tier-1 asset is NGL pipeline: Peace (~60% of EBITDA). PPL has minimal oil transportation or storage assets but is indirectly impacted through its exposure to NGLs (which are linked to oil prices);
- ✓ PPL operates in Canada's Tier-1 (wet) gas basins of Montney / Duvernay whereby it has built out a NGL value chain, including: gas processing, transportation, fractionation, and storage. Because of this, PPL is an essential service for its counterparties.
- ✓ PPL is also increasingly focusing on facilitating new markets (for its counterparties) through common-use infrastructure: LNG, export terminals, and petrachem;
- ✓ IRR / valuation and investment thesis based on:
  - Under-appreciated earnings quality given take-or-pay basis to gas processing, transportation, storage and fractionation
  - Extensibility due to asset location

Pembina Pipeline provides a fully integrated NGL value chain

<u>Negatives/Risks</u>

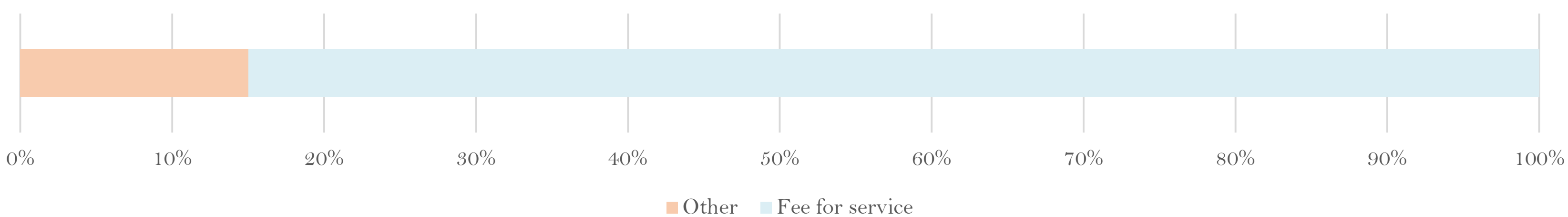
- ➢ Counterparty risk higher than peers (~60% investment grade)

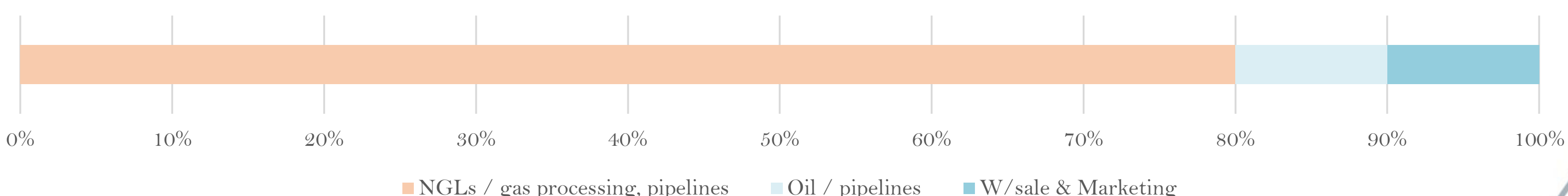
 Source: 4D Infrastructure / company presentations

Pembina Pipeline – Strong Buy

Earnings Exposure

- PPL has ~80% of EBITDA linked to NGL gas processing, pipeline, fractionation, and storage assets. Historically, NGL prices have been linked to oil due to interchangeability to produce energy. This has decoupled more recently (reducing its sensitivity) due to:
    1. NGLs such as propane / ethane can be exported to intl. markets;
    2. NGLs such as condensate have demand > supply in Canada (due to need to transport heavy oil in pipelines)
- PPL's fee-for-service implies volume risk, but a portion of volumes (typically >60%) are take-or-pay (underpinning new capacity ROIC). Of importance, PPL's distributions are paid from its contracted earnings. Marketing earnings are seen as a windfall allowing for capital flexibility;
- Pembina Pipeline's FY19 EBITDA decomposition below:





 Source: 4D Infrastructure / company presentations

Pembina Pipeline – Strong Buy

Sensitivities

- Scenario testing included:
  1. Oil price shock (oil price at US$20-to-30) leading to weaker NGL prices (albeit blunted due to hedging / decoupling of NGL pricing to oil) which in turn leads to short run (e.g. 1 year) ~25% reduction in base NGL processing, transport, fractionation and storage volumes, prior to recovery;
  2. Oil price shock (oil price at US$20-to-30) leading to lower oil price long run (e.g. perpetuity). Assuming ~10% curtailment of Canadian oil production. Weaker oil prices and oil production, in turn, leads to long run ~25% reduction in base NGL processing, transport, fractionation and storage volumes with no recovery.
  3. Oil price shock as represented in scenario 2 above and zero contribution from Marketing EBITDA long run;

Scenario?	Sensitivity	IRR
(lower) oil price (short-run)	No additional NGL capacity modelled; ~25% loss of volumes short run, with recovery due to asset location / condensate demand in Canada	**-3.0%**
(lower) oil price and production (long-run)	No additional NGL capacity modelled; ~25% loss of volumes long run, with no recovery	**-7.0%**
(lower) oil price and production (long-run) / no marketing	No additional NGL capacity modelled; ~25% loss of volumes long run, with no recovery and assume no contribution from Marketing	**-10.5%**

PPL is an integrated service provider providing processing, transport, fractionation and storage. Its assets are located in Tier-1 basins and (past) capital discipline / stronger contractual terms of its assets (relative to NGL midstream peers) are not being recognised

Gibson Energy – Strong Buy

Investment Thesis

- ✓ Gibson Energy (GEI CN) is a midstream company based out of Canada with ~75% of EBITDA linked to oil storage assets. Oil storage in Canada is based on operational flexibility rather than speculation (e.g. contango / backwardation). Oil E&P use storage to manage production rates (relative to pipeline reservation), batching, basis risk, etc.
- ✓ New capacity is underpinned by ~10 yr. take-or-pay contracts. Mgmt. believe an additional 2-to-4 storage tanks can be added year-on-year due to incremental production of oil sands (e.g. optimisation of wells);
- ✓ Solid customer base of which 85% are investment grade
- ✓ IRR / valuation and investment thesis based on:
  - Balance sheet normalisation post divestment of non infrastructure assets
  - Under-appreciated earnings quality due to take-or-pay contract structure
  - Extensibility due to asset location

Gibson Energy is an essential service for Canadian oil producers

<u>Negatives/Risks</u>

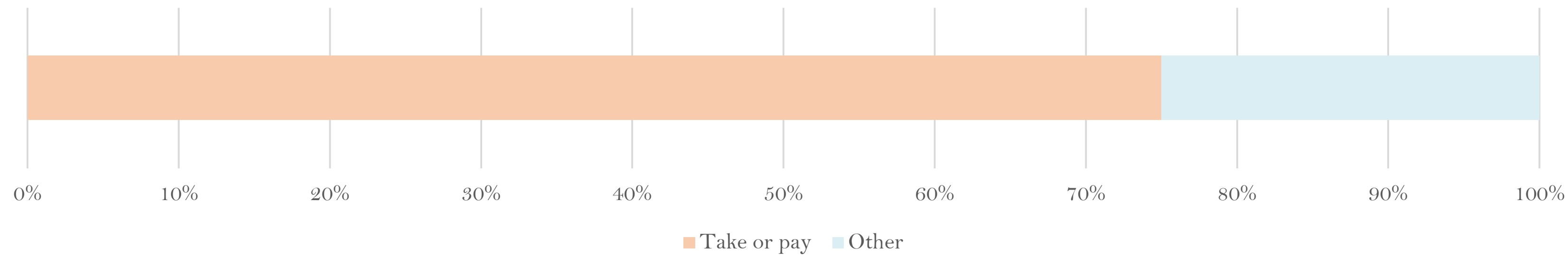
- ➢ Safety / maintenance costs with increasing compliance requirements
- ➢ Marketing subject to price volatility

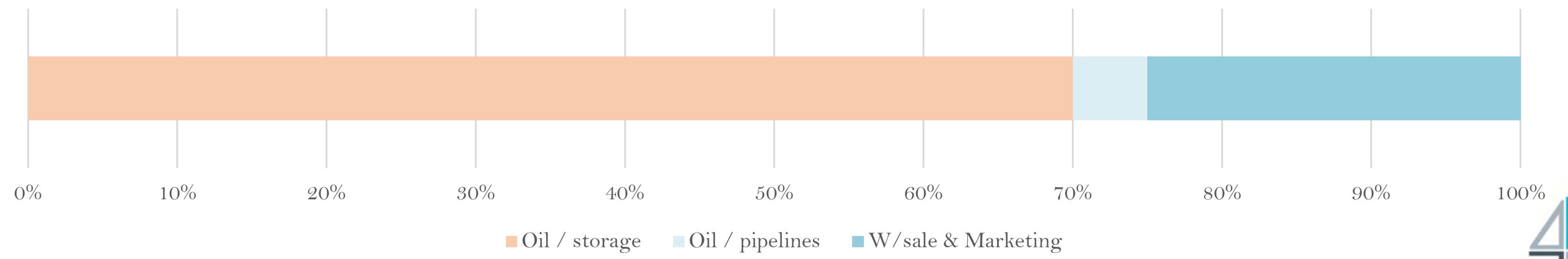
 Source: 4D Infrastructure / company presentations

Gibson Energy – Strong Buy

Earnings Exposure

- Gibson Energy (GEI CN) is a midstream company based out of Canada with ~75% of EBITDA linked to oil storage assets and the remainder associated predominantly with oil, gas, and NGL Marketing;
  - GEI's proportion of oil storage EBITDA is increasing year on year with commensurate reduction in more volatile Marketing. Marketing is heavily influenced by spreads between Western Canadian Select (WVS) and WTI oil price
  - Of importance, GEI's distributions are paid from its contracted earnings. Marketing earnings are seen as a windfall allowing for capital flexibility (e.g. higher growth capex budget associated with higher Marketing earnings);
- Gibson Energy's FY19 EBITDA decomposition below:





 Source: 4D Infrastructure / company presentations

Gibson Energy – Strong Buy

Sensitivities

- Scenario testing included:
  1. Oil price shock (oil price at US$20-to-30) short run (e.g. 1 year). Assuming ~10% curtailment of Canadian oil production, prior to recovery;
  2. Oil price shock (oil price at US$20-to-30) leading to lower oil price long run (e.g. perpetuity). Assuming ~10% curtailment of Canadian oil production, no recovery. On take-or-pay expiry, 10% of storage capacity not renewed;
  3. Oil price shock as represented in scenario 2 above and zero contribution from Marketing EBITDA long run;

Scenario?	Sensitivity	IRR (~)
(lower) oil price (short-run)	No additional capacity modelled; existing assets fully utilised, no impact on earnings due to take-or-pay contractual terms	**0%**
(lower) oil price and oil production (long-run)	No additional capacity modelled; existing assets 10% of capacity not renewed (i.e. asset stranding)	**-3.0%**
(lower) oil price and oil production (long-run) and no marketing	No additional capacity modelled; existing assets 10% of capacity not renewed (i.e. asset stranding) and assume no contribution from Marketing	**-6.0%**

GEI's oil storage assets in Hardisty and Edmonton are an essential service protected by ~10 year take-or-pay contractual terms

Targa Resources – Strong Buy

Investment Thesis

- ✓ Key positions in some of the most productive and lowest wellhead cost Oil & Gas basins in the world in the Permian and Bakken basins
- ✓ Able to capture and earn fees on commodity volumes all the way down the vertical supply chain through interconnectivity – able to offer customers one stop shop from supply basin to end market
- ✓ Strong earnings growth forecasted from increasing captured volumes driven by underlying O&G basins and output – Targa Resources (Targa) is able to fully capitalise on the transition from raw commodity to refined commodity

Strong growth driven by capturing gas volumes in the best basins in the US

<u>Negatives/Risks</u>

- Direct commodity price exposure representing 20% of operating margin (with 10% hedged for 2020) can provide earnings volatility
- Indirect link between oil and earnings below a threshold price – mitigated by operating in some of the lowest cost production basins in the world
- Over leveraged at +5.0x Debt/EBITDA (FY19) – growth driven reductions FY20

Strong growth potential from capturing volumes in the best basins in the US and earning fees throughout the vertical supply chain

Source: 4D Infrastructure / company presentations

Targa Resources – Strong Buy

Recent developments

- Targa's share price has ranged between US$40 - $55 for the past five years as investors focused on whether the company was on track to achieve significant de-risking and de-gearing of its business
- Since 20 February the share price has reduced -72% aligned with 1) global fears of Coronavirus outbreak (demand driver); and 2) the fallout from OPEC negotiations which resulted in Saudi Arabia cutting crude prices and increasing supply output (supply driver) – both factors means crude prices fall from c.US$54/Bbl to below US$30/Bbl
- The fear for many midstream players, including Targa, is that it is potentially uneconomic for O&G producer customers to drill commodities at these new prices – potentially stranding midstream assets and creating financial distress

Mitigants to current low commodity prices

Operational mitigants	Financial mitigants
- Operating in the lowest cost basins in the US - Producers are last to stop drilling and first to start again	- Targa has liquidity through its revolving capital facilities of approximately $2.7 billion
- Expect producers to look for cost reductions from O&G service contractors – reducing their own breakeven cost base	- Significant headroom (1.2x EBITDA) on the only debt covenant in the structure - Management are confident of getting a waiver if required
- Ability to improve cashflows through cost cutting, removal of capital projects, asset sales and potentially reducing the dividend	- No debt maturing for three years in 2023 - Assumedly commodity prices improve in this time
- Bankruptcy of producer customers is protected through being a net creditor in the relationship	- In Bankruptcy process Targa is usually the net creditor - low ability to negotiate contact degradation

Targa Resources – Strong Buy

4D Infrastructure's view of the situation and market reaction

- Current crude prices are irrationally low – no producer including Saudi Arabia or Russia is benefitting
- At Targa's current share price the market has assumed a strong possibility of financial distress
  - As outlined in mitigants, the next review point for financial distress is the refinancing of debt in 2023 – this is an issue if crude commodity prices don't recover to improve debt market confidence, or facilitate debt reductions
- Despite the above earnings mitigants, prolonged very low commodity prices (below c.US$40-45/Bbl substantially into 2021) is likely to impact producers' appetite to drill over the medium/long term, and therefore Targa's earnings
  - This will impact Targa's ability to achieve a targeted reduction in debt leverage to below 4.0x Debt/EBITDA and improve investor market confidence
- A return to crude prices above US$45/Bbl will likely result in a return to production and earnings growth for the company
- KEY QUESTION - can OPEC and Russian maintain these super low crude prices for an extended period?

Scenario?	Sensitivity	IRR (~)
(lower) oil price (medium term)	Takes aggressive cuts to all G&P basins to the point that the company can only just repay 2023 maturing debt without raising additional debt financing	**-23.4%**

4D Infrastructure believes that the current uneconomic level of commodity prices (especially crude) will recover in time for Targa to continue its growth trajectory and de-gear its financial structure