Brookfield Infrastructure Partners: A Wasting Trust Trading at 2x Inflated NAV

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He is an incorporated, undercapitalized, unlimited asylum for the reception of the restless and unwise dollars of his fellowmen.
O'Henry, The Man Higher Up

Executive Summary

We are short the units of Brookfield Infrastructure Partners (BIP). We believe BIP is a YieldCo with inflated cashflows and asset values that does not cover distributions. We believe the partnership has an unsustainable financial model and is reliant on aggressive accounting. Finally, the units trade at an unjustifiably high multiple of NAV. By our estimate, there is over ~70% downside to fair value.

BIP's complex financial accounting encourages investors to remain focused on management's partnership-level non-GAAP/IFRS metrics and presentation to the exclusion of asset-level analysis, net asset value and the source of distributions and cashflow.

The partnership's non-GAAP/IFRS financial presentation centers on funds from operation (FFO), a proprietary metric our analysis shows inflates cash available for distributions. Investor focus on yield and distribution growth have resulted in the trading multiple increasing from ~0.76x NAV in 2010 to the current 2x NAV.

A high fee burden and distribution payout, both disconnected with partnership returns or cashflows, created a cash expense structure that reached what we think is an unsustainable 19.8% of NAV in 2022.

Over time as multiple expansion caused BIP's **unit price** to decouple from **unit value**, management removed key disclosures that facilitated both distribution coverage and carrying value analysis. All entity-level financial information for equity accounted investments was eliminated in 2018. ***As of 2Q23, 54% of net assets were invested in equity accounted investments for which no company financial information is provided.***

In a zero interest rate environment, investors may have been willing to overlook many of the issues in the quest for yield. However, we believe in the current environment, investors will see BIP for what it is: ***a YieldCo that doesn't cover distributions, employs aggressive accounting, and trades at an inflated valuation***. ***It is an industry anomaly hiding in plain sight.***

Our report begins with the investment portfolio, which is the only source of partnership equity and cash flow. Our portfolio-level analysis shows numerous troubled assets that raise significant questions regarding the quality of BIP's disclosures and accuracy of the carrying values. Our valuation work suggests that net assets are overstated by approximately $2.5B or ~24%, approximately $1B of which applies to unitholders.

We analyze BUUK Infrastructure, a key investment holding carried at $1.2B on the balance sheet or ~13% of NAV. We show how BUUK uses a revenue recognition method for connections (construction) income that inflates reported cashflows by including customer contributions to CapEx as revenue. BUUK's credit rating agency, Moody's, acknowledges the issue. ***Moody's refers to the low quality of BUUK's cashflows stating that "connections income makes a large contribution to revenue… and EBITDA... but little or no contribution to free cashflow."***[1]

We believe that BUUK's debt exceeds the value of its assets, making **BIP's stake worth $0.**

We move up from the asset-level to the partnership, showing how BIP's business model works.

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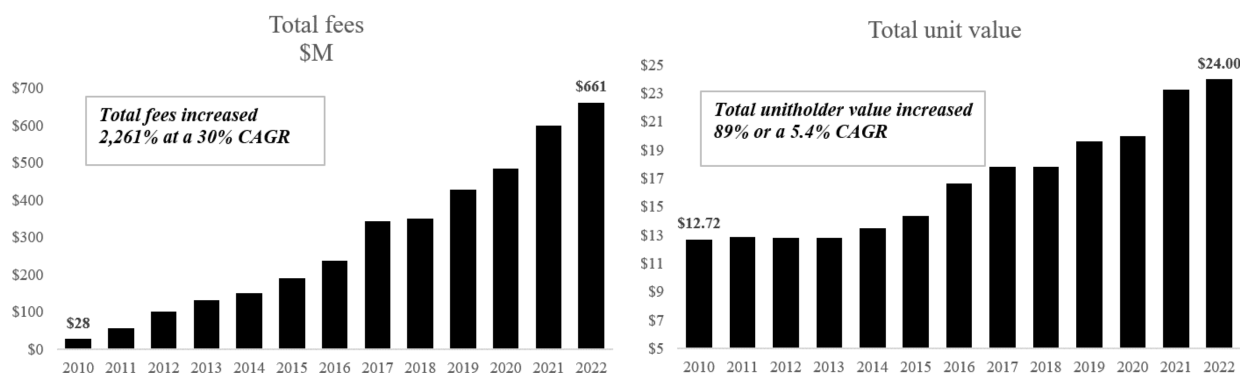
[1] [1] Moody's' credit opinion 5/24/2021.

We believe that BIP's FFO metric inflates cashflows and overstates the partnership's ability to pay distributions. We illustrate this in one way showing that Arteris S.A., a company management has identified as the "largest contributor to toll road cashflows"[2] has long been what we consider financially distressed. **We estimate that BIP has booked approximately $1B of FFO from Arteris since 2015.** The FFO is purportedly "cashflow" that supports distributions to unitholders, but **our analysis shows BIP didn't collect the FFO, but had to downstream cash to Arteris to keep it afloat.**

Over time as BIP's distributions have increased and trading multiple expanded, fees paid to its external manager, Brookfield Asset Management (BAM), have skyrocketed.

BIP paid BAM 7.1% of NAV or a total of $661M in base fees and incentive distributions in 2022, while unitholder NAV/unit declined -5.9%; inclusive of distributions. We estimate BIP's NAV-based total return was 5.7%. Competitor fees topped out at 3.5% for a fund that delivered 14.7% NAV growth to shareholders.

The chart below compares long term total fee growth with total value generated for unitholders.



Source: Total fees is base management fee plus incentive distributions taken from BIP 20-Fs. Total unitholder value is defined as NAV per unit plus cumulative distributions. NAV/unit is estimated from partnership capital and split-adjusted shares outstanding. Distributions for 2012, 2014 2016, 2018, 2020 and 2022 taken from BIP's August 2023 Corporate Profile, others are estimates.

Brookfield Asset Management has clearly profited far in excess of value delivered to unitholders. Neither management fees nor incentive distributions are linked with partnership net assets, profits or cashflows. Management fees are capitalization-based; incentive distributions are based on the level of distributions paid to unitholders.

BAM has the incentive to grow both capitalization and distributions, not increase NAV or cashflows.

Between 2010 and 2022, BIP's capitalization increased dramatically. The trading multiple expanded from 0.76x to over 3.0x at its peak as units outstanding increased ~500M to 657M. The growth in capitalization and distributions have driven **total fees from an estimated 1.49% of NAV in 2010 to 7.1% in 2022.**

NAV analysis as a method or component of valuation faded from consideration as the multiple expanded. The unit price became divorced from the value of the underlying portfolio, making units akin to a derivative.

The growth in fees and capitalization has not been accompanied by outsized profits for unitholders. Where **BAM's fees have increased 23x from $28M to $661M** or a 30% CAGR, NAV/unit has declined -$0.88. We estimate **the change in NAV plus distributions has generated a modest annualized return of 5.4% for unitholders.**

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[2] Bahir Manios, BIP 2020 Investor Day.

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We estimate that total return as measured by the change in stock price plus distributions generated a 14.2% annualized return for unitholders between 2010 and 2022. Given the decline in NAV, **we estimate that approximately 2/3rds of returns were due to multiple/premium expansion, not investment returns.**

In our view, the overpayment of distributions combined with high fees makes the business model unsustainable long-term. Constructing financially fragile investment structures is not new for Brookfield. The Edper group, Brookfield's predecessor, collapsed 80-90% in the mid-1990s[3]. It was an analogous structure built on excessive dividends and leverage.

BIP investor have been inveigled by the current yield and a target of 5-9% annual distribution growth[4] to pay far above our estimate of intrinsic value. It is easy to see $15 or more in downside in the unit price based on valuation. **A realistic NAV revaluation and multiple rationalization point to a value of $6-9 per unit or downside of ~75%.** Upside, however, requires buyers to be willing to pay a higher multiple of NAV, making the investment thesis akin to the greater fool theory, in our view.

Below we illustrate BIP's valuation anomaly by comparing it with infrastructure vehicles. The first table contains only private infrastructure vehicles, the second a mix of private infrastructure, public infrastructure and private equity.

Close Comparable Valuations

	Brookfield Infrastructure Partners (NYSE: BIP)	**CK Infrastructure Holdings** (HK: 1038)	**Power Asset Holdings** (HK 0006)	**3I Infrastructure** (L: 3IN)
NAV/share (unit)	$11.40	$48.79	$41.43	$336.00
Price/share (unit)	$23.22	$36.20	$37.00	$294.00
Premium/(Discount)	***104%***	***-26%***	***-11%***	***-13%***

Source: Yahoo Finance prices, company financials net assets and shares (units) outstanding. Prices as of 10/21/23.

Comparable Valuations

Vehicle	**Type**	**Ticker**	**Premium (Discount)**
Brookifeld Infrastructure Partners	***Private Infrasturcture***	***BIP***	***104%***
3i Group PLC	Private Equity	III.L	11%
Brookfield Global Infrastructure	Closed-end fund	BGI.UN	-9%
Power Asssets Holding	Private Infrasturcture	0006 HK	-11%
3i Infrastructure	Private Infrasturcture	3IN L	-13%
Mainstay CBRE Global Infrastructure	Closed-end fund	MEGI	-20%
Cohen & Steers Infrastructure Fund	Closed-end fund	UTF	-20%
HG Capital Trust	Private Equity	HGT.L	-21%
CK Infrastructure	Private Infrasturcture	1038 HK	-26%
Apax Global Alpha	Private Equity	APAX.L	-29%
Aberdeen Private Equity Opportunities	Private Equity	APEO.L	-43%
Harbourvest Global Private Equity	Private Equity	HVPE.L	-46%

Source: Company websites, Yahoo Finance, Hargreaves Lansdown and estimates of discount.

[3] The Independent, Legacy of a Bootlegger.
[4] BIP 2Q23 supplemental information package states growth targets.

KEY FACTS:

Our ***Portfolio-level analysis*** evidences overvaluation of investments and businesses that we consider misrepresented at the BIP level (p7).

Inflated asset values - We examine portfolio positions amounting to over 70% of net assets (p 8). Asset-level problems include mundane overvaluation and concealment of severe impairments. We value BIP's largest asset, Inter Pipeline, at $1.5B versus the carrying value of $2.68B (p 35). **Arteris (p 28) and Rutas de Lima (p 26) both face existential threats, though for different reasons. None of the issues are disclosed by BIP.**

Our valuation work indicates that asset values are overstated by at least $2.5B in the aggregate. Applying BIP's proportion takes the NAV/unit down ~19% to $9.54 from 2022 year-end IFRS NAV of $11.72 (p50).

Individual asset valuation work includes BUUK Infrastructure, a key asset at 13% of NAV (p 9).

In our view, the BUUK described and financially depicted in BIP's SEC filings is a FantasyCo. The accounting presentation has no relationship with the underlying economics of the business. The proportional FFO recorded in BIP's non-GAAP/IFRS accounting and cashflows consolidated on BIP's IFRS statements are both vastly inflated, in our opinion. **We believe a realistic value for BIP's equity, currently carried at $1.2B, is $0.**

BIP classifies BUUK as a utility which generates long-term returns from a regulated asset base[5], but we estimate over 50% of EBITDA and cashflow comes from an unusual classification of construction-related CapEx contributions as revenues. **The accounting transforms the appearance BUUK's deeply unprofitable construction business into a profitable, cashflowing enterprise.** This is only evident with deep industry and asset level analysis, which is not possible with BIP's disclosure.

In our view, a combination of factors makes the presentation of BUUK deeply deceptive. (1) inappropriate and transformational accounting election; (2) the failure of BUUK to disclose key accounting and regulatory risks; and (3) we believe BIP's disclosures regarding BUUK completely misrepresent the company's business, describing a growing, stable cashflow pipeline business, while the finances it consolidates are driven by very aggressive construction accounting.

Asset-level accounting boosts both company and BIP metrics – BUUK has made an accounting election that records customer CapEx contributions as revenue. While legal, it is unusual. Connections income "boosts cashflow-based credit metrics and covenants", according to Moody's.[6] **In our view, the only reason for using this accounting treatment is the beneficial impact it has on financial reports at the BIP level through consolidation.**

Significantly lower cashflow than reported – We estimate developer contributions to CapEx added approximately £139M in costless revenue in 2022. Adjusted for contributions, EBITDA declines -55% to £120M from the reported £269M. Our FFO estimate is £58M, -72% from the reported £207M. **The inflated revenue and cashflow numbers filter up to both BIP's IFRS and Non-GAAP/IFRS accounting presentations.**

Declining profitability - The EBITDA margins of BUUK's core pipeline business has declined to 57% in 2022 from a high of 75% in 2016 due to the expiry of favorable regulatory pricing.

[5] BIP 2Q23 Supplemental, page 11.
[6] Moody's May 2021 note on BUUK.

BUUK is 2-3x overvalued – Adjusting financials for connections income, as any industry buyer would do, shows BUUK is overvalued by 2-3x on BIP's balance sheet. It is carried at an estimated 35x enterprise value to adjusted EBITDA in an industry where comparable transactions take place at 11-13x.

Excessive leverage – Inflating assets and cashflows facilitated BUUK's amassing immense amounts of debt. We estimate debt to recurring EBITDA of 16x and an FFO/debt of only 2.6%. Both metrics are indicative of severe financial distress.

Negative equity - Valuing BUUK according to EBITDA by connection type establishes an enterprise value range between £932M and £1.75B. The company has total liabilities of £2.1B and total debt of £1.9B. We estimate BUUK has negative equity of (£350M) to (£1.2B). In contrast, BIP's total GBP equity equivalent is £1.3B.

Severe regulatory risk - Regulatory changes related to Net Zero are scheduled to phase-out residential gas usage in the U.K. and ban the construction of new gas connections. The construction ban begins in 2024 in Scotland and 2035 in England and Wales. The Net Zero legislation means that gas connections, the most profitable part of BUUK's business may disappear, **making the gas network a stranded asset worth zero**.

Serious disclosure issues on multiple fronts – BUUK audits do not cite the treatment of developer contributions as revenues as a critical audit matter or an issue of requiring significant judgement. The risk of banning the construction and eventual use of gas connections is not disclosed. BUUK directors determined that there are no critical judgements that need to be disclosed. BUUK's policy is an anomaly in the industry, which is clearly evident when comparing disclosures with competitors.

Partnership-level analysis shows:

Unjustifiable premium to NAV – BIP's unit price has become divorced from unit value. Premium expansion has led the units to trade at 104% or 2x NAV. The closest comps for BIP trade at discounts ranging from -11% to -26% (pps 3, 50).

The trading multiple amplifies valuation multiples embedded in asset carrying values. BIP owns a stock that trades at $55/share and 8.4x EV/EBITDA in the public market. Purchased via BIP units, investors are paying $112.72/share and 13.9x EV/EBITDA (p 48). BIP owns limited partnership interests in BAM-managed private funds. BIP owners pay 2x NAV. Infrastructure fund interests trade on secondary markets at discounts of ~0.9x NAV[7].

Removing disclosures impedes analysis –Removal of key disclosures actively impede distribution coverage analysis and portfolio valuation. Management has eliminated a simple GAAP disclosure showing distribution coverage (p 64), eliminated IFRS disclosures that facilitated analysis of distribution coverage (pps 65, 68), and removed carrying value information (p 66). **In our view, there is a clear pattern of obfuscation evident in changes in disclosures.**

FFO is not cashflow – BIP's funds from operations (FFO) metric "cannot reasonably be used as a liquidity measure" as stated in SEC correspondence (p 48). Yet, management presents FFO to investors as an interchangeable proxy for cashflow (p 48). Using a key asset as an example, we show how FFO manufactures cashflow and inflates the ability to pay distributions to unitholders (p 52).

BIP does not cover distributions - Our analysis shows that BIP's payout is approximately 2x what is sustainable. A standard metric shows BIP's payout has averaged 144% (p 56) compared to an average a

[7] Infrastructure Investor, All Roads Lead to Infrastructure Secondaries, August 2023.

payout of ~55% for comparable companies. We estimate BIP can support a $0.53 distribution, 65% below the current annualized rate of $1.53 (Appendix 2).

Financial engineering hides the wasting trust: BIP's high cash expense structure has transformed it into a wasting trust (p 57). We believe naturally eroding equity is masked by asset-value write-ups and selling equity to the public at multiples of NAV. We estimate BIP has added $3.9B of equity with fair value adjustments since 2015, and $2.3B of incremental equity selling/issuing units above NAV over the same period.

Brookfield Asset Management vs BIP unitholders – BIP's management fees are not connected to unitholder profit or growth in net asset value (p 61). Capitalization-based fees and Incentive Distribution Rights create a fee structure that benefit Brookfield at the expense of unitholders, in our view. Total fees paid to Brookfield increased almost 5-fold from 1.49% to 7.1% of NAV since 2010. **Unitholder NAV/unit is stagnant while the dollar value of Brookfield's fees have increased 23x from $28M to $661M (p 2).**

Corporate governance and accounting risks - Governance and structure are frequently overlooked and constitute key risks to unitholders (Appendix 1). Management does not owe fiduciary duty to unitholders and may subordinate BIP unitholder interests to third-parties. Despite being classified as an operating company at the end of 2022 **52% of unitholder net assets was invested in equity accounted positions for which no entity-level financial information is given (p 7).**

I. Portfolio Asset Analysis

BIP's stated mission is to own and operate a diversified portfolio of high-quality infrastructure assets that will generate sustainable and growing distributions over the long-term for unitholders.

In our view, the underlying portfolio contrasts sharply with the sales pitch to investors. The portfolio is concentrated with three positions accounting for 46.4% of net assets.

BIP's investments are spread across the balance sheet in three categories, shown below.

Components of Net Assets

($ millions)	**2022**	**% Total**
Non-wholly owned consolidated	7,318	
Wholly owned consolidated	643	
HoldCo equity	(3,052)	
Net consolidated assets	4,909	48%
Equity accounted	5,325	52%
Net assets	**10,234**	

Source: BIP 2022 20-F for basic financial data, estimate for wholly-owned and % of total..

Just over 50% of partnership net assets were invested in equity accounted investments at the end of 2022.

Financial information on investments is scant:

- **Wholly-owned investments** – no financial information. Only one investment. ~4% of net assets.
- **Non-wholly owned consolidated –** summary balance sheet, income statement and cashflow information. ~21 positions and ~44% of net assets.
- **Equity accounted investments** – no entity-level financial information. More than 18 positions and ~52% of net assets.

In total, BIP discloses some entity-level financial information on 44% of NAV; **there is no company-level financial information on the remaining 56% of NAV.**

Portfolio-level analysis is both the most difficult aspect of evaluating BIP and the most necessary. BIP is an investment holding company with no operations. The aggregate carrying value of the investments are unitholder equity, and distributions from the businesses and asset sales are the only source of cashflow.

Conducting in-depth analysis on any BIP investment requires obtaining financial information elsewhere. This is problematic for U.S. and Canadian assets, which have no public filing requirements. However, many other jurisdictions, including the U.K., Australia and Brazil require private companies to file public statements.

Our analysis focuses on a sub-set of BIP's assets. In **Appendix 4**, we provide a full schedule of investments.

a. Discounting Net Assets

We value assets in the portfolio to both compare our valuations with managements and provide an a discount/premium to apply to the net asset value. We group our analysis in four buckets:

1. **Detailed write-ups** – we performed detailed analysis of two key assets that together make-up ~41% of NAV. Both assets file financial statements in other jurisdictions. ***BUUK Infrastructure*** (p 9) and 13% of NAV files statements in the U.K. ***Inter Pipeline*** (p 34) ~28% of NAV – files financial statements in Canada. Our valuations resulted in substantial discounts on both assets. We believe

BUUK is a zero. Further, the accounting is deceptive and should be deeply concerning for BIP investors.

2. **Troubled or impaired positions** – BIP has a number of investments we consider deeply troubled (p 25). Although individually small, together they account for 7.4% of NAV. BIP does not provide much financial data, indications from credit ratings agency provide excellent context. We do not value the positions, but investors may want to discount them based on the issues we discuss. The positions are: ***Rutas de Lima*** **(**toll roads in Peru), ***Dawn Acquisitions*** (data centers) and ***Rockpoint Gas Storage.*** The mayor of Lima has taken legal action to reclaim the concession from Brookfield, while Dawn Acquisitions has been what we consider a complete and predictable failure, and we believe Rockpoint is an amalgamation of extremely low-quality assets. We do not value the positions, but believe the qualitative information provided is important context for investors both with respect to valuation and BIP's disclosure regarding performance.
3. **Equity Accounted segment valuation** – BIP no longer provides either carrying values or summary financial information for equity accounted investments. However, there is information on all four positions in the transport segment (p 27). Our total segment valuation was inline with BIP's carrying value. However, we estimate the value of ***Arteris***, once carried at \$1.72B, has collapsed to ~\$100M and may soon go to zero. Though not discussed in BIP filings, ***Dalrymple Bay Infrastructure and Cheniere Energy Partners*** are public companies. ***V.L.I S.A*** publishes statements in Brazil, and ***Patrick Ports*** is co-owned with an investor that provides reasonable disclosure.
4. **Summary valuation** – ***NorthRiver Midstream*** **(p 43)** (5.7% of NAV) was purchased from Enbridge. We performed a summary valuation with data provided by BIP that yielded an approximately 23% discount to the carrying value.

Our valuation work results in a total discount of -24% or \$2.5B with \$1.7B applicable to BIP. The summary is shown below.

Key Investments Examined

Consolidated Investments **Brookfield Nomenclature**	**Entity Name**	**% of Net Assets**	**Carrying Value**	**Our Valuation**	**Change**	**% Change**	**BIP's % Stake**	**BIP Discount $**	**Others Discount $**
Canadian diversified midstream	Inter Pipeline Ltd	27.9%	2,675	1,500	(1,175)	-44%	56%	(658)	(517)
U.K. regulated distribution operation	BUUK Infrastructure No 1 Limited	12.9%	1,233	-	(1,233)	-100%	80%	(986)	(247)
Western Canadian nat gas gathering and processing	NorthRiver Midstream, Inc.	5.7%	546	422	(124)	-23%	29%	(36)	(88)
	Total	**46.4%**	4,454	1,922	(2,532)			**(1,680)**	**(852)**

Troubled Investments

Company		**% of Net Assets**	**Carrying Value**	**Our Valuation**	**Change**	**% Change**	**% Stake**	**BIP Discount $**	**Others Discount $**
Peruvian toll roads	Rutas de Lima	1%	119	119	-	0%	17%	-	-
North American data centers	Dawn Acquisition	2%	188	188	-	0%	29%	-	-
North American gas Storage	Rockpoint Gas Storage Partners	4%	405	405	-	0%	**40%**	-	-
	Total	**7.4%**	712	712	-			**-**	**-**

Equity Accounted Investments		**% of Net Assets**	**Carrying Value**	**Our Valuation**	**Change**	**% Change**	**% Stake**	**BIP Discount $**	**Others Discount $**
Transport segment									
Brazilian toll road	Arteris S.A.	-	-	100	-	-	45%	-	-
Brazilian rail & port	VLI S.A.	-	-	470	-	-	11%	-	-
Australian port	Patrick Ports	-	-	354	-	-	13%	-	-
Australian export terminal	Dalrymple Bay Infrastructure	-	-	402	-	-	49%	-	-
US LNG Terminal	Cheniere Energy Partners	-	-	680	-	-	6%	-	-
		18.8%	1,925	2,005	80	4%		**80**	

% of net assets valued	**72.7%**
Valuation difference	(2,452)
Discount as a % of net assets	**-24.0%**

Source: BIP 2022 20-F for carrying values and stakes. Our valuations and dependent calculations are our estimates.

BUUK Infrastructure

Multiple Levels of Deception

BUUK has a $4.2B enterprise value on BIP's balance sheet. **Our research indicates that it is worth $2.2B at most. With $2.3B in debt, BUUK has negative equity**. We value BIP's 80% stake at $0, reducing net assets by the $1.2B carrying value.

The core, immediate problem with BUUK is that the company's real cashflows are less than 50% of what are reported. Cashflows are inflated by the use of an accounting election where customer contributions to CapEx are counted as revenues, which become expense-free operating cashflow. However, the contributions have an ~0% free cashflow margin, as noted by Moody's in a credit note[8]. In our view, the only reason to use the accounting is the inflationary impact it has on operating cashflows at the BIP level.

Moody's discusses the impact of the accounting treatment in a credit note on BUUK. An outtake from the note is shown below.

Moody's: Impact of Accounting Treatment of Customer Contributions

BUUK's Baa2 ratings are, however, constrained by weak underlying funds from operations (FFO), particularly when considering the high proportion of connection income, which is less predictable and largely associated with growth capex, and a highly leveraged capital structure.

The high proportion of connections income currently boosts cash flow-based credit metrics and financial covenants…

Source: Moody's ratings actions May 24, 2021.

BUUK has grown to near monopoly status constructing ~65-70% of new connections in the U.K. – and the accounting is the key component for what is ultimately an unprofitable construction business. Incumbent British Gas has warned the regulator of the market-distorting problems that stem from the accounting:

British Gas on Independent Gas Transporters (IGTs)
We recommend accounting separation between connection and transportation charges. Charges to the builders and developers should reflect actual costs of connection and should not be cross subsidized.

IGTs are not currently subject to any imposed incentives to operate efficiently and we are concerned that customers ultimately may pay for IGTs' inefficiencies.
Source: British Gas report to regulator Ofgem.

The immediate problem of BUUK's inflated cashflow is augmented by an existential threat to the company's key business – constructing and operating gas pipeline connections. **The U.K.'s Net Zero legislation is set to eliminate the residential use of gas.** Thus, the bulk of BUUK's assets may become stranded and worth nothing. Finally, neither the accounting risks nor the regulatory risks are disclosed by BUUK or BIP. **Competitors prominently disclose both, making the Brookfield companies industry anomalies.**

The summary of BUUK's key issues are:

- **Unusual, cashflow inflating accounting** – BUUK recognizes customer contributions to construction CapEx as revenues, which leads to EBITDA and cashflow margins of ~100%. In reality, the contributions are offset by expenses in investments and have ~0% margins. We estimate

[8] Moody's' credit opinion 5/24/2021.

BUUK contributed $182M in FFO 2022. On an adjusted basis, we estimate it is -72% lower at ~$51M.

- **BUUK is 2-3x overvalued** – Adjusting financials for connections income, as any industry buyer would do, shows BUUK is overvalued by 2-3x on BIP's balance sheet. It is carried at an estimated 35x enterprise value to adjusted EBITDA in an industry where comparable transactions take place at 11-13x.
- **Inadequate disclosures** – BUUK fails to disclose material risks. Net Zero legislation in the U.K. will ban the construction of gas connections and may lead the network to become a stranded asset. Competitors disclose the risk; BUUK does not. BUUK does not disclose the accounting treatment as an accounting risk. The competitors that use the accounting disclose it as a critical accounting judgment or critical audit matter.

NOTE: All financial information for BUUK on which our analysis is based are available at Companies House in the U.K. The formal name of the entity is BUUK Infrastructure No 2 Limited, company number 08246443.

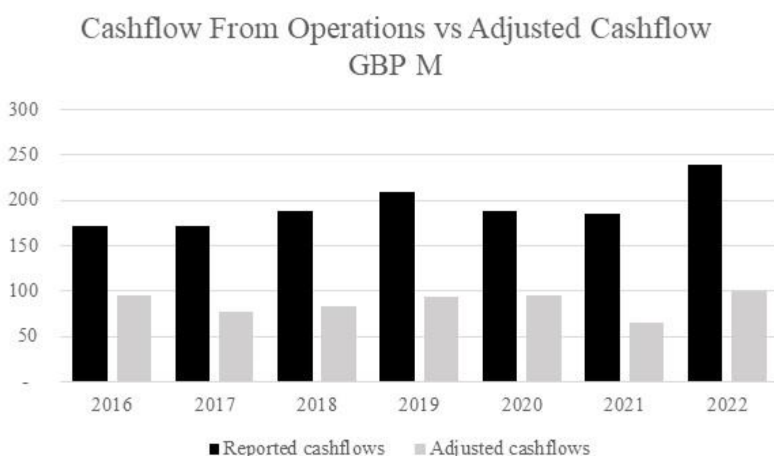
I. BUUK's Cashflow and EBITDA Is Half the Presented

Historically, developers were required to bear the full cost of connecting their projects to the gas/electricity networks after receiving a quote from the monopoly gas/electric distributor in the region. However, after deregulation and in order to encourage competition in the connections market, Ofgem allowed the independent market adopters to offer incentive payments to the developers.

The companies then build out the connections for their full price while taking the developer contribution as an offset to the cost of the asset under UK GAAP. However, BUUK has chosen a different accounting treatment where they are realized under percentage of completion method into revenue. The change is purely accounting related and does not change the fundamental nature of the business or transaction.

Including developer contributions inflates revenue and creates costless EBITDA.

Including the developer contributions for CapEx gives BUUK the appearance of being roughly double the size as it would using industry standard accounting. The table below compares reported cashflow from operations and cashflow adjusted for our estimate of developer contributions.



Source: BUUK Infrastructure No 2 Ltd financial statements. Adjusted cashflows remove our estimate of developer contributions to CapEx.

Critically, ~100% of cashflows associated with developer contributions to CapEx are offset by cash outflows in the investing section of the cashflow statement. Thus, although they inflate cashflows and BIP's FFO metric, the contribution to free cashflow is negligible, at best.

BUUK's presented financial information differs substantially from the operating reality of the business. The company is an amalgamation of more than 30 entities that can be summarized as 1) Regulated connections providers – mostly gas & electricity and 2) Unregulated service providers – construction of connections mainly to housing developments. The accounting amalgamation of the regulated and unregulated businesses combined with the accounting of developer **contributions** distorts the presentation to the point of obfuscating the real economics of the group.

Importantly, any potential strategic buyer of BUUK would be familiar with the accounting issue and strip-out the EBITDA associated connection construction. However, the absence of adequate disclosure means that BIP investors have no way to know that performance metrics are inflated.

Analysis of BUUK is very difficult due to deficient disclosures: the number of different connection types, revenues per connecting type, developer contributions dynamics, competitive pricing for asset adoption, construction cost overruns are not disclosed.

In our model, we estimated the revenue breakdown by connection type and backed out construction revenues. In the table below we present revenues EBITDA on a reported and adjusted basis. By stripping out the inflating impact of construction, we are able to estimate the annual recurring revenue and EBITDA of the transport infrastructure, which is the recurring cash generating business described at the BIP level.

BUUK Annual Reccuring Revenue and EBITDA; EBITDA Yield

GBP M	2022	2021	2020	2019	2018	2017	2016
Revenue							
Gas	139	133	128	121	120	119	119
Electricity	103	88	71	58	47	39	33
Fibre	24	19	15	14	12	9	6
W&W	9	7	6	5	4	4	3
DE	7	4	1	1	1	0	0
Smart Metering	-	20	49	39	30	19	9
ARR	283	271	270	239	214	190	170
ARR Net of Smart Meters	*283*	*252*	*221*	*200*	*184*	*172*	*161*
Reported Revenue	465	392	331	328	307	276	248
Reported EBITDA	**269**	**245**	**223**	**241**	**222**	**206**	**184**
Adjusted ARR Revenue (contributions, electrical)	211	190	171	159	152	144	138
Adjusted ARR EBITDA (net smart meters 80% margin)	**120**	**115**	**112**	**104**	**105**	**103**	**103**
Adjusted EBITDA as a % of Reported	**45%**	**47%**	**50%**	**43%**	**48%**	**50%**	**56%**
EBITDA %	**57%**	**60%**	**66%**	**65%**	**70%**	**72%**	**75%**
PPE net	3,902	3,116	3,301	3,028	2,574	2,279	2,123
EBITDA yield	3.1%	3.7%	3.4%	3.4%	4.1%	4.5%	4.9%

Source: Company filings and estimates.

The main adjustment necessary relates to developer contributions which BUUK books as connections revenue using percentage of completion construction accounting. We have also stripped the passthrough SoLR (supplier of last resort) charges as well. We have also adjusted all numbers to exclude the impact of smart meters. BUUK purchased Smart Assets 1 in 2016 and sold the business in 2021, realizing a significant gain (£140M) on disposal of a potentially volatile and energy supplier dependent business.

Developer contributions increase revenue, flow through to the EBITDA **as a costless item and enhance EBITDA and CFO while being capitalized as assets.** This creates inflated values across all accounts and does not comply with the matching inflow/benefit accounting standards.

Comparison of the reported versus adjusted results shows three key facts about BUUK's business:

- Inclusion of developer contributions distorts the financial results, inflating revenue and EBITDA. In 2022, we estimate that EBITDA stripped of constructing revenue was £120M, 55% less than the reported £269M.
- The profitability of the core business has been steadily declining. EBITDA margins have fallen to 57% in 2022 from 75% in 2016.
- Significant CapEx is required to maintain minimal growth investments as is evident declining EBITDA yield on PP&E.

The table below highlights the distortive impact of the accounting. We provide a side-by-side comparison of BUUK's summary finances on an as reported and adjusted basis. The adjusted numbers represent our estimate of the economic real performance of the business, illustrating the extent to which BIP's accounting elections inflate results.

Reported vs Adjusted Financial Performance

	2022	
(£ millions)	**Reported**	**Adjusted**
Revenue	465	283
Cost of sales	140	140
Gross profit	326	143
EBITDA	269	120
FFO	207	58
CFO	239	76
Debt	1,898	1,898
Margins		
EBITDA	58%	42%
FFO	44%	20%
CFO	51%	27%
Debt/EBITDA	7.1x	15.8x
FFO/Debt	11%	3%

Source: Company filings and estimates.

CFO is cashflow from operations. CFI is cashflow from investing.

II. Developer Contributions Accounting – Grants, Deferred or Immediate Revenue

Under UK GAAP developer contributions were never included in revenue, EBITDA and CFO. Contributions were an offsetting account for the cost of building the connection thus lowering the required CFI outflow and the capitalized costs of PPE.

Under IFRS, they are generally accounted for as deferred revenue released over the useful life of the assets. Applications differ on whether to include the received contributions as a lowering CFI offset or add them to CFO as increase offsetting the small deferred revenue realized decrease for the year.

BUUK applies a very aggressive stance where these contributions are immediately recognized under percentage of completion method, increase CFO and increase CFI outflow through the higher costs of capitalized PPE. **It is a very aggressive accounting by historical standards and in comparison to competitors as shown below.**

Impact on Cashflows of Deferred Revenue Accounting Method

Companies using the Standard	Cadent before acquisition UK Power Networks	SGN, Northern Gas UK Power Networks, Western Power Distribution, Electricity NorthWest, Northern Powergrid, National Grid Electricity Distribution, National Gas Transmission, Last Mile	**BUUK** Wales & West Utilities, Cadent (post 2019 acquisition)
Financial Statement Impact of Accounting Treatment	*U.K GAAP*	*IFRS*	*IFRS*
	Decreasing cost of PPE	**Released over life of the asset**	**Released upon completion**
Revenue	None	Small impact of deferred revenue annual amortization	**Large impact** based on completed connections
EBITDA	None	Small impact of deferred revenue annual amortization	**Large impact**
CFO	None	*Decreases by the amortized amount, (possible increases by the deferred contribution received in the year) or*	**Large impact** through profitability and new net contributions to deferred assets not yet in construction
Free Cashflow	None	None	**None**

Source: Company documents and estimates.

The accounting election and application is not an academic issue. Both the group's rating agency Moody's (rating Baa2) and other industry players like British Gas have commented on the issue of developer contributions.

Moody's May 2021 credit note states that *"the ratings are, however, constrained by **weak underlying funds from operations** (FFO), particularly when considering the high proportion of connection income…. Most of the associated costs for new connections will largely be recognized as capital spending, and, thus, **connection income makes a large contribution to total revenue (around one quarter) and EBITDA (around one third based on Moody's estimates) but little or no contribution to free cash flow**. The high proportion of connections income currently boosts cash flow-based credit metrics and financial covenants…"*

We concur with the analyst's evaluation and we calculate the contribution at the time (2020) as 42% rather than 33.3% estimate. However, Moody's numbers likely included the smart meter contribution.

British Gas is even more stark in its discussion of the issue. In a filing with the U.K. regulator, Ofgem, British gas says: *"As a major gas supplier we have become increasingly concerned about some aspects of the way this market (IGT) has developed. ..We recommend accounting separation between connection and transportation charges. Charges to the builders and developers should reflect actual costs of connection*

and should not be cross subsidized. No IGT should be in position where it could abuse its monopoly position."

The supplier's concern also confirms other complaints that despite regulation, IGT networks are charging more than the incumbents for similar connections. As a result, only certain suppliers are willing to add them to their plans thus limiting competition. **Instead of competition in connections, Ofgem ended up creating another large monopoly with BUUK controlling 65% to 70% of the independent gas connections market by using cost of capital, amalgamated accounting and higher charges.**

British Gas warned *"The extent to which the market is distorted is difficult to determine due to the lack of transparency of IGTs costs and charging arrangements. ... IGTs are currently able to offer developers a capital contribution or allowance thus reducing the developer's cost of network and connections. We believe that, increasingly, IGTs are offering allowances that cover the total cost of installation, i.e., the developer contribution is zero. "*

"IGTs are not currently subject to any imposed incentives to operate efficiently and we are concerned that customers ultimately may pay for IGTs' inefficiencies.

We believe that accounting separation of the connections and transportation activities will be required to address this problem."

British Gas' depiction of market distortions appear to describe BUUK's market behavior. Regulatory changes combined with accounting that reflects incentives to BIP, have created a broken market where the risks are ultimately borne by the consumer.

III. BUUK is 2 to 3x Overvalued

Transaction multiples in the space take place in a narrow range. The table below presents comparable valuation metrics based on BUUK's presented and adjusted EBITDA and Revenue.

BUUK Comparable Valuation

Entity	Last Deal	Buyers	EV/Adj EBITDA	EV/Revenue	EV/Assets	Debt/Adj. EBITDA
Gas (GDN & Transmission)						
Scotia Gas Networks	2022	Brookfield consortium	11.4x	7.0x	1.2x	6.4x
Cadent Gas	2019	Macquarie consortium last 39%				
(National Grid Gas Distribution)	2017	Initial control purchase	12.5x	7.6x	1.6x	5.4x
Northern Gas Network Holdings Ltd	2005	CK Infrastructure [1]	11.8x	7.1x	1.3x	6.0x
Wales & West Utilities Ltd	2012	CK Infrastructure [1]	17.4x	9.4x	1.6x	9.9x
National Gas Transmission	2023	Macquarie consortium 60%	11.2x	5.0x	2.0x	7.6x
Average Gas UK			**12.9x**	**7.2x**	**1.5x**	**7.1x**
Electricity (DNO & Transmission)						
Western Power Distribution plc	2021	National Grid	10.7x	8.7x	0.9x	4.7x
UK Power Networks Holdings	2010	CK Infrastructure [1 2]	11.4x	8.6x	1.2x	3.6x
Average Electric UK			**11.0x**	**8.6x**	**1.1x**	**4.1x**
BUUK Reported			**15.6x**	9.0x	1.1x	7.1x
BUUK Adjusted			**35.1x**	19.9x	3.1x	17.6x

Notes:
[1] *HK$ to GBP exchange rate 0.1058 at YE 2022*
[2] *Sale to Macquarie falls through in July 2022 due to increased price demand*

BUUK is clearly overvalued on any comparable metric and severely overvalued if contributions adjustments are made.

Any prospective acquirer in the space would strip-out developer contributions to value BUUK. On an adjusted basis, the company is carried at a generous 35x adjusted EBITDA on BIP statements. We do not think BUUK is worth any more than 11-12x.

BUUK's valuation is extremely aggressive before taking into consideration the ~3x equity multiple at the BIP level and any potential intermediate Holdco level debt between the UK entities and the consolidated partnerships.

In the table below, we value BUUK based on our estimate of EBITDA by connection type.

BUUK Valuation Range

	Revenue	**EBITDA**	**EBITDA**	**Multiple**		**EV £ M**				**% of Value**
	£ M	%	£ M	Min	Max	Min	Max	Average		
Gas	140	64%	90	8.0x	15.0x	717	1,344	11.5x	1,030	**77%**
Electricity	103	20%	21	8.0x	15.0x	165	309	11.5x	237	18%
Other	40	25%	10	5.0x	10.0x	50	100	7.5x	75	6%
	283		120			**932**	**1,753**		**1,342**	

Source: Company financials and estimates.

The analysis yields a valuation range of £932M to £1.75B. With year-end total liabilities of £2.1B, BUUK has negative equity of (£1.2B) to (£354M).

IV. Risk and Accounting Disclosures: BUUK vs World

There is a lack of proper accounting disclosures both relating to 1) the presentation of developers' contributions and 2) the strategic risks to the gas assets given the enacted UK legislation.

All the company's competitors and the rating agencies covering them provide similar disclosures related to both issues. However, Brookfield seems to play by a different rule book, operates in a differing reality where the only key risk is the slowdown in UK construction.

1. Moody's Differing Risk Factors

Moody's rates both BUUK and its chief competitor ESP Utilities Group Limited (ESP) with a Baa2 rating. What differs substantially is the risk disclosures associated with both entities. ESP's disclosures specifically state that:

"ESP's Baa2 ratings are, however, constrained by …. (2) **the risk of unforeseen regulatory changes** that could reduce cashflows and increase business risk"[9]. Given BUUK and ESP are competitors, it is unclear why Moody's does not cite this risk with BUUK.

Secondly, although it mentions the negative implications for both groups from "enacting of the government's climate change policies", the rating agency notes that ESP creditors benefit from a covenant and security package that includes…. (5) **limitations around business activities to owning and managing UK electricity and gas assets**". In other words, ESP is not in the construction business.

The credit rating agencies consider the high environmental risks of phasing out gas as a significant credit challenge for the gas distribution networks. The uncertainty around the long-term future of gas systems and the potential alternative use options are widely discussed across the industry. BUUK and BIP are anomalies in this respect.

2. Competitors' Differing Disclosures

BUUK faces two distinct types of risks: operational and accounting. The key operational business risk is the uncertain future of gas networks in the U.K. The chief accounting risk relates to the revenue and cashflow inflation created by the treatment developer CapEx contributions.

BUUK is an outlier with respect to disclosures of each risk. The company characterizes the regulatory environment thusly:

BUUK Disclosure

Principal Risks and Uncertainties
The principal risks facing the group are:

Regulatory
The Group operates in stable and transparent regulated utility markets in the UK. The Group is not aware of any significant proposed changes impacting the existing regulatory frameworks in which it operates. Any such change could have either a positive or negative impact on our future business prospects. The Group has carried on investing in both regulated and non-regulated markets, diversifying its regulatory risk.

Source: Company filings.

In contrast, the ESP Group, BUUK's primary competitor, states that "the two principle regulatory changes currently facing the Group are: 1) the planned phasing out of new gas connections for residential properties

[9] Moody's 5/25/21 note on ESP Utility Group

2) the implementation of the Ofgem review of electricity distribution network charges and access." The company's disclosure on the future of gas networks is shown below.

ESP Group Disclosure

Principal Risks and Mitigations

Risk	Description
Regulatory environment – future of gas	The UK Government's stated target is no new residential gas connections after 2025, leading to the uncertainty of future gas connections and reduced growth levels. The decarbonisation of home heating could lead, in the next few decades, to gas assets becoming stranded, with no funding mechanism to recover asset investment.

Source: Company filings.

ESP is blunt about the potential impact of regulatory issues on the business. In his annual review of ESP's performance, CEO Kevin O'Connor unequivocally points out that "The phasing out of new connections of gas heated residential properties, announced to commence in 2024 in Scotland shortly followed in 2025 in England and Wales, **will have a significant impact on utilities infrastructure in the UK**." Recent actions indicate that the ban will be delayed 10-years in England and Wales[10], but the ban will remain for Scotland.[11]

All of the GDNs and the gas transmission operator also address the issue of the useful life of their gas assets as a key source of estimation uncertainty.

Although BUUK is a large player in the industry, it is the only company we have found that does not address the future of gas networks as either a key business risk or a source of estimation uncertainty.

The only other two companies that now use IFRS 15 to include developer contributions in revenue based on the stage of completion are also Deloitte clients. However, there are two significant differences between them and BUUK. First, developer contributions are a very small part of their businesses – Cadent received £78M in contributions in 2022 on revenues of £2,340M and Wales & West £11.4M on revenues of £462.9M in 2021.

Most importantly, both companies' audits include the developer contribution revenue recognition as **a critical accounting judgement**. Below is Wales & West's disclosure regarding developer contributions.

Wales &West Critical Accounting Judgement

Critical judgements in applying the Group's accounting policies

Recognition of contributions received from customers towards the construction or diversion of a network asset

Contributions received from customers towards the construction or diversion of network assets of £15.8m (2019: £14.9m) are recognised in turnover within the profit and loss account on job completion or at stages of a project in line with costs. In making their judgement, the directors considered the detailed criteria for the recognition of revenue as set out in FRS 102 and, in particular, whether the Group had extinguished its performance obligation under the terms of the contract. Following a detailed review of the contracts with customers for construction or diversion of network assets the directors are satisfied that the Group has performed its obligations under the contract and that recognition of the revenue in the current year is appropriate. The contributions are recognised in line with completion of the construction work as the obligation in respect of the contract is completed once the construction work is completed and there is no continuing obligation. The costs incurred in the year of £148.2m (2019: £147.9m) are recorded within the Gas Distribution Network fixed assets and depreciated over the life of the asset.

Source: Company filings.

[10] Sunak announces delay.
[11] Scottish Parliament.

In contrast, BUUK management maintains that there are no critical accounting judgements, as shown below.

BUUK Critical Accounting Judgement Disclousre

Critical judgments in applying the Group's accounting policies

The Directors consider that there are no critical judgements to be disclosed that have been made in the process of applying the Groups accounting policies which have a significant effect on the amounts recognised in the financial statements.

Source: Company filings.

In the table below, we provide a summary of key disclosures. Developer contributions are disclosed as revenue recognition issues as critical accounting judgements. The future of gas networks is discussed both as a critical accounting judgment and a key source of uncertainty.

Comparative Dislcosures

	Developer Contributions	Gas Connection Ban Risk Disclosure	Critical Audit Matter	Critical Accounting Judgement/Uncertainty	Key sources of Estimate Uncertainty
Wales & West	Yes	Yes	Capitalized overhead Value of financial instruments	Contributions from developers Derivative contracts	Allocating overhead between CapEx and operations Useful life of the network
ESP Group	No	Yes	Goodwill impairment Recoverable investments in subsidiaries	Phase out of new connections of gas heated residences in residential properties announced to commence in Scotland in 2024 and 2025 in England and Wales.	None
Cadent Gas	Yes	Yes	None	Contributions from developers Useful life of networks	None
Last Mile	No	Yes	Recoverability of investments due to future of gas networks	Phasing out of new connections	Combined with accounting
BUUK	Yes	No	None	None	None

Source: Company filings.

BUUK is a clear anomaly in the industry, failing to disclose either the real regulatory risk to gas networks or the accounting treatment of developer contributions. BIP's risk disclosure for BUUK addresses connections construction indirectly, as shown below.

Outtake from Risk Disclosure for BUUK

General Risks

All of our operating entities are subject to general economic and political conditions and risks relating to the markets in which we operate.

roads or volume of commodities transported on our rail network and/or shipped through our ports; our U.K. regulated distribution business earns connection revenues that would be negatively impacted by an economic recession and a reduction of housing starts in the U.K. An economic downturn would also lead

Source: BIP 2022 20-F

A slowdown in housing would impact the accounting presentation, but not the underlying business.

BUUK's disclosure failures are repeated at the BIP level. Users of BIP's financial statements cannot know that the revenue, EBITDA and FFO contributions from BUUK are vastly inflated. Nor can they know that the assets have a significant risk of being stranded.

V. Debt and Cash Constraints

BUUK's financial statements highlight the constant need for funding of the expensive construction. The table below presents the free cashflow of the business as presented with our estimates netting out of the smart meter business. The net deficit accumulated over the last six years is £467M.

BUUK FCF Shortages 2016-2022

£ M	2022	2021	2020	2019	2018	2017	2016	Total
Cashflow from operations, adjusted[1]	239	169	149	177	164	156	165	1,220
Cashflow from investing, adjusted	(352)	(270)	(223)	(266)	(230)	(198)	(147)	(1,687)
Free cashflow	**(113)**	**(101)**	**(74)**	**(89)**	**(66)**	**(42)**	**18**	**(467)**

1. Adjusted for Smart Meters

Source: Company financials and estimates.

The successful disposition of the smart meters business in 2021 allowed the company to pay out an additional £330M of dividend and repay £80M of bank debt and £52M of derivatives which has alleviated financial pressure.

However, the adjusted cashflow statement for the period shows that all the gains associated with the smart meters disposition were used to fund the £330M dividend, leaving the underlying business with almost £500M funding shortage. **The table below highlights the additional £1.1B of debt added by the business of which 34% went to fund additional dividends of £382M paid to BIP and its co-investor.**

2016-2022 Cashflow Net of Smart Meters Transactions £ M

Cashflow from operations		**Cash from financing**		
EBITDA	763			
Def Revenue & WC	55	Derivatives	(155)	
		Dividends	(382)	
Interest payments	(370)			
	448		*(537)*	
Cash from investing				
PPE	(1,687)	Borrowings	**1,095**	
Developer Contributions	742	Adj.	(68)	
	(945)			
				Δ Cash
Total	(497)		491	(7)

Source: Company financials and estimates.

The consequences of the high-CapEx low profitability model coupled with making large distributions to BIP are evident in **the company's growing debt burden, which implies a 16x debt/adjusted EBITDA ratio**. Changes in liabilities are shown below.

BUUK Expanding LT Liabilities

£ M	2022	2021	2020	2019	2018	2017	2016
Bank debt	148	-	80	282	77	204	41
Bonds	1,758	1,732	1,730	1,411	1,420	1,107	1,128
Finance fees	(8)	(6)	(7)	(7)	(5)	(4)	(4)
Total borrowings	**1,898**	**1,726**	**1,803**	**1,686**	**1,491**	**1,307**	**1,164**
Total liabilities	**2,107**	**1,870**	**1,930**	**1,817**	**1,606**	**1,402**	**1,247**

Source: Company financials and estimates.

Appendix BUUK Financial Statements

BUUK Infrastructure No 2 Ltd
Income Statements

£ M	2022	2021	2020	2019	2018	2017	2016
Revenue							
Gas	139	133	128	121	120	119	119
Electricity	103	88	71	58	47	39	33
Fibre	24	19	15	14	12	9	6
W&W	9	7	6	5	4	4	3
DE	7	4	1	1	1	0	0
Smart Metering	0	20	49	39	30	19	9
ARR	**283**	**271**	**270**	**239**	**214**	**190**	**170**
Net of Meters	283	252	221	200	184	172	161
ARR Growth Rate	12%	14%	10%	9%	8%	6%	18%
Connections	139	120	92	115	104	94	77
Construction	5	9	5	-	5	3	6
Electricity SoLR Revenue	19	-					
Other	19	12	13	13	13	7	5
	183	141	110	128	122	104	87
Reported Revenue	**465**	**412**	**380**	**367**	**336**	**294**	**257**
ARR as a % of Reported Revenue	61%	61%	58%	55%	55%	58%	63%
Reported Metrics	**183**	**141**	**110**	**128**	**122**	**104**	**87**
Adj EBITDA	**269**	**265**	**262**	**272**	**246**	**221**	**190**
Adj EBITDA ex smart meters	269	245	223	241	222	206	184
FFO	207	204	202	217	194	177	154
ex smart meters		184					
AFFO	189	193	196	206	181	168	148
ex smart meters		172					
Maintenance Cap Ex	18	12	6	11	14	8	6
COGS	140	106	91	74	65	51	43
Gross Profit	326	307	288	292	272	244	214
	70%	74%	76%	80%	81%	83%	83%
D&A	95	99	108	93	81	68	74
SG&A	62	53	42	40	36	30	26
Operating Profit	168	155	139	159	155	146	113
Gain on sale of subsidiary		140	-	7	-	4	
Net Finance Costs	62	63	58	52	55	48	61
EBT	106	91	81	107	100	97	52
Tax	27	92	36	19	17	15	1
Net Income	79	140	44	96	83	86	52

Source: BUUK Infrastructure No 2 financial statements and estimates.

BUUK Infrastructure No 2 Ltd
Balance Sheets

£ M	2022	2021	2020	2019	2018	2017	2016
Cash	3	32	5	4	4	13	8
Derivatives	47	-	-	-	-	-	-
AR	167	148	121	112	99.0	67.4	48.5
Inventories	6	3	1.5	1.2	0.3	0.4	0.2
Current Assets	*223*	*183*	*127*	*117*	*103*	*80*	*57*
PPE	3,901	3,547	**3,728**	**3,392**	2,881	2,505	2,253
Goodwill	24	24	28	26	26	26	26
Other intangibles	26	32	33	39	44	50	55
Derivatives	-	23	20	22	26	9	30
Deferred tax	36	39	32	31	34	37	51
Longterm Assets	*3,986*	*3,664*	*3,840*	*3,510*	*3,012*	*2,626*	*2,416*
Total Assets	**4,209**	**3,847**	**3,967**	**3,627**	**3,115**	**2,707**	**2,473**
AP	155	156	143	136	121	119	108
Deferred income	145	78	87	82	73	53	50
Debt	273	-	-	-	-	-	-
Current Liabilities	*574*	*235*	*230*	*218*	*194*	*172*	*158*
Debt	1,625	1,725	1,803	1,686	1,491	1,307	1,164
Deferred income	64	66	41	49	42	42	34
Derivatives			51	58	65	82	82
Deferred tax	678	634	477	388	326	284	275.3
Longterm Liabilities	*2,367*	*2,425*	*2,371*	*2,180*	*1,924*	*1,714*	*1,555*
Total Liabilities	**2,941**	**2,660**	**2,601**	**2,399**	**2,118**	**1,886**	**1,713**
Equity	**1,269**	**1,187**	**1,366**	**1,228**	**997**	**821**	**760**
Convertible Loan Notes	159	159	159	159	159	159	159
	4,209	3,847	3,967	3,627	3,115	2,707	2,473

Source: BUUK Infrastructure No 2 financial statements and estimates.

BUUK Infrastructure No 2 Ltd
CashFlow Statements

£ M	2022	2021	2020	2019	2018	2017	2016
Net Income	79	140	44	96	83	86	52
CFO							
Tax adj	27	92	36	19	17	15	1
Finance adj	62	63	61	52	55	48	61
Gain on sale adj		(140)	(3)	(7)		(4)	
Loss on sale of PP&E	3	4	11	6	6	2	
D&A	95	99	108	93	81	68	74
CFO before WC	**266**	**257**	**257**	**258**	**242**	**216**	**188**
Delta AR	(18)	(32)	(8)	(14)	(32)	(20)	8
Delta Inventory	(3)	(9)	1	(1)	-	(1)	-
Delta Deferred Revenue	65	16	(4)	18	31	12	6
Delta AP	(8)	13	6	6	2	13	13
	35	(11)	(5)	10	1	4	27
	301	247	252	268	242	220	214
Interest on borrowing	(62)	(60)	(60)	(55)	(51)	(45)	(37)
Interest on derivatives		(2)	(4)	(4)	(4)	(4)	(5)
CFO	**239**	**185**	**188**	**208**	**187**	**171**	**172**
CFI							
Pmt for PP&E	(352)	(276)	(285)	(324)	(311)	(293)	(200)
Dispositions	-	586		3	1	32	
Acquisitions		(4)	(2)	5			(72)
FCF	**(113)**	**(90)**	**(98)**	**(115)**	**(123)**	**(122)**	**(28)**
CFF							
Pmt for debt issue costs	(2)	(1)	(1)	(2)	(2)	(1)	(1)
Repayment of derivatives	-	(52)			(16)		(86)
Proceeds from borrowings	148	68	420	247	398	180	451
Repayment of borrowings	-	(151)	(297)	(42)	(226)	(16)	(165)
Net borrowing	148	(83)	124	205	172	164	286
Dividends	(60)	(330)	(20)	(95)	(40)	(67)	(100)
CFF	**84**	**(466)**	**101**	**107**	**113**	**94**	**99**
Net increase/decrease in cash	(29)	26	1	0	(8)	4	(1)
Cash beginning of the year	32	5	4	4	12	8	9
Cash end of the year	3	32	5	4	4	12	8

Source: BUUK Infrastructure No 2 financial statements and estimates.

BUUK Infrastructure No 2 Ltd
Income Statements

£ M	**2022**	**2021**	**2020**	**2019**	**2018**	**2017**	**2016**
Cash	3	32	5	4	4	13	8
Derivatives	47	-	-	-	-	-	-
AR	167	148	121	112	99.0	67.4	48.5
Inventories	6	3	1.5	1.2	0.3	0.4	0.2
Current Assets	*223*	*183*	*127*	*117*	*103*	*80*	*57*
PPE	3,901	3,547	**3,728**	**3,392**	2,881	2,505	2,253
Goodwill	24	24	28	26	26	26	26
Other intangibles	26	32	33	39	44	50	55
Derivatives	-	23	20	22	26	9	30
Deferred tax	36	39	32	31	34	37	51
Longterm Assets	*3,986*	*3,664*	*3,840*	*3,510*	*3,012*	*2,626*	*2,416*
Total Assets	**4,209**	**3,847**	**3,967**	**3,627**	**3,115**	**2,707**	**2,473**
AP	155	156	143	136	121	119	108
Deferred income	145	78	87	82	73	53	50
Debt	273	-	-	-	-	-	-
Current Liabilities	*574*	*235*	*230*	*218*	*194*	*172*	*158*
Debt	1,625	1,725	1,803	1,686	1,491	1,307	1,164
Deferred income	64	66	41	49	42	42	34
Derivatives			51	58	65	82	82
Deferred tax	678	634	477	388	326	284	275.3
Longterm Liabilities	*2,367*	*2,425*	*2,371*	*2,180*	*1,924*	*1,714*	*1,555*
Total Liabilities	**2,941**	**2,660**	**2,601**	**2,399**	**2,118**	**1,886**	**1,713**
Equity	**1,269**	**1,187**	**1,366**	**1,228**	**997**	**821**	**760**
Convertible Loan Notes	159	159	159	159	159	159	159
	4,209	3,847	3,967	3,627	3,115	2,707	2,473

Source: BUUK Infrastructure No 2 financial statements and estimates.

Troubled Investments

BIP owns a number of positions we believe are deeply troubled. While individually small, collectively they account for approximately 7% of unitholder net assets. Two of the positions are North American, so there is little financial information available. However, evaluating the companies via local press and debt market research provides a view as to financial position of the entities.

We do not provide independent valuation estimates for this group. That said, we believe that the context we provide sheds light on the poor quality of BIP's disclosure. Investors may want to provide a discount to stated carrying values.

The situation with the Peruvian asset is not merely financial. The municipality that controls the concessions is in the process of taking it back from Brookfield for a variety of reasons.

The table below lists the consolidated investments to which we have applied discount and the resulting loss of value to BIP unitholders.

Troubled Investments

Company		% of Net Assets	Carrying Value	Our Valuation	Change	% Change	% Stake
Peruvian toll roads	Rutas de Lima	1%	119	119	-	0%	17%
North American data centers	Dawn Acquisition	2%	188	188	-	0%	29%
North American gas Storage	Rockpoint Gas Storage Partners	4%	405	405	-	0%	**40%**
	Total	**7.4%**	712	712	-		

Source: Company filings and estimates.

Rutas de Lima – Peruvian toll roads – 1% of Net Assets

In early January 2023, the mayor of Lima announced that he was terminating Brookfield's concession for Rutas de Lima. BIP did not disclose the issue in either the 20-F as a subsequent event, nor in either of the quarterly filings.

This article provides a good summary of the reasons for the cancellation, which include high toll rates and a negative impact on the community. The mayor has also requested the concession be investigated for money laundering.

Problems between Brookfield and the local population are not new. Brookfield purchased 57% of the asset from the scandal ridden Odebrecht in 2016. Odebrecht remains a 25% stake-holder.

Locals have complained of high tolls on the roads. This article from 2017 discusses violent protests that erupted upon the installation of a new toll booth and provides **links to videos of protesters burning down toll booths.**

Brookfield has responded to the mayor by threatening arbitration. The mayor has apparently made a proposal, which Brookfield appears to have ignored. After being convinced to negotiate with Brookfield, the mayor's patience is apparently at an end. Stating that he wasted his time with them, the mayor is now threatening to take his battle to the NYSE and Department of Justice in the U.S.

North American Data Centers - Dawn Acquisition – 2% of Net Assets

In December 2018, Brookfield purchased AT&T's Evoque Data Center business for $1.1B. BIP's portion 29% for which it paid $315M. Some investors at the time viewed data centers as another real estate like business. However, as pointed out in this Financial Times article on BIP and the acquisition, that data centers are CapEx intensive.

The FT was right to criticize the acquisition - Dawn has proved to be a failure.

Dawn was originally assigned a lower-end of highly speculative "B" rating by S&P. In August 2022, S&P downgraded Dawn to Selective Default after Brookfield repurchased debt from holders below par, but upgraded it to "CCC" shortly after. The transactions were a distressed restructuring considered to be a default event because holders received less than originally promised.

In February 2023, S&P downgraded the secured debt to "CCC" from "B-" after Brookfield removed several data centers from the collateral pool.

None of the financial distress or attendant credit events have been disclosed by BIP.

Rockpoint Gas Storage (Rockpoint)– North American Gas Storage – 4% of Net Assets

What is now know as Rockpoint is an amalgamation of gas storage assets BIP has accumulated over the years, none of which were of particularly good quality. The largest acquisition was of Niska Gas Storage in 2016. Niska was a publicly traded insolvent gas storage company. The company's final 10-K shows revenue declining from $207M in 2014 to $54M in 2016 amidst customer losses and difficult market conditions.

Rockpoint operates in what Fitch Ratings calls the "volatile midstream subsegment of natural gas storage" with a concentration in Alberta, Canada. The volatility is evident in the company's financial results, which are summarized below along with BIP's net asset position.

Rockpoint Gas Storage

($ millions)	**Revenue**	**Cashflow Operations**	**Carrying Value**
2018	150	-	318
2019	143	83	333
2020	143	68	334
2021	371	196	323
2022	246	61	405

Source: Company filings and estimates.

Fitch rates Rockpoint as "B-" – the last rung of Highly Speculative before Substantial Risks. The rating incorporates subordinated debt provided by Brookfield as equity. Additionally, Brookfield provides Rockpoint with a revolving line of credit.

In investor presentations, management states that BIP owns and operates stable cashflowing businesses. Rockpoint is certainly not that, as evident in the financial results. The company operates a hybrid storage for fee and trading business. Rockpoint purchases gas for storage and sells it in the forward market to lock in a spread. High pricing and volatility are theoretically opportunities for the company and account for the better recent results.

Despite years of poor to mediocre results, BIP has increased the value of the position 48% since 2016. We are skeptical of the businesses quality and ability to generate stable, long-term returns.

Multiple Assets: Equity Accounted Transport Segment

The absence of all financial disclosure for equity accounted investments makes the vast majority of the 52% of net assets a black box. The transport segment, however, was crackable if one spent enough time tracking down the assets.

Both Arteris S.A. and VLI S.A. are Brazilian companies that publish financial statements. Both Dalrymple Bay Infrastructure and Cheniere Energy Partners are public companies, and Patrick Ports is co-owned by a public company that has more liberal disclosure policies than BIP.

This valuation project did not yield much of a change. Our valuation of the group was inline with BIP's valuation, although we do not know how the allocation. We show the results below.

Equity Accounted Transport Segment Valuation
($ millions)

Brookfield Nomenclature	Company Name	BIP Value	DF Value
Brazilian toll road	Arteris S.A.		100
Brazilian rail & port	VLI S.A.		470
Australian port	Patrick Ports		354
Australian export terminal	Dalrymple Bay Infrastructure		401
US LNG Terminal	Cheniere Energy Partners		680
	Total	1,925	2,005
	% of assets	18.8%	

Source: Company filings and estimates.

We provide summary write-ups on each asset. Those for VLI and Patrick Ports are quite short, as we believe they are likely the least likely to elicit controversy or comment. **The write-up for Arteris is more extensive because we believe that asset should be valued at ~-90% from the last published carrying value in 2017, and looks like it is either a zero or will require more bail-outs.**

We group the two public companies of Dalrymple Bay and Cheniere Energy together. Though the valuation is straightforward, analyzing the two high-yield holdings illustrates the deeply negative cashflows associated with the positions in the context of BIP's business model and fee structure.

Arteris S.A.

Arteris has long been a troubled company. Brookfield purchased Arteris at the end of the emerging market bubble in 2012 and 2013. Since that time, both Arteris' has experienced operational issues and several bouts of severe financial stress and the Brazilian Real, which Brookfield does not hedge, has declined -61% against the dollar.

Financial struggles for the company have not ended.

Abertis Infrastructure is the controlling shareholder in Arteris. In Abertis' annual report[12], it notes that in **2021 the company took a large impairment charge on Arteris** due to "a series of factors including increased capex costs and delays in certain regulatory procedure".

Abertis' 2021 annual report indicates that there were capital contributions to Arteris during the year. 23.8M of capital increases were attributed to BIP.[13]

[12] Page 85 Abertis Annual Report.
[13] Page 174 Abertis Annual Report.

To our knowledge, BIP's SEC filings make no disclosures relative to an impairment, financial conditions that would lead to an impairment or additional capital contributions.

It appears as if the new government is restructuring concession agreements, which will likely require greater investment on the part of the concession holders and potentially lower tariffs. The restructurings will clearly impact the industry as a whole.

Things are no better at the firm level. Local press reports that Arteris' owners failed in their attempt to sell the company in 2022, and are trying to work out its financial and regulatory issues. Importantly, it appears as if Arteris again has liquidity problems and will likely need another cash infusion from Brookfield and Abertis if it is to survive. This would be the second. In 2016, BIP's share of the cash "infusion" into Arteris was $239M.

S&P noted in a credit report in June 2023 that they expected Arteris would need to make BRL7.4B or $1.5B between 2023 and 2025 – 23% above previous expectations. This is a significant burden for a company suffering from excess leverage and negative free cashflow. Arteris nearly failed in 2015 and is on the brink again.

We value Arteris using an average of the low and high adjusted EBITDA for the two comparable Brazilian toll road companies.

Arteris S.A. - Valuation and Context

Arteris Valuation *($ millions)*	**Low**	**High**
Enterprise value	1,692	2,369
Net debt	1,809	1,809
Equity	(116)	561
Stake	45%	45%
Value	**($52)**	**$252**
Average	***$100***	

Comparative Valuation	**Arteris**			
Metric	**Low**	**High**	**EcoRodovias**	**CCR**
EV/EBITDA 1	14.72x	20.61x	6.12x	8.21x
EV/EBITDA 2	4.00x	5.60x	5.64x	4.07x
Debt/EBITDA 1	15.74x	15.74x	4.66x	3.65x

Source: Company financials and estimates.

Brazilian toll road companies provide EBITDA and adjusted EBITDA excluding certain costs, such as maintenance. We calculated both multiples. EBITDA 1 is a standard calculation, and EBITDA 2 is adjusted, yielding higher, more steady numbers overall. To estimate the valuation, we used the low and high for EBITDA 2, which yields a round value of $100M.

Arteris is not viable as a stand-alone entity, in our view.

There are two interesting facts to note with the Arteris case. The last disclosed valuation of the company was for $1.5B in 3Q17. **We now value that stake at ~$100 or -93%. Despite the massive loss of value, we estimate that Arteris contributed $93.4M in proportional FFO in 2022.**

Arteris highlights how Brookfield's FFO-based accounting can create a financial picture completely divorced from the objective financial reality at the asset level. That chasm also illuminates the disclosure deficiencies. Despite financial stress and severe averse regulatory actions at both Arteris and

Rutas de Lima in Peru, BIP's discussion of the toll road operational and regulatory environment in the 20-F did not change between 2021 and 2022.

VLI S.A.

VLI was started by Vale S.A. (VALE). The rail and infrastructure company was transformed into a joint venture by selling pieces to Brookfield and the Japanese conglomerate Mitsui in 2014. BIP acquired its 11% interest for $367M in 2014. It is owned through a Brookfield-managed private equity fund.

We used VLI's statements from Brazil for our analysis.

The exhibit below was taken from VLI's annual report and shows the company's ownership structure.

VLI Ownership

Acionistas	Ações Ordinárias	% Participação
Vale S.A.	2.631.089.569	29,59%
Brookfield Brazil Infrastructure Fundo de Investimentos em Participações	2.267.516.800	25,51%
Mitsui & Co., Ltd.	1.778.158.082	20,00%
FI - FGTS	1.413.854.823	15,90%
BNDESPar	711.263.233	8,00%
Brasil Port Holdings L.P.	88.907.904	1,00%
	8.890.790.411	**100,00%**

Source: VLI annual report.

The Brookfield group as a whole owns 25.51%, thus BIP owns approximately 43% or 997M shares of the total Brookfield stake.

VLI Valuation *(BRL millions)*	
EV/EBITDA	10.00x
Debt/EBITDA	2.36x
EBITDA Adj	2,945
Net debt	6,947
Equity	22,500
Enterprise value	29,447
FX	5.2668
Equity USD	4,272
BIP	11%
Value	470

Source: Company financials and estimates.

The last disclosure of VLI's carrying value was for $394M in 3Q17.

We use financial information taken from VLI's 2022 annual report. BIP's VLI stake is valued using a 10x EV/EBITDA multiple, comparable to publicly traded Rumo S.A. (Rail3). We used EBITDA of BRL 2.945B, which is a blend of company reported EBITDA (BRL 1,908B) and adjusted EBITDA (BRL 3,354B). We value BIP's 11% stake at $470M, as shown in the accompanying table.

There are two other valuation datapoints available, both of which are lower than our valuation. VALE carries its 29.6% stake at $428M implying a total valuation of $1.4B. However, VALE reports in U.S. GAAP, which is not comparable to BIP's IFRS carrying value.

Secondly, the Brazilian Development Bank (BNDES) exercised its option to acquire a stake which implies a total valuation of $3B. We, likewise, view the transaction as below fair market value.

Patrick Ports

Patrick Ports was owned by the publicly traded Australian company Asciano. In 2016, Brookfield formed a consortium to take over the company. Conflicts of interest prevented Brookfield from owning Asciano's rail assets; the group was limited to the port assets.

BIP purchased a 13% interest in Patrick Ports for $202M. Including the stake of the Brookfield Infrastructure Fund III (BIF III), the total Brookfield stake is 50%.

BIP does not disclose any entity-level financial information for Patrick ports. However, Brookfield's 50% JV partner Qube Holdings (QUB Australia), provides financial information and a detailed narrative on the assets performance in its annual report.

There has been speculation in Australian media that Qube was interested in purchasing Brookfield's 50% stake for ~A$ 2B. Brookfield said that Patrick was not for sale, which we find peculiar given that BIF III is in its 7th year and should be winding down.

We used the $A4B total valuation for Patrick Ports cited in the media, resulting in a value of $354M for BIP's 13% stake. However, we note that the price tag implies an EV/EBITDA multiple of 17.35x 2022 EBITDA, which seems on the high side for ports.

Dalrymple Bay Infrastructure and Cheniere Energy Partners

We are grouping Dalrymple Bay and Cheniere together because they are both publicly traded entities.

The Australian export terminal is formally Dalrymple Bay Infrastructure (DBI). The asset formerly known as the Dalrymple Bay Coal Termina (DBCT) was rebranded to remove the coal reference in 2020.

Dalrymple Bay was purchased in a two-step transaction in 2009 and 2010 from the bankrupt Babcock and Brown. BIP owned 71% with Brookfield Infrastructure I (BIF I) owning the remaining 29%, a 2010 vintage fund. The asset was put-up for sale in 2020. There were no private buyers willing to pay Brookfield's price, so in the end Dalrymple Bay was IPO'd in Australia. It was one of the largest IPO's of the year and the most troubled. Pricing and size were both taken down.

The IPO transaction illustrates the problematic corporate governance at BIP. All transaction with the fund are related-party. Governance of BIP has been structured to remove all fiduciary duties that may be owed to the limited partners. **Thus, BIPs management, which are also managers at Brookfield and Brookfield-managed funds, can subordinate the financial interests of BIP unitholders to other interests – such as Brookfield private fund limited partners.** This is evident in the Dalrymple Bay IPO.

Prior to the transaction, BIP owned 71% of Dalrymple Bay Infrastructure, then known as Dalrymple Bay Coal Termina (DBCT) with the remaining owned by a Brookfield sponsored private equity fund. The ownership structure is indicated in BIP's financial footnotes in 2019, the year prior to the IPO, shown below.

Dalrymple Bay Ownership Structure 2019

Defined Name	Name of entity	Country of incorporation	Effective Ownership Interest (%) 2019	Effective Ownership Interest (%) 2018	Voting interest (%) 2019	Voting interest (%) 2018
Utilities						
U.K. regulated distribution operation	BUUK Infrastructure (Jersey) Limited	U.K.	**80**	80	**80**	80
Australian regulated terminal operation	DBCT Management Pty Ltd[1]	Australia	**71**	71	**100**	100
Colombian regulated distribution operation	Empresa de Energia de Boyaca S.A.[1],[3]	Colombia	**17**	17	**100**	100
Brazilian regulated gas transmission operation	Nova Transportadora do Sudeste S.A.[1]	Brazil	**28**	28	**90**	90
Colombian natural gas distribution operation	Gas Natural, S.A. ESP[1],[2]	Colombia	**16**	16	**55**	55
Brazilian electricity transmission operation	Odoya Transmissora de Energia S.A. & Esperanza Transmissora de Energia S.A.[1],[2]	Brazil	**31**	—	**100**	—

Source: BIP 2019 20-F.

BIP's ownership is 71%. The Brookfield consortium owned the remaining 29% and allocated voting rights to BIP, as indicated by difference between BIP's ownership interest and voting interest. Brookfield often allocates voting right, which conveys "control", thus the ability to consolidate the entity.

DBI's IPO prospectus provides an exhibit explaining the pre-and anticipated post-IPO ownership structure, shown below.

DBI Ownership Scheme

Topic	Summary	Further information
Who are the current owners and what will their interest be at Completion of the Offer?	As at the Prospectus Date, Brookfield, via a controlled entity, BIP, holds all of the issued shares in DBI. The Directors (and their associated entities) do not have any interests in the Stapled Securities as at the Prospectus Date and are not expected to have any such interests at the Completion of the Offer (subject to any acquisitions they may make for cash under the Offer, as set out in Section 8.3.2.4). The expected interests of the Securityholders after Completion of the Offer are set out below.	Section 8.3.2.4 and 9.1.5

Figure 1.4: Securityholding structure

	Stapled Securities held at Completion	
BIP	up to 245m	up to 49%
New Securityholders	at least 255m	at least 51%

BIP may hold up to 49% of the Stapled Securities after Completion, but may hold a lesser percentage.

Source: DBI prospectus.

The disclosure indicates that the Brookfield group owned DBI 100% prior to the IPO and BIP could retain up to a 49% stake, which would be dependent on investor demand. **In other words, BIP was the safety valve retaining a material portion of its position if investor demand was weak, but allowing the Brookfield sponsored private fund to exit.** This is exactly what transpired upon the IPO.

When the transaction took place, the Brookfield fund was allowed to sell its entire 29% stake, while BIP only sold a 22% stake, which was only 30% of its holding. The disclosure below indicates the favoritism in the sale.

BIP Disclosure on Sale of DBI

a) Partial disposition of our Australian export terminal

On December 7, 2020, Brookfield Infrastructure, alongside institutional partners (collectively the "DBI Consortium") completed the partial sale of a 22% interest in our Australian export terminal for net proceeds of approximately $55 million (DBI consortium total of approximately $265 million). Our partnership recognized gains of approximately $400 million (DBI consortium total of $575 million) in Other income (expense) in the Consolidated Statement of Operating Results related to the disposition and remeasurement of our residual 49% interest. The partnership derecognized the business from our consolidated financial statements effective December 7, 2020, and accounts for our residual interest using the equity method, as it retained significant influence over the Australian export terminal. Net losses relating to foreign currency translation and net investment and cash flow hedges of approximately $35 million (DBI consortium total of approximately $70 million) were reclassified from accumulated other comprehensive income to Other income (expense) on the Consolidated Statement of Operating Results.

Source: BIP 2020 20-F.

The disclosure notes that BIP sold a 22% interest receiving $55M in proceeds; other Brookfield investors received $210M or 80% of the total.

We believe that had BIP been owed fiduciary duty by its mangers the sales would have been allocated on a pro-rata basis on the IPO. Brookfield's end of life fund could have sold the remainder of their stake in the open market. That, however, would have resulted in a significantly lower return for the Brookfield-managed private equity fund.

Dalrymple Bay was priced at A$2.57. Institutional interest was low. As this article in the Australian Financial Review notes there was so much hair on the deal, Brookfield had to call in favors to get it done. The government of Queensland (which sold the concession) was recruited as a cornerstone investor. So, too, was the Canadian firm Fairfax Financial (FFH Toronto).

The $A2.57 price appears to have been an unsustainable price. The stock immediately traded down, becoming one of the worst performing Australian IPOs of 2020, and did not trade at or above the IPO price until 2 ½ years later in 2023.

Given the predictably poor post-IPO performance, the 100% sales allocation awarded to the Brookfield fund shifted profits from BIP unitholders to the Brookfield private fund limited partners.

BIP purchased a 6% interest in **Cheniere Energy Partners** or what it calls its North American LNG terminal from Blackstone in 2020 for $425M. Although we do not believe that BIP has ever made the disclosure, Cheniere is a public company.

Public Company Valuation

	CQP	DBX
Price	56.00	2.43
Units	12.14	242.92
Value	680	590
FX		0.68
USD	680	401

Source: Company filings and Yahoo.

We used the year-end public prices to value both the Dalrymple Bay and Cheniere positions. We believe that the prices, irrespective of opinion on how they are valued by the market, is the best estimate of the value at the time.

It must be noted, however, that because BIP is classified as an IFRS-reporting operating company, it is under no obligation to carry the stakes at the public market valuations.

Brookfield entities often carry publicly traded entities at prices significantly different than the public market valuations. As noted elsewhere in this report, Arteris was carried at over a 2.7x its public valuation when it was public. This is a phenomenon we have observed across the Brookfield group of companies.

The two entities represent over $1B of unitholder equity. As publicly trade companies, we can infer a great deal about BIP economics using them as examples.

In the table below, we calculated the dividends received from each of the publicly traded companies and estimated fees and distributions associated with them as well.

Bleeding the Assets

($ millions)	**Value**	**Dividends Received**	**Management Fees paid**	**Distributions Paid**	**Net Cashflows**
Cheniere Energy Partners	690	43.64	(49.71)	(171.40)	(177.47)
Dalrymple Bay Infrastructure	403	32.45	(29.02)	(33.74)	(30.31)
Total	1,093	76.09	(78.73)	(205.14)	(207.77)

Source: Company financials and estimates

We calculated total management fees associated with the positions by using the 7.2% of total net assets paid in 2022. We estimate the distribution allocation by calculating BIP's proportion of the FFO of the entities and assumed a 68% payout.

Public records indicate that BIP would have received a total of $76M in dividends from Cheniere and Dalrymple Bay based on the ownership stakes. The allocation of ($78.7M) in fees and (205M) in distributions result in a net cashflow on the positions of ($207.7M).

This example illuminates two facts about BIP's business model. **Distributions paid are far in excess of distributions received and therefore must be financed. It also shows how the fee structure results in excessive fees paid to Brookfield.** In this case, they earn~$79M in fees annually to manage these two stock positions.

Inter Pipeline Ltd.

The White Elephant

IPL is BIP's largest position with partnership equity of $2.675B or 26% of net assets. The company carries the label of Canadian diversified midstream.

Brookfield is generally adept at motivating key actors in acquisition targets, but they faced stiff opposition with IPL. It was a long acquisition process that began in November 2020 and concluded a year later in November 2021.

In the end, Brookfield overpaid for the business. However, the unique ways in which BIP operates at the partnership level provides incentives to overpay:

- **Paying for acquisitions with stock increases book value**. In 2Q21 prior to the transaction, BIP's balance sheet had $643M in BIPC net assets, for NAV/share of $14.30; in 3Q21 shares used in the acquisition increased net assets to $1.04B, but because they were swapped at a multiple of NAV, the NAV/share increased 15% in the quarter to $16.43. This is Brookfield financial engineering creating value.
- **Acquisitions increase partnership FFO and distribution-paying ability irrespective of cash dividends received from the investment.** This is well illustrated with IPL. Prior to withdrawing its rating S&P noted that reduced distributions were required to maintain credit metrics[14]. The company's financial statements indicate the company paid $0 dividends in 2022. Brookfield skirted the restriction by structuring some of the position as related party loans on which interest is paid. However, we estimate that BIP's proportion of IPL's FFO in 2022 was $394M, but its proportion of related-party interest paid was only $79.5M.

Thus, despite overpaying for IPL, BIP obtained the tangible benefit of equity creation and the intangible benefit of booking FFO growth, that despite the fact that it could not be collected, would support increased distributions.

Subsequent to purchase, a confluence of factors have emerged to weigh on IPL's valuation, in our opinion. Further delays and construction cost over-runs at IPL's petrochemical complex have extended negative cashflows on the project, multiples in the whole segment are flat, and the Canadian dollar has depreciated ~7% versus the USD.

Fitch Rating's August 2023 note is particularly dispirited[15]. Fitch expects "worse profit performance from Heartland in both 2023 and 2024 compared to prior forecasts." Plant utilization continues to be below 50%, worse than expected, though a ramp-up is still expected. Fitch also puts a damper on Brookfield's ability to extract cash from IPL, noting that leverage in 2022 was "too high for the BBB- rating". "Ramping-down the dividend" was specifically cited as a way for IPL to absorb "moderately challenging" operating problems at Heartland.

In our view, it is clear that BIP is overvaluing its IPL stake. Further, there is an additional related-party debt that is eliminated in consolidation with BIP, leading to the overstatement of equity. Our analysis shows that BIP's stake is worth $1.2B or 43% less than the carrying value of $2.7B.

[14] May 8, 2023 S&P Note.
[15] August 11, 2023 Fitch Note.

Background

Investors have an unusually detailed view of the proceedings thanks to documents related to actions filed with the Alberta Securities Commission.

Brookfield first approached IPL in June 2020 after amassing a position in the company's stock earlier in the year. A follow-up conversation was set for November 2020, at which time Brookfield made an indicative offer of C$17-17.50 per shares. At the time, Brookfield said that it was a significant shareholder. The facts, however, were slightly different.

Brookfield had amassed a 9.75% position in the shares, just shy of the 10% required for disclosure in Canada, and a 9.9% economic position through total return swaps purchased through BMO Capital Markets. The swap position would become an issue with the Alberta Securities Exchange.

In December 2020, Brookfield sent a non-binding proposal at C$18.25 per share, which was rejected by IPL, who countered by suggesting a pre-emptive offer of C$24 per share. It seemed an excessive premium, given the stock was trading at around C$13.50 at the time.

In early 2021, after several months with no progress, BIP CEO and head of Brookfield's Infrastructure division, Sam Pollock determined IPL "had no serious intent on engaging with us (Brookfield)" and on February 10, 2021, Brookfield announced a 19.65% aggregate economic interest in IPL and its intention to make a bid on a hostile basis.

IPL formed a special committee to undertake a strategic review following Brookfield's announcement.

It's important to note the context in which these discussions took place.

In 2018, IPL had undertaken a significant and expensive capital project. It was building Heartland, a large petrochemical complex in Alberta, Canada. It was initially expected to cost C$3.5B and take 4-5 years to complete.

The project was plagued by cost overruns, supply chain issues and delays, many of which were due to Covid-19. IPL's balance sheet was badly damaged, loaded with excess debt to fund Heartland. The stock had tumbled form the low C$20s to a low of C$6 in early 2020 before recovering to ~C$13.

IPL was financially vulnerable. Financial results were soft. Management was looking for a JV partner for Heartland to ease the financial burden and fix its broken balance sheet.

Brookfield formally launched its hostile takeover offer on February 22nd for a total of C$16.50 per share split between cash and Brookfield Infrastructure Corporation (BIPC) stock.

In early March, IPL's board formally rejected Brookfield's offer and began discussions with Pembina Pipeline Corporation, a company with assets similar to IPL.

Throughout the spring of 2021, both Brookfield and Pembina were engaged with IPL.

The companies continued to wrangle with back and forth bids, but IPL's press release of June 21, 2021 indicates that the company continued to favor Pembina over Brookfield. Around this time, Brookfield filed an application with the Alberta securities commission (ASC) complaining that IPL's defense tactics were inappropriate, because the company had adopted a supplemental shareholder rights plan and the break-up fee. The ASC's written ruling is available here.

The ASC dismissed Brookfield's concerns, but opined extensively on the cross-complaints by IPL and Pembina, which focused on Brookfield's deceptive tactics and use of total return swaps.

Brookfield used the swap position to avoid the mandated disclosure required for a ~20% position. Further, Brookfield hired BMO, the swap provider to advise on the IPL transaction. Payment included a $15M success fee, creating the incentive for BMO to vote in Brookfield's favor. The Alberta Security Commission filing notes that when Brookfield made the offer it said that it had "no right to vote, or direct or influence the voting, acquisition or disposition of" swap shares.

The ASC determined that Brookfield's actions were "**clearly abusive to IPL shareholders and the capital markets, and therefore contrary to public interest.**" The ASC sanctioned Brookfield by increasing the required vote to approve the tender from 50% to 55%.

On July 15, 2021, Brookfield raised its offer to C$20 all cash or C$23.85 in stock, or a pro-rated cash/stock worth C$21.23 per share.

On July 27, 2021, IPL's board recommended shareholders go with the Brookfield bid. The Pembina bid was withdrawn, IPL paid Pembina C$350M for their trouble, and Brookfield "won" the day, but it came at a cost, as we show below.

IPL Bid Evolution

(C$ billion, except per share)	**2/22/2021**	**6/2/2021**	**Final**
Per share	$16.50	$19.50	$20.48
Cash	4.90	5.60	6.38
% total	76.20%	74.00%	72.64%
Shares	1.53	1.97	2.40
% total	23.80%	26.00%	27.36%
Total offer for equity	6.43	7.57	8.79
Enterprise value, C$ B	$13.23	$14.51	$15.73

Source: Company filings and estimates.

When the discussions with Brookfield began, IPL's stock was around C$13.50. In the end, IPL management got close to the C$24 suggested in December 2020. The average price of C$20.48 per share in the final pricing represented a 50% premium over the stock and a substantial improvement for shareholders over Brookfield's original C$16.50 offer.

The natural corollary is that Brookfield, including BIP unitholders, paid an additional C$3.1B or 23.6% on an enterprise value basis as the price of the equity and amount of debt both rose.

In our view, IPL's management extracted maximum value from Brookfield given the company's high debt and continued risks associated with Heartland. Pembina was recruited and well-compensated to play the foil to Brookfield driving-up the price for IPL shareholders.

The Heartland project, its delays and cost overruns, made IPL as a whole a stranded asset of sorts. While there were some excellent pipeline assets, it was highly levered and Heartland increased the risk profile substantially.

The company had been for sale in part or as a whole since early 2021. **Despite the long sales process, no bidders or potential partners emerged outside of Brookfield and what looks like a recruited and well-compensated, white night.**

We have concluded that a new bidder did not emerge because it was not worth it. Examination of the business shows why.

Inter Pipeline's Business

IPL has two historical core businesses – pipelines and natural gas liquids. The pipeline business is divided into long-haul pipelines serving large, investment grade customers in the oil sands and conventional pipelines. The long-haul pipelines are contracted with take-or-pay contracts and have little risk. The conventional pipelines are likewise contracted, but there is some volume risk.

Combined these are valuable cash cows, attractive in the Canadian market, where investors prefer contracted asset bases.

The natural gas liquids business comprises facilities infrastructure and marketing in the current segment breakdown. The facilities convert natural gas and propane into derivative commodities. It is a spread business and contains material commodity risks.

The Heartland project adds a large, complex and capital intensive petrochemical business to the mix. Heartland is a combined propane dehydrogenation (PDH) and polypropylene plant (PP). The PDH side converts propane into the commodity propylene. The PP plant converts propylene into polypropylene, a plastic commodity used in many products.

Heartland's business is typically a risky, commodity exposed business. However, while it is unusual for the industry, management was able to contract approximately 70% of capacity with take-or-pay contracts.

A key advantage of Heartland is said to be that following changes in pipelines going to the U.S., there is a surplus of propane in Alberta at low prices, which reduces costs relative to PP production elsewhere. **Time will tell if the benefit materializes, but it should be noted that no other midstream thought the opportunity worth exploiting, even as a JV partner with IPL.**

The current financial profile reflects the relative risks of the core businesses, but Heartland has not yet ramped, as indicated in the table below.

Inter Pipeline Financial Profile

EBITDA *(C$ millions)*	**2020**	**2021**	**2022**
Pipeline	894	842	880
Facilities	166	84	133
Marketing	30	329	303
New Ventures	-	(56)	(55)
Total	1,090	1,199	1,261
% of Total			
Pipeline	82%	70%	70%
Facilities	15%	7%	11%
Marketing	3%	27%	24%
New Ventures	0%	-5%	-4%

Source: Company financials and estimates.

The volatility of the natural gas liquids business, labeled facilities management by Brookfield, is evident in the segment results. The marketing segment purchases commodities from other IPL divisions and resells them.

The decline in EBITDA in the pipeline segment in 2021 reflects the relatively minor volume risk. The large swings in facilities and marketing show the substantial commodity risks. Heartland and its traditionally

volatile business made smooth with take-or-pay contracts was supposed to add C$400-C$500M of EBITDA annually.

The Brookfield Takeover and the Question of Heartland

Discussions with IPL insiders indicate that Brookfield took two immediate actions when the acquisition closed. They fired a lot of people, and decentralized functions such as accounting so that each division became responsible for its own workflow.

The personnel issue strikes us as peculiar. IPL was not known to be a boom/bust hire and fire type of company. It is our understanding that the company was known to run lean and keep employees during downturns. Reduced personnel speaks to the possibility of skimping on maintenance, which has been an issue at numerous Brookfield assets, including BIP's Arc Infrastructure, where train derailments have long-been an issue.

The decentralized workflow suggests that Brookfield is planning on selling one or more divisions.

We would expect that Brookfield would likely sell Heartland and perhaps the NGL businesses along with it. However, it might be more complicated than it once was.

At the time Brookfield purchased IPL, Heartland was expected to produce C$350M in EBITDA in 2023 after ramping-up in 2022. Costs have increased and production ramp-up delayed.

Heartland was originally expected to cost C$3.5B. When Brookfield purchased IPL the cost had risen to ~C$4B. We believe the final cost will come in around C$4.5B, roughly 30% over budget. In IPL's 1Q23 filing with SEDAR, the company withdrew its 2023 guidance. Heartland is expected to produce cashflow losses in 2023 as production ramps.

Management has stated that Heartland could generate an average of C$400-500M in EBITDA annually. Conversations with industry sources suggest that number is likely aggressive. Roughly 70% of capacity is contracted with take-or-pay contracts with pre-determined rates of return. Profitability on the remaining 30% will be driven by the commodity cycle.

Heartland may be able to reach C$500M in a good year with high PP spreads, but that is not likely a sustainable number. **Further, we believe that the structure of the commodity markets is different than when the project was launched and it is becoming increasingly unfavorable.**

IPL competitor and former bidder Pembina Pipeline had planned to build a PDH/PP plant in Alberta as well. The project was suspended during Covid-19 in 2020, then suspended indefinitely. In 2022, Pembina's financial partner, Kuwait, cancelled the project stating that it was "found to be unfeasible".

Cancellation of the project makes sense in the current business context: capacity for PP production is expanding significantly while demand is declining.

ExxonMobil doubled PP production capacity at the end of 2022 at its Louisianna facility.

Industry analysts at both S&P and the ICIS (Independent Commodity Intelligence Services) have published reports on growing production capacity and the impact on PP markets. S&P notes that there is a supply glut, in part, due to PDH start-ups in China.

The ICIS report discusses declining margins in 2022, expected weakness in 2023 due to declining import needs in both China and the U.S. "New capacity is coming online even as overall demand outlook has weakened in line with reduced expectations surrounding economic growth…"

The Heartland project must have looked attractive to Brookfield in 2021. The spread between Edmonton propane prices and PP were at record highs. Post-Covid reopening was expected to reignite economic growth and presumably PP demand along with it.

Brookfield was insistent on acquiring IPL and dutifully raising its bid. **At the same time, though, the Canadian oil & gas industry collectively took a pass on IPL and sat on the sidelines. Further, Experienced industry players - Kuwait and Pembina - cancelled a similar project after determining was "unfeasible".**

Brookfield has been left holding the bag. It overpaid for the asset and is now facing declining market demand. The spread available to the 30% merchant business is likely significantly lower than it was when it purchased the facility.

The prescient take-or-pay contracts signed by the previous management team provide some stable profitability for several years after the plant fully ramps in 2023. However, long-term take-or-pay contracts are unusual in the PDH/PP industry. Rollover risk is real.

In 1H21 when many of the contracts were signed, the industry was reeling after a freeze in Texas that shut-down a lot of capacity. In that environment, alternative supply arrangements may have made sense. However, that was an unusual time. Negotiations may be very different in the future given new capacity. There is a risk the plant may be transformed into a largely merchant-based producer, fully exposed to the commodity cycle.

We believe this risk is a key reason why IPL did not attract JV partners or other bidders. The realities of the PDH/PP market weigh on IPL's valuation.

Brookfield Overpaid and Added More Leverage

We think it is important to put our valuation of IPL in context by looking at what Brookfield paid for the company. In the table below, we show IPL valuation metrics based on 2020 results and compare them with TC Energy, Pembina Pipeline and Enbridge.

Comparable Valuation

				IPL	
2020 *(C$ millions)*	**TRP**	**PPL**	**ENB**	**Pre-deal**	**Transaction**
EBITDA	9,901	3,281	14,495	1,012	1,012
Cashflow from operations	7,058	2,252	9,781	817	817
Distributions received	-	-	705	-	-
Standard					
EV/EBITDA	8.29x	9.24x	9.41x	8.98x	12.69x
EV/CFO	11.62x	13.47x	13.94x	11.12x	15.72x
Adjusted					
EV/EBITDA	8.29x	9.24x	**8.97x**		
EV/CFO	11.62x	13.47x	**13.00x**		

Source: Company filings and estimates.

We adjusted IPL by adding C$25M to EBITDA compensate for Heartland. Similarly, we adjusted IPL's enterprise value lower by C$3.5B to account for the Heartland investment. The result is that we can see the valuation at which IPL's operating businesses traded before the Brookfield offer and the multiples at which it transacted.

Part of the long argument supporting the Brookfield's purchase was that they were only paying for the existing businesses and was getting the Heartland project for free. The numbers do not support that view.

After adjusting for what the anticipated cost of Heartland, the multiples pre-deal were inline with other valuations at the time.

Brookfield paid a high premium when the transaction took place almost 9-months after the initial offer. An S&P credit note stated that Brookfield was going to put C$1.425B of acquisition debt on IPL's balance sheet. The new debt grew the due to affiliates account to C$3.4B.

Comparing BIP's summary IPL balance sheet published in the 20-F with IPL's independent balance sheet, gives investors an important view on HoldCo consolidation.

The table below shows the two IPL balance sheets in USD.

IPL: Comparative Balance Sheets

	FX	0.7382	
($ millions)	**BIP**	**IPL**	**Difference**
Current assets	577	578	1
Long term assets	14,306	14,263	(43)
Total assets	14,883	14,841	(42)
Current liabilities	2,370	1,727	(643)
Due to affiliates	-	**2,597**	2,597
Long-term liabilities	7,342	7,342	(0)
Total liabilities	9,712	11,667	1,955
Net assets	5,171	3,174	(1,997)

Source: Company financials and estimates.

The asset side of the balance sheet is comparable. The liabilities are not. There is $643M more current liabilities on the BIP balance sheet than the IPL balance sheet, and there is $2.3B more long-term liabilities (due to affiliates) on the IPL balance sheet.

We believe the $640M is additional debt raised at the HoldCo level above Bison/IPL as part of the financing to complete the transaction.

In October 2021, Brookfield made the last purchase of IPL stock. To do so, it raised ~$2B. On the 2021, cashflow statement, cash increases by C$2.1B, reflecting inflows from C$1.43B increase in debt, and C$635.5M in equity raised. These reflected cash inflows and corresponding C$1.9B outflow reflecting Bison's purchase of stock.

As of December 2021, IPL's balance sheet had a total of C$3.4B of due to affiliates, which increased marginally over the year and translates into the $2.6B seen on IPL's summary balance sheet shown above.

The $2.6B due to the affiliate disappears upon consolidation causing IPL equity as shown on BIP's financial statements to be overstated. **The HoldCo consolidation hides debt.**

That said, we are not sure the entire $2.6B is debt, so for our valuation purposes, we adjusted it downward. We took the initial debt amount of C$1.43B and added the interest accrued over 2021 and 2022. The total at the end of 2022 was C$ 2.28B or $1.7B.

We derive our multiple used for IPL's core cashflowing business from the previous peer group using 2022 numbers, as shown below.

Comparable Valuation				
2022 *(C$ millions)*	**TRP**	**PPL**	**ENB**	**Average**
EBITDA	9,901	3,590	12,501	
Cashflow from operations	6,375	2,929	11,230	
Distributions received	2,632	-	2,819	
Standard				
EV/EBITDA	9.88x	9.41x	13.05x	10.78x
EV/CFO	15.35x	11.53x	14.53x	13.80x
Adjusted				
EV/EBITDA	7.81x	9.41x	10.65x	9.29x
EV/CFO	10.86x	11.53x	11.61x	11.34x

Source: Company filings and estimates.

We use the adjusted multiple, which includes dividends received from equity accounted investments. The multiples are unchanged since early 2020.

The table below shows our valuation. In it, we calculate separate enterprise values for IPL's core business and Heartland. For the core business, we use the market multiple and EBITDA adjusted upward for Heartland's negative contribution. We use a high multiple of 11x for Heartland to reflect the highly contracted nature of the business, which ordinarily we believe would be ~7-8x on merchant activity.

We use C$400M as a longer-term sustainable EBITDA for Heartland. We estimate Heartland is worth ~C$4.4B. The original cost estimate was $C3.5B, but we believe it will come in at closer to C$4.5B in the end. The valuation of Heartland is very close to the cost, which is likely why Pembina and Kuwait cancelled their project.

The table below shows the valuation.

Inter Pipelline Valuation

Pipeline & Facilities, Marketing		**Heartland**	
(C$ millions)	**2022**	*(C$ millions)*	
EBITDA	1,184	EBITDA	400
Heartland adjustment	55	Multiple	11.00x
Adjusted EBITDA	1,240	Enterprise value	**4,400**
Multiple	9.29x		
Enterprise value	**11,514**		
Enterprise value			
Core business	11,514		
Heartland	4,400		
Total	15,914		
IPL net debt	(10,836)		
Equity value	5,078		
FX	0.7382		
Gross equity USD	3,749		
Bison-level debt	(643)		
Total net equity USD	**3,106**		
BIP stake	56%		
BIP gross equity	1,739		
Value discrepancy	(221)		
BIP net equity	**1,518**		
IPL proportion of LP-net debt	(1,028)		
BIP net equity	**490**		

Source Company filings and estimates.

We estimate an enterprise value of C$11.5B for the core business and C$4.4B for heartland for a total of C$15.9B. The enterprise value is modestly below the $16.3B valuation at the time of the transaction. The decline reflects the lack of multiple expansion over the period for the group, and the very high-multiple Brookfield paid.

We subtract a total of C$10.8B in net debt leaving a total equity value of C$5.1B, which translates into $3.7B. We subtract the additional Bison-level debt of $643M bringing total equity down to $3.1B.

BIP's 56% stake yields $1.7B in value. However, while the 20-F says BIP's stake is 56%, the share of net assets is less. We subtract the difference of $221M leaving net equity to BIP of $1.5B.

We value BIP's stake at $1.518M, 43% or ($1.157B) below the carrying value $2.765B. We would need to apply an ~12x to obtain BIP's valuation using our valuation assumption for Heartland. Canadian midstream assets do not trade at those levels.

The ($1.157B) difference between BIP's carrying value and ours is subtracted directly from equity for the purposes of calculating NAV.

We also present IPL on a stand-alone basis to show the impact of multiple layers of debt in the structure.

BIP has total LP-level debt of $3.7B. IPL's proportion of that debt is just over $1B. **Thus, with a full allocation of debt in the pyramid, BIP unitholders have only $409M in equity remaining.**

NorthRiver Midstream

Brookfield purchased the gas gathering and processing midstream assets from Enbridge in a two-step transaction for a total of $3.3B. In October 2018, Brookfield purchased the provincially regulated assets, and in December 2019 the acquisition of the regulated assets closed.

NorthRiver Two-setp Acquisition

2018	**BIP**	**Consortium**	**BIF III**
Total consideration	559	2,000	1,441
Cash	281	982	701
Asset level debt	278	974	696
2019	**BIP**	**Consortium**	**BIF III**
Total consideration	377	1,300	923
Cash	246	861	615
Asset level debt	131	439	308
Total	**BIP**	**Consortium**	**BIF III**
Total consideration	936	3,300	2,364
Cash	527	1,843	1,316
Asset level debt	409	1,413	1,004

Source: Company financials and estimates.

The accompanying table shows some detail of the transaction. In total, BIP paid $527M in cash and $409M in asset-level debt for the total $936M. The LBO funding ratio was 44% debt and 56% equity.

BIP owns 29% of NorthRiver; we believe the Brookfield-managed Brookfield Infrastructure Fund III (BIF III) owns the remaining 71%. BIF III assigned their voting rights to BIP. The vote swap technically conveys control to BIP, requiring or allowing BIP to consolidate it despite the minority position.

BIP's disclosures imply that $1.4B of the $3.3B total consideration was paid with asset-level debt. We used the company's 2019 EBITDA and debt/EBITDA ratio taken from Moody's to calculate the purchase multiple, which is shown in the accompanying table.

Acquisition Valuation

($ millions)	**2019**
Enterprise value	3,256
EBITDA (Moody's)	294
EV/EBITDA	11.07x
Debt/EBITDA (Moody's)	5.10x
Implied Debt	1,499

Source: Company financials and estimates.

Moody's indicates that NorthRiver's debt/EBITDA was 5.1x in 2019, implying total debt of $1.5B. Given that BIP disclosed that the purchase was funded with $1.4B of asset-level debt, we can assume that Enbridge sold the asset on a debt-free basis.

Brookfield paid a purchase multiple of 11x inline with where Keyra traded at the time.

At the time of the transaction, Enbridge was selling non-core assets to pay-down debt as the company rationalized following the $28B acquisition of Spectra Energy in 2016. Brookfield and Enbridge have interlocking directorates, with two Enbridge directors also serving on Brookfield boards.

NorthRiver gathers and processes gas in northeastern British Columbia and west central Alberta. The company owns 16 natural gas processing facilities and over 3,400 kilometers of gathering pipelines. The pipelines are connected to major markets through the Westcoast pipeline to the US Pacific Northwest, the Alliance pipeline to the US Midwest, and the Nova Gas Transmission system to the Alberta market.

According to Moody's, approximately 1/3 of well locations in NorthRiver's operating area have strong economics and are profitable at lower natural gas prices. The remaining 2/3 are more challenged, requiring higher price, limiting producer investment and growth opportunities. The company's largest customer is Ovintiv (OVV NYSE).

Moody's rates NorthRiver Ba3, equivalent to an S&P BB-, the lowest rung for non-investment grade speculative before highly speculative. We use Keyera Corp (KEY Toronto) as a comparable company for valuation purposes. Keyera's credit is rating three notches above Northriver's with a lower medium investment grade rating from S&P of BBB-.

As a non-wholly owned consolidated entity, BIP provides summary financial information on NorthRiver. We used information from Moody's debt report for estimated EBITDA in 2022.

In the table below, we show comparable valuation information.

Comparable Analysis

	Equity Value	Enterprise Value	EV/ EBITDA	EV/ CFO	Debt/ EBITDA	Debt/ CFO
Keyera Corp ($CAD 000)	8,675	12,368	11.54x	13.37x	3.45x	5.13x
NorthRiver Midstream ($ 000)	1,911	3,561	11.49x	18.08x	5.32x	9.15x

Source: Company filings and estimates. Based on year-end 2022 prices.

NorthRiver is carried at an EV/EBITDA multiple comparable to Keyeras' and higher than the transaction multiple, despite the significantly more aggressive leverage profile. In our valuation of the asset, we assign a 10.5x multiple to EBITDA and 15x cashflow from operations. The EBITDA discount reflects NorthRiver's higher risk profile relative to Keyera.

The discounted multiples imply an enterprise value of $3.3B and $3.0B, for the EBITDA and cashflow from operations multiples, respectively. The valuation implies a slightly lower multiple than at the time of purchase to reflect the high leverage and an enterprise value inline with the original purchase price. The average value of the EV/EBITDA and EV/CFO is $422M or a 23% discount from the $546M carrying value.

II. BIP's 2x NAV Multiple Creates 65% Downside in the Unit Price

Bezzle is the temporary gap between the perceived value of a portfolio and its actual long-term value.

At some point investors realize they have been conned and thus are less wealthy than they had assumed. When this happens, perceived wealth decreases until it once again approximates real wealth.

John Kenneth Galbraith via Michael Pettis

BIP has two layers of valuation: the value of its investment portfolio and the premium (or discount) at which the units trade in the public market.

Gross net assets are the sum of the values of the partnership's ownership stakes in portfolio companies. BIP carries investments at IFRS fair value - the price at which management believes they can be sold to a third-party. The carrying values have embedded multiples, just like the market capitalization of publicly traded stocks.

The net asset value (NAV) is the gross value of the investments adjusted for LP-level assets and liabilities, which is always a net debt position. The second level of valuation is the discount or premium at which BIP units trade in the public markets. Given management's use fair value accounting and how comparable investment vehicles trade, the units should trade at or around NAV. **Yet, they do not.**

Earlier in BIP's life as a public entity, the units traded around NAV. The NAV valuation methodology was supported by the sell-side at the time. For example, in its 2011 initiation report on BIP, BMO Capital provided three valuation methods, but **focused on the sum of the parts, for which it provided valuations of the individual assets**. We show BMO's valuation below.

BMO Individual Investment Valuation

Table 11: Sum-Of-Parts Valuation

	2013E EBITDA ($MM)	Multiple	Net Asset Value ($MM)	
Utilities:				
Regulated EBITDA	$393	13.0x	$5,103	Excludes developr contributions of $9 million per quarter
Developer Contibutions	$36	6.0x	$216	Reflects non recurring nature of developer contributions
	$429	12.4x	$5,319	
Segment Debt			-$2,828	
		Value	$2,491	
Transport & Energy:				
Brookfield Rail	227	12.0x	2724	Premium multiple to North American peers
North America - NGPL	100	12.0x	1200	Multiple in line with publicly traded North American pipeline and storage peers
OTHER - IEG (Island of Man)	24	8.0x	192	Multiple in line with publicly traded Energy distribution peers
UK PD Ports	40	13.0x	520	Transaction multiple for PD Ports acquired by BBI
Euroports	40	13.0x	520	Premium multiple to publicly traded International Port operators
Chilean Toll Road	24	12.0x	288	Reflects recent precedent transactions
Segment EBITDA	$455	12.0x	$5,444	
			$5,444	
Segment Debt			-$2,400	
		Value	$3,044	
Timber:				
Partnership Capital			$607	Reflects external valuation of Timberlands
		Value	$607	
		Total	$6,142	
Cash			$663	2013 Cash retained in the business
Corporate Liabilities			-$424	2013 Corporate and subsidary debt
Management Fee	-$67	10.0x	-$670	2013 Management fee capitalized at 10x
Net Asset Value (NAV)			$5,711	
Shares			185.1	
NAV / Share			$30.85	
Premium (Discount) to Current Price	$26.37		17%	

Source: Brookfield Infrastructure Partners L.P., BMO Capital Markets

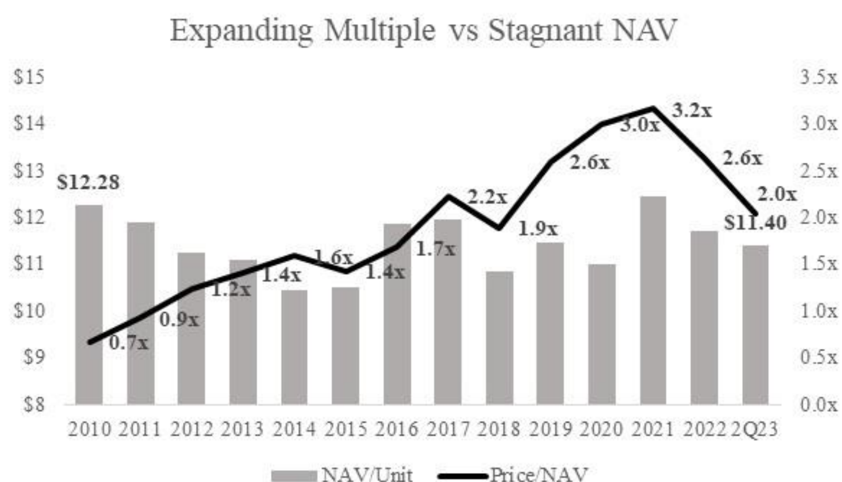
Source: BMO initiation report December 2011.

We believe this rational approach acknowledging that BIP is a fund has been abandoned by the sell-side. Over time as the number of investments has increased and the level of disclosure decreased, investors, with the implicit encouragement of management shifted away from the asset value approach. Instead, investors use the far simpler dividend yield or multiple of proportional FFO or EBITDA, which are provided by management.

The lack of portfolio-level financial disclosure means that investors cannot calculate the proprietary metrics.

Investors now rely almost entirely on management's top-level, non-GAAP/IFRS accounting. Investors are encouraged to view BIP as a kind of fixed income substitute with a growth component. We believe one consequence of this is that BIP's unit price has become entirely untethered from the value of its underlying portfolio.

The chart below shows the NAV and trading multiple of IFRS NAV on an annual basis since 2010.



Source: NAV/unit is partnership capital divided by estimate of split adjusted shares outstanding; price to NAV is reported price from Yahoo Finance! Divided by our estimate of NAV/unit.

At the beginning of 2010, while converting to IFRS, BIP traded at a discount to NAV of 0.76x. In the ensuing 12 ½ years, the multiple increased to over 3.0x at its peak.

In our view, the multiple expansion was facilitated the shift of focus from NAV to FFO, yield and distribution growth in the low-rate environment. Over time, the multiple expanded as distributions increased, but NAV did not. BIP began trading in a yield range of 4-6% as if it were a fixed-income alternative.

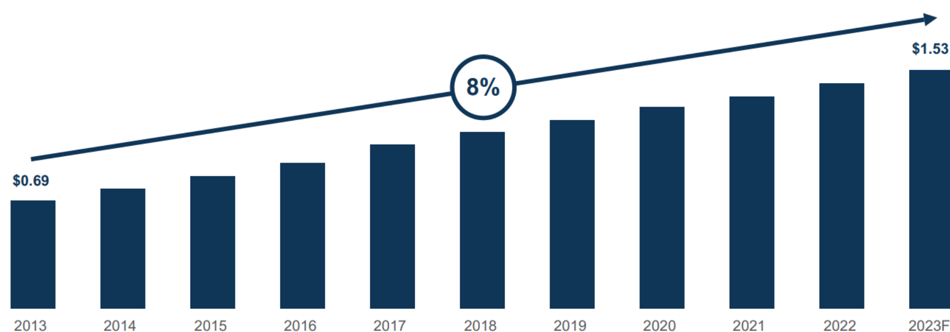
The increase in trading multiple coincides with declining interest rates. **Reaching for yield via BIP is somewhat understandable when rates are close to 0%, but are foolhardy with the 10-year treasury at ~4.75%.**

Management presents FFO to investors as a proxy for cashflow and the appropriate metric with which to set distributions. The exhibit below was taken from BIP's 2Q23 supplemental information package. It begins by discussing the partnership's "conservative" distribution payout, underpinned by cashflow from operations, but quickly shifts to FFO, highlighting the steady growth of distributions over time.

FFO is Cashflow When Communicating with Investors

BIP has a conservative payout ratio underpinned by stable, highly regulated or contracted cash flows generated from operations

- We believe that a payout of 60-70% of FFO is appropriate
- Targeting 5% to 9% annual distribution growth, in light of expected per unit FFO growth
- Distribution payout is reviewed with the Board of Directors in the first quarter of each year
- The Board of Directors declared a quarterly distribution in the amount of $0.3825 per unit, payable on September 29, 2023 to unitholders of record as at the close of business on August 31, 2023. This quarterly distribution represents a 6% increase compared to the prior year
- Distributions have grown at a **compound annual growth rate of 8%** over the last 10 years
- Below is a summary of our distribution history over the last 10 years[1]



Source: BIP 2Q23 supplemental information package.

While management presents FFO to investors as a proxy for cashflow and cash available to the partnership, the message to the SEC is the opposite. In 2018 correspondence with the SEC, the company acknowledges that FFO cannot be reasonably used as a liquidity measure. We show an outtake from the correspondence below.

Management to SEC: FFO is NOT a measure of liquidity

3. You present FFO per unit on pages 8, 99 and 104. On pages 6 and 106 you state FFO is a measure of operating performance. However, it appears FFO is a liquidity measure from disclosures on pages 51, 76, 110 and 114 that associate the measure with distributions to unitholders, liquidity and sources and uses of cash. Question 102.05 of the C&DI states a non-GAAP measure that can be used as a liquidity measure must not be presented on a per share basis, even if management presents it solely as a performance measure. Please revise your presentation accordingly

The Partnership believes that, similar to net income, FFO cannot be reasonably used as a liquidity measure as it could yield significantly different results required to evaluate liquidity for two fundamental reasons. Firstly, FFO is derived on an accrual basis and therefore does not consider changes in working-capital balances, and secondly, FFO includes the Partnership's share of earnings from its equity accounted investments rather than the cash dividends received from the Partnership's investments during the period.

The Partnership acknowledges that referring to FFO within section "5.B Liquidity and Capital Resources" may create ambiguity around the use of the metric on the basis that this is not a metric that either management of the Partnership or analysts use to evaluate liquidity and accordingly will remove such references from future filings,

Source: Company filings.

Although management tells the SEC FFO should not be equated with liquidity, it is essential that investors believe it is proxy for cashflow available to the partnership. BIP's financial model would breakdown without FFO as the definition of "cashflow". The FFO-based payout is more than 2x what we believe is sustainable. FFO determines distributions, which influences the trading premium and incentive fees. The high trading multiple increases capitalization-based fees and higher distributions to LPs increases incentive distribution payments to BAM.

Since 2010, unitholders have received approximately $12.60 in distributions, and despite stagnant NAV/unit, unit price appreciation added $17.73 at the recent price of $26, driving an annualized return of 14.2% - 2/3rds of the total. **BIP unitholder returns have far outstripped the return on investment – and it is all driven by the multiple expansion.**

The risk is that multiples can contract as well as expand.

a. The Trading Multiple and Investment Holding Valuation

The high trading premium has severe implications for portfolio valuations.

When an investor buys BIP units, he/she is buying a portion of each investment in the portfolio – no different than a mutual fund or private fund. However, buyers of open-ended funds, **including BIP's private fund co-investors**, buy units/shares at NAV, thus purchase the portfolio at carrying value. This is not the case with buyers of BIP. **The units trading premium amplifies the valuation multiples already embedded in position carrying values.**

To illustrate, take Cheniere Energy Partners (CQP), a publicly-traded holding BIP calls its North American LNG export operations. We have not seen a disclosure in BIP filings acknowledging that CQP is public.

We make two adjustments to CQP's data to show the difference of buying the stock directly and via a purchase of BIP units. First, we apply BIP's multiple of NAV to the value of CQP's market capitalization. We then apply CQP's proportionate share of BIP-level debt. The results are shown in the table below.

CQP: Purchase Price via BIP

	Current	LP Overhead	Implied
Price	***$55.34***		***$112.72***
Shares	484		484
Equity value	26,785	**2.04x**	54,558
Debt	16,198	**245**	16,443
Enterprise value	**42,983**		**71,001**
EBITDA	5,100		5,100
EV/EBITDA	**8.43x**		**13.92x**

Source: CQP 2022 10-K for shares, Yahoo for price, estimates for remainder.

The table shows the public market valuation on the left, which we assume is BIP's carrying value. As a note, BIP does not disclose the carrying value of equity accounted CQP. Although it is logical to carry it at the market value, unlike a mutual or hedge fund, the partnership is not required to do so.

On the right side we adjust the equity for BIP's multiple and add $184M of HoldCo debt.

Investors can buy CQP in the public markets for $55/share CQP at an EV/EBITDA multiple of 8.4x. **The buyer of BIP units is paying the equivalent of $112.72 per share for CQP and an EV/EBITDA multiple of 13.9x.**

Why would an investor pay $112 for a stock that trades on the open market for $55?

b. Comparable Valuation: BIP is an Anomaly

At times, management has compared BIP to MLPs and others utilities, depending on investment vogue. More recently, they have settled on **grow-tility**, which BIP defines as an utility-like business with defensive attributes, but offers premium growth. It's a best of both worlds presentation where the investment case rests on the dividend yield and expected dividend growth.

The yield-focused comparison with utilities is inappropriate, in our view. The false comparison and the bezzle embedded in the unit price are readily apparent when comparing BIP with other investment vehicles.

In the table below, we have assembled a diverse group of investment vehicle, including infrastructure assets, private equity, and closed-end infrastructure funds. **BIP is the obvious outlier and anomaly from a valuation perspective.**

BIP's Unjustifiably High Premium

Comparable Valuations Vehicle	Ticker	Premium (Discount)
Publicly Traded Infrastructure		
CK Infrastructure	1038 HK	-26%
Power Asssets Holding	0006 HK	-11%
3i Infrastructure	3IN L	-13%
Average		-16%
Publicly Traded Private Equity		
3i Group PLC	III.L	11%
Harbourvest Global Private Equity	HVPE.L	-46%
HGCapital Trust	HGT.L	-21%
Apax Global Alpha	APAX.L	-29%
Aberdeen Private Equity Opportunities	APEO.L	-43%
Average		-26%
Closed-end Infrastructure Funds		
Cohen & Steers Infrastructure Fund	UTF	-20%
Mainstay CBRE Global Infrastructure	MEGI	-20%
Brookfield Global Infrastructure	BGI.UN	-9%
Average		-16%
Brookifeld Infrastructure Partners	***BIP***	***104%***

Source: Yahoo Finance and company websites. Prices as of 10/16/23

10 of 11 entities shown trade at a discount to NAV. Not surprisingly, closed-end funds investing in public securities trade at the smallest average discount. The private equity group trades at the largest average discount with a much wider range.

The closest sub-group of comparables is the publicly traded infrastructure group. CK Infrastructure and Power Assets Holdings are particularly close to BIP, though of much higher quality. **The group trades at an average discount of -16% compared to 104% for BIP.**

Power Assets and CK Infrastructure, both controlled by CK Hutchison Holdings, have investments very similar to BIP's. We believe the steeper discount at CK Infrastructure reflects both lower portfolio quality and an additional holding company discount.

CK Infrastructure holds a material portion of its power portfolio through its 36% stake in Power Assets. Additionally, CK Infrastructure owns some other assets that are lower quality relative to Power Assets, including Canadian parking business and a home water heater business, similar to BIP's residential infrastructure operations.

Overall, the portfolios are strikingly similar to assets in BIP's portfolio, including a Canadian midstream, U.K. gas networks, Australian utilities and gas distribution networks, and New Zealand electric transmission lines. They are also similar structurally, in that there are multiple public vehicles of assets, with overlapping ownership controlled by a single party.

In addition to comparable investments, investors should consider that what much of BIP's portfolio is held via investments in Brookfield-managed private infrastructure funds. **Private fund LP interests trade in secondary markets**. Infrastructure Investor, referenced earlier, stated **that infrastructure fund interests traded at 89% of NAV** in 1H23. Hamilton Lane, which manages secondary funds, cites private fund pricing of 85%-90%[16].

The private market discount is clearly evident in all private infrastructure funds with the exception of BIP.

a. Right-sizing the Unit Trading Multiple

We believe BIP should trade at the steepest discount in the infrastructure group. In the table below, we calculate the trading value of BIP's units based on both stated NAV and our estimate of NAV. We use a low discount of -30% to reflect a discount to CK Infrastructure and a -20% at the high-end – a modest discount to the group.

Unit Valuation

	Reported		**Dalrymple Finance**	
	Low	**High**	**Low**	**High**
NAV/Unit	$11.40	$11.40	$9.54	$9.54
(Discount)	-30%	-20%	-30%	-20%
Value/unit	**$7.98**	**$9.12**	**$6.68**	**$7.63**
Price	*$26.00*			
Downside	***-69%***	***-65%***	***-74%***	***-71%***

Source: Company financials to estimate NAV/unit, Yahoo Finance for pricing and estimates.

Based on this methodology, the fair value for BIP units is between $6.68 and $7.63 representing downside of -71% to -74%. Even using management's estimate of NAV, BIP is only worth $8-9 per unit.

Appendix 5 shows how we discount the NAV.

[16] Hamilton Lane Q&A with Tom Kerr, July 2023.

III. FFO: Constructing the Metric to Overstate Cash Available for Distribution

Controlling the definition of cashflow is a critical aspect of BIP's financial facade. Management uses FFO and cashflows interchangeably in communications with shareholders, as shown below.

BIP's Sales Pitch: Conservative Payout and FFO is Cashflow

BIP has a conservative payout ratio underpinned by stable, highly regulated or contracted cash flows generated from operations

- We believe that a payout of 60-70% of FFO is appropriate

Source: BIP 2Q23 supplemental information package.

In principle, FFO is EBITDA minus interest expense. The partnership's definition divorces FFO from cash received and partnership claims on cash.

BIP defines FFO as the fund's proportional interest in FFO across both consolidated and equity accounted investments. The proportionality is critical because the majority of BIP unitholder equity is in equity accounted investments.

As of 2Q23, total net assets of the limited partnership were $9.98B, 54.3% of which, or $5.4B were invested in equity accounted investments. The split of consolidated/equity accounted investments has a significant impact on FFO, as shown below.

Funds From Operations and Payout

($ millions)	2018	2019	2020	2021	2022
Funds from operations					
Consolidated-proportion	685	793	869	988	1,201
Equity accounted - proportionate	546	591	585	745	886
Total FFO	**1,231**	**1,384**	**1,454**	**1,733**	**2,087**
Distributions	(919)	(1,027)	(1,134)	(1,257)	(1,418)
Payout ratio	*75%*	*74%*	*78%*	*73%*	*68%*

Source: Company filings and estimates.

FFO is a proportional metric

FFO consolidated
\+ FFO equity accounted
= Company FFO

In 2022, only 58% of FFO came from consolidated investments with 42% from equity accounted investments. The table above shows the contribution of equity accounted investments to FFO. **Below, we show FFO booked vs actual distributions received.**

FFO Booked vs Cash Received

($ millions)	2018	2019	2020	2021	2022
FFO	546	591	585	745	886
Distributions received	59	254	167	157	575
% of FFO booked	*11%*	*43%*	*29%*	*21%*	*65%*

Source: Company filings and estimates.

BIP effectively never receives as much in distributions as it books in FFO, perpetually inflating the partnerships ability to fund distributions. Over the last 5-years, the ratio of FFO booked to distributions received has averaged only 34%. Over the entire period, BIP booked $3.4B in FFO from equity accounted investments and received only $1.2B in dividends.

This has significant implications for BIP's reported payout. The partnership has booked $3.4B in FFO from equity accounted investments between 2018 and 2022. At the average 73% payout over the period, implies

that FFO from equity accounted investments have underpinned $2.4B in distributions to unitholders over the period. **The LP has received only 49.5% or $1.2B in distributions, leading to a funding gap of $1.24B.**

We know that FFO dramatically overstates cash available for distributions by comparing FFO with distributions received from equity accounted investments. The section below, shows why FFO is fundamentally flawed and misleading without adequate disclosure to assess the quality of the cashflows.

a. Arteris S.A.: Illustrating the FFO Deception

The example of Arteris S.A., described in filings as Brazilian toll road operations, illustrates how investments are mis-represented to inflate financial performance and inflate the distribution-paying ability of the partnership. **The deception is two-fold: conceptual and financial.**

According to the 20-F, BIP's "toll roads are expected to generate stable, growing cash flows as a result of their strategic locations, favorable long-term economic trends in the countries where we operate and inflation-linked tariffs".

This is a partial truth. Arteris is not simply a toll collector, it is a construction company. **The addition of construction changes the business model.** The way in which BIP presents Arteris is a conceptual deception by means of omission that leads to financial deception.

Arteris has never been sufficiently profitable or generated cashflows to pay material dividends. Yet, former BIP **CFO Bahir Manios described Arteris as "by far the largest contributor, making up almost 75% of our overall toll road cash flows[17]".** Arteris can only be viewed as a successful, cashflowing business using Brookfield's narrow definition and accounting. The financial reality is quite different.

In 2015, Arteris was a failing public company. Its stock collapsing as it faced a wall of maturing debt with no refinancing options. **Rather than write-off what was a ~14% of NAV stake at the time**, BIP bought the remainder of the company with its co-investor.

The buyout provided the company a lifeline and removed the stock from the public eye. In 2016, BIP injected $239M (and its investment partner roughly the same), to keep the company afloat.

In the table below, we use Arteris' Brazilian financial statements to show the company's FFO generation, BIP's proportion along with non-investment related cash flows – distributions received and cash infusions.

[17] Bahir Manios, BIP 2020 Investor Day.

Arteris S.A. - FFO Rich, Cash Poor

FX BRL	3.5	3.55	3.2	3.7	4	5.2	5.4	5.2
($000)	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Adjusted EBITDA	415,745	492,583	555,056	456,011	465,359	332,520	347,943	423,107
Financial expenses	(141,470)	(157,011)	(120,404)	(139,041)	(143,118)	(92,743)	(152,654)	(157,316)
FFO	274,275	335,572	434,652	316,969	322,241	239,777	195,289	265,791
BIP Stake	31%	49%	45%	45%	45%	45%	45%	45%
FFO - BIP Proportion USD	**85,025**	**164,430**	**195,593**	**142,636**	**145,008**	**107,900**	**87,880**	**119,606**
Free cashflow USD	**(329,245)**	**(237,664)**	**(699,575)**	**(181,358)**	**(36,658)**	**(8,863)**	**(183,788)**	**(208,025)**
Dividends BRL	33,300	-	56,400	-	-	-	-	-
Dividends USD	9,514	-	17,625	-	-	-	-	-
Cash from (to) Arteris								
Distributions received	2,949	-	7,931	-	-	-	-	-
Cash injections	-	(239,000)	-	-	-	-	-	-
Net cashflows	**2,949**	**(239,000)**	**7,931**	**-**	**-**	**-**	**-**	**-**

Total FFO booked	**1,048,079**
Dividends underpinned (@ 70%)	**733,655**
Total cashflows	**(228,119)**

Source: Company filings and estimates.

BIP books substantial proportional FFO based on its ownerhsip stake

The company needs ongoing financing to fund construction CapEx

Arteris could never pay material dividends and required a cash bailout to remain solvent

BIP booked $1B in FFO "cashflows" supporting distributions to LPs while downstreaming $239M in cash to Arteris

We estimate BIP booked $1B in FFO from Arteris since 2015**. The contribution to proportional FFO at BIP underpinned approximately $700M in distributions to unitholders, despite net cashflows of ($228M),** with only $10.9M in distributions to offset $239M of cash injections, as management called them.

What Mr. Manios called BIP's largest cashflow contributor to the toll road segment is a financial failure with regulatory issues, need for another bailout, teetering on the edge of bankruptcy. However, none of this is evident from BIP's disclosures.

According to management, Arteris has been an excellent investment contributing significantly to "cashflows". However, this view only holds with BIP's FFO-based accounting which ignores significant real costs and the ability of companies to pay dividends. BIP's view can only be maintained if full financial information is withheld from investors. Were investors accurately informed on the financial state of Arteris, it would be clear that Mr. Manios' statements regarding the company do not comport with reality.

FFO is constructed to inflate cashflows and the appearance of cash available for distribution. Brookfield's reporting is designed present stability and growth. **The illusion of strong and growing cashflows, in turn, allows Brookfield to increase distributions in effort to maintain the market multiple, both of which generates fees.**

IV. BIP's Distribution Payout is More than 2x Sustainable Levels

BIP is a holding company with no operations. To meet cash obligations, including distributions to unitholders, the LP is dependent on receiving distributions from its underlying investments via an interim HoldCo. Alternatively, the partnership would need to finance distributions with LP-level debt.

BIP's FFO-based metrics are not appropriate measures to assess distributions. As shown in the previous section, they significantly overstate cash available. The metric is also problematic in that investors cannot calculate it, thus it cannot be compared with peers.

The most accurate and transparent way of evaluating distribution coverage is to compare distributions received and their origins with distributions paid. The adoption of IFRS eliminated the direct disclosure of distributions received, and over time management has eliminated key footnote disclosures that made it possible to calculate the number.

a. Proportional Cashflow Payout

In the absence of proper disclosure, payout is best viewed as a proportion of cashflow from operations from consolidated entities plus dividends received from equity accounted investments. This is conceptually similar to standard YieldCo evaluation models, such as Moody's model shown in this presentation.

A key benefit of a cashflow metric is that, unlike FFO, investors can calculate it, and as it is standard, BIP can be compared with other Yieldcos.

The metric has two weaknesses. **Capital expenditures and debt repayment often inhibit the payment of dividends, irrespective of cashflow.** Additionally, BIP only discloses entity-level cashflows annually.

For a short time, proportional cashflow was simple to calculate. **BIP disclosed the amount of consolidated cashflow from operations attributable to non-controlling interests in a footnote**, which could be used to calculate the partnerships claims on cashflow. We show the disclosure below.

AFFO Reconciliation

US$ MILLIONS	For the year ended December 31, 2020	2019	2018
Cash from operating activities	**$ 2,530**	$ 2,143	$ 1,362
Add: FFO from associates and joint ventures	**585**	591	546
Remove:			
Distributions received from associates and joint ventures	**(167)**	(254)	(59)
Cash from operating activities attributable to non-controlling interests[1]	**(1,716)**	(1,209)	(1,028)
	1,232	1,271	821
Less: Maintenance capital expenditures	**(281)**	(288)	(249)
Taxes paid on disposition of Chilean electricity transmission operation	—	—	256
Changes in working capital and other items	**222**	113	154
AFFO[2]	**$ 1,173**	$ 1,096	$ 982

Source: BIP 2020 20-F.

The reconciliation itself is not important, but the disclosure of cashflow attributable to non-controlling interests was very important. It could be used to calculated the cashflow attributable to the partnership to estimate distribution paying capabilities.

We used the disclosure to calculate partnership claims on cashflow from 2015-2020. For the two years following 2020, we calculated the cashflow using data available annually in the 20-F. The table below shows our calculation of BIP's proportional cashflow coverage of distributions. This measure is the

equivalent to BIP's FFO payout though with the inclusion of movements in working capital. We include BIP's FFO payout for comparative purposes.

BIP's Cashflow Coverage of Distrbituions

	IFRS Compliant						Estimates[1]	
	2015	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Cash flow from operation	632	753	1,481	1,362	2,143	2,530	2,772	3,131
- Cash flow attributable to non-controlling interests	(149)	(231)	(840)	(1,028)	(1,209)	(1,716)	(1,898)	(2,040)
Cash flow attributable to the LP	483	522	641	334	934	814	874	1,091
Distributions								
Distributions to LPs	(480)	(544)	(680)	(779)	(869)	(949)	(1,048)	(1,174)
Incentive distributions to BAM	(66)	(84)	(114)	(140)	(158)	(185)	(209)	(244)
Total distributions	(546)	(628)	(794)	(919)	(1,027)	(1,134)	(1,257)	(1,418)
Proportional Cashflow Payout								
Cash flow after distributions	(63)	(106)	(153)	(585)	(93)	(320)	(383)	(327)
Payout Ratio	**113%**	**120%**	**124%**	**275%**	**110%**	**139%**	**144%**	**130%**
FFO Payout	**68%**	**67%**	**68%**	**75%**	**76%**	**78%**	**73%**	**68%**

Source: Cashflow from operations and cashflow attributabble to non- controlling interests taken from BIP 20-Fs. FFO payout taken from BIP supplemental filings.

1. Derived by calculateding proportional cashflow from operations from LP disclosures.

Our cashflow coverage ratio indicates that BIP has not covered distributions in the period shown.

The partnership has a cumulative FFO-equivalent payout cash deficit of $2.7B over the period shown.

To put BIP's payout in context, we compare it with a number of comparable companies in Appendix 2. On average, the payout ratio of comparable companies is 54% of cashflow. In contrast, BIP's payout has averaged 144% over the period shown.

In **Appendix 3**, we provide an example showing how BIP uses company-level debt at consolidated investments to finance distributions paid to the partnership.

V. Wasting Trust Hidden by Inflating Asset Values and Unit Sales

BIP is a high cash expense entity. **In 2022, the partnership paid out 19.8% of adjusted net assets in fees and distributions.** Maintaining or growing net asset value requires annual returns in excess of the payout figure. BIP does not generate the ~20% returns from operations necessary to stem NAV erosion. NAV is maintained through a combination of writing-up the value of investment holdings via the IFRS accounting standard IAS 16 and by selling equity at multiples of book and using it as acquisition script.

The fair value increases are disclosed in the footnotes in a table showing the accumulated fair value adjustments[18]. **Between 2015 and 2022, fair value adjustments totaled $3.98B for consolidated assets; we estimate ~$1.4B of that accrued to unitholders**. BIP does not disclose the fair value adjustments for equity accounted investments.

Between 2015 and 2022, the consolidated statement for partnership capital[19], or changes in equity attributable to limited partners, states that unit sales and issuances added a total of $4.13B in equity. **We calculate that selling or issuing units above NAV generated $2.28B of incremental book value.**

In the table below we illustrate the impact of issuing equity above NAV on NAV/unit. On the left, we show BIP's basic operational model, which as of 2022 included total management and incentive fees of ~7% of NAV, and distributions of 13% of NAV. For this example, we assume a 10% return on investments. On the right, we illustrate the impact of selling equity at the current multiple of NAV.

Wasting Trust Financial Model

		Change
Beginning Net Assets	100	
- Total Fees	(7)	-7%
- Distributions	(13)	-13%
+ Returns	10	10%
Ending Net Assets	90	
Beginning NAV/unit	$10.00	
Ending NAV/unit	***$9.00***	***-10%***
Units outstanding	10	

Manufacturing Equity by Selling Units > NAV

	Beginning	**Issue @ 2.3x**	**Total**
Net Assets	100	10	110
Above NAV	-	13	13
Total Net Assets	100	23	123
NAV/Unit	**$10.00**	**$23.00**	**$11.18**
Units outstanding	10	1	11

Beginning NAV/unit	**Net of fees Returns**	**Unit Sales**	**Ending NAV/unit**
$10.00	-$1.00	$1.18	$10.18

Source: Estimates.

The operational side of the business generated a loss of $1/unit, but selling equity above NAV generated an incremental $1.18 per share. On the bottom, we put them together to have an NAV that is net/net up $0.18 per unit.

BIP's business model is essentially one of a wasting trust, where excessive cash expenses naturally erode NAV, but NAV declines are offset with the financial engineering of writing-up the value of assets and selling units at a multiple of NAV.

[18] Note 14 in BIP's 2022 20-F.
[19] Page F-10 in BIP's 2022 20-F.

In **Appendix 5**, our adjusted net assets exhibit shows that excluding financial engineering, unitholder NAV/unit eroded -79% over the 8-years shown.

a. The Mathematics of Asset Value Inflation

The net assets depicted in the accounting is supposed to represent changes in portfolio level valuation as moderated by LP-level financial actions. **There is significant evidence BIP has historically carried assets at dramatically inflated values.** An important example is the Brazilian toll road business, Arteris S.A.

Arteris is an unusual case in that as a publicly traded entity owned by two IFRS reporting entities, it created the opportunity to compare BIP's mark with the public market value and that of a co-investor using comparable accounting.

In 2015, Arteris was publicly traded in Brazil with a majority owned jointly by Brookfield and Abertis Infrastructure, a Spanish company that was publicly traded at the time. The Brookfield group owned 49% and Abertis 51%.

2015 was an exceptionally difficult year for the company. Abertis took a material impairment charge, writing down the value of Arteris by -57%. The outtake from Abertis' 2015 annual report discusses it.

Arteris: Significant Impairment Charge in a Challenging Year

The situation of political and economic instability in Brazil has meant significant challenges for Arteris over the course of the year. Traffic has been affected by the slowdown in industrial activity with falls in the heavy vehicles segment. By contrast the figures show a slight improvement in the case of light vehicles.

The provisions registered by the Group, on the one hand, for impairment of the balance on compensation for traffic guaranteed in the AP-7 agreement (859 million euro, without considering the tax effect) on which Abertis and the Ministry of Public Works have differences in interpretation and, on the other hand, the impairment in the net assets of Arteris (763 million euro) due to the worsening of the macroeconomic situation in Brazil, have had a negative impact on the operating result (EBIT). In comparable terms, the EBIT grew by 12%.

Source: Abertis 2015 annual report.

In contrast to Abertis' discussion of the asset, BIP's disclosure on toll roads and Arteris presents a favorable long-term environment with growth opportunities.

BIP's Arteris/Toll Road Disclosure

Our toll roads are expected to generate stable, growing cash flows as a result of their strategic locations, the favourable economic trends in Chile, Brazil and India and inflation indexed tariffs. These markets have experienced significant economic growth over the last 20 years, leading to increased motorization rates and economic trade, which has driven increases in traffic volumes. We expect these trends to continue in the long-term, resulting in significant future traffic growth on our toll roads.

Strategic Position

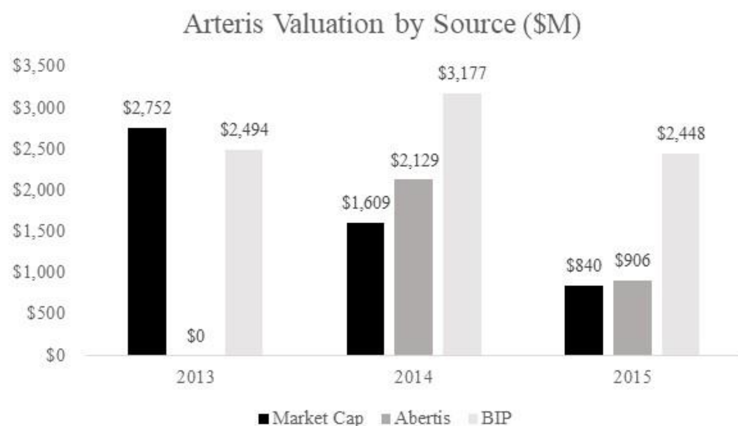
Our Chilean toll road constitutes a key artery in Santiago's urban road network as it connects the affluent business center of east Santiago with Chile's international airport, the Port of Valparaiso and the North of Chile. The primary users of the road are commuters getting to and from work. Conversely, our Brazilian toll roads are part of the inter-urban Brazilian toll road network, whose traffic is a mix of heavy industrial users and cars. Our roads are used in the transportation of goods in states of Brazil, which represent approximately 65% of Brazilian GDP. Subject to completion of the Gammon Acquisition, our toll road portfolio in India will span the country and include some of India's

Growth Opportunities

We believe that long-term growth in the South American and Indian economies will trigger increases in traffic volumes. Coupled with tariff increases from inflation and congestion tariffs, this should drive significant future cash flow growth for our toll road businesses. In addition, Brazil, Chile, and India are seeking to increase their respective paved road network by expanding existing roads and developing new roads. These planned expansions should present opportunities for us to invest additional capital in these attractive markets, given the scale of our existing network.

Source: BIP 2015 20-F

The different tone in the disclosures are clearly evident in the valuations.



In the accompanying chart, we show BIP's carrying value compared with the public market value and Abertis' carrying value.

We were not able to obtain Abertis' 2013 valuation, but BIP's total implied valuation was slightly less than the market capitalization. The relationship reversed in 2014, where BIP wrote up the value 27% despite the stock market valuation declining -41%. **Abertis' -57% impairment charge is evident in its 2015 carrying value.** The market cap of the company had declined another -47% in 2015. **Although BIP wrote-down Arteris in 2015 by -23%, the write-up n 2014 meant that it was roughly equal with the 2013 valuation. In contrast, the market cap declined -70% from 2013 to 2015.**

In 2015, BIP owned a 31% stake carried at $759M, implying a total equity value of $2.45B for Arteris. In contrast, the total market capitalization of the publicly traded stock was $840M, and Brookfield's senior partner that consolidated Arteris, carried its position at a $906M valuation.

In our view, management's ability to inflate asset values stems from poor company-level financial disclosure and vague qualitative disclosures.

The Arteris example shows the importance of understanding BIP's portfolio and how poor disclosure impedes analysis and leads to excess valuation. To understand the magnitude of the asset inflation problem, we need to follow the inflation process from asset-level equity through to the public markets.

BIP carried Arteris at 2.9x the market value of the equity. BIP units, in turn, currently trade at 2.3x NAV, or BIP-level carrying values. The mathematics of asset inflation shown below clearly illustrates the issue.

Mathematics of Asset Inflation

	Arteris	
($ millions)	**Equity**	**Multiple**
Market value	$260	
Multiple		2.9x
Carrying value	$759	
Unit market multiple		2.3x
Market value	$1,746	

Source: Company financials and estimates.

Asset inflation combined with BIP's trading multiple transform the value of Arteris. **While buyers of BIP units are focused on distribution yield and growth, management is taking something worth $260M and selling it to investors for $1.7B.**

VI. Financial Plunder: Fees Structured to Profit Brookfield at the Expense of Unitholders

BIP is externally managed by Brookfield Asset Management. BIP pays Brookfield a base management fee and incentive distributions. The fees are structured in a way that disadvantages BIP unitholders and benefits Brookfield. Fees are not connected with unitholder economics, but rather capital market metrics.

a. Controlling the Fee Structure, Benefitting Brookfield

BIP pays a 1.25% annual base management fee based on a modified enterprise value that is the market capitalization plus recourse debt, including preferred stock. Incentive distributions increase as distributions to unitholders increase. It is the same incentive distribution rights structure that the MLP's had but largely eliminated. **Distributions paid to unitholders are not limited by profits, cashflows or dividends received. They are set at the sole discretion of Brookfield.**

Quarterly LP Distribution and Incentive Distribution

Distribution	$0.3825				
Units	762				
First threshold	$0.1218				
Second threshold	$0.1320				
	Threshold	**% Excess**	**LP**	**Incentive**	**Total**
Excess of 1st	$0.0102	15%	8	1	9
Excess of 2nd	$0.2505	25%	191	64	254

Source: Company filings and estimates.

The accompanying table shows how incentive distributions are calculated.

We used the declared 1Q23 distribution to calculated the incentive distributions paid to BAM.

BAM is paid 15% of cashflows above the first distribution threshold and 25% of cashflows above the second. The numbers are calculated by multiplying the amount in excess of the threshold by the total number of units. Overall in this case, the total quarterly incentive distribution is ~$65M.

In the accompanying table, we estimate total fees to be paid to Brookfield.

Base Management Fee Calculation

	Price	**NAV**
Price	32.00	11.72
Units M	762	762
Market cap $M	**24,374**	**8,927**
Debt instruments $M	4,897	4,897
Total capitalization $M	**29,271**	**13,824**
Fee amount	1.25%	1.25%
Annual base fee	366	173
Annualized incentive fees	260	260
Total fees	626	433

Source: Company filings and estimates.

The left-most column shows estimated fees using the current market price. To illustrate the impact of the NAV multiple on fees, the right-hand column assumes that BIP trades at 2022 year-end IFRS NAV/unit.

We added BIP's LP and redeemable units and BIPC's units to get the total market capitalization to which we added recourse debt and preferreds.

At $32 per unit, current base fees are an annualized $366M the over 2x what they would be if the units traded at NAV.

Annualized base and incentive fees to be paid to BAM total $626M, roughly $200M more than if the units traded at NAV and approximately 7% of year-end applicable net assets.

Brookfield either directly controls or has significant influence over distributions and capitalization, which determine fees. Brookfield has reacted to incentives by pursuing policies that have increased its wealth dramatically at the expense of unitholders.

One can see the incentives clearly at work at BIP over time. Since 2010, the market capitalization plus recourse debt increased 710% to ~$24B from ~$3B. Similarly, distributions per unit increased 227% to $1.44 per unit from $0.44. Over the same time, NAV/unit has been stagnant.

Long-term unitholders have profited despite the stagnant NAV due to the expanding trading multiple of the units. **The dark side of the trading multiple is that because fees are based on market capitalization, they grow as a percentage of equity along with multiple expansion, accelerating NAV erosion.**

In the table below, we show fees and distributions paid as a percentage of beginning-year LP equity for the last 5-years.

Fees and Distributions as a Percentage of Net Assets

($ millions)	**2018**	**2019**	**2020**	**2021**	**2022**
Base management fee	214	270	302	394	421
Incentive distribution	136	158	183	206	240
Total fees	350	428	485	600	661
Distributions to LPs & other	567	628	711	800	901
Distributions to Brookfield	216	241	240	251	277
Total distributions	783	869	951	1,051	1,178
Total fees and distributions	1,133	1,297	1,436	1,651	1,839
Fees and distributions to Brookfield	566	669	725	851	938
Fees as a % of net assets*	4.7%	6.3%	7.1%	7.4%	7.1%
Distributions as a % of net assets	10.5%	12.9%	13.9%	13.0%	12.7%
Total payout as a % of net assets	**15.2%**	**19.2%**	**21.0%**	**20.5%**	**19.8%**
Fees and distributions to Brookfield as a % of net assets	**7.6%**	**9.9%**	**10.6%**	**10.5%**	**10.1%**

*Source: Company filings and estimates. *Net assets is average total partnership capital minus non-controlling interests in subsidiaries, minus general partner interests and minus preferred equity and perpetual notes.*

The fee structure combined with the trading multiple have caused fees paid to Brookfield to skyrocket. On an absolute basis, total fees have increased 88% to $665M from $354M over the 5-year period shown. Fees as a percentage of NAV has increased to 7.2% from 5.3% in 2018.

The dramatic increase in fees both on an. absolute basis and particularly as a percentage of NAV is more dramatic over a longer time frame. Fees increased 23x from $28M in 2010 to the current level of $665, as illustrated in the chart on page 2.

b. Fees in Context

We compared the fees BIP unitholders pay to Brookfield with the costs of operating other infrastructure funds and companies. Both Power Assets and CK Infrastructure are internally managed by a board of directors, which is very similar in structure to how BIP is managed. However, there is not a formal management fee. There are expenses for directors and investment expenses.

3i Infrastructure is externally managed like BIP. However, the fees are structured differently. The base management fee is ~1.3% of the gross investment value. The performance fee is 20% of the NAV/unit return above an 8% hurdle rate.

The table below contains staff costs/expenses and the fees for the two CK entities and the management and incentive fees for 3i an BIP.

Brookfield Extortionate Fee Structure in Context

	Internally Managed		**Externally Managed**	
	Power Assets	**CK Infrastructure**	**3i Infrastructure**	**Brookfield Infrastructure**
Base fee	-	-	58	421
Incentive fee	-	-	55	244
Total	20	137	113	665
% of NAV	**0.18%**	**0.88%**	**3.40%**	**7.17%**

Source Company filings and estimates.

The expenses for the internally managed entities are modest. Total fees for 3i are high at 3.4%. However, the base fee is calculated off of gross investment value. **The performance fee of 1.7% of NAV was driven by the fact that the NAV/share increased 14.7% during the year**.

The fee structure imposed on BIP unitholders is clearly an outlier in the industry. **Unlike 3i, Brookfield's fees are untethered from unitholder returns, allowing the firm to extract immense amounts of fees irrespective of investment performance.**

VII. Eliminating Disclosures and Impeding Analysis

A confluence of factors came together over time to create BIP in its current form. Accounting and associated accounting disclosures have played a central role in BIP's development. In 2010, BIP switched from filing statements in U.S. GAAP to Canadian IFRS. With the conversion to IFRS, the quality of disclosures began to erode. Over time, many of the key disclosures that facilitated detailed analysis of distribution coverage and carrying values have been eliminated.

BIP's GAAP statements included three financial presentations, including a set of fund-like financial statements. The GAAP accounts balanced the presentation by providing both fund statements representing the LP-level financial perspective and the economics of unitholders, and those required for the operating company presentation.

Evaluating the partnership in terms of distribution coverage and NAV was simple. **For the first several years as a public entity, BIP traded around NAV, reflecting the simplicity of the presentation.**

The fund-like statements including the easy to read statement of cashflows was eliminated when BIP transitioned to IFRS. We show the fund-like cashflow statement below to illustrate the ease with which distribution coverage could be evaluated with audited numbers.

BIP's Fund-like Cashflow Statement

BROOKFIELD INFRASTRUCTURE PARTNERS L.P.

For the year ended December 31, 2009 and 2008 and for the period from May 21, 2007 (inception) to December 31, 2007

STATEMENTS OF CASH FLOWS

US$ MILLIONS	2009	2008	2007
Operating activities			
Net income	$ 28.2	$ 16.8	$ 0.7
Distributions from equity accounted investment	42.4	22.3	—
Adjustments for non-cash items:			
Earnings from equity accounted investment	(28.2)	(16.8)	(0.7)
Cash from operating activities	$ 42.4	$ 22.3	$ —
Investment activities			
Investment in Brookfield Infrastructure (Note 3)	$(549.6)	$ —	$ —
Cash used in investment activities	$(549.6)	$ —	$ —
Financing activities			
Distributions to unitholders	$ (34.8)	$(20.3)	$ —
Issuance of new units (Note 4)	549.6	—	—
Repurchase of units during the period	(7.6)	(2.0)	—
Cash used in financing activities	$ 507.2	$(22.3)	$ —

Distributions received are greater than distributions paid-out

Source: BIP 2009 20-F.

As an investment holding company with no external operations, cashflow from operations was distributions received from its investments. The fund-like statements made it easy to evaluate coverage.

From the perspective of BIP investors, the adoption of IFRS led to three significant changes:

1. Collapsing of the accounting presentation into one, eliminating the LP-level fund statements and key asset financials leaving one set of financial statements that consolidate over 20 discreet, unrelated businesses.

2. Change in policy resulted in many of BIP's small investment stakes being consolidated; the balance sheet is now **dominated by non-controlling interests**.
3. The rare election to use IAS 16, which allows management to mark its investments to market by **writing-up the value of assets**.

The consolidation of over 20 companies with an average ownership stake of only 30% ensures the financial presentation does depict the performance of any particular business. Elimination of the LP-level statements removed the in data that allowed unitholders to evaluate distribution coverage and NAV.

BIP's IFRS filings have, at times, contained information that facilitated evaluation of distribution coverage and the valuation of individual assets. **Management has systematically eliminated the most useful disclosures**.

a. Eliminating Disclosures, Impeding Analysis

2015 was the last year BIP disclosed distributions-related information for non-wholly owned subsidiaries. To illustrate the change, we show an out-take from 2015 income statement disclosure in the tables below.

Both the upper and lower part of the exhibit show the 2015 income statement. However, the first is from the 2015 20-F; the second is from the 2016 20-F.

Eliminating Distribution Information

2015 20-F: 2015 Income Statement, Non-wholly Owned Consolidated Entities

	Year ended December 31, 2015					
		Attributable to non-controlling interest			Attributable to unitholders	
US$ MILLIONS	Revenue	Net Income (loss)	Other Comprehensive Income (loss)	Distributions	Net Income (loss)	Other Comprehensive Income (loss)
Utilities						
UK regulated distribution operation	$ 339	$21	$ 25	$14	$122	$101
Australian regulated terminal operation	330	15	(4)	28	68	(9)
Colombian regulated distribution operation	152	13	(26)	17	16	(9)

2016 20-F: 2015 Income Statement, Non-wholly Owned Consolidated Entities

	Year ended December 31, 2015				
		Attributable to non-controlling interest		Attributable to unitholders	
US$ MILLIONS	Revenue	Net Income (loss)	Other Comprehensive Income (loss)	Net Income (loss)	Other Comprehensive Income (loss)
Utilities					
U.K. regulated distribution operation	$ 339	$21	$ 25	$122	$101
Australian regulated terminal operation	330	15	(4)	68	(9)
Colombian regulated distribution operation	152	13	(26)	16	(9)

?

The distributions by entity disclosure present in 2015 was eliminated in the 2016 20-F

Source: BIP 2015 and 2016 20-Fs. The exhibits do not present all entities. See note 24 in each 20-F for the full disclosure

The information is almost identical. In the 2016 version, the disclosure of distributions was eliminated. The single disclosure allowed investors to calculate most of the distributions BIP received from consolidated investments. Knowing how much was distributed, investors could estimate whether it was paid from profits and cashflow or debt-funded.

Appendix 3 contains an example showing the usefulness of the distribution disclosure. **We use data provided to show that only three entities paid 76% of dividends from non-wholly owned entities, and both investments funded the dividends with debt**.

This very valuable disclosure was eliminated.

Similarly, in 2018, BIP altered the annual disclosures on equity accounted investments, significantly impeding analysis.

All company-level financial and carrying value information for equity accounted investments was eliminated after 2017.

In the table below, we show the balance sheet disclosure for equity accounted investments taken from BIP's 20-F. Both tables contain 2017 financial information. However, to illustrate disclosure changes, the upper part of the table is from the 2017 20-F and the bottom part from the 2018 20-F.

Eliminating All Company Financial Information from Equity Accounted Investments

2017 20-F: 2017 Equity Accounted Balance Sheet Disclosure

	As at December 31, 2017								
	Total							Attributable to	
US$ MILLIONS	Current Assets	Non-Current Assets	Total Assets	Current Liabilities	Non-Current Liabilities	Total Liabilities	Total Net Assets	Other Ownership Interests	Partnership's Share
Brazilian toll road	$ 304	$ 5,769	$ 6,073	$ 602	$ 2,102	$ 2,704	$ 3,369	$ 1,654	$ 1,715
North American natural gas transmission operation	139	4,741	4,880	139	2,716	2,855	2,025	1,012	1,013
Chilean electricity transmission operation	280	7,122	7,402	181	3,874	4,055	3,347	2,417	930
European telecommunications infrastructure operation	464	6,281	6,745	561	2,968	3,529	3,216	2,602	614
Brazilian rail business	743	6,131	6,874	515	2,405	2,920	3,954	3,518	436
Australian ports operation	198	2,281	2,479	24	1,332	1,356	1,123	932	191
Other	694	5,228	5,922	865	2,291	3,156	2,766	2,093	673
Total	$ 2,822	$ 37,553	$40,375	$ 2,887	$ 17,688	$ 20,575	$19,800	$ 14,228	$ 5,572

Company-level financial data is replaced with segment-level data

The removal of company specific data precludes investor analysis, including simple valuation

2018 20-F: 2017 Equity Accounted Balance Sheet Disclosure

		As at December 31, 2017								
		Total							Attributable to	
US$ MILLIONS	Ownership and Voting Interest	Current Assets	Non-Current Assets	Total Assets	Current Liabilities	Non-Current Liabilities	Total Liabilities	Total Net Assets	Other Ownership Interests	Partnership's Share
Utilities	11-28%	$ 631	$ 9,068	$ 9,699	$ 756	$ 4,892	$ 5,648	$ 4,051	$ 3,037	$ 1,014
Transport	11-50%	1,548	17,096	18,644	1,396	7,002	8,398	10,246	7,385	2,861
Energy	20-50%	164	5,054	5,218	162	2,784	2,946	2,272	1,196	1,076
Data infrastructure	21%	464	6,281	6,745	561	2,968	3,529	3,216	2,602	614
Corporate & other	25-40%	15	54	69	12	42	54	15	8	7
Total		$ 2,822	$ 37,553	$ 40,375	$ 2,887	$ 17,688	$ 20,575	$19,800	$ 14,228	$ 5,572

Source: BIP 2017 and 2018 20-Fs. The exhibits do not present all entities. See note 11 or 12 in the 20-Fs for the full disclosure

BIP moved from providing a bare minimal financial summary on the asset level to aggregating all information on a segment level. For example, individual carrying values and financial data for Brazilian toll roads, Brazilian Rail and Australian ports have been combined in the transport segment, along with an unknown number of unlisted other entities from the other category.

Alterations to the disclosure precludes all asset-level analysis with equity accounted investments.

BIP unitholders had 54.3% of net assets invested in equity accounted investments as of 2Q23. **Changes in disclosure means that the majority of unitholder NAV is invested in a black box for which no meaningful financial information is provided.**

In 2017, both the Wall Street Journal and the Financial Times published articles questioning the carrying values for two of BIP's key equity accounted assets. 2017 was the last year BIP published the carrying values of equity accounted assets. **The sequence of events makes it appear as if management's response to criticism is to reduce transparency to avoid scrutiny.** We show out-takes from the articles below.

Wall Street Journal on BIP's Toll Road Valuation

HEARD ON THE STREET

Brookfield's Toll Road to Riches

Canadian asset manager can't seem to settle on a value for its Brazilian toll road and investors should be skeptical

By Michael Rapoport Follow
Updated Aug. 9, 2017 7:16 pm ET

Share Resize 2

Brazilian toll-road company Arteris is a big holding for the Canadian alternative asset manager Brookfield. Above, from 2015, a construction site in Brazil. PHOTO: YASUYOSHI CHIBA/AGENCE FRANCE-PRESSE/GETTY IMAGES

Source: Wall Street Journal August 9, 2017.

Financial Times Headline from Article Questioning a Pipeline Valuation

Opinion **FTfm** + Add to myFT

It's a case of buyer take note with Brookfield's Bermuda vehicle

John Dizard examines the group's investment in North American natural gas transmission

JOHN DIZARD + Add to myFT

"*For Mr. Pollock, "from an operating perspective we saw through the trough in 2015…we had a lot of confidence. The short answer is that we didn't agree with their (Kinder Morgan's) view of value".*

BIP CEO Sam Pollocks answer when asked why BIP and Kinder Morgan carried a co-owned asset at vastly different valuations.
Source: Financial Times, November 18, 2017.

A Valuable Disclosure of Cashflows Proves Short-lived

Identifying cashflows attributable to BIP unitholders is a significant problem, because the statements are dominated by non-controlling interests. This is particularly problematic with cashflows and the assessment of distribution coverage.

For several years, BIP provided an exhibit reconciling its AFFO metric with cashflow from operations. In doing so, claims on consolidated cashflows by third-parties was disclosed.

It was an extremely useful figure that allowed investors to easily assess distribution coverage with cashflows. The table below shows the exhibit in full. The exhibits itself is unimportant. We highlighted the claims of non-controlling interests.

Claims of Other Owners on Consolidated Cashflows

US$ MILLIONS	For the year ended December 31, 2020	2019	2018
Cash from operating activities	**$ 2,530**	$ 2,143	$ 1,362
Add: FFO from associates and joint ventures	**585**	591	546
Remove:			
Distributions received from associates and joint ventures	**(167)**	(254)	(59)
Cash from operating activities attributable to non-controlling interests[1]	**(1,716)**	(1,209)	(1,028)
	1,232	1,271	821
Less: Maintenance capital expenditures	**(281)**	(288)	(249)
Taxes paid on disposition of Chilean electricity transmission operation	—	—	256
Changes in working capital and other items	**222**	113	154
AFFO[2]	**$ 1,173**	$ 1,096	$ 982

The consolidation of minortity positions makes the cash claims of non-controlling interests essential to assessing distribution coverage

Source: BIP 2020 20-F.

Disclosure of the cash claims of non-controlling interests allowed investors to calculate the cash attributable the partnership and distribution coverage, as we show below.

Cash Coverage of Distributions

	2020	2019	2018
Cashflow from operations	2,530	2,143	1,362
Cash attributable to non-control	(1,716)	(1,209)	(1,028)
Cashflow attributable to BIP	814	934	334
Distributions	(1,134)	(1,027)	(919)
Payout ratio	139%	110%	275%
Cash attributable to BIP %	32%	44%	25%

Source: Company financials and estimates.

BIP unitholders are minority holders on the financial statements, a indicated by the percentage of consolidate cashflows attributed to BIP. Using the disclosure to calculate cash attributable to the partnership allowed investors to see that BIP was not covering distributions with the proportion of cashflow attributable to the partnership.

The disclosure with the cashflow information was published beginning in 2017 and was removed in 2020.

In the absence of lucid, relevant audited financial statements, management's non-GAAP/IFRS financial presentation took prime position, encouraging the partnership to adopt a financial strategy that has temporarily decoupled the unit price from value.

APPENDIX 1

Poor Corporate Governance and the Risk-laden Corporate Pyramid Structure

BIP's structure is complex and represents a significant risk to unitholders. Structural risks come broadly two categories - governance of the partnership, structure of the partnership, and the implications these conflicts of interest have on where BIP unitholders are in the waterfall in the event of liquidation.

Brookfield manages BIP, proprietary capital and third-party capital in the private equity funds in which BIP is a co-investor. As such, Brookfield needs to consider to the financial interests of two or more parties of investors and itself as manager. The financial interests of different parties are not always aligned and often conflict. Brookfield owes fiduciary duties to its public shareholders and private fund limited partners, but as noted in the risk section of BIP's 20-F, **Brookfield does not owe any fiduciary duties to BIP's unitholders**. Private funds, BIP and sister-entity Brookfield Renewable Power (BEP) have co-mingled investments.

Importantly, as noted below the directors can take the interests of third-parties into consideration when managing BIP.

BIP Disclosure on the Lack of Fiduciary Duties Owed by the Manager

resolving any such conflicts. The independent directors of our General Partner can, subject to acting in accordance with their own fiduciary duties in their capacity as a director of the General Partner, therefore take into account the interests of third parties, including Brookfield, and, where applicable, any Brookfield managed vehicle, consortium or partnership, when resolving conflicts of interest and may owe fiduciary duties to such third parties, or to such Brookfield managed vehicles, consortiums or partnerships. Additionally, any fiduciary duty that is imposed under any applicable law or agreement is

Source: Company filings.

The structure of the governance transforms BIP into something like a pressure valve where the managers can legally justify subordinating the interests of unitholders to those of Brookfield or other Brookfield investors. We have seen this play out in numerous scenarios, including BIP purchasing assets when BAM-managed funds are selling, and BAM private equity investors being prioritized in assets sales.

Disclosure requirements around related-party transactions to protect minority holders has been modified. BIP has exemptive relief from the Canadian rule MI 61-101. BIP is exempt from seeking minority approval and valuation requirements if transactions are under 25% of market valuation, which is currently ~$5B.

Leverage and ownership risks are embedded in BIP's holding-company laden corporate structure.

BIP owns shares in a Bermuda HoldCo, Not Operating Companies

Our partnership is a holding entity and currently we rely on the Holding LP and, indirectly, the Holding Entities and our operating entities to provide us with the funds necessary to pay distributions and meet our financial obligations.

Our partnership is a holding entity and its sole material asset is its managing general partnership interest and preferred limited partnership interest in the Holding LP, which owns all of the common shares of the Holding Entities and indirectly owns the class B shares and the class C shares, through which we hold all of our interests in the operating entities. Our partnership has no independent means of

Source: Company filings.

The issue is that BIP's financial statements and footnotes discuss owning stakes of varying size in discreet entities, all of which are noted on page 26. However, in reality, the partnership owns shares in another

holding company. It is unclear how unitholder claims on ownership percentages of specific assets would work in the event of an unwind as BIP does not have any direct ownership in the assets.

BIP's accounting presentation collapses what is a sprawling, multilayered corporate structure. This is important, because BIP is part of an extensive corporate pyramid with many layers. The ownership issues may also be accompanied by leverage problems, as noted in the risk disclosure below.

BIP's Corporate Pyramid Disclosure

We may be subject to the risks commonly associated with a separation of economic interest from control or the incurrence of debt at multiple levels within an organizational structure.

Our ownership and organizational structure is similar to structures whereby one company controls another company which in turn holds controlling interests in other companies; thereby, the company at the top of the chain may control the company at the bottom of the chain even if its effective equity position in the bottom company is less than a controlling interest. Brookfield controls the sole shareholder

Source: Company filings.

All Brookfield operating companies have asset-level debt. They may also be associated with HoldCos with debt and liabilities as well. Finally, there is LP-level debt.

A key risk is that may be a significant amount of interim HoldCo debt between the operating company and BIP that is not consolidated or visible on BIP's financial statements. As a result, BIP may be far more levered than it appears.

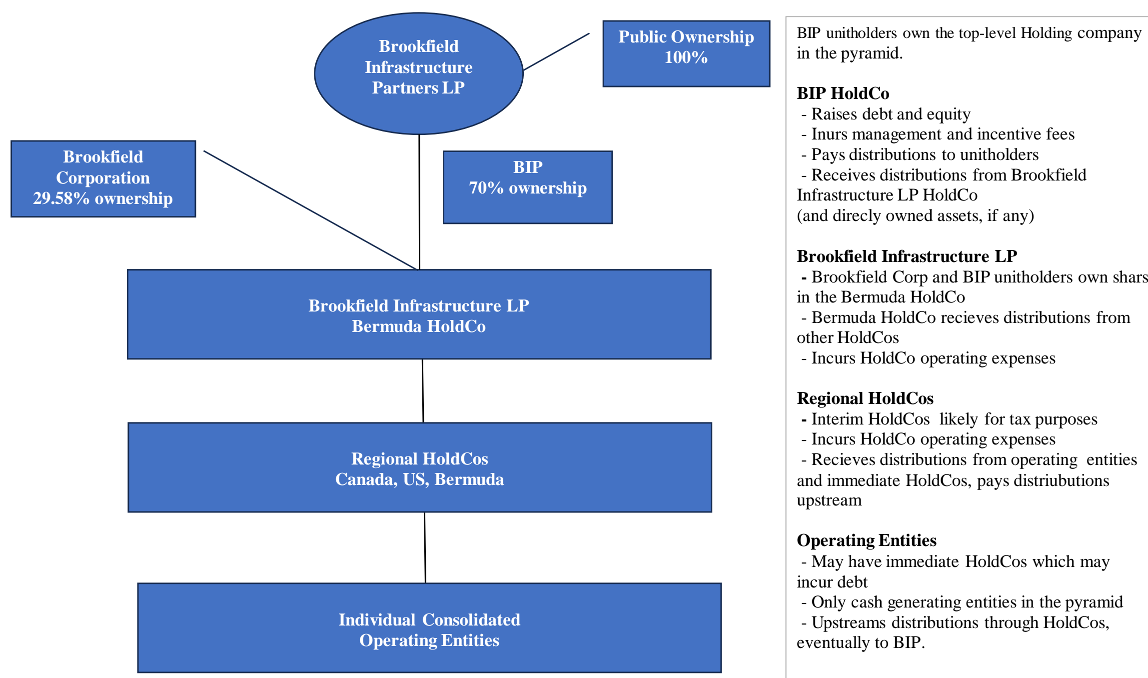
While we cannot quantify the risk of debt hidden in the pyramid, history says it can be significant. When Brookfield's predecessor company, Edper, collapsed in the early 1990's, "the bankers fell out of their chairs in shock" when they learned how much leverage was piled on the small amount of equity. The collapse and impact of leverage on the corporate pyramid structure is discussed in this excellent article.

The Brookfield group of companies is an updated, modernized version of Edper, but it retains its roots. It is run by many of the same individuals using similar tactics to maximize control over cashflow with minimal equity. In many cases, they are even using the same assets.

Corporate pyramid structures were once common in the U.S. They were essentially declared illegal after many failed following the stock-market crash of 1929. The most effective method of banning them is tax policy, which has escalating tax values for non-wholly owned entities that pass dividends up through multiple layers. Tax policy has made the structure financially unviable for U.S corporations. **The Brookfield entities operate in U.S. capital markets because they occupy a gray zone.** They are Canadian and Bermuda offshore vehicles that trade in the U.S., but are not taxed as U.S. corporations. Were they treated as U.S. corporations for tax purposes, they would likely liquidate.

The ability of BIP and other Brookfield entities to access U.S. capital markets is, to some extent, a regulatory failure. **Brookfield is exploiting a legal loophole. BIP is a foreign offshore entity structured to avoid long-standing and effective U.S. regulation meant to protect investors against problems arising in both investment companies and pyramid structures**.

In a typical corporate structure, it is clear where the equity holders are in the capital structure. BIP's financial presentation gives a similar impression with a slightly more complex capital structure. However, the reality is vastly more complex with many layers of liabilities and co-ownership. **We believe that unitholder equity is significantly more subordinated that the typical common stock. In our view, BIP units are analogous to the equity tranche of a mortgage-backed security – last in a long line to get paid.** The exhibit below is adapted from BIP's 20-F and shows the simplified structure.



Source: Company filings and entities.

BIP owns shares in Brookfield Infrastructure Bermuda. That HoldCo owns shares in numerous other HoldCos in many cases alongside institutional investors and Brookfield-managed private funds.

Note Brookfield's ownership in BIP is not through equivalent units, but are a hybrid in the HoldCo with a cash conversion feature. It is classified on BIP's balance sheet as equity because BIP's directors have the option to satisfy Brookfield's cash redemption request with standard BIP LP units. Otherwise they would be classified as debt. However, unitholders should note that Brookfield appoints all BIP directors and those directors do not owe unitholders fiduciary duties.

Both the governance and structure of the group are set-up to benefit Brookfield. BIP unitholders should expect their interests to be subordinated to Brookfield's. It is codified in the structure.

The operating entities are often far more complex than shown. For each business there may be numerous operating entities. For every operating entity group there can be many, many HoldCos before eventually arriving at the major HoldCos listed above the entities in the diagram.

Structural complexity can obscure liabilities. When BIP consolidates an entity, we don't know exactly how much of the HoldCo structure is included. As such, **debt booked as intercompany loans can disappear upon consolidation, and HoldCos with additional debt may be left out of the consolidation process.** Further, the fund co-investors have additional debt. In the final analysis, it is impossible to know how much debt is layered on the assets.

What BIP discusses and listed as their holdings are supposed to be a "look through" into the ownership. How exactly that works is unclear. As evident in the structural depiction, BIP owns nothing directly. Everything is owned through holding-companies, some of which have more than one shareholder.

Assignation of ownership looks to be more of an accounting exercise than a legal certainty.

APPENDIX 2

Comparative Payout Ratios Using a Standardized Metric

To put BIP's payout in the context, we made the comparable calculations for three groups of yield-driven stocks, which we show below.

Comparative Payout 2022	Related and Comparable MLPs					Owned Entities		Comparable Funds	
	ENB	KMI	EPD	Key TO	PPL TO	CQP	DBI AX	Power Assets	CK Infra.
Cashflow from operations	11,230	4,967	8,039	925	2,929	4,149	189	772	1,717
Dividends received	760	160	100	-	-	-	-	6,803	11,198
Total cashflow	11,990	5,127	8,139	925	2,929	4,149	189	7,575	12,915
Dividends paid	(7,306)	(2,504)	(4,095)	(424)	(1,651)	(2,635)	(93)	(6,019)	(6,324)
Cashflow payout ratio	61%	49%	50%	46%	56%	64%	49%	79%	49%
Group Average					**52%**		**56%**		**64%**

Source: Company financials and estimates.

The first group is of MLP's has either a direct relationship to a BIP asset or are a close comparable. BIP's Western Canadian midstream was purchased from Enbridge (ENB) and Keyera Corp. (KEY TO) is a good comparable for the asset. The partnership owns one pipeline together with Kinder Morgan (KMI). Pembina Pipeline (PPL TO) and Enterprise Products (EPD) are both comparable to BIP's largest equity position, Inter Pipeline.

BIP has a stake in both of the YieldCos in the second group. The partnership's North American LNG export terminal and Australian export terminal are, in fact, the public companies Cheniere Energy Partners (CQP) and Dalrymple Bay Infrastructure (DBI AX), respectively. Together, we estimate that CQP and DBI AX account for over $1B or 11% of total net assets. **As key holdings, the payouts of the two companies should be comparable to BIP's.**

The final two entities are publicly-traded infrastructure investment funds, like BIP. Power Assets and CK Infrastructure – are very similar to BIP and invest in comparable infrastructure assets. Both entities primarily use equity accounting for their investments, making cashflow from operations less relevant and evaluating distribution coverage is simple. Distributions received are clearly visible on the financial statements, as are distributions paid. Both entities cover their distributions paid with distributions received from their investments.

The average payout for the MLP and YieldCo entities are 52% and 56%, respectively. The average cashflow payout of the two entities BIP owns is 56%. **In comparison BIP's comparable payout s roughly 2.2x greater having averaged 120% between 2015 and 2022**.

The average payout of CK Infrastructure and Power Assets is ~64%. Though higher than the cashflow based payouts of the operating companies, the payouts are based on actual cash distributions received by the HoldCo from their investments – which is how BIP should be evaluated.

a. Right-sizing the Distribution to Value BIP

We estimated the value of BIP's units by right-sizing the distribution based on a long-term sustainable cashflow payout ratio. The average payout of the operating companies in the group above is 54%.

We adjust BIP's sustainable cashflow payout lower than comps for three reasons. Comparable companies have higher free cash flow as a percentage of CFO margins, which averages 63% for the group. We estimate

the comparable margin for BIP has averaged 44% over the last two years. Our valuation work indicates that some cashflow from operations recorded at the BIP level is fake. Similarly, asset-level works indicates that almost 30% of BIP's proportional cashflow comes from emerging market pipelines. It is dominated by Brazil, which has historically had a very volatile currency.

We discounted the payout ratio to 45% from 54% to reflect the risks. We further adjusted cash available for distributions by assuming a fixed proportion of 17% being paid out to Brookfield as incentive distributions.

Our calculations are shown below.

Yield Based Valuation

($ millions, except per unit)	**2022**		
Cashflow attributable to limited partners	1,091		
Cashflow payout	45%		
Total cash available	491		
Incentive distributions	(84)		
Cash available for LP distributions	**406**		
Max Distribution per Unit	***$0.53***		
Current annualized distribution	$1.53		
Price	$32.00		
Current yield	4.8%		
Yield	*4.0%*	*4.8%*	*6.0%*
Implied unit value	**$13.34**	**$11.16**	**$8.89**

Source: Company filings and estimates.

BIP currently trades at a yield of 4.8%. Decreasing the distribution to a sustainable 45% of proportional cashflow to $0.53/unit suggests the units are worth $9-11 per unit.

APPENDIX 3

Financing Distributions with Debt at the Asset Level

Disclosures circa 2015 allowed investors to see how much cash was distributed by which investments, creating the ability to determine if assets were paying sustainable levels of distributions or were being funded with debt via asset stripping.

In the tables below, we compare distributions paid by BIP's investments with cashflow generated by the entity.

Distribution Concentration and Sustainability
Consolidated

`	Ownership	Distributions To BIP	Total Distributions	Distributions % Cashflow	Distributions Free Cashflow	CFO, $M	Free cash Flow, $M
Utilities							
UK regulated distribution	80%	56	70	42.7%	-89.7%	164	(78)
Australian regulated terminal	71%	69	97	93.7%	146.3%	103	66
Colombian regulated distribution	17%	3	20	128.0%	204.8%	16	10
Transport							
UK port operations	59%	-	-	0.0%	0.0%	19	(47)
Chilean toll roads	51%	-	-	0.0%	0.0%	70	70
Energy							
North American gas storage	17%	-	-	0.0%	0.0%	(1)	(1)
North American west coast gas stor	25%	-	-	0.0%	0.0%	(2)	(3)
Canadian district energy	40%	14	35	159.1%	583.3%	22	6
U.S. district energy	40%	7	18	87.3%	229.2%	21	8
Corporate							
Holidng LP	70%	-	-			-	-
Total		**149**	**240**			**412**	**31**

Equity Accounted Investments

	Ownership	Distributions To BIP	Total Distributions	Distributions % Cashflow	Distributions Free Cashflow	CFO, $M	Free cash Flow, $M
Brazilian toll road	31%	3	10	5.2%	-2.9%	194	(340)
South American transmission	28%	54	193	70.4%	127.0%	274	152
North American natural gas transmi	50%	0	1	1.0%	-1.7%	98	(59)
Brazilian rail	11%	1	7	2.3%	-1.1%	309	(620)
European telecom infrastructure	21%	8	38	15.0%	25.0%	253	152
Other	11-50%	21	94	61.0%	144.6%	154	65
Total		**87** `				**1,282**	**(650)**

Source: Company filings and estimates

There tables contain a critical information, including:

- There are more than 14 entities listed between the non-wholly owned and equity accounted investments. The **top-3 paying entities, upstreamed 76% of the distributions**, indicating that although BIP may have a diversified portfolio of investment as management claims, it is highly dependent on a few entities to upstream cash. **From a cash perspective, it is not diversified, but highly concentrated**.
- Entity-level payouts as a percentage of cashflow from operations ranged from 40% to 159%. Of the 10 entities that paid distributions, only one covered distributions with free cashflow, indicating that dividends are being funded, in part, by debt. **Excessive, debt-funded payouts are not sustainable.**

The high concentration of dividends received and unsustainable payouts at the entity level are not unusual. The lack of free cashflow means that distributions upstreamd to BIP are often financed with debt at the asset level.

The entity-level distribution disclosure facilitated analysis of how entities paid distributions and the impact it had on equity.

BIP received unusually large distributions of $425M from non-wholly owned investments in 2014. $277M or 65% of distributions came from two portfolio companies. Payouts from both entities were financed with debt, as shown below.

Debt Funded Distributions
($ millions)

U.K. regulated distribution	2014	
Total distributions paid	180	
Cashflow from operations		159
Cashflow from investing		155
Free cashflow		**4**
Change in debt		**153**

Chilean toll roads	2014	
Total distributions paid	261	
Cashflow from operations		63
Cashflow from investing		8
Free cashflow		**55**
Change in debt		**214**

Source: Company filings and estimates

Both entities paid out more in distributions than they generated in cashflow from operations and multiples of free cashflow. As shown, distributions at both companies were largely financed by layering debt onto the assets. Unfortunately, it is no longer possible to make these calculations because management removed the entity-level distribution disclosure.

APPENDIX 4

Schedule of Investments

BIP's Schedule of Investments as of 2022

Consolidated Investments **Brookfield Nomenclature**	**Company Name**	**Stake**	**Carrying Value**	**% of Net Assets**
Utilities				
U.K. regulated distribution operation	BUUK Infrastructure No 1 Limited	80%	1,233	12%
Brazilian regulated gas transmission operation	Nova Transportadora do Sudeste SA	31%	119	1%
Colombian natural gas distribution operation	Vanti SA	21%	66	1%
North American residential energy infrastructure o	Enercare, Inc	26%	474	5%
Indian gas transmission	Pipeline Infrastructure Ltd.	21%	17	0%
UK residential infrastructure	BOXT Limited	15%	17	0%
European residential infrastructure	Thermondo GMBH	11%	17	0%
Transport				
North American rail operation	Genesee & Wyoming	9%	483	5%
U.K. ports operation	Brookfield Ports Acquisiitions (UK) Ltd	59%	189	2%
Australian port operation	Linx Cargo Care Group Pty	27%	107	1%
Peruvian toll roads	Rutas de Lima S.A.C.	17%	119	1%
Indian toll roads	Simhapuri Expressway Limited, Rayalseema	29%	75	1%
Midstream				
Canadian diversified midstream	Inter Pipeline Ltd	56%	2,675	26%
North American gas storage operation	Rockpoint Gas Storage Partners	**40%**	405	4%
Western Canadian natural gas gathering and proces	NorthRiver Midstream, Inc.	29%	546	5%
Data				
North American data center	Dawn Acquisitions	29%	188	2%
Australian data center operation	Ruby Pooling Hold Trust	29%	101	1%
UK telecom towers	WIG Holdings I Limited	24%	82	1%
Indian telecom towers operation	Summit Digitel Private Limited, Crest Digite	17%	402	4%
US fiber		?	3	0%
Western Australian Rail	Arc Infrastructure	100%	643	6%

Equity Accounted Investments Brookfield Nomenclature	Company Name	Stake	Carrying Value	% of Net Assets
Equity Accounted Investments				
Utilities				
Brazlian electricity transmission	Multiple	15%		
Mexican nat gas transmission	Multiple	13%		
Colombian natural gas distribution	Multiple	11%		
Australian regulated utility	AusNet Services	8%		
Autralian smart meter	Intellihub	13%		
Total Value			887	9%
Transport				
Brazilian toll road	Arteris S.A.	45%		
Brazilian rail & port	VLI S.A.	13%		
Australian port	Patrick Ports	13%		
Australian terminal (DBCT)	Dalrymple Bay Infrastructure	49%		
US LNG Terminal	Cheniere Energy Partners	6%		
Total Value			1,925	19%
Midstream				
US gas pipeline	Natural Gas Pipeline Company of America	38%		
North Am. Gas storage	Rockpoint Gas storage	20%		
Total Value			1,058	10%
Data				
European telecom infrastructure	TDF Infrastructure	21%		
Brazilian data center	Ascenty	12%		
New Zealand data distribution		12%		
Indian data center	Mercury Holdings SG Pte	13%		
Australian data center	Uniti Group	12%		
US Semiconductor facility	Intel Semiconductor Foundry	12%		
Total Value			1,297	13%

APPENDIX 5

Adjusted Net Assets Showing the Wasting Trust

The table below shows our estimate of limited partner net assets adjusted for fair value gains and incremental equity created by selling units above NAV.

Change in Limited Partner Net Assets since 2015[1]

	2015	2016	2017	2018	2019	2020	2021	2022
Beginning balance	3,533	3,838	4,611	4,971	4,513	5,048	4,233	5,702
Net income	169	285	11	192	52	141	556	101
Other comprehensive income	(86)	358	128	(205)	246	(11)	138	237
Comprehensive income	83.0	643	139	(13)	298	130	694	338
Unit issuance	**582**	**505**	**692**	**14**	**559**	**9**	**545**	**13**
Unit repurchases	(67)	(6)	-	(30)	(28)	-	-	-
Partnership distributions	**(339)**	**(377)**	**(459)**	**(520)**	**(575)**	**(588)**	**(608)**	**(660)**
Partnership Pfd distributions	(3)	(9)	(22)	(29)	(33)	(35)	(41)	(38)
Issuance of BIPC shares	-	-	-	-	-	(441)	-	-
Other items	49	17	10	120	314	110	879	17
Ending balance	3,838	4,611	4,971	4,513	5,048	4,233	5,702	5,372
Distributions as a % of equity	*10%*	*10%*	*10%*	*10%*	*13%*	*12%*	*14%*	*12%*
NAV/unit	***$10.52***	***$11.85***	***$11.98***	***$10.85***	***$11.47***	***$9.55***	***$12.45***	***$11.72***
Adjusted Net Assets								
Beginning balance	***3,533***	***3,134***	***3,308***	***2,933***	***2,085***	***2,069***	***1,505***	***1,592***
Reported change in equity	305	773	360	(458)	535	(374)	1,469	(330)
Unit issuance for cash adjustment	(133)	(232)	(426)	-	(333)	-	(388)	-
Unit issuance payment adjustment	-	-	-	-	-	-	(766)	-
Fair value adjustment - consolidated investments	(409)	(164)	(145)	(155)	(170)	(184)	(81)	(105)
Fair value adjustment - equity accounted investments	(162)	(203)	(165)	(234)	(49)	(6)	(147)	(340)
Ending equity	***3,134***	***3,308***	***2,933***	***2,085***	***2,069***	***1,505***	***1,592***	***817***
NAV/Unit	***$8.59***	***$8.50***	***$7.07***	***$5.01***	***$4.70***	***$3.40***	***$3.48***	***$1.78***

Source: Financial data and unit count in top panel from BIP 20-Fs. Adjusted net assets use estimates of incremental equity from sales above NAV and esimtates of applicable fair value gains.

1. Issuance of BIPC shares is treated as a distribution.

APPENDIX 6

The table below shows our application of the total discount through BIP's capitalization structure.

Discounting Net Assets

($ millions)	**2022**	**Discount**	**Net Assets**
Limited Partners	5,372	(1,003)	4,369
General Partner	27	-	27
Non-controlling interests attributable to:			
Redeemable Partnership units held by Brookfield	2,263	(423)	1,840
BIPC exchangeable shares	1,289	(241)	1,048
Exchangeable units	72	(13)	59
Perpetural subordinated notes	293	-	293
Interests of others in operating subsidiaries	15,320	(852)	14,468
Preferred holders	918	-	918
Total partnership capital	**25,554**	**(2,532)**	**23,022**

Source: BIP 2022 20-F and estimates for application of discount and Darlymple Finance's estimate of NAV.