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CREDIT OPINION
12 November 2021

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Port of Houston Authority (Harris County), TX

New rating for $315 million of port revenue bonds

Summary

The credit profile for the Port of Houston Authority of Harris County, Texas (the "Authority", "PHA", "Port Houston") reflects 1) low leverage, with debt service coverage above 5.0x and debt to operating revenue below 2.0x pro forma for all planned issuance; 2) large and growing local market providing primarily O&D cargo demand that the authority is well positioned to serve; 3) robust multi-year growth trend that is driving increasing scale and competitiveness as a regional cargo center, with a substantial 70% share of container trade on the Gulf Coast; 4) conservative financial management, with a prudent approach to capital investment and healthy liquidity and financial flexibility to manage volume risk; and 5) history of obtaining taxing authorization to fund capital spending, which preserves flexibility.

The authority will implement a sizeable $1.9 billion capital spending plan over the next five years, and beyond this may require additional channel and terminal expansion to accommodate longer term growth. The credit profile is supported by conservative budgeting, healthy liquidity and robust debt service coverage, which provide resilience to unanticipated financial challenges. These factors also provide cushion against physical climate risks, which on past occasions have temporarily disrupted the authority's operations. Despite additional vessel activity associated with private users on the Houston Ship Channel, the authority has grown largely unconstrained, including nearly doubling the size of its operations in the last 10 years, and Project 11 will widen the channel to provide for more efficient two-way traffic.

Credit strengths

- Strong financial flexibility, with projected coverage over 5.0x, leverage under 2.0x and cash on hand over 500 days
- Large and fast growing local market providing primarily O&D cargo demand that the authority is well positioned to serve
- Dominant local and regional market position, with 96% and 70% share of container cargo in Texas and Gulf Coast, respectively
- Multi-year trend of above average growth, with Port Houston the sixth-largest total container port and the fourth-largest export container port in 2020;
- History of voter authorized bonding for capital spending

Credit challenges

- » Large capital plan will reduce currently robust financial flexibility; recent Corps-led dredging projects have experienced schedule delays and cost increases
- » Long-term expansion needs may keep capital spending levels elevated
- » Recent extreme weather events have temporarily disrupted operations
- » Historically sound liquidity may narrow with funding of capital plan

Rating outlook

The stable outlook reflects our view that the authority's credit profile will remain stable over the next 12 to 18 months. A strong financial position, supported by robust cash flow and liquidity, along with elevated volume and expanding economic activity will contribute to stable performance.

Factors that could lead to an upgrade

- » The rating could be upgraded with material improvement in the authority's market position and a view that the scope and cost of future capital investment would have manageable financial impact.

Factors that could lead to a downgrade

- » Weakened financial position reflected in a sustained period of DSCRs below 3.0x and days cash on hand below 500.
- » A material, and sustained, adverse change in the existing trading regime that results in significantly lower revenues or volumes for the Authority.
- » Significant deterioration of the authority's competitive position, reflected in reduced market share in non-discretionary and discretionary cargo segments and a sustained period of cargo growth meaningfully below the sector average.

Key indicators

Exhibit 1

Port Houston

Year end December 31

	2016	2017	2018	2019	2020
Total Container Volume Annual Growth (%)	2.4	12.6	9.8	10.6	0.1
Operating Revenues (000)	290,226	332,873	369,316	391,437	390,732
Operating Ratio (%)	64.0	60.1	56.7	58.7	59.7
Adjusted Debt to Operating Revenues (x)	0.34	0.25	0.19	0.24	0.33
Days Cash on Hand	800	659	743	801	714

Source: Port Houston

Profile

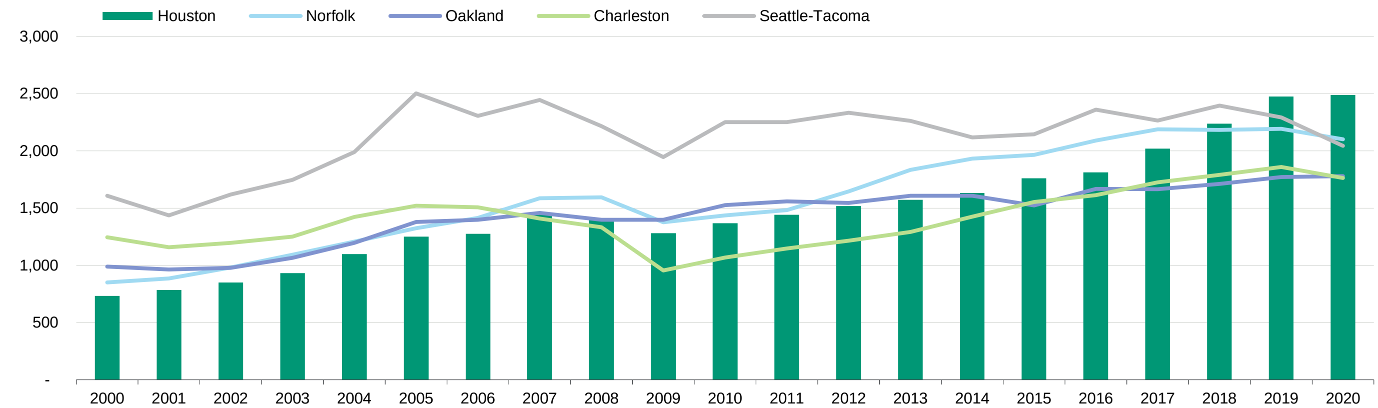
The authority is a navigation district and independent political subdivision of the State. The authority is the local sponsor for the 52-mile Houston Ship Channel and owns a diverse group of facilities designed to accommodate a variety of cargo, including general cargo, containers, automobiles, grain, coal, pet coke, dry and liquid bulk and project and heavy-lift cargo. Houston is the fifth-largest container port, and fourth-largest container export port, in the US.

Detailed credit considerations

Revenue Generating Base

Port Houston benefits from a robust multi-year growth trend that is driving increasing scale and competitiveness as a major container port. This growth has eclipsed other top 10 ports and established a dominant position as a regional cargo center. Port Houston currently handles 96% of container cargo in Texas, 70% of container cargo on the Gulf Coast, and is the fourth-largest export port in the US.

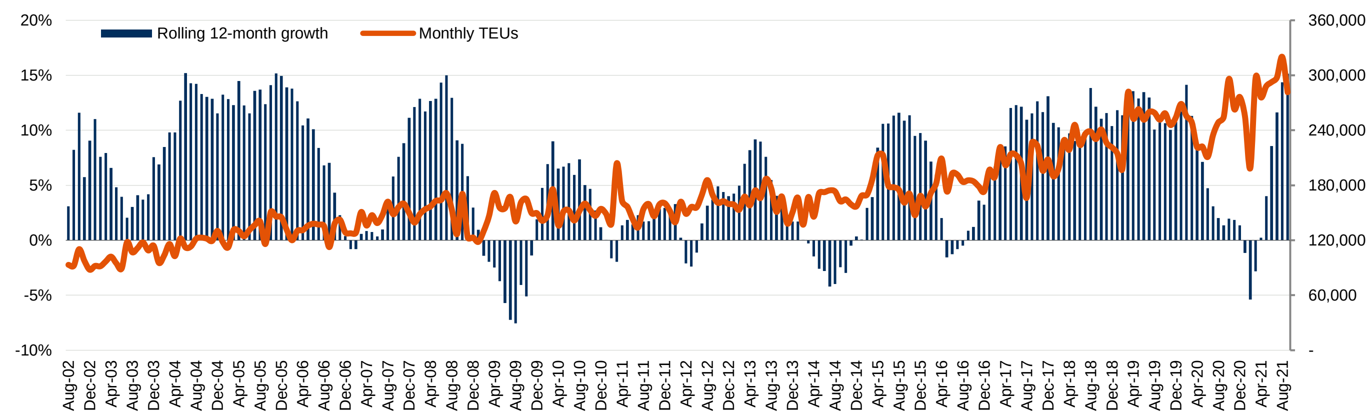
Exhibit 2
Port Houston has emerged as a major container port
Loaded TEUs (000)



Source: Moody's Investors Service

Port Houston's growth has been strong and sustained, although accelerated by the expanded Panama Canal. Container throughput has grown 16% YTD in 2021, and has grown at a CAGR of 5% for the last two decades.

Exhibit 3
Robust and consistently positive growth, with only limited contraction, over 20-year period
Total TEUs



Source: Moody's Investors Service, Port Houston

We expect growth will remain strong, supported by 1) above-average population growth in the local market, 2) the further ramp up of resin exports in Texas and on the Gulf Coast, 3) the continued deployment of larger ships through the Panama Canal, which will shift imports from West Coast ports, and 4) the ability to efficiently add incremental berth and yard capacity at Bayport Container Terminal, which is at only 60% of full build out.

Growth will also be facilitated by Project 11, which will widen the channel by 30% in Galveston Bay and enable more efficient two-way traffic and larger container ships to call at Port Houston's primary terminals.

Large local market, dominant regional position

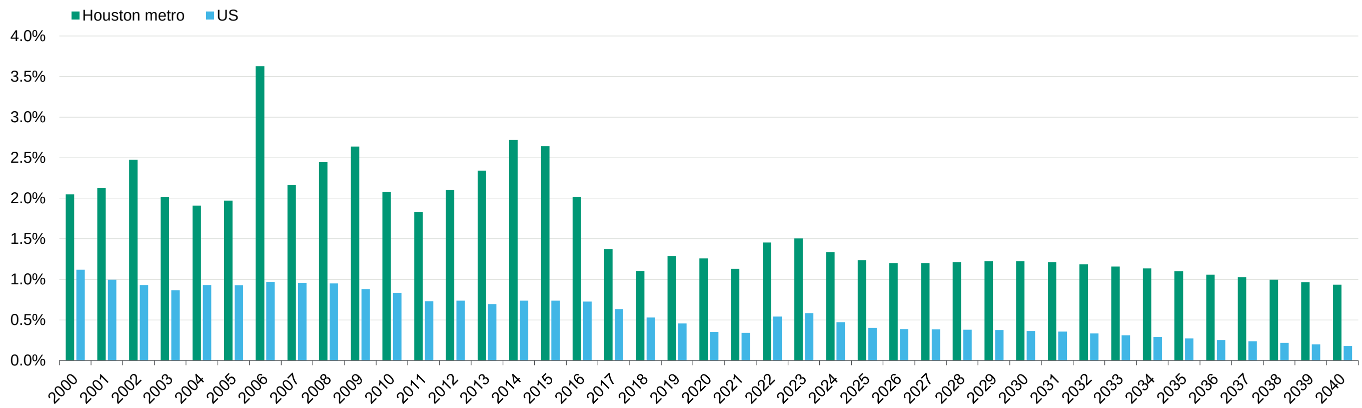
The credit profile is supported by Port Houston's strong competitive position for serving both 1) a large and fast growing local market in the Houston metropolitan area and 2) an extended regional market on the Gulf Coast, in which Port Houston has a substantial 70% share of container trade. Houston is the fifth-largest metropolitan area in the US by population, is growing 2x the US average, and has substantial economic activity. Oil, gas and petrochemical activity is more pronounced for private facilities on the Houston Ship Channel, though Port Houston does have minor exposure through steel imports, which tend to be driven by drilling activity, and containerized exports of resins, plastics, chemicals and minerals.

We view the consumer base in the large adjacent local market, with 7 million people – which is larger than 25 states – and growing at an above-average rate, as a key credit strength that reduces reliance on more contestable inland markets to sustain long-term cargo demand. Port Houston's current container volume is substantially serving local or regional cargo demand, which is less exposed to competition.

Exhibit 4

Sizeable and fast growing local market will drive long-term import demand

Population growth, actual and projected

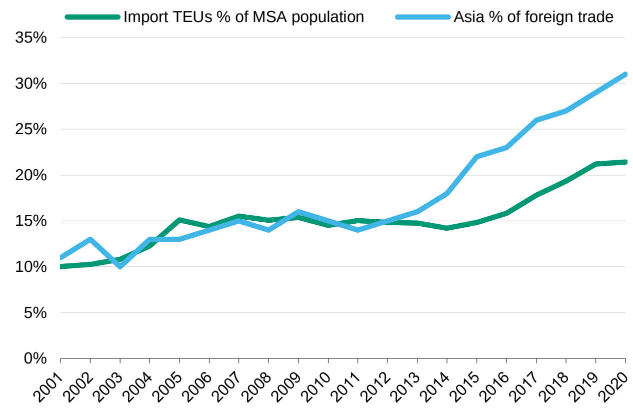


Source: Moody's Analytics

Growth has also been driven by a shift of import cargo into Houston from West Coast ports, converted to all-water from "land bridge" routings. The shift has been catalyzed by the West Coast lockout in 2002, which caused importers to diversify operations across multiple regions, and more significantly by the expanded Panama Canal in 2016. A major channel expansion (Project 10) completed in 2005 and the opening of Bayport Container Terminal in 2007 were key improvements at Port Houston that set the stage for recent growth.

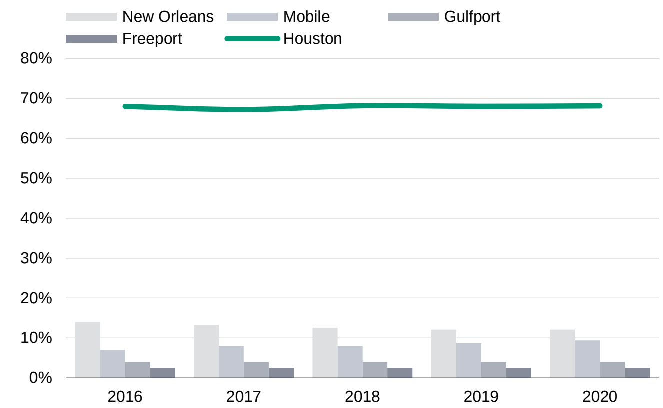
The ability to serve larger and more efficient ships has allowed Port Houston to increase the share of import demand it serves, reflected in higher container volume per local market population over time, which has in turn reinforced the consolidation of Gulf Coast region activity to Port Houston.

Exhibit 5
Growth driven by shift of Asian imports from West Coast…



Source: Moody's Investors Service

Exhibit 6
… cementing a dominant regional market position
Gulf Coast port share of regional container volume



Source: IHS Markit

The ports of Los Angeles and Long Beach remain relevant competitors, with significant rail service into Texas that is centered on Dallas-Fort Worth. We expect these ports will continue to serve container cargo in the regional market because of the shorter transit time they afford shippers based on their proximity to Asia. However, Port Houston is positioned to offer the lowest transport cost for freight movement through the local market, and we expect larger ships and other factors will facilitate increased competitiveness on the part of Port Houston.

Water depth and channel activity will be managed to ensure unconstrained growth
At 45 feet, the Houston Ship Channel has less water depth than other gateway ports, which could limit its ability to serve ultra large ships. Undertaking a comprehensive deepening program beyond the current 45 foot depth would entail a high cost due to both the length of the channel (52 miles for the main stem) and the potential need to extend the entrance channel upwards of 20 miles into the Gulf of Mexico.

The channel depth is a notable difference in infrastructure, but it is unclear how this will manifest and Houston has grown substantially despite the same differential existing. Port Houston can handle 15,000 TEU ships, which can accommodate near-term expected growth in ship sizes, including all ships capable of transiting the Panama Canal. Further, substantially all of Port Houston's container volume is transported to/from the port by truck, which is less likely to be diverted to higher cost land bridge routes based solely on ship sizes.

The widened channel will also facilitate growth, enabling safer and more efficient two-way vessel traffic and allowing larger container vessels to call Port Houston's terminals. The current limitation on vessel length of 1,120 feet – which was instituted in 2019 to address concerns of energy users over traffic delays on the channel – is expected to be increased to 1,200 feet when the widening of the Galveston Bay reach is completed.

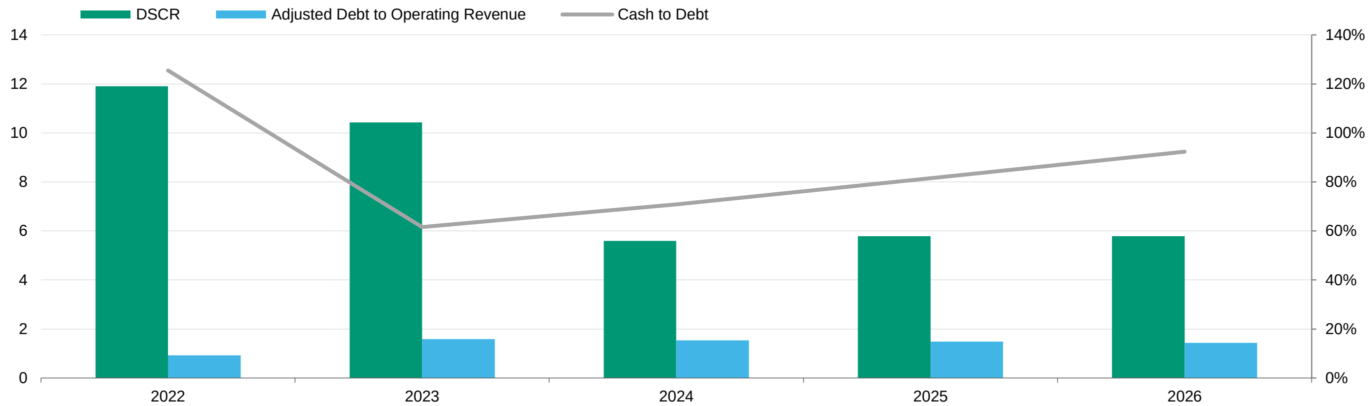
General obligation bonds have been authorized on previous occasions to pay for dredging projects. The Houston Ship Channel supports significant commercial activity and has a large and influential group of advocates along the channel and throughout Texas. This is reflected in the recent "new start" designation awarded to Project 11, which significantly accelerated the timeline relative to the traditional approach.

Financial Operations and Position

Port Houston has strong financial flexibility that provides resilience to a range of potential stresses. This is reflected primarily in low leverage, with a debt-free balance sheet currently and projected "Aaa" level DSCR and "Aa" level adjusted debt to operating revenue assuming $350 million of additional debt in 2023. This is complemented by strong liquidity, with over 100% cash to debt projected through 2022 and over 500 days cash on hand, along with an unissued $100 million revolving note facility, projected through 2025.

Exhibit 7

Low leverage, strong flexibility, projected to continue



Source: Moody's Investors Service

We view low leverage and healthy liquidity as key to managing demand risk and potential disruptions from climate – such as Hurricane Harvey and Winter Storm Uri – or other events that could affect channel access or port infrastructure. The authority benefits from a degree of revenue stability as 13% of its total revenue is from lease and other primarily fixed revenue streams received from various port properties for which it is landlord. 25% of the authority's cash operating expense is related to casual longshore labor hired for cargo handling – this is largely variable with volume over time, and is another form of budgetary flexibility.

Capital spending

Financial flexibility will remain robust despite implementation of a more than $1.5 billion capital plan through 2025. Debt to finance capital spending can be accommodated given the excellent balance sheet and significant operating cash flow, which will allow the authority to maintain strong DSCRs – at or above 5.0x – and cash fund a majority of planned spending. The authority is forecasting roughly 2% revenue growth through 2025, which we view as conservative, and is carrying a 20% contingency in the Project 11 cost estimate and will have awarded a majority of the scope by the end of next year.

While financial flexibility will be strong upon completion of the current capital plan, investment spending could remain elevated depending on the pace at which volume grows and the authority pursues longer term projects. This could include a potential further deepening (Project 12) and a new container terminal.

These projects are largely conceptual or in preliminary planning at this stage, and are likely to be demand driven. Houston currently has two large container terminals that can be further expanded on their existing footprints – from 4.5 million to 7 million TEUs – and sufficient channel depth (and no overhead restrictions to the container terminals) to support expected growth for the next 10-15 years. The ability to grow and pace these projects according to demand reduces the risk of large scale capital spending beyond what is currently outlined. However, continued mid to high single-digit volume growth will bring forward the need to expand container terminal infrastructure, and potentially deepen the channel.

History of general obligation bond authorization

Port Houston has benefitted from consistent use of general obligation bond funding for capital spending. All of PHA's current debt is tax-supported GO debt, and has been for the last 20 years. Historically, the port has received GO debt authorization roughly every 10 years – while not assumed in our forecast, this offers the potential to significantly support/reduce future capital spending.

Exhibit 8

Voters have authorized port improvements on multiple occasions

Last eight bond elections

Election	1957	1967	1973	1979	1987	1989	1999	2007
Amount	$ 7,000	$ 16,000	$ 40,000	$ 50,000	$ 100,000	$ 130,000	$ 387,000	$ 250,000

Current dollars (000)

Source: Port Houston

Liquidity
Liquidity is healthy and has been maintained at a consistently sound level. Houston ended 2020 with 715 days cash on hand, and no revenue debt. Liquidity is further supplemented by a $100 million revolving note program, supported by two note purchase agreements in effect through October 2026.

We view internal liquidity above 500 days cash on hand as representing a solid profile. Strong liquidity is an important credit consideration because of the volume risk in the authority's operating model.

Debt and Other Liabilities

Legal security
The bonds are secured by a first lien on net revenues of the authority's facilities. Ad valorem taxes are excluded from pledged revenues. The authority will be required to fund a debt service reserve, sized at the three-prong test, if first lien coverage is below 3.0x.

Debt structure
The Series 2021 bonds are fixed rate, fully amortizing first lien obligations.

The Authority is planning a potential $350 million of additional parity debt in 2023 for capital spending. This would entail a peak debt balance of $650 million in 2023, representing a strong 1.3x forecasted operating revenue.

The current and anticipated 2023 issuance are structured to produce level annual debt service.

Debt-related derivatives
None.

Pensions and OPEB
The authority sponsors the Port of Houston Authority Restated Retirement Plan, a single employer defined benefit plan covering eligible employees hired before August 1, 2012; all employees hired afterward are on a defined contribution plan. On December 11, 2019, the authority adopted a formal Pension Plan funding policy in accordance with state requirement outlined in Senate Bill (SB) 2224. SB 2224 mandates a written policy that details plans to achieve a funded ratio equal to or greater than 100%.

For the year ended December 31, 2020, the authority made pension contributions of $10.6 million, which was a robust 250% of our “tread water” indicator, the contribution amount at which we have determined there would be no increase in unfunded liability, based on reported assumptions.

In 2020, the authority reported an unfunded liability of $12.5 million. Based on Moody's standard adjustments to reported pension data, we calculate an adjusted net pension liability (ANPL) of $127 million in 2020. The three-year average ANPL was $97 million, equal to 0.25x operating revenue in 2020. The main difference between the Authority's reported net pension liability and Moody's ANPL is the rate used to discount the pension liability, which was 6.25% for the port and 2.31% for Moody's.

ESG considerations

Environmental
At the port sector level, overall credit exposure to environmental risks is moderate, reflecting exposure to carbon emissions from ocean vessels, cargo handling equipment, and truck or rail carriers, the majority of which operate diesel-powered equipment. The moderate risk also reflects exposure to coastal storms, sea level rise and severe weather, as many ports are situated in coastal locations with limited to no elevation above sea level.

Harris County by virtue of its location and proximity to the Gulf Coast is severely exposed to natural and man made hazards with flooding and hurricane risk particularly elevated. The area is still in the rebuilding process following Hurricane Harvey with funding from various levels of government committed to improving the area's resilience to weather future storms. Funding from the $2.5 billion approved by Harris County voters, and $30 billion from the federal government through the US Army Corp of Engineers and commitment from the state will increase the area's preparedness and ability to handle future events.

Social

Social issues can either weigh on or enhance the credit quality of ports. Social considerations most relevant to our credit analysis include (1) customer relations, (2) human capital, (3) health and safety, (4) responsible production and (5) demographic and societal trends. There are four potential channels through which social issues generally affect credit quality — reputational, operational, litigation and regulatory risks.

Governance

The Authority is a navigation district and independent political subdivision of the State, operating pursuant to Texas statutes. Originally constituted in 1911 as the Harris County Houston Ship Channel Navigation District to sponsor deepening and widening of the Houston Ship Channel, the Authority began operating terminals along the Channel in 1922.

The Authority by statute operates independently of other governmental entities, except that the County Commissioners Court, upon request of the Authority, sets the Authority's tax rate, levies the Authority's tax and issues and authorizes the Authority's general obligation bonds. By statute, the County Treasurer serves as the Treasurer of the Authority.

Responsibility for all other activities of the Authority is exercised by a Port Commission composed of seven commissioners. Two members of the Port Commission are appointed by the County Judge and Commissioners Court; two by the Mayor and City Council of the City; one by the Mayor and City Council of the City of Pasadena, Texas; and one by the Harris County Mayors' and Councils' Association. The Chairman of the Port Commission is jointly appointed by the governing bodies of the County and the City.

Rating methodology and scorecard factors

The principal methodology used in these ratings was Publicly Managed Ports Methodology published in June 2019. Please see the Rating Methodologies page on www.moodys.com for a copy of this methodology.

The scorecard-indicated outcome for Port of Houston Authority is Aa1, which is above the assigned rating of Aa3. The difference partially reflects uncertain evolution of coverage and liquidity metrics owing to implementation of a large capital program in the short term, and the potential for continued significant capital spending in the medium term depending on growth trends, which could result in metrics closer to the authority's lower financial policy levels.

Exhibit 9

Publicly Managed Ports

Factor	Subfactor	Score	Metric
1. Market Position	a) Port Size (Operating Revenues) ($ million)	Aaa	$513.65
	b) Service Area and Competition	Aa	
	c) Operational Restrictions	Aa	
2. Volatility and Diversity	a) Operating Revenue Volatility (5-year operating revenue CAGR)	Aaa	5.60%
	b) Customer Diversity	Ba	
3. Capital Program	a) Capital Needs Requiring Leverage	B	
4. Key Credit Metrics	a) Net Revenues DSCR (3 year avg)	Aaa	7.27
	b) (Debt + ANPL) to Operating Revenue (3 year avg)	Aa	1.53
Notching Considerations		**Notch**	
	1 - Tax Support for Operations	0.5	
	2 - Liquidity - Cash to Debt	0.5	82%
Scorecard Indicated Outcome:		**Aa1**	

Scored to 2025 projected
Source: Moody's Investors Service

REPORT NUMBER 1307888

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