Economic Impacts of San Pedro Bay Ports’ Share Losses on the Alameda Corridor Transportation Authority

for: Pacific Maritime Association
Introduction and Executive Summary

- This report examines the ongoing decline of discretionary cargo volume through the Ports of Los Angeles and Long Beach and its financial implications for the Alameda Corridor Transportation Authority (ACTA), the public agency that owns and manages the Alameda Corridor.

- The analysis summarized by this report finds that the continued erosion of cargo market share expected for the port complex poses a severe financial risk to ACTA, which may require the Ports of L.A. and Long Beach to cover shortfalls in ACTA’s revenues and earnings.

- ACTA’s revenues and earnings are almost entirely reliant on usage fees on containers transiting the Alameda Corridor. As such, it is heavily impacted by the flow of “discretionary cargo” – intermodal cargo moving through the Ports of Los Angeles and Long Beach bound for areas outside the region.

- A May 2019 analysis led by Dr. Michael Nacht of UC Berkeley found a steady decrease in the share of Asia-origin container cargo into the United States through the port complex, declining from a 56% share in 2003 to 46% in 2018. This decline has been driven partly by the significantly higher cost of moving containers through Southern California ports as compared to other port options in British Columbia and on the U.S. Gulf Coast and East Coast.

- Construction of the Alameda Corridor cost approximately $2.4 billion and was financed primarily through bonds. As of June 30, 2018, ACTA had long-term revenue bond debt and accrued interest exceeding $2.1 billion. The bonds require increasing debt service, with annual payments increasing significantly every five years: from $122 million in 2013 to $164 million in 2024, $225 million in 2029, and $249 million in 2034.

- This report finds that, if current trends continue, ACTA will experience significant cash flow deficits beginning in 2024, growing from $47 million per year from 2024 to 2029, to more than $100 million in 2029. Under this scenario, the accumulated shortfall would climb to nearly $1.2 billion by 2038.

- If the annual decline in cargo totals more than the 0.3% assumed for this scenario – as it has since 2008 – losses may occur earlier and grow even larger.
Should terminal operators in the San Pedro Bay port complex be prevented from installing new technologies that would improve the efficiencies and cost structures of their facilities, this would likely accelerate the Alameda Corridor’s financial challenges and raise significant questions about the viability of the current financing structure.

• **This could include negatively impact the ratings of ACTA’s bonds.**

Indeed, a recent credit analysis from Moody’s Investors Services states that its current stable outlook “reflects our expectation of limited diversion of discretionary cargo to competing gateways,” and cites sustained underperformance of corridor volume as a factor that could lead to a downgrade of ACTA’s bond credit rating.

• The Ports of Los Angeles and Long Beach – public entities funded by taxpayers -- are obligated to pay a portion of any financial shortfall that ACTA experiences.

Based on Mercator’s analysis, as summarized in this report, and based on the preceding Nacht report, it is clear that enabling Pier 400 and other container facilities in the port complex to enhance terminal efficiencies would better position the gateway to attract future discretionary cargo and meaningfully strengthen the long-term economic health of the port, as well as of the Alameda Corridor.

**About Mercator**

Mercator International LLC is a leading independent advisor to stakeholders across the international freight transportation sector and port industry. With significant experience working in senior management positions for top global companies throughout the industry – including ocean carriers, railroads, terminal operators, port authorities, and financial institutions -- Mercator is trusted around the world to make informed insights and strategic recommendations, building upon and extending beyond rigorous quantitative analyses of commercial, operational, and financial data.
SPB Ports’ Share of North America’s Port Container Throughput

The percentage of container traffic moving through US and Canadian ports that is routed through the ports of Los Angeles and Long Beach has been in decline for some years, as shown in the graph below.

- SPB’s total volume share declined from about 35.4% in 2007 to 30.8% in 2018, based on American Association of Port Authorities (AAPA) statistics.

- ACTA’s share (based on the volumes handled, as reported by ACTA) fell from 13.4% in 2007 to 8.3% in 2018.
  - The rate of share loss since 2007 has averaged just under 0.5% per year.

- Conversely, the “non-ACTA,” non-intermodal (local + transload) portion of SPB’s throughput – as a percentage of total North American port volume – has been fairly steady during the same period.

- Thus, not surprisingly, the loss of discretionary intermodal volumes moving on the Alameda Corridor has been the primary cause of the SPB port complex losing share in the North America port container traffic market since 2007.
ACTA’s Volume History

As the chart below indicates, revenue-generating container volume for ACTA, following the Global Financial Crisis of 2008-2009, peaked in 2014 and has since declined.

ACTA container volumes (in TEUs) – 2008 - 2018

- The data presented above was compiled from ACTA’s fiscal year (FY) 2018 Report (issued on March 28, 2018) and prior years’ reports.
- Of the 4.76 million TEUs reported by and for ACTA in calendar year (CY) 2018, 58% are estimated to have been import loads, 32% were export loads, and the remainder were empty containers.
ACTA’s Debt Service Payments

As of June 30, 2018, ACTA had long-term debt in revenue bonds of $1.646 billion and accrued interest payable of $502.5 million, according to the Authority’s FY 2018 Report available on-line.

The chart below shows ACTA’s annual payment schedule for principal and interest on those long-term obligations.

ACTA principal and interest payments – 2019 through 2038

- ACTA’s near-term scheduled debt service payments grow from $103.3 million in FY 2019 to $122.1 million in 2023.
  - Subsequent amounts are $164 million p.a. (2024-2028), increasing to $225 million p.a. (2029-2033), and to $249 million p.a. (2034-2038).
- This chart was constructed under the assumption that there is no further refinancing of ACTA’s current debt structure.
Because ACTA’s volumes include significant portions of export loads and empty containers, Mercator concluded that projections of ACTA’s volumes would be most effectively produced by projecting ACTA’s total volume share of total North American port container throughput – instead of forecasting ACTA’s total (bi-directional) volumes based only on the SPB ports’ combined projected share of projected Asia import TEU volumes into the US and then making further assumptions about future export load and empty container volumes moving on the Corridor.

Mercator consequently utilized a long-term forecast of North American port container throughput that we constructed with a linear regression model, with combined US and Canadian GDP as the primary macro-economic driver. Our model produced the growth rates for the continent’s aggregate port volumes over the next twenty years shown in the graph.

North America port throughput volume year-over-year growth rates (%) – 2019 through 2040
If ACTA maintains its current 8.3% share of the US/Canadian aggregate port container market, then the growth rates in the latter market forecasted by Mercator’s regression model (as shown on the prior page) would result in ACTA’s volumes increasing from 5.19 million TEUs in FY 2018 to 9.74 million TEUs by FY 2040. This volume trajectory is plotted below.
If ACTA increases its per-TEU charges in line with projected CPI, and the resulting rates are applied to the forecasted volumes from the prior page (after breaking down the projected total volume for ACTA between waterborne loads, waterborne empties, and non-waterborne loads), then ACTA’s operating revenues should grow continuously from $117 million in FY18 to $323M in 2038, as plotted below.

Moreover, those revenues should exceed expenses (inclusive of debt service payments on principal and interest) in all but five of the next twenty years.

The reason for the shortfalls in cash flows in 2024-2025, and again in 2029-2031 is the aforementioned step-up in debt service payments in 2024 (from $122 million to $164 million) and again in 2029 (from $164 million to $225 million).
If the SPB ports become less attractive as an intermodal gateway, and accordingly, ACTA loses 0.2 points of market share each year through 2030 (such that its share of the North American port market drops from 8.3% in 2018 to 5.9% in 2030), with no further share loss thereafter (i.e., volume then grows at the same rate as the US/Canadian aggregate market), then ACTA would experience minimal, absolute volume growth over the next 11 years (with total volume remaining in the 5.2-5.3 million TEU range until 2030) before experiencing modest annual increases to 6.9 million TEUs by 2040.

Given the loss of share that ACTA experienced from 2011 to 2018 (as shown on page 3), and taking into account the predictions in the Nacht/Martin report, this particular scenario should be considered as an optimistic outcome.
Projecting ACTA’s Cash Flow – Scenario with Modest Share Loss

If ACTA increases its per-TEU charges in line with projected CPI, and the resulting rates are applied to the forecasted volumes from the prior page (after breaking down the projected total volume for ACTA between waterborne loads, waterborne empties, and non-waterborne loads), then ACTA’s operating revenues should grow continuously from $117 million in FY18 to only $234 million in 2038, as shown in the graph.

However, after 2023, ACTA’s projected expenses (inclusive of debt service payments) would exceed operating revenues continuously until 2038.

ACTA cash flow outlook to 2038 - with 0.2% annual loss in share of the North American port container market through 2030

Moreover, the accumulated shortfall would exceed $250 million by 2030 and climb to $700 million by 2038, even with rates increasing with CPI during this period.
Projecting ACTA’s Volumes – Scenario with Additional Share Loss

If ACTA loses 0.3 points of market share each year through 2030 (such that its share of the North American port market drops to 4.7% in 2030) and then holds steady thereafter, then ACTA’s volume could be expected to decline to 4.2 million TEUs by 2030, before growing with the overall market, which would bring volume to 5.5 million TEUs by 2040, as shown in the graph below.

The annual share loss assumption reflected above (of 0.3% per year for ten years) is still less than what ACTA actually averaged from 2008 to 2018.
Projecting ACTA’s Cash Flow – Scenario with Additional Share Loss

If ACTA increases its per-TEU charges in line with projected CPI, and the resulting rates are applied to the forecasted volumes from the prior page (after breaking down the projected total volume for ACTA between waterborne loads, waterborne empties, and non-waterborne loads), then ACTA’s operating revenues would plateau in the $129-130 million range from 2024 to 2030, before increasing to $189 million by 2038, as plotted below.

However, after 2022, ACTA’s projected expenses (inclusive of debt service payments) would exceed operating revenues continuously until 2038.

ACTA cash flow outlook to 2038 -- with 0.3% annual loss in share of the North American port container market through 2030

Moreover, the accumulated shortfall would exceed $420 million by 2030 and climb to nearly $1.2 billion by 2038, even with rates increasing in step with the CPI during this period.
Summary Observations

General conclusions

- **Import loaded containers** account for about 51% of the collective throughput of the ports of Los Angeles and Long Beach, and are clearly the driver of the aggregate marine volume of SPB’s terminals, as export loads account for only about 19-20%.

- Asia is the source of about 94% of the import loaded containers moving through SPB ports.

- Thus, the **loss of share** in the North American port container market by the SPB ports that has occurred since 2007 (as shown on page 3) is correlated with the ports of Los Angeles and Long Beach handling declining shares of import containers from Asia, relative to the other ports in the US and Canada.
  - Most of this volume can be considered discretionary and able to move through multiple North American West Coast ports.

- Since the non-intermodal component of Asian imports through SPB is largely captive, the **SPB ports’ losses in shares** of Asian container imports to the US are **directly attributable to losses of intermodal import traffic flows** (that would otherwise generate revenues for ACTA).

- A **loss of import intermodal traffic flows** through the SPB gateway also results in a **loss in westbound/outbound volumes** of export loaded and empty containers.

Nacht/Martin/Henry report linkage

- The Nacht/Martin/Henry report on Sustaining the San Pedro Bay Community Ports projected that the PSW (SPB) ports’ share of Asian container imports into US ports will decline from 46% to 42% from 2018 to 2030, as shown in the chart above.
  - That loss is roughly comparable to Mercator’s third scenario for ACTA presented on prior pages – with ACTA losing 0.3% share per year until 2030

- The respective share projections of both reports represent a slower rate of decline than was experienced over the prior eleven years.

- Nonetheless, it could be argued that the earlier report **understates the risk for ACTA’s volume losses for the 2019-2030 period** – because the SPB ports have also been losing Asian import volumes to the ports in British Columbia, and these losses are likely to increase.
Summary Observations

Growing threat from British Columbia ports

- Prince Rupert Port Authority announced in May its new master plan, including the development of a new container terminal with a capacity of 2.5 million TEUs/year, to be available by or before 2029
  - This would be in addition to a capacity expansion of about 0.7 million TEUs per year to the existing terminal by early 2022

- The Vancouver Fraser Port Authority (VFPA) intends to build a new terminal of comparable capacity (2.4 million TEUs per year) during the same period, but if that project is not approved, it will probably then add a fourth berth at Deltaport, with a capacity gain of at least 800,000 TEUs/year.

- Most of the incremental capacity in these two ports developed over the next decade will be targeted to capture Asian imports to US destinations.

- Thus, these developments will further intensify the competition for discretionary intermodal cargo that is presently flowing through the SPB ports and ACTA.

Outlook for ACTA

- The risk of ACTA experiencing major cash shortfalls in the next decade – absent the mitigation of the comparative cost disadvantages of the SPB port complex – is very real.

- Mercator’s analysis of ACTA’s historical volumes, revenues, operating expenses, and debt service payments/schedule leads to the conclusion that further share losses of Asian imports into the US and Canada by the SPB ports to other North American ports (and hence stagnant or reduced volumes for ACTA) will result in massive cash shortfalls for the Authority after 2023, ranging from:
  - $250-$420 million in accumulated losses by 2030
  - $700-$1200 million in accumulated losses by 2038

- Given that SPB ports are contractually bound to cover ACTA’s cash shortfalls, it is imperative that the two ports go on the offensive to improve volume outcomes, inclusive of taking actions to increase container handling operating efficiencies and retaining as much discretionary cargo as possible.

- Inaction will likely result in further gains of intermodal cargo by both BC ports and US East and Gulf ports.