

FINANCIAL ANALYSIS

A. Introduction

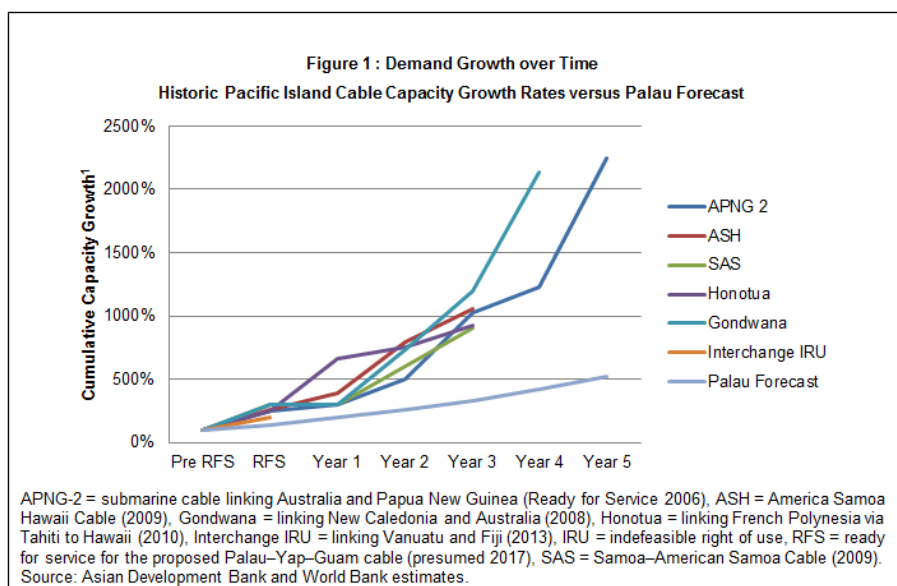
1. **Project summary.** The Asian Development Bank (ADB) will support Palau to develop a fiber optic submarine cable system (SCS) connecting Palau to Southeast Asia—the Southeast Asia–United States west subsystem (SEA-US) cable. The SCS will provide cost-effective broadband connectivity to boost opportunities for inclusive growth. Enhanced connectivity will address service delivery constraints in key social sectors such as education and health. Belau Submarine Cable Corporation (BSCC) has been set up to construct and operate the cable system in Palau. It will provide transparent wholesale bandwidth access to telecommunication providers in Palau.

2. **Demand projection.** A top–down methodology is used to predict adoption by benchmarking other broadband connectivity projects in the Pacific region corresponding to Palau’s current demand distribution across its telecommunication services. The adoption of O3b Networks, an alternative high-speed satellite solution, is taken into account and competition with that service is offset. Demand for capacity per megabit per second (Mbps) is forecast conservatively below the region’s average adoption rates, at a growth rate of about 40.0%, declining to 20.0% within the first 5 years after the cable comes into service, then falling steadily to 3.5%, which is expected to be sustained thereafter. The average annual growth rate over 15 years is 12%. The resulting capacity is positioned at the lower end of all available Pacific-based benchmark data (Figure 1). On the same basis, subscriber growth has been estimated to peak at 15,000 early adopters after 5 years as new services at lower costs are introduced after the SCS ready for service date, followed by a growth rate of 7%, steadily declining to 2% thereafter. Tourist subscribers, a significant factor given Palau’s sizable tourism sector, have also been taken into account.

B. Financial Analysis

3. **Pricing.** Table 1 outlines pricing per Mbps that guarantees the competitiveness of the SCS while ensuring financial viability. At all demand levels, the price has been set to a maximum amount that matches the minimum price level of comparative high speed satellite services. The financial model shows that the chosen price scheme can produce a good return while offering an affordable price to the consumers. Irrespective of demand growth projections, the revenue streams are conservatively capped at 2% of gross domestic product.

4. **Methodology and assumptions.** Financial viability was assessed based on the financial sustainability of BSCC’s operations over the cable’s estimated life (30 years, including 2 years of construction). The weighted average cost of capital (WACC) for the project was compared with the financial internal rate of return (FIRR) to determine the project’s financial viability. The sensitivity of the FIRR to adverse movements in the underlying assumptions was also assessed. The total estimated financial cost of the submarine cable system is \$30.19 million, including project management and contingencies. Palau’s operating costs for the cable system are estimated at \$0.85 million for the first year, with an annual increase of 3% thereafter. The financial benefits were estimated from the revenue accruing to BSCC, which is calculated by demand for international bandwidth multiplied by proposed wholesale tariffs.

**Table 1: Proposed Pricing as Demand Increases**

Item		2017	2018	2019	2021	2025	2030
Demand	Mbps	269	347	440	668	816	954
Cable Demand	Mbps	66	144	237	668	816	954
Minimum Pricing	\$/Mbps/month	863	859	575	539	539	539

Mbps = megabit per second.

Source: Asian Development Bank estimates.

5. **Calculation of weighted average cost of capital and financial internal rate of return.** The project's WACC was computed based on the financing plan, which comprises ADB ADF and OCR debt financing to the Government of the Republic of Palau. Additionally, the government contributes tax and duty exemptions as well as BSCC's start-up costs. The cost of equity was assumed to be 15%. ADB's ADF and OCR loan costs to the government are assumed at 2.0% (ADF) and 2.1% (OCR). Table 2 shows that the resulting WACC is 2.38%. The FIRR is 11.5% over 30 years, including the construction period of 2 years. This comfortably exceeds the estimated WACC, supporting the financial viability of the project.

Table 2: Weighted Average Cost of Capital

Items	ADB		Palau	Total
	ADF	OCR		
A. Amount (\$ million)	8.5	16.5	5.2	30.19
B. Weighting	28.3%	54.6%	17.2%	100%
C. Nominal cost (Interest rate)	2.0%	2.1%	15.0%	
D. Tax rate	0.0%	0.0%	0.0%	
E. Tax-adjusted nominal cost [C x (1-D)]	2.0%	2.1%	15.0%	
F. Inflation rate	1.6%	1.6%	3.0%	
G. Real Cost [(1+E)/(1+F)-1]	0.4%	0.5%	11.7%	
H. Weighted component of WACC (Real)	0.1%	0.3%	2.0%	2.38%

ADB = Asian Development Bank, ADF = Asian Development Fund, OCR = ordinary capital resources, WACC = weighted average cost of capital.

Source: Asian Development Bank estimates.

6. **Sensitivity analysis.** The main financial risks include (i) an increase in the price of the cable system, (ii) an increase in operating costs, and (iii) a shortfall in anticipated demand and hence revenues. These risks are considered low because (i) the cable system cost estimates are based on similar cable project developments; (ii) the operating costs are conservatively estimated based on quotes received from maintenance firms, while risks are shared with the Federated State of Micronesia as the operating costs are split; and (iii) demand and the resulting revenue were considered at a growth rate well below similar implementations in the region. Future growth will be even higher because of the exponential increase in the use of mobile internet, particularly in developing countries, where annual growth rates of 50%–300% are being recorded. The risk of price and hence revenue attrition from a second SCS operator entering the market is considered very low because of the very high capital cost of entry and the country's small size. As for funding sources, ADB's technical assistance and loan are already earmarked, and contributions from the Government of the Republic of Palau have been agreed.

7. The FIRR and FNPV were tested against decreased revenue (caused by a demand decrease), and increased capital and operational costs. The analysis indicates the project is sensitive to a revenue decrease, and less sensitive to a capital or operational cost overrun (Table 3). To ensure its financial viability, BSCC must encourage demand growth through fair and open access and attractive transparent pricing for all retail service providers. Telecommunications regulatory reforms currently supported by the World Bank will aid in ensuring that the benefits of reduced cost and improved quality wholesale capacity are passed to the retail operators and then to end users. The financial net present value evaluation indicates that the project has a healthy net present value, which only becomes negative when revenue decreases by 28.5% or more.

Table 3: Sensitivity Analysis

Scenario with WACC @ 2.38%	FNPV (\$ million)	FIRR (%)	Switching Value (%)
Base case scenario	47.5	11.7%	
20% decrease in revenue	28.5	8.6%	50.0%
10% increase in capital expenditures	41.6	10.0%	69.6%
10% increase in operating expenditures	46.2	11.5%	348.0%

FIRR = financial internal rate of return, FNPV = financial net present value, WACC = weighted average cost of capital.

Source: Asian Development Bank estimates

8. **Financial sustainability.** A financial projection was prepared to examine the robustness of BSCC's financial position over time. BSCC net cash flows will turn positive in 2019 and remain positive thereafter.

C. Financial Management Assessment

9. BSCC is a newly established entity and will need to recruit personnel to manage accounting. During implementation, the project will engage experienced consultants to set up procedures, systems, and reporting mechanisms to implement robust financial management practices. BSCC will recruit permanent accounting staff on time to have sufficient overlap with consultants. This will help develop adequate capacity to continue accounting practices after the implementation period. The detailed time-bound action plan is Table 4. BSCC will follow the

government's yearly auditing process.

Table 4: Time-bound Action Plan

Action	Purpose	Responsibility	Time Frame
Specialized team of financial management specialists recruited as part of the project management unit	Set up accounting practices, systems, and procedures	BSCC	After 6 months of project effectiveness
Organizational structure set up	Ensure proper approval authority and prevent conflict of interest	BSCC	After 6 months of project effectiveness
Permanent account staff recruited	Make accounting practice sustainable	BSCC	By Q2 2017, to have sufficient overlap with consultants ensuring proper training and handover
Arrange periodic internal audit	Ensure compliance with Palau's accounting policy	BSCC	By Q1 2017
Arrange periodic external audit	Ensure compliance with Palau's accounting policy and other requirements	BSCC	By Q1 2017
Arrange periodic training program and capacity development	Introduce new process, manual, and systems	MOF and BSCC	Once a year

BSCC = Belau Submarine Cable Corporation, MOF = Ministry of Finance, Q = quarter
Source: Asian Development Bank.

10. Overall, the financial management risk is expected to be high. The mitigation measures will be monitored to manage the risk.

Table 5: Belau Submarine Cable Company Financial Projection

Amount (\$ million)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2035	2040	2045
Balance Sheet																		
Cash	0.0	0.0	(0.5)	(0.8)	1.0	2.5	4.3	6.6	9.2	12.2	15.6	19.2	23.3	27.6	32.4	62.8	99.9	0.0
Debtors	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Accounts receivable	0.0	0.0	0.0	0.2	0.7	0.8	0.9	0.9	1.0	1.1	1.1	1.2	1.2	1.3	1.4	1.8	2.0	0.0
Work in progress	10.8	21.9	25.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross fixed assets	0.0	0.0	0.0	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	0.0
Less: Accumulated depreciation	0.0	0.0	1.0	2.0	2.9	3.9	4.9	5.9	6.9	7.9	8.8	9.8	10.8	11.8	12.8	17.7	22.6	0.0
Net fixed assets	0.0	0.0	(1.0)	23.3	22.3	21.3	20.4	19.4	18.4	17.4	16.4	15.4	14.5	13.5	12.5	7.6	2.7	0.0
Total Assets	10.8	21.9	24.3	23.3	22.3	21.3	20.4	19.4	18.4	17.4	16.4	15.4	14.5	13.5	12.5	7.6	2.7	0.0
Bank overdraft or Short-term loans	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Accounts payable	0.0	0.0	0.0	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.0
Long-term borrowings	10.5	21.4	24.6	24.6	24.6	23.3	22.1	20.8	19.6	18.3	17.1	15.8	14.6	13.3	12.1	5.8	0.0	0.0
Total Liabilities	10.5	21.4	24.6	24.7	24.8	23.6	22.3	21.1	19.8	18.6	17.3	16.1	14.9	13.6	12.4	6.2	0.5	0.0
Government Contributions or Equity	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0
Reserves	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Retained earnings	0.0	0.0	(1.2)	(2.5)	(1.2)	0.6	2.8	5.3	8.3	11.7	15.3	19.3	23.6	28.3	33.4	65.4	103.6	0.0
Total Equity	0.2	0.5	(0.7)	(2.0)	(0.8)	1.1	3.2	5.8	8.8	12.1	15.8	19.8	24.1	28.8	33.9	65.9	104.1	0.0
Income Statement																		
Annual revenue	0.0	0.0	0.2	1.2	3.8	4.3	4.6	4.8	5.1	5.3	5.4	5.6	5.8	6.0	6.2	7.1	7.2	7.3
Cost	0.0	0.0	0.0	1.0	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.6	1.7	0.1
Nominal revenue	0.0	0.0	0.3	1.3	4.2	4.9	5.2	5.6	6.1	6.4	6.8	7.1	7.5	7.9	8.3	10.5	11.8	13.3
Nominal cost	0.0	0.0	0.0	1.1	1.4	1.6	1.6	1.6	1.7	1.7	1.7	1.8	1.8	1.9	1.9	2.3	2.8	0.2
Cash flow from operation	0.0	0.0	0.2	0.2	2.7	3.3	3.6	4.0	4.4	4.7	5.0	5.3	5.7	6.0	6.4	8.2	9.0	13.1
Depreciation	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0
Interest	0.0	0.0	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.0	0.0
Net profit before tax	0.0	0.0	(1.2)	(1.3)	1.2	1.8	2.2	2.6	3.0	3.3	3.6	4.0	4.3	4.7	5.1	7.1	8.0	13.1
Profit versus revenue (%)	0	0	(446)	(103)	30	38	42	46	49	52	54	56	58	60	61	67	67	99
Cash Flow Statement																		
Accounts receivable	0.0	0.0	0.0	0.2	0.7	0.8	0.9	0.9	1.0	1.1	1.1	1.2	1.2	1.3	1.4	1.8	2.0	2.2
Accounts payable	0.0	0.0	0.0	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.0
Cash	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.7	0.7	1.1
Working capital	0.0	0.0	0.1	0.0	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.3	1.4	1.5	1.6	2.1	2.2	3.3
Working capital change	0.0	0.0	0.1	0.0	0.6	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1
Working capital loan	0.0	0.0	0.1	0.0	0.6	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1
Net cash flow	(10.5)	(10.9)	(2.9)	0.2	2.5	2.9	3.2	3.4	3.7	3.9	4.0	4.2	4.4	4.6	4.7	5.5	5.5	5.4

Source: Asian Development Bank estimates