Deutsche Bank
Research

Rating
Buy

North America
United States

TMT
Telecom Services

Company
AST SpaceMobile

Reuters	Bloomberg	Exchange	Ticker
ASTS.OQ	ASTS US	NSM	ASTS

Date
20 November 2023

Forecast Change

Price at 20 Nov 2023 (USD)	4.78
Price target	23.00
52-week range	6.98 - 2.74

Business Plan Progresses, Though Funding An Ongoing Process

Valuation & Risks

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Key changes		
TP	32.00 to 23.00 ↓	-28.1%
EPS (USD)	-0.49 to -0.85 ↓	-73.4%
Revenue (USDm)	2.4 to 0.0 ↓	-100.0%

Source: Deutsche Bank

We remain constructive toward AST SpaceMobile's long term business opportunity given the company's large TAM, differentiated technology, partnerships with many of the world's largest mobile network operators (MNOs), and attractive wholesale/revenue share business model; notwithstanding the fact that it has taken much longer than management originally anticipated to execute satellite manufacturing, launch, and testing plans. In hindsight, AST's plan was too aggressive from a timing perspective, but that shouldn't take away from what's been accomplished thus far.

AST SpaceMobile continues to make progress toward proving its technology and commercializing its business plan. The BlueWalker 3 testing program, which is now substantially complete, indicates that the technology is working as planned. That said, macro conditions have become less favorable for AST over the past several quarters, specifically in terms of cost inflation for materials and production, rising funding costs, and less appetite in the market for early stage business models. We think it is more these macro factors, as opposed to the pace of executing the business plan or other factors, that explain the decline in AST's share price over the past year.

We maintain that the business offers a meaningfully positive risk/reward outlook, but we're lowering our PT to $23 PT (from $32), due to our lower forecast, a change in our valuation scenarios driven by higher funding costs, and the potential for continued equity dilution. At $4.78/share, the market appears to be pricing in a relatively low probability of success, which we do not think properly values AST's long-term potential. That being said, given the early stage of the business, the risk of failure is higher than it is for most public companies in the sector, and there's still a wide range of outcomes.

Key Updates

- **We believe that AST's successful deployment of the BlueWalker3 test satellite in orbit last Fall, and the subsequent demonstration of voice and data capabilities using standard unmodified cell phones over the past year, have reduced AST's technology and business model risk.** The BW3 system has now proven it is capable of supporting two way voice connections and data downloads over 2G, 4G LTE, and now 5G, using standard unmodified cell phones from major OEMs. This latest 5G testing was accomplished in early September by partnering with AT&T for its

In our view, this demonstration represents a key testing milestone and validation of AST's underlying business case (ie to provide service to standard consumer hardware), and could help accelerate commercial and strategic discussions with key MNO partners and regulators globally. Importantly, we believe the BlueWalker 3 testing program is now substantially complete, without any major setbacks. Since launching BlueWalker3 last Fall, the company's technology roadmap is largely unchanged, which allows AST to proceed as planned with the construction of the first 5 commercial BlueBird satellites.

- **The company reiterated its plans to launch the first block of 5 commercial satellites in 1Q24, and hopes to begin generating revenue in 2024.** We believe the company is increasingly turning its focus towards the commercialization of its system, now that the technology has been validated. AST is currently working on commercial agreements with government entities and mobile network operators, which would lead to revenue next year, assuming AST is able to successfully execute these agreements.

- **Funding remains the biggest overhang for AST at this stage** (in our view), with market conditions over the past year having become significantly less favorable for underfunded, earlier stage businesses. Management has stated that AST's cash balance and existing facilities are sufficient to fund the company's cash expenditures over the next 12 months, including the launch of the first five Block 1 satellites. However, AST seems close to securing additional funding this year to maintain a capital buffer and finance the construction and launch of Block 2 satellites (beginning next year). The company estimates that its total incremental capital funding requirement will be $550-650M for the first 25 satellites (Block 1 and Block 2), which should enable the company to achieve positive FCF.

  We believe a strategic partnership is the best financing option available, and the one which AST is most focused currently. AST is in the definitive documentation and diligence phase with multiple strategic partners. This is happening in parallel with work on commercial agreements.

  In our view, working with its established wireless carrier partners could help AST avoid further dilutive equity issuance, or high cost debt financing with potentially restrictive covenants. We think this type of agreement could entail the collection of pre-paid revenue for future capacity utilized, equity investment, or a relatively low coupon convertible preferred.

  AST's business plan is expected to yield material benefits to its MNO partners (including capex reduction, product differentiation, and additional revenue streams), and we think it is logical that these MNO partners (including AT&T, Rakuten, and Vodafone) would be motivated to ensure that AST's business is successful. We believe the recent 5G test success and completion of the overall BlueWalker3 testing program are important milestones for prospective strategic partners.

- **We are updating our model to reflect the latest timelines and cost assumptions for the business**. We expect the first 5 commercial Bluebird satellites to launch in late 1Q24. Based on management's expectations, it will take ~3-4 months between launch and activation of commercial service, which implies about 5-6 months of revenue generation in 2024 for the first batch of satellites.

Management believes that, as the company moves past elevated R&D spend for design, testing, and early manufacturing processes; operating expenses should moderate to a $25-30M quarterly run-rate starting in 1Q24, down from ~$40M to date.

Capex for the project has increased modestly since our last update, due to inflation for inputs, as well as tighter market dynamics for orbital launch capacity. AST now expects the first 5 BlueBirds will cost $115M, up from $110M as of last quarter, with part of this latest change based on a request from a major MNO to change the orbital location of the constellation to provide better coverage to that MNO's subscribers. AST has already spent 85% of the capex for these first 5 BlueBird satellites, and expects to take a "modular" approach to subsequent satellite launches based on funding availability and market conditions.

The 20 Block 2 satellites are now expected to cost $16-18M each (vs $16M as of this time last year, and $13-15M in the initial business plan), and we believe production costs for subsequent commercial satellites have increased by a similar amount (to a ~$13M run-rate at scale, by our estimation, vs $11M prior).

Delays and cost overruns are fairly common in the satellite industry and are not overly surprising or concerning, so long as the technology and business case remains intact. We continue to believe that AST's addressable market and business model are very attractive, and we are optimistic about the company's prospects (based on the successful testing developments to date, as well as the who's who list of global MNO partners). **Based on these new assumptions, we are forecasting ASTS will generate positive EBITDA in '25 (vs '24 prior).**

- **We are lowering our PT to $23, driven by reduced estimates (outlined above) and a change in our valuation scenario framework.** We are now using a weighted average of three scenarios; (1) placing a 20x multiple on our '26 adj. EBITDA forecast and discounting back to the present at a 15% rate (40% weighting), (2) a more conservative scenario, where demand is lower and costs are higher (40% weighting), and (3) a "zero value" scenario, to reflect the risks surrounding the technology and business model (20% weighting). We had initially used a valuation framework that included a fourth scenario based on management's early long term forecasts for the project. However, given the delays in executing the business plan and higher costs of funding now, we think it is more prudent at this point in time to focus on our forecast (which has taken into account recent changes in timing and costs) and reevaluate more optimistic outcomes as the commercial side of the business begins to ramp. Net net, our PT is shifting to $23 (vs $32 prior), which still offers significant upside from current levels. Key risks include AST's technology not working as planned, failure to deploy the company's large arrays in space, satellite anomalies, launch failures, delays meeting key business plan milestones & cost overruns.

Figure 1: ASTS Estimate Revisions

	Current Estimates					Variance to Prior Estimates				
	2023	2024	2025	2026	2027	2023	2024	2025	2026	2027
Total Revenue	0.0	29.9	248.7	1,034.7	2,606.7	(2.4)	(174.2)	(635.4)	(1,258.2)	(1,982.7)
Total Opex	162.6	108.9	115.7	129.0	145.6	32.1	(33.7)	(45.3)	(55.9)	(64.0)
Adj. EBITDA	(162.6)	(79.0)	133.0	905.7	2,461.1	(34.5)	(140.5)	(590.1)	(1,202.3)	(1,918.7)
% Margin	NA	-264.8%	53.5%	87.5%	94.4%	NA	-294.9%	-28.3%	-4.4%	-1.0%
Capex	126.5	280.0	580.0	560.0	430.0	(88.5)	(240.0)	(175.0)	0.0	(20.0)

Source : Deutsche Bank estimates, company information.

Figure 2: ASTS Model Summary

	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Total Subscribers (000s)	0	2,500	17,500	67,500	147,500	257,500	382,500	522,500
Total ARPU		$1.99	$2.07	$2.03	$2.02	$2.05	$2.08	$2.09
Growth %			4.1%	-2.1%	-0.4%	1.5%	1.3%	0.6%
Total Revenue	**0.0**	**29.9**	**248.7**	**1,034.7**	**2,606.7**	**4,984.2**	**7,978.2**	**11,350.2**
Growth %			733.2%	316.0%	151.9%	91.2%	60.1%	42.3%
Adj. EBITDA	**(162.6)**	**(79.0)**	**133.0**	**905.7**	**2,461.1**	**4,822.9**	**7,805.5**	**11,171.1**
Growth %		-51.4%	-268.3%	580.9%	171.7%	96.0%	61.8%	43.1%
% Margin		-264.8%	53.5%	87.5%	94.4%	96.8%	97.8%	98.4%
Capex	(126.5)	(280.0)	(580.0)	(560.0)	(430.0)	(285.0)	(260.0)	(235.0)
Free Cash Flow	**(290.3)**	**(413.1)**	**(543.3)**	**(27.4)**	**1,230.2**	**3,165.5**	**5,441.1**	**7,979.1**
Growth %			31.5%	-95.0%	-4584.6%	157.3%	71.9%	46.6%

*All Dollars in Millions, Except ARPU

Source : Deutsche Bank estimates, company information.

Figure 3: Our $23 PT is based on weighting three different scenarios: our model, a more conservative scenario, and a zero value scenario

ASTS Valuation			
	"DB Model" (A)	"Conservative" (B)	"Zero" (C)
Adj. EBITDA ('26E)	905.7	452.9	
EV/EBITDA Multple	**20.0x**	**10.0x**	
Enterprise Value ('26E)	18,114	4,529	
Net Debt ('26E)	776	971	
Market Cap ('26E)	17,338	3,558	
Discount Rate	15.0%	15.0%	
Market Cap ('23E)	11,415	2,342	
Stock Price ('23E)	**$47.87**	**$9.82**	**$0.00**
Shares Outstanding ('23E)	238.4	238.4	
Scenario Weight	40.0%	40.0%	20.0%
		Price Target	**$23**

Source : Deutsche Bank estimates, company information.

Figure 4: ASTS Valuation Multiples

ASTS Valuation Multiples	2023	2024	2025	2026	2027
Share Price	$4.78	$23.00	$26.44	$30.39	$34.93
Growth	-0.8%	381.2%	15.0%	15.0%	15.0%
EOP Shares	238.4	238.4	238.4	238.4	238.4
Market Capitalization	1,139.8	5,484.3	6,304.2	7,246.7	8,330.1
Net Debt	(4.9)	408.1	951.4	978.9	(251.4)
Minority Interests + Other	(202.4)	(202.4)	(202.4)	(202.4)	(202.4)
Adjusted Enterprise Value	932.5	5,690.1	7,053.3	8,023.2	7,876.3
Unlevered Free Cash Flow (Fully Taxed)	(239.7)	(331.0)	(464.3)	100.6	1,366.4
Yield (CY)			-6.6%	1.3%	17.3%
Yield (CY+1)	146.5%*	24.0%*	19.4%*	17.0%	
EBITDA	(162.6)	(79.0)	133.0	905.7	2,461.1
EV/EBITDA (CY)			53.0x	8.9x	3.2x
EV/EBITDA (CY+1)	0.5x*	2.2x*	2.6x*	3.3x	
Levered FCF (Fully Taxed)	(290.3)	(413.1)	(543.3)	(27.4)	1,230.2
Levered FCF Yield (CY)			-8.6%	-0.4%	14.8%
Price/FCF (CY)			(11.6x)	(264.2x)	6.8x
Price/FCF (CY+1)	0.9x*	4.5x*	5.1x*	5.9x	

* '27E Multiple

Source : Deutsche Bank estimates, company information, Bloomberg Finance LP