Telesat

Elevator Pitch
A sub-$500m satellite operator with $1.25bn cash, FCF over $150m, on the cusp of a billion-dollar low-earth orbit opportunity.

Introduction
Telesat was started by the Canadian Parliament in 1969 and went on to launch the world's first commercial satellite. The last five years has seen TSAT lay the groundwork for the future; launching its Phase 1 LEO satellite (2018); the world's first 5G backhaul demo (2019); and producing a cutting-edge low-earth orbit network (2021). Having redomiciled to Canada, TSAT was removed from both the Russell 2,000 and 3,000 resulting in a 20% fall in a matter of days followed by a slow and painful decline from $54 to sub-$10, today.

Business Overview
Telesat is one of the world's largest global satellite operators with 188 low earth orbit (LEO) satellites with optionality for modulation. This modulation will enable Telesat to partner with others who want access to more cost-effective satellites (when compared with fibre and microwave) which are 20x more responsive than today's geosynchronous (GEO) satellites. Telesat is also designing a backhaul site with a potential monopoly in the somewhat less lucrative pole coverage. Telesat typically partners with in-flight, maritime, and defence operators having worked with the US Navy and being awarded a $31m NASA contract thus identifying its trustworthiness further ratified by its support from the Government of Canada. This ought to increase given their Telesat Lightspeed innovation which is less penetrable thus hard to hack or jam. Their previous experience has seen them work on 5G with Vodafone and, to date, have completed core demonstrations with Petrobas, Motorola, Telefonica, and Vodafone. Other applications for satellites include agriculture, energy, mining, and Insurance.

TSAT's Lightspeed programme is 36x closer to Earth thus: increases capacity from GB to TB; reduces latency 12-27x; and is 20x faster than the traditional GEO satellites. With connectivity at the forefront of the future - and 39% of the world's population not having access to affordable, reliable, high-speed internet - Telesat is well positioned to improve global connectivity in an industry that is expected to triple in size in the coming years (> $1tn). Moreover, satellite launching costs are reducing significantly having gone from $18,500/kg in 2009 to $2,720 in 2018; an 85% reduction.[1] Further, Meta (previously Facebook) funded a study where MIT researchers[2] confirmed that TSAT achieves a similar throughput as SpaceX despite fewer satellites[3] and - holding the number of gateway antennas constant at 700 – Telesat produces 5.0 - 6.5Tbps. Compared to OneWeb (1.0 Tbps); SpaceX (5.0 Tbps); and Amazon (6.0 – 11.0 Tbps). This shows that Telesat achieves greater throughput despite fewer satellites due to their dual gateway connection system. Moreover, OneWeb and Amazon may achieve higher throughput but require 50% more gateway antennas thus Telesat will see 2x utilisation compared with their competitors with a ground station of ~40 (handling all capacity) whereas OneWeb requires double, and SpaceX requires triple.

Telesat shares are held primarily by MHR Fund Management LLC and PSP Investments (~37%). A further ~39% is owned via Telesat's unlisted partnership which holds Class A and B units. Thus, the public listing comprises approximately 24% of the company's market capitalisation.

Why does this opportunity exist?

1. Passive Investors
    a. Redomiciled from US to Canada. Removed from Russell 2k and 3k leading to forced selling on limited volume.

2. DISH Network
    a. DISH reduced their need for TSAT coverage .:. stock halved despite TSAT almost instantly replacing them.

3. Uncertainty
    a. Investors are becoming infuriated with LEO delays.
    b. Surprise in expected CapEx which may impact CFFI with Cash Requirements in the next few years ~$1bn.
    c. Thales are experiencing supply chain problems in construction delaying financing with Export Credit Agencies.

4. Star CEO competition
    a. Bezos (Kuiper) vs. Musk (SpaceX) vs. Goldberg, who? (Telesat). Despite not competing with these two co's.
        1. *"This is not a consumer broadband play," Goldberg said. "We're one of the largest satellite operators in the world today and we've been doing this for 50 years now. But we've always been an enterprise kind of service provider ... we know that customer base, we know those markets. We collaborated with those customers when we conceived of this opportunity and designed this constellation." –* [*CNBC*]

[1] SpaceX 2018 launch cost $2,720/kg vs. NASA's suggested pre-2009 costs of $18,5000/kg
[2] A technical comparison of three low earth orbit satellite constellation systems to provide global broadband - ScienceDirect
[3] pachler21a.pdf (mit.edu)

Valuation

This year alone Telesat is expecting $700m revenues which ought to generate $120 – $230m FCF representing 25 – 50% of today's market capitalisation. Moreover, GEO has a revenue backlog of $1.7bn thus, with an approximate FCF margin of 25 – 33%, would result in a cash inflow which exceeds Telesat's current market capitalisation. Telesat currently trades at a measly 1.8x EBITDA (ttm) despite being suggested to command a 5.5x multiple [LightShed Partners]. Should this materialise, GEO would be worth over $1.5bn. However, to remain conservative, we take a midpoint of 4x given Telesat's perception in the market. At such a multiple, GEO is valued at $1.1bn which equates to just 7x FCF versus a current multiple of 3x. A baseline for the value of Telesat would simply be Telesat's current stockholder's equity of $373m. Looking out at Telesat's $1.7bn revenue backlog, GEO ought to generate ~$500m in FCF in the coming years.[4] Telesat will also receive $260m in October due to an accelerated Phase II relocation payment. Thus, they will be sat on $2.0 – $2.1bn cash. Accounting for Telesat's Other Current Assets ($100m), PP&E ($1bn), and Minority Interest ($1bn), less total liabilities ($3.4bn) would value Telesat at $700 – $800m. To conclude, I believe the primary portion of Telesat, GEO, is worth at least $373m and could conservatively be worth $1.1bn.

Telesat's CEO suggests the LEO satellites will exist in a total addressable market (TAM) of ~$215bn by 2030. Moreover, Goldberg indicated that it could capture 2% of such market, being their usual conservative selves. This 2% would equate to $4.3bn in revenues. However, LightShed Partners imply that a more immediate and appropriate TAM – given Telesat's 'Enterprise-Only' Silo – would be closer to $200bn. LightShed suggests Telesat will only be able to capture 0.8% market share. Thus, Telesat's LEO revenues would be closer to ~$1.6bn at maturity. Herein, I will assume the TAM for LEO is $200bn and Telesat can only capture 0.8% of said market. Moreover, to remain conservative, I will assume similar margins to GEO despite LEO being lower cost as they're smaller, cost less to get into orbit, and need fewer satellites given their improved technology. Thus, assuming no multiple re-rating, I employ the following valuation matrix:

	FCF @ 3.1x			**EBITDA @ 1.8x**		
Margins[5]	*17%*	*25%*	*33%*	*50%*	*60%*	*70%*
Valuation	$0.8bn	$1.2bn	$1.6bn	$1.4bn	$1.7bn	$2.0bn

This compares with management's proposal that LightSpeed could generate CAD 4.5bn EBITDA by 2031 (within 5yrs of launch).[6] Even if Telesat captures 2% of the $215bn TAM and retains GEO's 5yr historical EBITDA margins of 70%, LEO would generate $3bn EBITDA p.a. which – at a current EBITDA multiple of 1.8x – would equate to a LEO valuation of ~$5.5bn ($11bn at a multiple of 3.6x). Using FCF margin analysis, LEO would trade between $2.2 – $4.5bn. As such, we are conservatively valuing LEO way below management's conservative estimates. To conclude, I believe Telesat could be worth:

	GEO	**LEO**	**Telesat**	**ROI**
LO	$0.4bn	-	$0.4bn	-23%
LQ	$0.7bn	$0.8bn	$1.5bn	+210%
UQ	$0.8bn	$1.2bn	$2.0bn	+313%
HI	$1.1bn	$1.6bn	$2.7bn	+458%

[4] Current FCF Margin (25%) = $439m; 5yr Average FCF Margin (33%) = $574m.
[5] FCF = Half 5yr Average (17%); Current (25%); 5yr Average (33%). EBITDA = Current (50%); Mid-Point (60%); 5yr Average (70%)
[6] Value Investors Club / TELESAT CORP (TSAT)

Catalysts

1. Backlog recognition
    a. *Contracted revenue backlog ~$1.7bn (existing contracts without renewals; not all cancellable).*
    b. *A further slightly speculative Lightspeed backlog of $750m which could equate to $150 - $250m in FCF.*

2. LEO 3 Launch
    a. *LEO 3 Demo Satellite to launch on July 14, 2023 @ 23:37 UTC on Rocket Lab Mission [Live Stream].*

3. Debt reduction
    a. *Repurchasing senior unsecured notes; repurchased $103m debt at a cost of $66m [May Earnings Call].*

4. Government Relationships
    a. *Financing agreement to be confirmed previously confirmed.*
    b. *Telesat & Ontario Government offering reduced rate relationships .:. post-2026 this will see more upside.*

5. Improving Business
    a. *A DISH renewal (unknown likelihood) rent demand required.*
    b. *Increase in fleet utilisation (currently sitting at 88% - up 4% since last year).*
    c. *Energy increases may push demand for aero and maritime markets = new relationships.*
    d. *Cruise lines picking up from the current 70% ferrying (or greater penetration of a smaller bunch).*

6. Increased Bandwidth Requirements
    a. *Accelerated bandwidth due to the pandemic – advances in society – greater reliance on connectivity.*
        i. *Ottawa, the federal telecom regulator, and national infrastructure bank are set to increase access to digital services. The federal budget target set out, by 2030, everyone should be able to access speeds of 10MBps (up) and 50Mbps (down).*

7. Greater Acknowledgement
    a. *Mario Gabelli taking a considerable stake of almost 25% of the publicly traded shares outstanding.*
        i. *Mario Gabelli ~ 12%; Gabelli Funds ~ 8%; Gabelli Multimedia Trust ~ 1%; and Other[7] ~ 3%.*
    b. *Global Satellite Operators Association appointed Goldberg as chair and Eutelsat's CEO as vice chair.*
    c. *Attendance at multiple investor conferences to create more interest having shed 75% in under 12 months.*

8. A Potential Transaction
    a. *Takeover / privatisation / MBO / NDR / Equity Offering:*
        i. *Telesat's MCap is ~1/3 and ~1/2 VSAT and Echostar's cash position, respectively.*
        ii. *Telesat's MCap is 1%, 3%, and 4% of Amazon, Tesla, and Meta's cash position, respectively.[8]*

9. Reduction in Short Interest
    a. *Short interest down from $11m (5.63%) at the mid-point of 2022 vs. $½m (0.33%) today.*

10. LEO Abandonment
    a. *Telesat abandons LEO; sharp short-term decline followed by less ambiguity; GEO-linked re-rating.[9]*
        i. *At which point, Telesat will be worth $400 – $1.1bn, conservatively, based on GEO alone.*

Risks

- Debt spiral should LEO subsequently fail
- Funding issues surrounding the LEO satellites
    - Ottawa and ISED set a memorandum of understanding (MoU) to provide Telesat with a $600m subsidy. Since, Telesat has said there is a 3yr delay for Lightspeed services. To which Doreen Flynn, spokesperson for ISED, echoed that the funding is purely conditional on the constellation entering space – without revoking due to service start dates.
- DISH network depletion however TSAT were quick to replace their business
- Intangible Assets ~ 49% of total assets; Goodwill amounts to 38% of total assets
- Laggard to the game given the delays in LEO launch which may erode their lead in Canada
- Erwin, the chief architect behind Telesat's LEO satellites is retiring after a long time on lightspeed meaning: (a) financing is secured; or (b) his pet project failed

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[7] The Gabelli Utilities Fund; Gabelli Dividend & Income Trust; The Gabelli Small Cap Growth Fund; and The Gabelli Asset Fund.
[8] *"Facebook [Meta] may have secret plans to build a satellite-based internet"* – Mark Harris (2018).
[9] TooCheapToIgnore (VIC) believes abandoning LEO will de-lever the balance sheet and produce over $300m in FCF and a healthy dividend.