Nvidia's Backstop Universe – Heads I Win, Tails Who Loses?

英伟达的兜底宇宙——正面我赢，反面谁输？

The $11T AI Buildout, Nvidia's Backstop Economics, and the Limits of Nvidia's Balance Sheet

11 万亿美元的人工智能建设、英伟达的兜底经济学，以及英伟达资产负债表的极限

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An expanded view of Nvidia's Balance Sheet
英伟达资产负债表的扩展视图

As of 2Q F1/27 (second quarter of fiscal year ended Jan 2027) Nvidia in its 10-Q disclosed $530B of gross off-balance sheet guarantees across six different line items – a jump from $184B of obligations disclosed in the prior quarter due mainly to moves in three items:

截至 F1/27 第二季度（截至 2027 年 1 月的财年第二季度），英伟达在其 10-Q 中披露了六个不同项目合计 5300 亿美元的表外担保总额——较上一季度披露的 1840 亿美元义务大幅跃升，主要由于三个项目的变动：

1. Supply and capacity commitments went from $119B to $279B, primarily memory as explained by the CFO, with 96% of these supply commitments due by F1/29.

   供应与产能承诺从 1190 亿美元增至 2790 亿美元，主要是内存，正如首席财务官所解释的，其中 96%的供应承诺在 F1/29 前到期。

2. Guarantees and LPS Guarantees went from $3.5B to $108.5B on SB Energy's PORTS-Pike campus in Ohio, representing 4.25 GW leased to OpenAI for twenty years with Nvidia guaranteeing the land, power and shell.

   担保和 LPS 担保从 35 亿美元增至 1085 亿美元，涉及 SB Energy 在俄亥俄州的 PORTS-Pike 园区，代表向 OpenAI 租赁二十年的 4.25 GW，由英伟达为土地、电力和外壳提供担保。

3. Two line items appeared for the first time: $36B of AI cloud agreements, the take-or-pay floors under Neocloud capacity, and $20B of datacenter leases Nvidia has signed as a tenant but expects to reassign to third parties.

   两个项目首次出现：360 亿美元的 AI 云协议，即 Neocloud 产能下的照付不议下限，以及 200 亿美元的数据中心租赁，英伟达作为租户签署但预计将转交给第三方。

The $530B of commitments dwarf on-balance sheet liabilities of $91B, which includes $33.4B of total debt with $25B of senior notes issued in the most recent quarter. On the asset side, Nvidia's cash balance has increased from $12B to $22B in the past few quarters, but its investment book (marketable and non-marketable securities) has leapt

from $45B in 2Q F1/26 to $128B by 2Q F1/27. The $99B equity book generated $23.7B of gains in the first half, and $25B more of equity investments are committed.

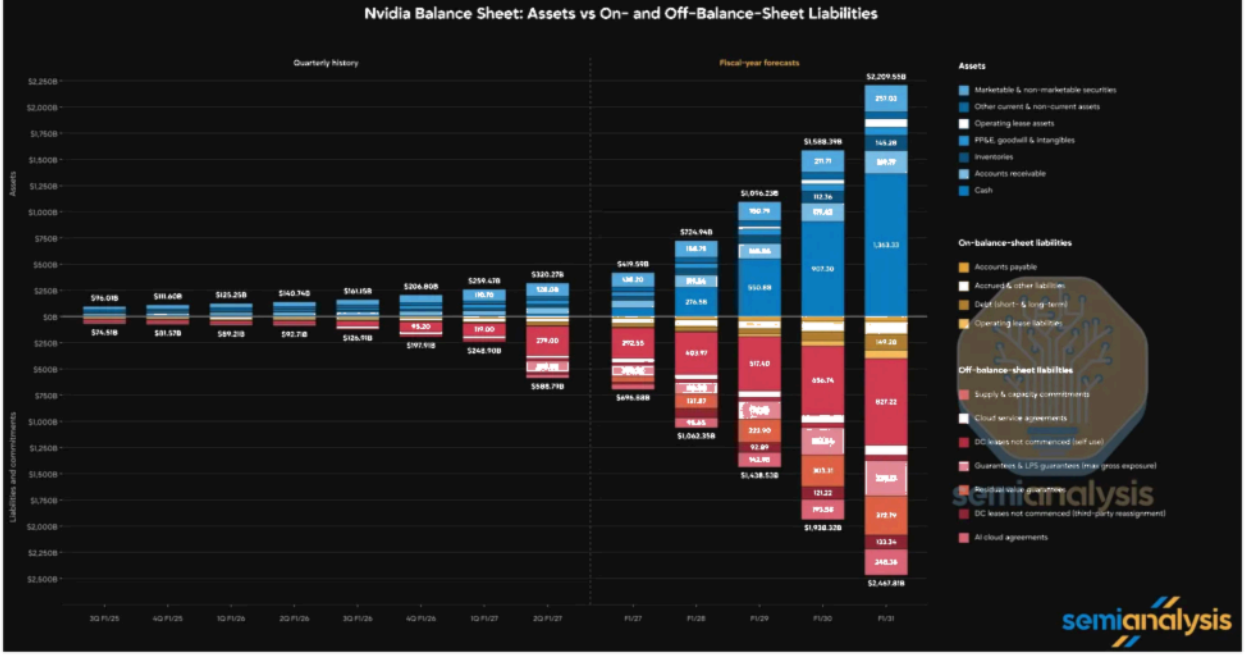
5300 亿美元的承诺使 910 亿美元的资产负债表内负债相形见绌，后者包括 334 亿美元的总债务，其中 250 亿美元为最近一个季度发行的优先票据。在资产方面，英伟达的现金余额在过去几个季度从 120 亿美元增至 220 亿美元，但其投资账簿（有价证券和无价证券）已从 F1/26 第二季度的 450 亿美元跃升至 F1/27 第二季度的 1280 亿美元。990 亿美元的股权账簿在上半年产生了 237 亿美元的收益，另有 250 亿美元的股权投资已承诺。

The question on everyone's mind is this: given Nvidia's on-balance sheet and off-balance sheet obligations, what is its capacity to meet all of these commitments in the case of an industry slowdown or downturn, and how much can Nvidia grow these obligations over time while still enjoying a margin of safety? How much support does the industry need and how much support **should** Nvidia offer?

所有人都在思考的问题是：考虑到英伟达的资产负债表内和表外义务，在行业放缓或低迷的情况下，它有多大能力兑现所有这些承诺？在仍享有安全边际的前提下，英伟达能在多长时间内将这些义务扩大到何种程度？这个行业需要多少支持，英伟达又应该提供多少支持？

In the chart below, we illustrate the history of these off-balance sheet items as well as our estimates of how much additional obligations Nvidia can reasonably support given its balance sheet and future cash flows. To be clear, this does not represent our base case or a definitive forecast for where we think Nvidia will go with its various backstops. Rather it focuses on the extent of Nvidia's ability to support obligations given its business profile, and we argue given this considerable firepower, that it **should** have the willingness to continue expanding these commitments significantly.

在下图中，我们展示了这些表外项目的历史情况，以及我们根据英伟达的资产负债表和未来现金流对其能够合理支持的额外义务所做的估算。需要明确的是，这并不代表我们的基准情景，也不是我们对英伟达各类兜底安排走向的确定性预测。相反，它关注的是英伟达基于其业务状况支持义务的能力范围，我们认为，鉴于其拥有如此可观的实力，它应当有意愿继续大幅扩大这些承诺。

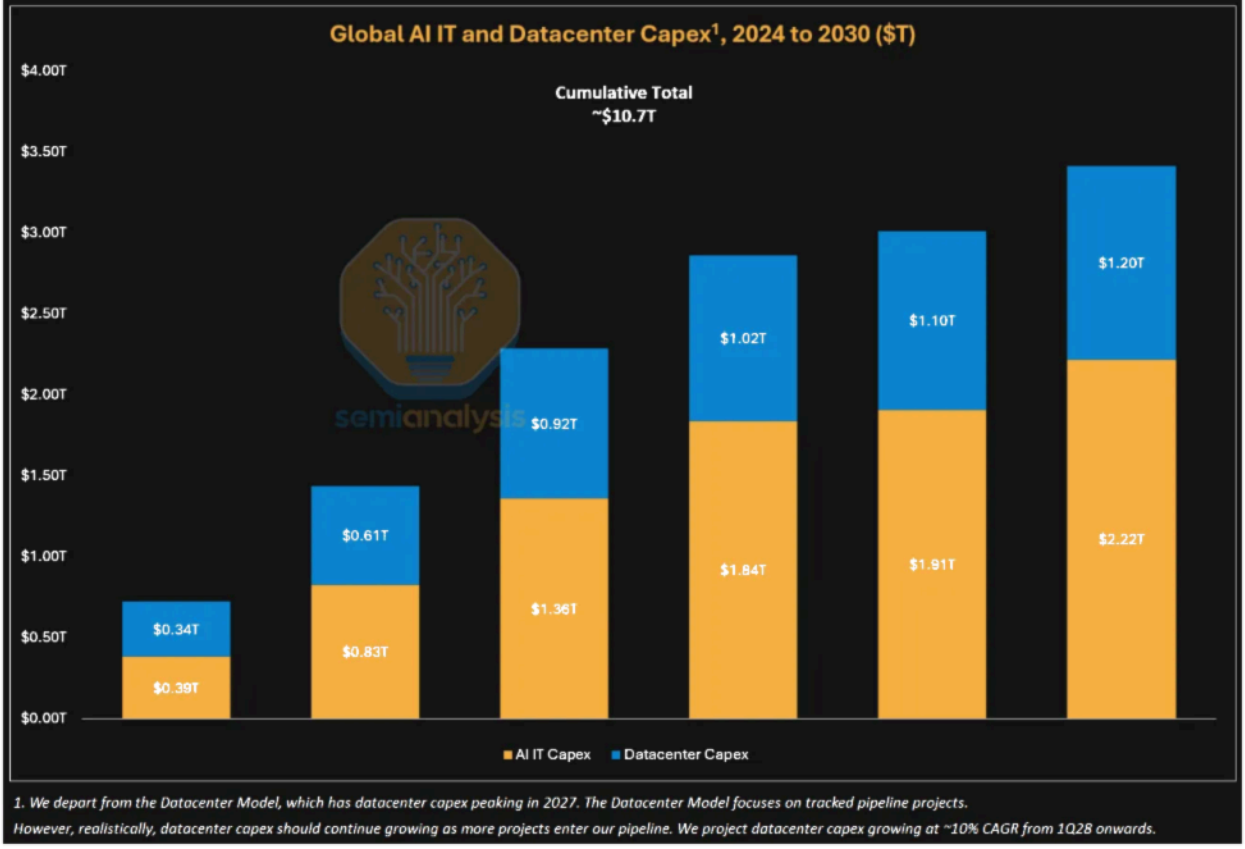


Source: SemiAnalysis AI Compute, Capital and Markets Model

来源：SemiAnalysis AI 算力、资本与市场模型

What is obvious from the diagram above is that Nvidia is a true behemoth when it comes to cash generation – consensus estimates have it generating ~$441B of EBITDA in F1/28, and this is why we reflect this via a growth of the cash balance to $1.4T by F1/31 – though in reality Nvidia will most likely reinvest this cash into various securities. These are huge numbers, yet the scale of overall AI investment is larger – we estimate ~$11T of cumulative capex from CY24 through CY29!. This note will explore how far Nvidia can take each form of support, and what impact this could make on the massive AI investment needs ahead of us.

从上图可以明显看出，英伟达在现金生成方面堪称真正的巨兽——市场一致预期其在 F1/28 将产生~$4410 亿的 EBITDA，正因如此，我们通过将现金余额到 F1/31 增长至 1.4 万亿美元来反映这一点——尽管实际上英伟达很可能会将这些现金再投资于各类证券。这些数字已经十分庞大，但整体 AI 投资的规模更为惊人——我们估计从 CY24 到 CY29 的累计资本支出将达到~$11 万亿！本报告将探讨英伟达在每一种支持形式上能走多远，以及这对我们面前庞大的 AI 投资需求可能产生何种影响。



Source: SemiAnalysis AI Compute, Capital and Markets Model

来源：SemiAnalysis AI 算力、资本与市场模型

Why all the Guarantees and Backstops?
为什么会有这么多担保和托底?

The mechanism that gives rise to these off-balance sheet guarantees and backstops is the same one we described in The Front End Gets Crowded (institutional article). The Gigascalers (Amazon, Microsoft, Google, Meta, Oracle) have been gatekeeping the investment grade capital that the AI buildout runs on and have benefitted tremendously from the high spread between offtake price they are being charged, and spot/short-term price that they are selling at as well as services that sit on top. In response, Nvidia has been manufacturing alternative credit anchors so Neoclouds and Neolabs can raise money without the Gigascalers. In these support arrangements, Nvidia sells GPUs at full margin on day one, then floors the buyer's revenue (in the case of the AI Cloud Partner (AICP) Program), or guarantees the buyer's landlord, or signs the lease itself, all so that non IG-rated operators can effectively borrow at IG

rated pricing.

产生这些表外担保和兜底机制的机理，与我们在《前端变得拥挤》（机构文章）中所描述的一致。超级规模企业（亚马逊、微软、谷歌、Meta、甲骨文）一直在把守 AI 建设所依赖的投资级资本，并从它们被收取的承购价与它们对外出售的现货/短期价格之间的高额价差以及叠加其上的服务中获益匪浅。作为回应，英伟达一直在制造替代性信用锚点，使 Neoclouds 和 Neolabs 能够在没有超级规模企业的情况下筹集资金。在这些支持安排中，英伟达第一天就以全额利润率出售 GPU，然后为买方的收入兜底（在 AI 云合作伙伴（AICP）计划的情况下），或为买方的房东提供担保，或自己签署租约，这一切都是为了让非投资级评级的运营商能够以投资级评级的定价有效借款。

Heads, demand holds and Nvidia wins twice, once on the GPU sale at full margin and again on the revenue share above the floor. **Tails, demand falls and the Neocloud makes no money but remains solvent, as the revenue floor is set high enough to repay lenders.** Nvidia's backstops and guarantees also act as a breakwater against further contagion as lenders have some shielding from a downturn. Yet how high and broad the breakwater that is the Nvidia backstop/guarantee depends on Nvidia's ability to meet these obligations.

正面情形下，需求保持稳定，英伟达两次获胜：一次是以全额利润率销售 GPU，另一次是从收入分成中获取超出底线的收益。反面情形下，需求下降，Neocloud 不赚钱但仍能维持偿付能力，因为收入底线设定得足够高，足以偿还贷款方。英伟达的兜底和担保也起到了防波堤的作用，抵御进一步的蔓延，因为贷款方在下行周期中有一定的保护。然而，英伟达兜底/担保这道防波堤有多高、有多广，取决于英伟达履行这些义务的能力。

Risk reward is asymmetric in Nvidia's favor as long as its balance sheet remains strong. Nvidia loses only if the backstopped Neoclouds fail to meet their lease and offtake commitments at the same time that Nvidia's own business and cash generation slow, degrading its ability to make good on these obligations. The two are correlated, since a Neocloud that cannot pay its lease is a Neocloud that has stopped buying GPUs. Only if a downcycle is steep enough to overwhelm Nvidia's ability to meet its off-balance sheet obligations, then it will be tails, we all lose.

只要英伟达的资产负债表保持强劲，风险回报就对其不对称地有利。英伟达只有在以下情况下才会受损：获得兜底的 Neocloud 无法履行其租赁和承购承诺，同时英伟达自身业务和现金创造放缓，削弱其履行这些义务的能力。两者是相关的，因为无法支付租金的 Neocloud 就是停止购买 GPU 的 Neocloud。只有当下行周期严重到足以压垮英伟达履行其表外义务的能力时，那才是反面情形——我们都输。

By our count, Nvidia today backstops ~6.5 GW of capacity, most of which is not yet built. Our datacenter model has Microsoft, Meta, AWS and Oracle leasing roughly 15 GW of third-party capacity in 2026 and we expect them to lease more than 35 GW by

2028. Each of those leases typically run fifteen to twenty years, and developers borrow against them with investment grade pricing. The Gigascalers are the implicit backstop of the buildout and are in aggregate far larger force than Nvidia's backstopped capacity, yet Nvidia's program gets the attention because it is new and because many investors have Cisco PTSD, contracted vicariously without an appreciation for the dissimilarities.

据我们统计，英伟达目前为约 1001#6.5 GW 的容量提供背书，其中大部分尚未建成。我们的数据中心模型显示，微软、Meta、AWS 和甲骨文将在 2026 年租赁约 15 GW 的第三方容量，我们预计到 2028 年它们将租赁超过 35 GW。每份租约通常为期十五到二十年，开发商以投资级定价以此借款。超大规模云厂商是这轮建设潮的隐性背书方，其总体规模远超英伟达所背书的容量，但英伟达的计划之所以备受关注，是因为它是新事物，而且许多投资者患有思科 PTSD，间接地签订了合约，却未理解其中的差异。

Nvidia Datacenter Guarantees and Credit Support

Deal name	Capacity (GW)	Nvidia obligation
PORTS-Pike - OpenAI / SB Energy	4.25	$105.00B guarantee cap Land, power and shell
Second frontier AI lab (Anthropic inferred)	2.00	Selective credit enhancement Amount not disclosed
Ward County - Nscale / Ionic Digital	0.23	$0.86B rent guarantee cap First five lease years
Total included	**6.48**	**$105.86B disclosed caps + unquantified credit support**
PORTS-Pike expansion option - excluded	3.80	Option only. No commitment included above.

Source: SemiAnalysis Capital and Markets Model

Source: SemiAnalysis AI Compute, Capital and Markets Model

来源：SemiAnalysis AI Compute, Capital and Markets Model

We will now explore how this support could evolve in detail – walking the six off-balance sheet obligation lines in the recent quarter's disclosure, plus a new one we have created to track residual value guarantees under the capital partnership.

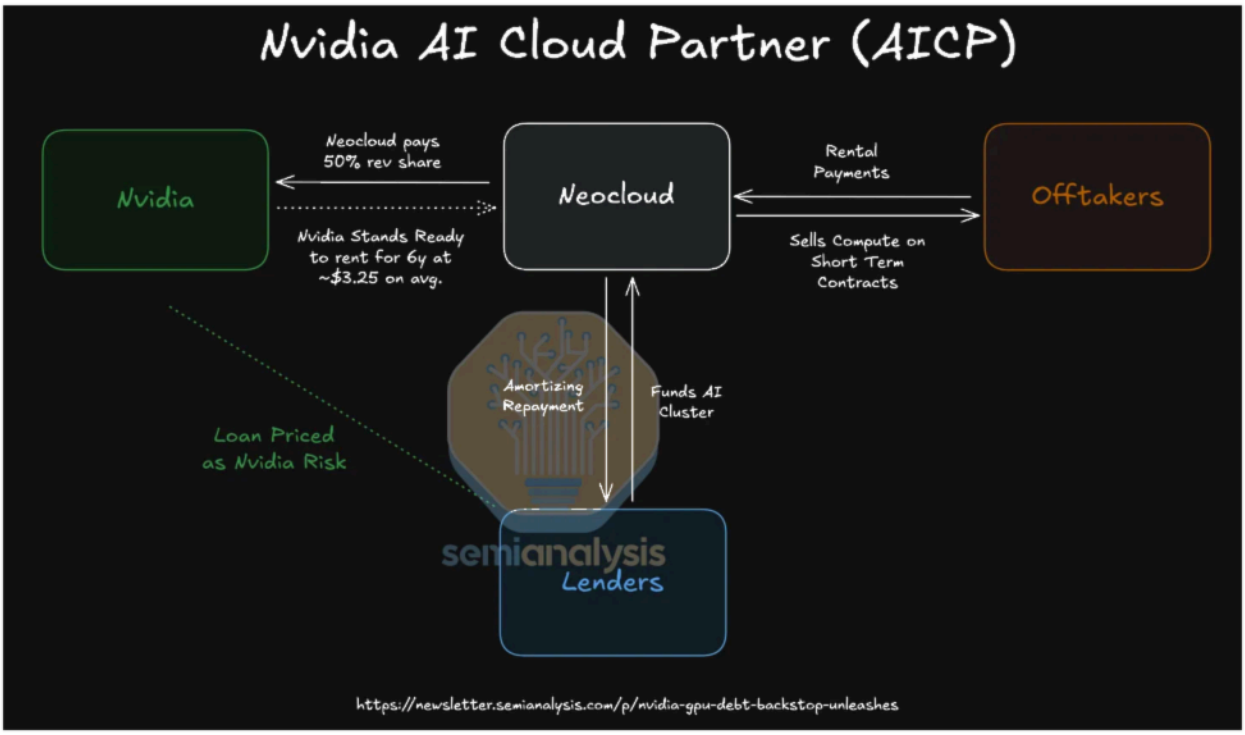
我们现在将详细探讨这种支持可能如何演变——逐一分析最近一个季度披露中的六项表外义务项目，以及我们新创建的一项用于追踪资本合作下残值担保的项目。

AI Cloud Agreements AI 云协议

This line item made its debut in the 2Q F1/27 earnings report released on August 26th, 2026 at $36B of aggregate obligation, spread across six years. It represents Nvidia's AI Cloud Partner (AICP) program, where Nvidia backstops GPU rental contracts for six years at a below market rate, approximately $2.35/hr/GPU on average for the GB300 vs the $4.50 to $4.60 range for 5y contracts, with the intent of making these AI clusters bankable. Neoclouds in this program would then seek to rent out compute on shorter term contracts to AI Natives and other tenants, but can always rent to Nvidia at any

time should these contracts fall through or not renew. We published an extensive analysis of this structure in a July 2026 Newsletter Article.

这一项目首次出现在 2026 年 8 月 26 日发布的 2027 财年第二季度财报中，总额为 360 亿美元的债务义务，分摊在六年内。它代表了英伟达的 AI 云合作伙伴（AICP）计划，英伟达以低于市场的价格为此计划中为期六年的 GPU 租赁合同提供兜底，GB300 的平均价格约为每小时每 GPU 2.35 美元，而五年期合同的价格区间为 4.50 至 4.60 美元，目的是让这些 AI 集群具备可融资性。参与该计划的新云服务商随后会寻求以更短期的合同将算力出租给 AI 原生企业和其他租户，但如果这些合同落空或不再续约，它们随时可以按兜底价格租给英伟达。我们在 2026 年 7 月的一篇通讯文章中对此结构发表了详尽分析。



Source: SemiAnalysis AI Compute, Capital and Markets Model

来源：SemiAnalysis AI Compute, Capital and Markets Model

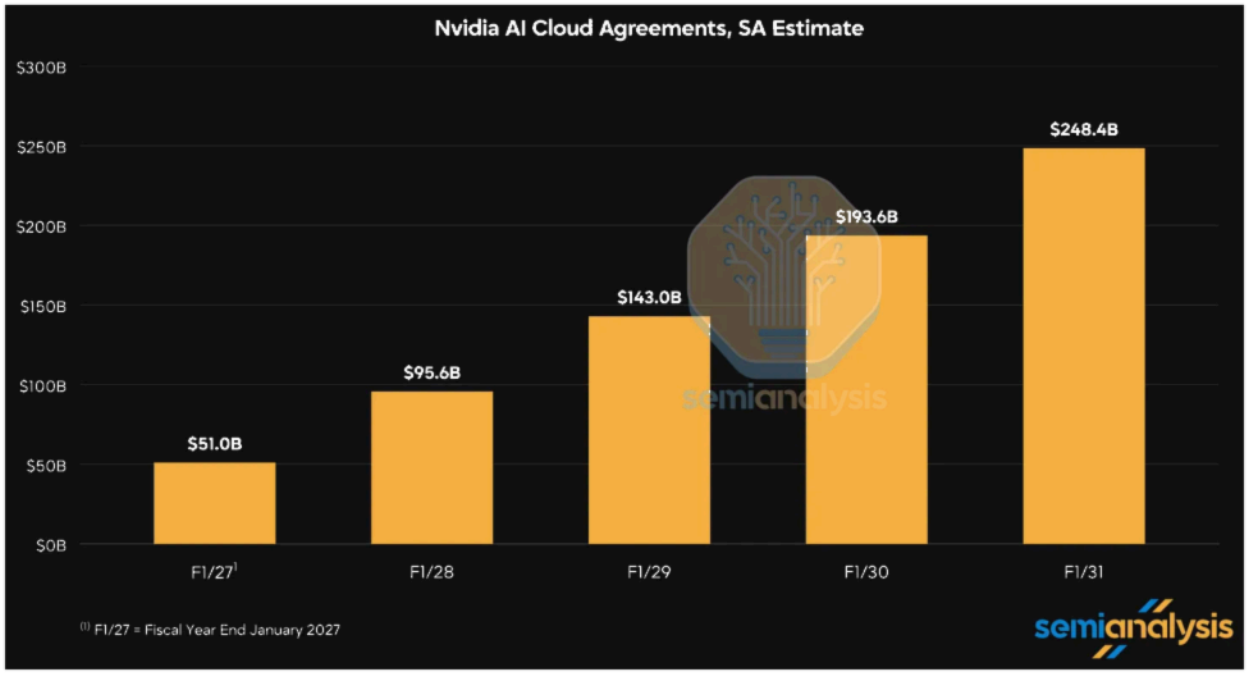
There are three deals announced so far under AICP: Firmus's 360MW deal in Batam corresponds to a $21.1B total obligation, the SharonAI deal means $4.2B of obligations and we estimate the GMI deal corresponds to $2.2B of obligations for Nvidia. We believe there are still a few deals that have been completed before Nvidia reportedly paused AICP two weeks ago and estimate this line item will close F1/27 at $51B.

迄今为止，在 AICP 框架下已宣布了三笔交易：Firmus 在巴淡岛的 360MW 交易对应 211 亿美元的总义务，SharonAI 交易意味着 42 亿美元的义务，我们估计 GMI 交易对应英伟达 22 亿美元的义务。我们认为，在据报道英伟达两周前暂停 AICP 之前，仍有几笔交易已经完成，并估计该科目将在 F1/27 结束时达到 510 亿美元。

We do understand that Nvidia is not advancing any further AICP deals at this time, but believe that they still wish to be supportive in one form or another. In this analysis, our forward modeling still assumes considerable growth in this line item to reflect our

view that Nvidia should offer support in some form, as well as to explore how far Nvidia could go in terms of explicit support.

我们确实了解到，英伟达目前不再推进任何进一步的 AICP 交易，但认为他们仍希望以某种形式提供支持。在本分析中，我们的前瞻性建模仍假设该科目将大幅增长，以反映我们认为英伟达应以某种形式提供支持的观点，同时也为了探究英伟达在明确支持方面能走多远。



Source: SemiAnalysis AI Compute, Capital and Markets Model

来源：SemiAnalysis AI Compute, Capital and Markets Model

Residual Value Guarantees under Capital Partnerships
资本合作下的残值担保

Earlier in August 2026, Nvidia announced its partnership with a number of private equity funds to mobilize over $500B of third-party capital to support the buildout of AI Clusters. Under this program, institutional investors are in the driver's seat and will evaluate and price each proposed project, with the only support from Nvidia being a residual value guarantee for up to 25% of a deal. In his X post detailing the program, Jensen Huang highlighted that this support would be limited and on a project-by-project basis. Though there are few details on what such a program could look like, we drew inspiration from the Google-Broadcom-Anthropic-Apollo TPU structure to

surmise how deals could be structured.

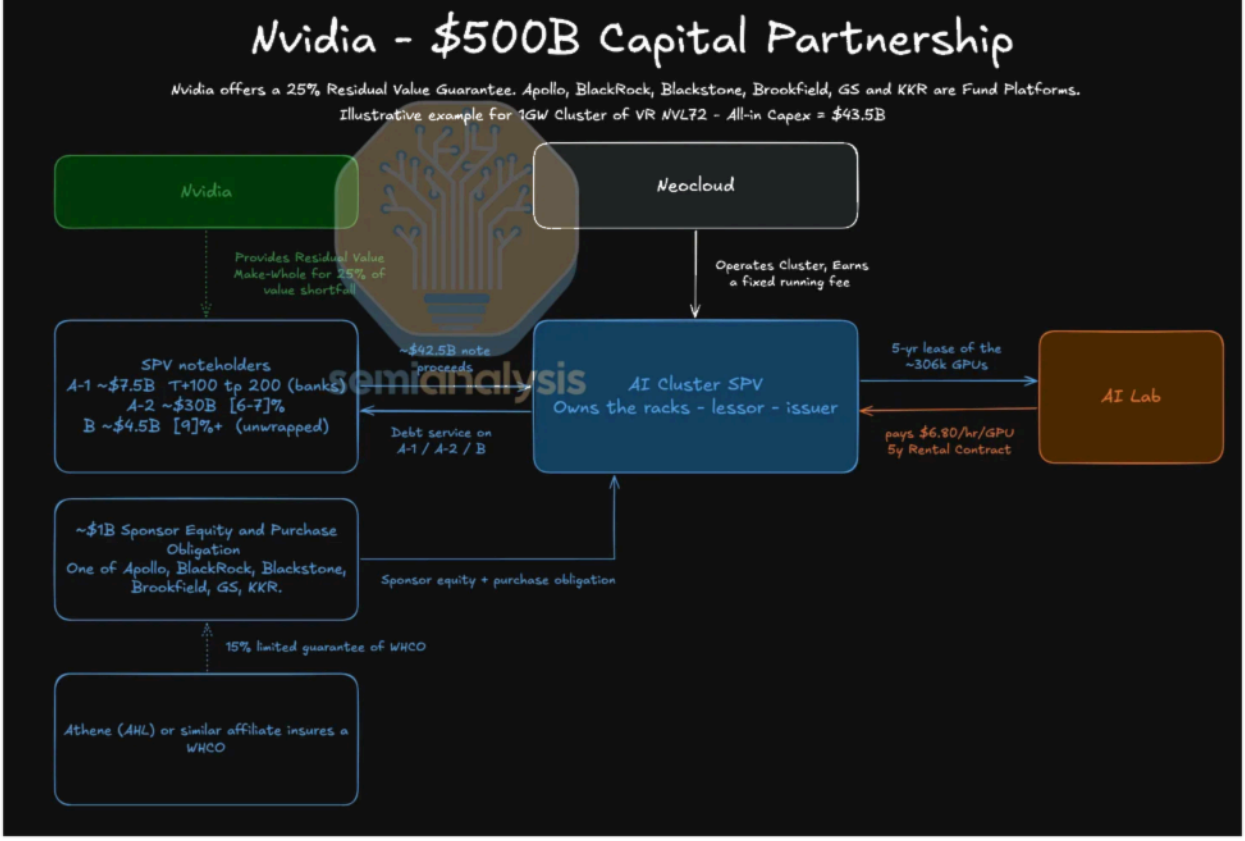
2026 年 8 月早些时候，英伟达宣布与多家私募股权基金合作，调动超过 5000 亿美元的第三方资本，以支持 AI 集群的建设。在该计划下，机构投资者占据主导地位，将对每个拟议项目进行评估和定价，而英伟达提供的唯一支持是对交易最高 25%的残值担保。黄仁勋在详细介绍该计划的 X 帖子中强调，这种支持将是有限的，并且逐个项目进行。尽管关于此类计划可能是什么样子鲜有细节，但我们从谷歌-博通-Anthropic-阿波罗的 TPU 结构中汲取灵感，以推测交易可能如何构建。

In the TPU backstop structure, if Anthropic is unable to continue to service lease payments to the TPU SPV, then the structure can be resolved by Broadcom assuming the lease or by the racks being sold. If the racks are sold, then the residual value guarantee takes effect, as Broadcom must then make the senior noteholders whole after such equipment sale – effectively plugging the residual value gap, if any. The deal gets better – Google will play its part by also backstopping rental payments to the various datacenter operators. The effect is that lenders to the TPU SPV are effectively taking Broadcom credit risk while lenders to the datacenters are taking Google credit risk.

在 TPU 兜底结构中，如果 Anthropic 无法继续向 TPU SPV 支付租赁款项，那么该结构可以通过博通承接租赁或出售机架来化解。如果机架被出售，则残值担保随之生效，因为博通必须在设备出售后使优先票据持有人获得全额偿付——实际上填补了残值缺口（如有）。这笔交易还有更妙之处——谷歌也将发挥作用，为各数据中心运营商的租金支付提供兜底。其效果是，TPU SPV 的贷款人实际上承担的是博通的信用风险，而数据中心的贷款人承担的则是谷歌的信用风险。

Nvidia's proposed structure would appear to wean investors away from this dual backstop as it not only reduces the residual value guarantee to only up to 25%, but it also is silent on any datacenter backstop.

英伟达提出的结构似乎会让投资者远离这种双重兜底，因为它不仅将残值担保降至最高仅 25%，而且对任何数据中心兜底只字未提。



Source: SemiAnalysis AI Compute, Capital and Markets Model

来源：SemiAnalysis AI Compute, Capital and Markets Model

We think that the funds could tranche the lending to create different pools of risk, with the first loss being taken by riskier equity/mezzanine style lending and the last loss taken by more senior creditors. Nvidia's 25% residual value guarantee would insert itself above the senior lenders but after the equity/mezzanine investors, adding a meaningful amount of crumple room to the structure, which could place the senior tranche at low enough risk of actual shortfall to attract conservative lenders like banks.

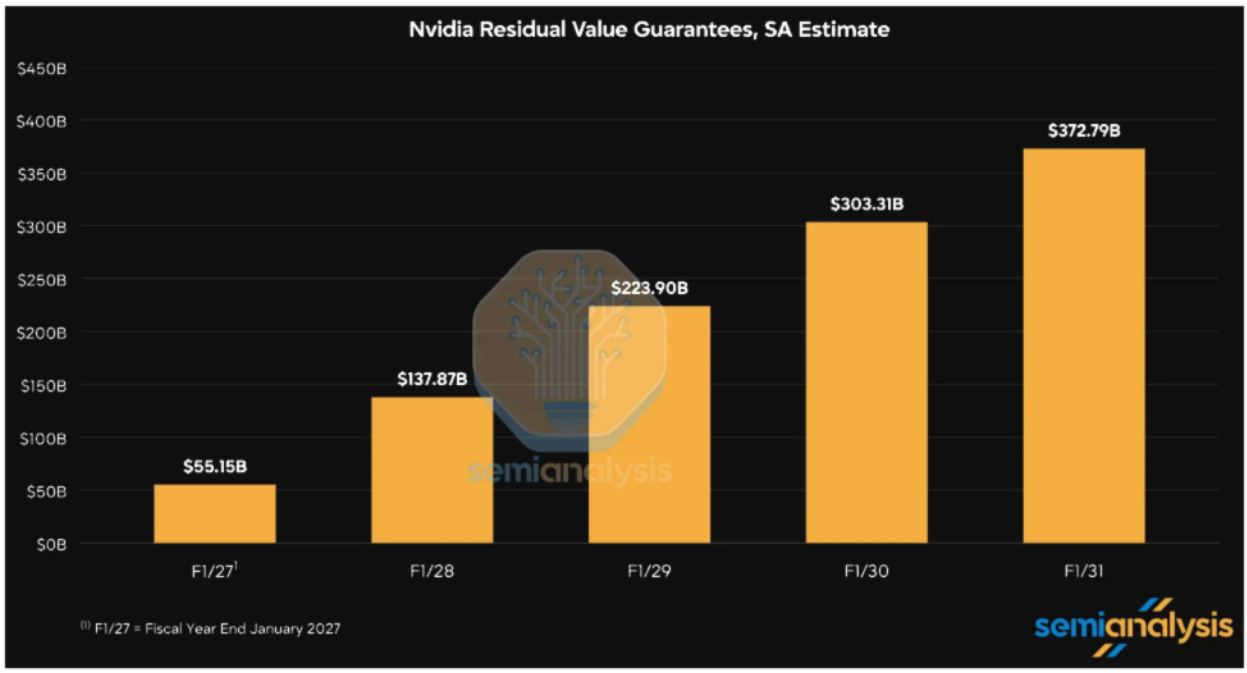
我们认为，基金可以将贷款进行分层，以创建不同的风险池，其中第一损失由风险较高的股权/夹层式贷款承担，最后损失由更优先级的债权人承担。英伟达 25%的残值担保将置于优先级贷款人之上，但在股权/夹层投资者之后，从而为整个结构增加可观的缓冲空间，这可能使优先级档的实际短缺风险低到足以吸引银行等保守型贷款人。

This structure can also provide the most bang for buck when it comes to Nvidia's off-balance sheet obligations. While the AICP creates $59B of obligations per GW of capacity enabled and the PORTS-Pike structure requires $25B of obligations per GW, the residual value structure would only require $9.4B of obligations per GW enabled, though the datacenter leg still needs to be solved for.

就英伟达的表外义务而言，这种结构还能实现最高的性价比。虽然 AICP 每启用 1GW 容量会产生 590 亿美元的义务，PORTS-Pike 结构每 GW 需要 250 亿美元的义务，但残值结构每启用 1GW 仅需 94 亿美元的义务，不过数据中心部分仍有待解决。

While Nvidia has said the program targets over $500B of capital, we think it will likely swell larger due to the strong compute demand. In the spirit of examining the full extent of Nvidia's maneuverability, we take an aspirational stance, assuming $2.5T of total funding under this program through F1/31, with the obligations under this line item ending F1/27 at $55B before growing to $373B by F1/31.

尽管英伟达表示该计划的目标是超过 5000 亿美元的资本，但我们认为由于强劲的计算需求，这一规模可能会进一步膨胀。本着审视英伟达可操作空间全貌的精神，我们采取一种理想化的立场，假设截至 F1/31 该计划下的总融资额达到 2.5 万亿美元，该项目的义务在 F1/27 结束时为 550 亿美元，到 F1/31 时增长至 3730 亿美元。



Source: SemiAnalysis AI Compute, Capital and Markets Model

来源：SemiAnalysis AI Compute、Capital and Markets Model

Cloud Service Agreements 云服务协议

Cloud Service Agreements are not a new line item, having first been disclosed in 3Q F1/23 at $1.6B before growing to ~$11B by 1Q F1/26 before jumping to $26B in 3Q F1/26. While AI Cloud Agreements represent Nvidia's backstops to external Neoclouds, Cloud Service Agreements primarily represent Nvidia's commitments related to its own in-house compute needs for model development and Continuous Integration/Continuous Development (CI/CD), though Nvidia has been known to resell this capacity at times.

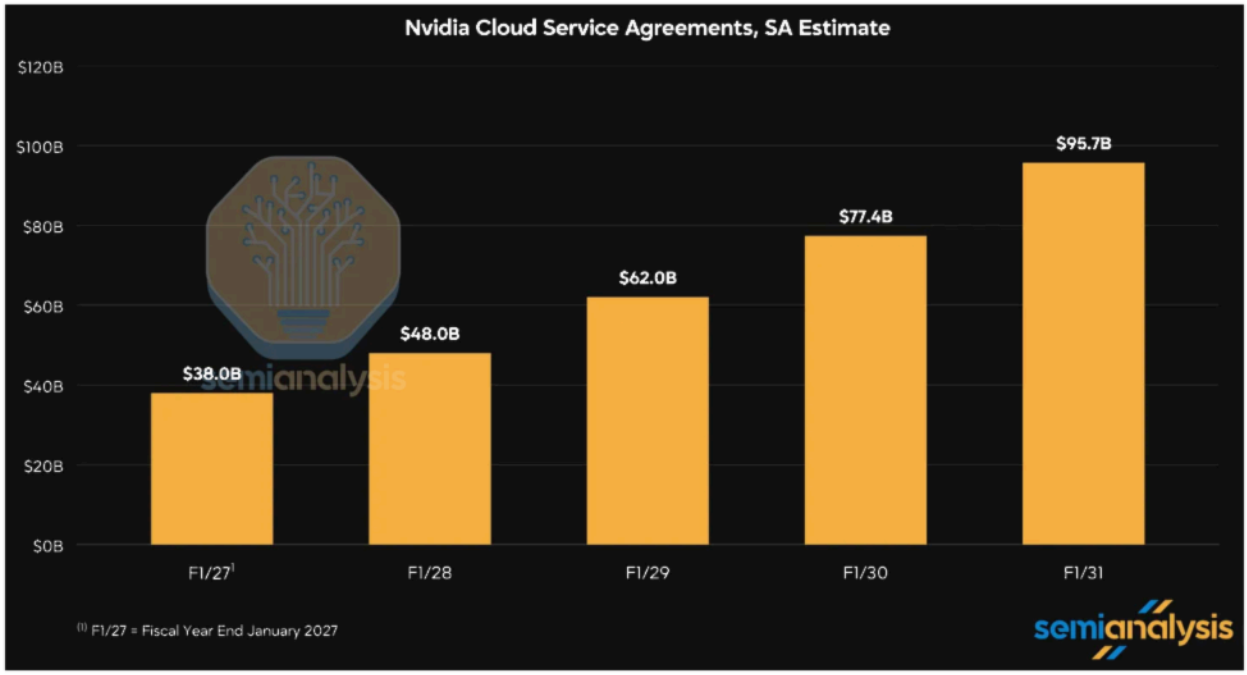
云服务协议并非新的项目，最初在 F1/23 第三季度披露时为 16 亿美元，到 F1/26 第一季度增长至~$110 亿美元，随后在 F1/26 第三季度跃升至 260 亿美元。AI 云协议代表英伟达对外部 Neocloud 的背书，而云服务协议则主要代表英伟达与其自身内部计算需求相关的承诺，用于模型开发和持续集成/持续开发（CI/CD），不过英伟达有时也会转售这部分算力。

Among the $29B of cloud service agreements listed, Nvidia has a $6.3B agreement thru 2032 with CoreWeave and we think the balance of the agreements are partially accounted for by ~360MW of compute in Batam, Indonesia via Oracle, ~20MW of capacity at YTL in Malaysia, 10-20k GPUs rented from CoreWeave, and a few other Oracle facilities in the US. Our AI Datacenter Model has more details on the exact facilities Nvidia is an end user at.

在列出的 290 亿美元云服务协议中，Nvidia 与 CoreWeave 签订了一份到 2032 年价值 63 亿美元的协议，我们认为其余协议的余额部分由以下构成：通过 Oracle 在印度尼西亚巴淡岛约 1001#360MW 的计算容量、在马来西亚 YTL 的 1002#20MW 容量、从 CoreWeave 租用的 1 万至 2 万块 GPU，以及美国的其他几个 Oracle 设施。我们的 AI 数据中心模型对 Nvidia 作为最终用户所在的具体设施有更详细的说明。

We estimate that these cloud service agreements will exit F1/27 at $38B and there is capacity to grow them to $96B by F1/31.

我们估计这些云服务协议将在 F1/27 退出时达到 380 亿美元，并且到 F1/31 有容量将其增长至 960 亿美元。



Source: SemiAnalysis AI Compute, Capital and Markets Model

来源：SemiAnalysis AI Compute, Capital and Markets Model

Datacenter leases yet to commence for third-party reassignment

待开始的第三方转租数据中心租赁

We think datacenter leases signed for reassignment become a large and fast-growing line. In Datacenter Backstop Wars (March 2026), we said Nvidia would lease multiple gigawatts in 2026, and indeed we now count about 1.2 GW signed year to date for both

its own use and for third-party reassignment.

我们认为，为转租而签署的数据中心租约正成为一条规模庞大且快速增长的业务线。在《数据中心兜底战争》（2026 年 3 月）中，我们曾指出英伟达将在 2026 年租赁数吉瓦的容量，而事实上，截至目前我们已统计到约 1.2 吉瓦的签约量，既用于自身使用，也用于第三方转租。

Nvidia Direct Datacenter Leases: Signed and Held (as of Sep 2026)

Landlord	Site	Capacity (MW)	Ready for service	Lease term	Nvidia commitment	10-Q line item	Signed	Source
Hut 8	Beacon Point Bldg 1, Caldwell TX	352	3Q27	15 years, 3% escalator	$9.80B	Leases for reassignment	Jul 2026	Hut 8 8-K; tenant per WSJ, FT
Hut 8	Beacon Point Bldg 2, Caldwell TX	352	2Q28	15 years, 3% escalator	$9.80B	Leases for reassignment	Jul 2026	Hut 8 8-K; tenant per WSJ, FT
Tract (Fleet Datacenters)	Peru Drive, McCarran NV	400	4Q27 to 2Q28	197 months	$12.00B	Own-use leases	2026	SA Datacenter Model; term per press
Vantage	100 Electric Ave, McCarran NV	224	2027 to 2030	n.a.	$6.72B	Own-use leases	2026, first 64MW	SemiAnalysis Datacenter Model
Digital Realty	Manassas VA	96	Live, full 2027	n.a.	$2.88B	Own-use leases	Before 2026	SemiAnalysis Datacenter Model
Mega Data Centres	Ein HaEmek, Israel	64	2Q27	n.a.	$1.92B	Own-use leases	2026	SemiAnalysis Datacenter Model
Aligned	Hillsboro OR	36	2026	n.a.	$1.08B	Own-use leases	Before 2026	SemiAnalysis Datacenter Model; multitenant building
Total		**1,524**			**$44.20B**	$45.00B filed ($20.00B + $25.00B)	1,232 MW (1.23 GW) signed in 2026	

Source: SemiAnalysis Datacenter Model, Hut 8 8-K List 2026), company filings, Tenant at Beacon Point per WSJ and FT.

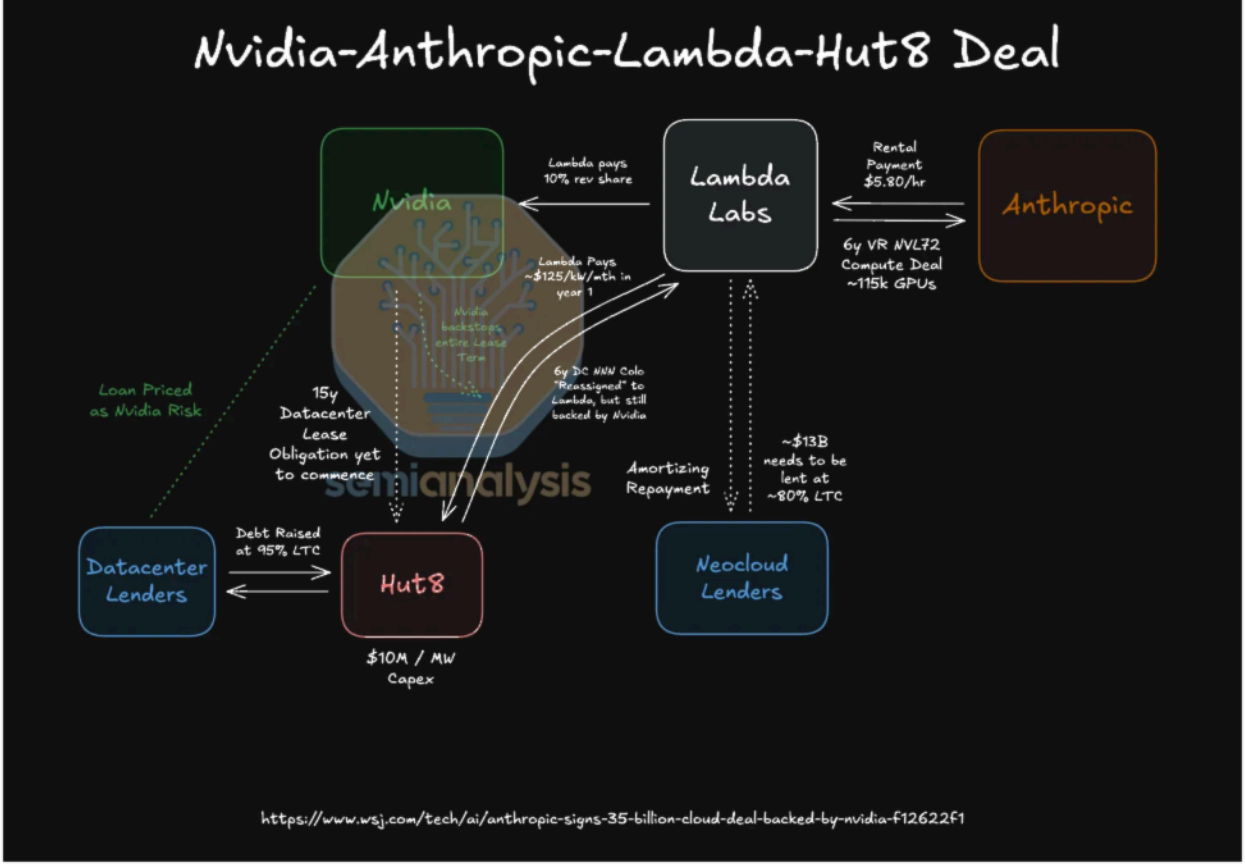
Own-use estimates use $30M per MW. The 520MW total implies $24.60B, approximately the $25B filed line.

Source: SemiAnalysis AI Datacenter Model

来源：SemiAnalysis AI 数据中心模型

The reassignment structure is effectively a credit substitution. A datacenter gets financed against Nvidia as an AA rated offtaker, then the lease is handed to a Neocloud that buys and operates Nvidia GPUs. Hut 8 funded the first Beacon Point building with $4.25B of senior secured notes at 6.129%, rated Baa2 and amortizing from 2030, which no Neocloud could price on its own name or for that term. Developers want both an investment grade tenant and a long lease, making the datacenter leg the hardest leg to solve for within the AI Project Trinity that was described in Nvidia GPU Debt Backstop Unleashes the AI Project Trinity (July 2026). Nvidia supplies both, and keeps years seven through fifteen after Lambda's term to re-let or use.

转租结构实质上是一种信用替代。数据中心以英伟达作为 AA 级承租方获得融资，随后租约被移交给一家购买并运营英伟达 GPU 的 Neocloud。Hut 8 以 42.5 亿美元、利率 6.129%的高级担保票据为 Beacon Point 首栋建筑提供了资金，该票据评级为 Baa2，从 2030 年开始摊销——这是任何 Neocloud 都无法以自身名义或以该期限定价的。开发商既想要投资级租户，又想要长期租约，这使得数据中心这一环节成为《英伟达 GPU 债务兜底释放 AI 项目三位一体》（2026 年 7 月）中所述的 AI 项目三位一体中最难解决的环节。英伟达两者兼备，并在 Lambda 的租期结束后保留第七至第十五年的使用权，以便重新出租或自用。



Source: SemiAnalysis AI Compute, Capital and Markets Model

来源：SemiAnalysis AI 算力、资本与市场模型

We think that this deal comes with a revenue share to Nvidia in order to compensate it for risk taken and the implicit use of its balance sheet. This seems fair enough – after all, we are by no means advocating for communism here. Even after reassignment to Lambda, we don't think Nvidia fully offloads the risk. Lenders that bought Baa2 paper on an AA tenant will not consent to a B-rated one, so Nvidia likely stays primary obligor until the project significantly de-levers and/or clears a DSCR test.

我们认为，这笔交易附带了对英伟达的收入分成，以补偿其承担的风险以及对其资产负债表的隐性使用。这似乎足够公平——毕竟，我们绝非在此鼓吹共产主义。即便在重新分配给 Lambda 之后，我们也不认为英伟达完全卸下了风险。那些基于 AA 级租户买入 Baa2 级票据的贷款方不会同意接受一个 B 级租户，因此英伟达很可能仍是主要债务人，直到该项目大幅去杠杆化和/或通过 DSCR 测试。

The fifteen year lease against a six year offtake gets described as a duration mismatch, but we would frame it as optionality. At year six, Nvidia can re-tenant with upgraded GPUs and touch only the power equipment, or let the operator renew and run the existing hardware at spot or short-term prices. Both paths are worth more in a world where interconnect queues run four to seven years.

十五年租约对应六年承购协议被描述为期限错配，但我们更愿意将其视为一种选择权。到第六年，英伟达可以更换租户并升级 GPU，且只需改动电力设备，或者让运营商续约并以现货或短期价格运行现有硬件。在互联排队需要四到七年的世界里，这两条路径都更有价值。

The scale of the above deal is small in the grand scheme of things. 704 MW is one campus. Most of the GWs coming online over the next five years are neither facilitated nor backstopped by Nvidia, and the Gigascalers' implicit backstops are far larger. Microsoft, Meta, Amazon, Oracle and Google lease ~39 GW of third-party capacity by 2028 against Nvidia's 1.5 GW as per our datacenter model.

上述交易的规模从全局来看并不大。704 兆瓦只是一个园区。未来五年内上线的大部分吉瓦既非由英伟达促成，也非由其兜底，而超大规模云厂商的隐性兜底规模要大得多。根据我们的数据中心模型，到 2028 年，微软、Meta、亚马逊、甲骨文和谷歌将租赁约 1001 吉瓦的第三方容量，而英伟达仅为 1.5 吉瓦。

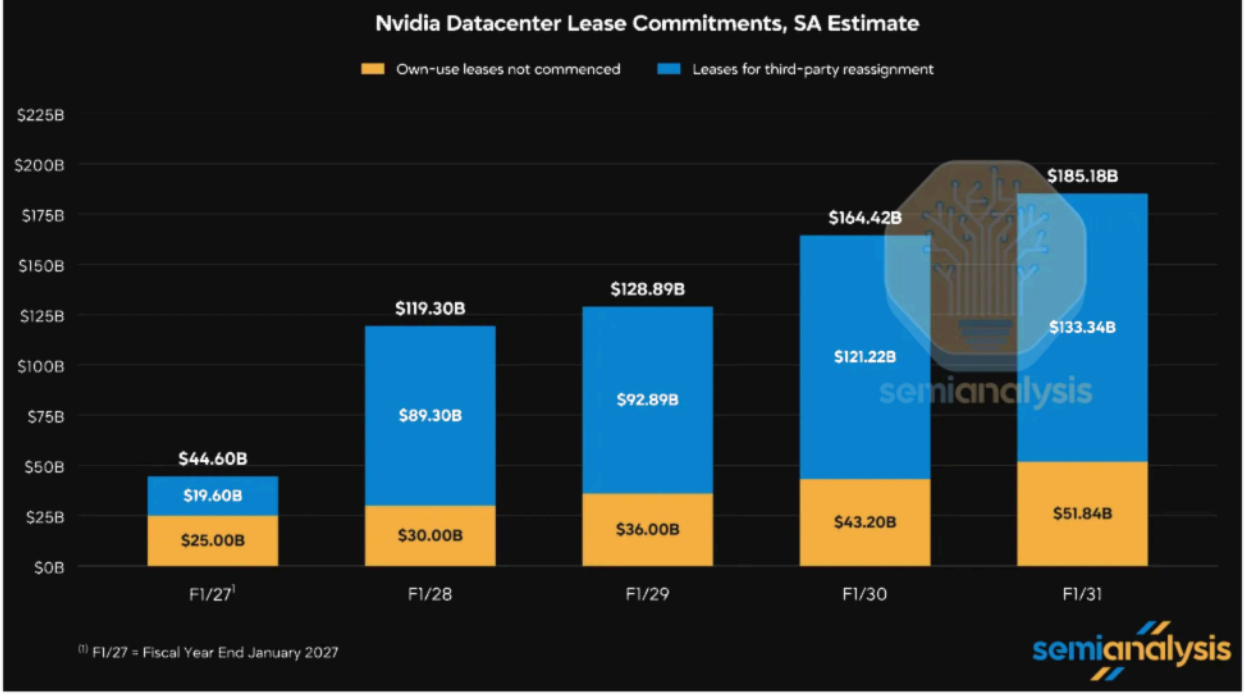
Datacenter Leases Not Commenced
尚未起租的数据中心租赁

Among the leases we outline in the table in the prior section, only the two at Hut 8 are for third-party re-assignment. Hut 8's July 8-K shows these two 352 MW leases at Beacon Point worth $9.8B each over fifteen years for $19.6B in total lease payments.

在上一节表格中列出的租赁中，只有 Hut 8 的两笔涉及第三方转租。Hut 8 的 7 月 8-K 文件显示，Beacon Point 的这两笔 352 兆瓦租赁每笔价值 98 亿美元，租期十五年，租赁付款总额为 196 亿美元。

The rest of the leases in the table will be occupied by Nvidia for its own use, and the value of these commitments sit in the separate $25B "Datacenter Leases Not Commenced" line item in Nvidia's disclosure. These leases include: Tract's 400 MW at McCarran, Nevada, the first 64 MW of Vantage's campus, and Mega's 64 MW in Israel. Two older own-use leases, Digital Realty in Virginia at 96 MW, and Aligned in Oregon at 36 MW, takes Nvidia's total as a tenant to 1.5 GW.

表格中其余的租赁将由英伟达自用，这些承诺的价值体现在英伟达披露中单独的 250 亿美元"尚未起租的数据中心租赁"项目中。这些租赁包括：Tract 位于内华达州麦卡伦的 400 兆瓦、Vantage 园区的首批 64 兆瓦，以及 Mega 位于以色列的 64 兆瓦。两笔较早的自用租赁——弗吉尼亚州 Digital Realty 的 96 兆瓦和俄勒冈州 Aligned 的 36 兆瓦——使英伟达作为租户的总量达到 1.5 吉瓦。



Source: SemiAnalysis AI Compute, Capital and Markets Model

来源：SemiAnalysis AI 算力、资本与市场模型

Guarantees and land, power and shell (LPS) guarantees
担保与土地、电力及壳公司（LPS）担保

This line moved from $3.5B to $108.5B in one quarter, and we think it is where the program is going. Ionic Digital's S-1 shows Nscale on a 126 month triple net lease for 234 MW of capacity, with Nvidia guaranteeing the first five years of rent up to $860.3M, and Nscale's parent guaranteeing from year six, with Nvidia taking $60M of Nscale warrants as consideration. About $2.6B of the $3.5B from last quarter still has no name against it.

这一项目在一个季度内从 35 亿美元跃升至 1085 亿美元，我们认为这正是该计划的发展方向。Ionic Digital 的 S-1 文件显示，Nscale 签订了一份为期 126 个月的三重净租赁合同，涉及 234 兆瓦的容量，其中英伟达担保前五年的租金，最高达 8.603 亿美元，Nscale 的母公司从第六年起提供担保，英伟达以 6000 万美元的 Nscale 认股权证作为对价。上季度 35 亿美元中约有 26 亿美元目前仍无明确对应方。

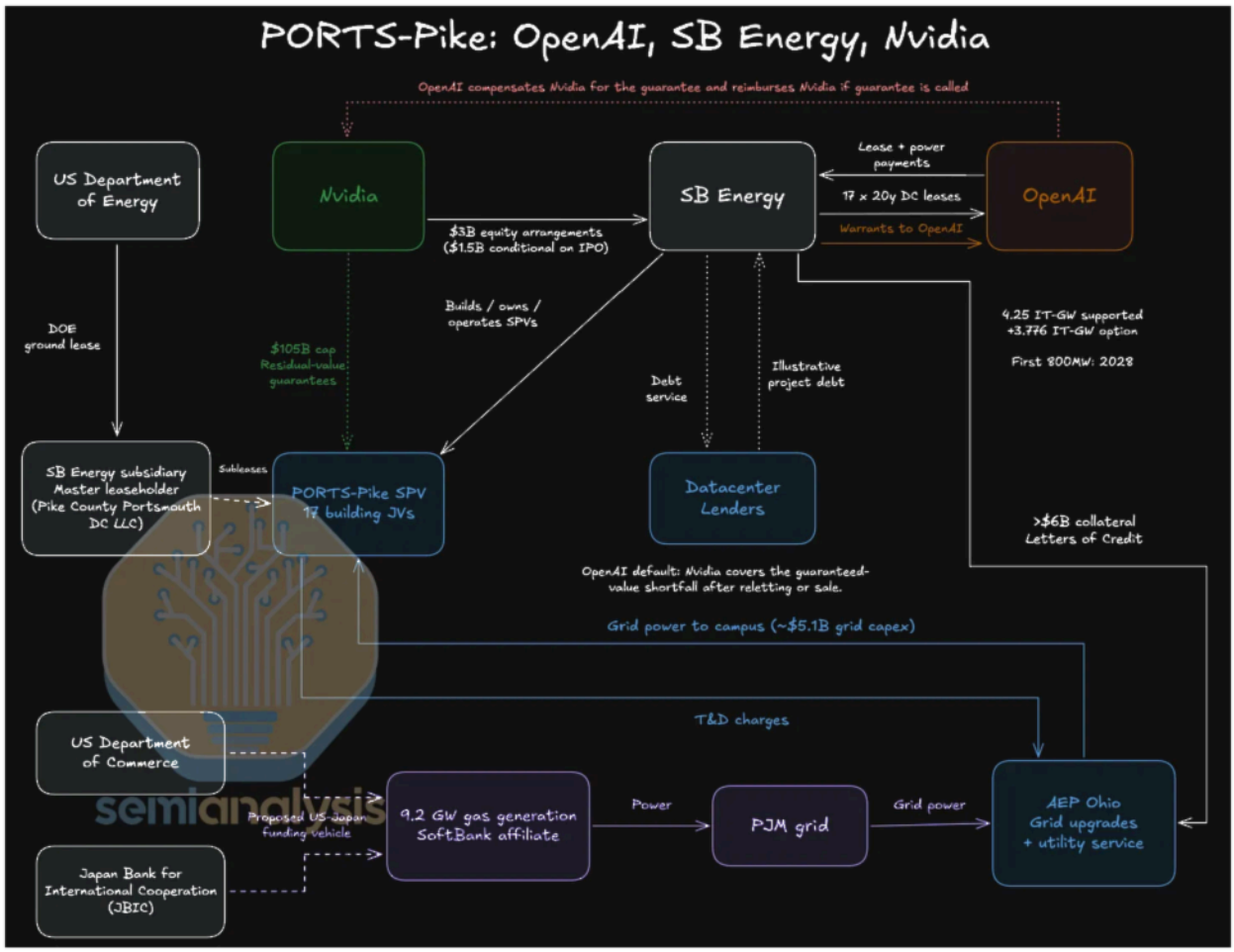
The PORTS-Pike deal added $105B of obligations disclosed in the most recent quarter, and it functions in a similar way, with Nvidia guaranteeing the value of a datacenter lease, but at a much larger scale. The deal includes credit support on land, power and shell for approximately 4.25 GW at SB Energy's PORTS-Pike campus in Ohio, capped at $105B against twenty year leases to an OpenAI affiliate, such support becoming effective in phases as buildings reach ready for service with the first expected in fiscal 2029. Exposure declines as OpenAI pays and terminates altogether if OpenAI reaches a satisfactory credit rating. The site will exclusively host Nvidia infrastructure, and Nvidia holds an option to backstop a further 3.8 GW in a second phase, and if Nvidia declines to backstop this phase, then OpenAI has to find an alternative guarantor with

an A- credit rating or better. The first phase prices in $24.7B/GW of credit support, so exercising the full option on the same terms would add about $93B and take the PORTS cap to roughly $200B.

PORTS-Pike 交易在最近一个季度新增了 1050 亿美元的披露义务，其运作方式类似，由英伟达为数据中心租赁的价值提供担保，但规模要大得多。该交易包括为 SB Energy 位于俄亥俄州的 PORTS-Pike 园区约 4.25 GW 的土地、电力和外壳提供信用支持，以对 OpenAI 关联公司二十年租约为担保对象，上限为 1050 亿美元，此类支持随着建筑达到可投入服务状态而分阶段生效，首批预计在 2029 财年。随着 OpenAI 付款，风险敞口逐步下降，若 OpenAI 达到令人满意的信用评级，则完全终止。该站点将专门承载英伟达基础设施，英伟达持有在第二阶段为另外 3.8 GW 提供后备支持的选项，如果英伟达拒绝为这一阶段提供后备支持，那么 OpenAI 必须找到信用评级为 A-或更高的替代担保方。第一阶段定价为每 GW 247 亿美元的信用支持，因此按相同条款行使全部选项将增加约 930 亿美元，使 PORTS 上限达到约 2000 亿美元。

We diagram the structure of the deal below, but fully unpacking the entire structure is another article onto itself!

我们在下方绘制了该交易的结构图，但完全拆解整个结构本身就需要另一篇文章！



Source: SemiAnalysis AI Compute, Capital, and Markets Model

来源：SemiAnalysis AI 算力、资本与市场模型

PORTS-Pike uses Nvidia's credit to help turn OpenAI's demand for compute into a campus that is financeable. SB Energy develops the roughly 8GW campus through 17 building-level landlord subsidiaries, each with a separate 20-year triple-net lease to an OpenAI affiliate. From a financing perspective, these project SPVs give lenders a defined set of assets and lease receipts to underwrite, allowing financing to follow through to the construction phase.

PORTS-Pike 利用英伟达的信用，将 OpenAI 的算力需求转化为一个可融资的园区。SB Energy 通过 17 个建筑级房东子公司开发约 8GW 的园区，每个子公司与 OpenAI 关联方签订一份独立的 20 年三重净租赁协议。从融资角度看，这些项目特殊目的实体为贷款方提供了一组明确的资产和租赁收入用于承销，使融资能够顺利推进至建设阶段。

If OpenAI defaults on the lease, Nvidia faces a defined shortfall under the guarantee, with recoveries from replacement tenants or a sale reducing its exposure. Nvidia also has options to assume leases and arrange alternative uses for the capacity. OpenAI also compensates Nvidia for the guarantee though the terms and amount of the compensation structure is still unknown.

如果 OpenAI 违约租赁协议，英伟达将面临担保项下确定的资金缺口，而通过替换租户或出售资产获得的回收可减少其风险敞口。英伟达还可选择承接租赁并为该算力容量安排替代用途。OpenAI 还就担保向英伟达提供补偿，但补偿结构的条款和金额目前尚不清楚。

To further incentivize the counterparties within the deal structure, Nvidia has agreed to invest $3B into SB Energy, including $1.5B conditional on its IPO, while OpenAI receives SB Energy warrants through the broader commercial relationship.

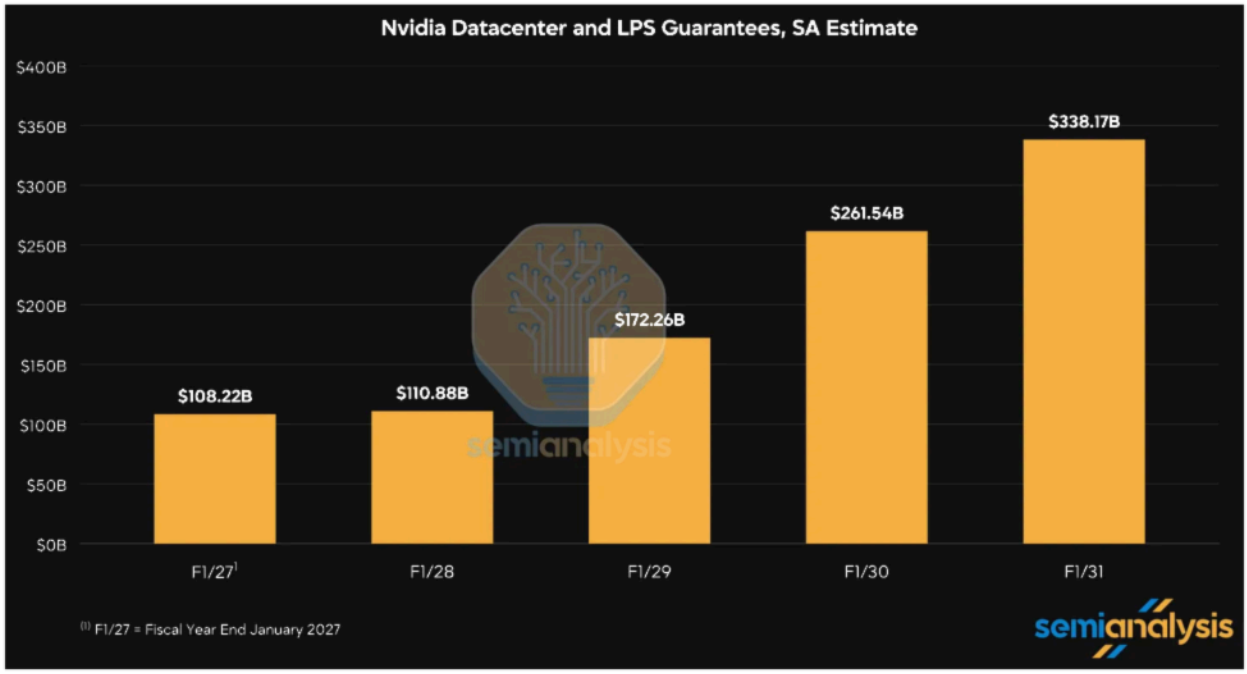
为进一步激励交易结构中的各交易对手方，英伟达已同意向 SB Energy 投资 30 亿美元，其中 15 亿美元以其 IPO 为条件，而 OpenAI 则通过更广泛的商业关系获得 SB Energy 的认股权证。

Nvidia estimates that PORTS-Pike could generate $150-200B of revenue per hardware generation, giving it a substantial incentive to provide the guarantee. On a gross commitment basis, LPS guarantees also support more than twice the capacity per dollar as AICP – approximately $24.7M/MW of maximum exposure vs. ~$58.6M/MW for AICP. LPS guarantees address the datacenter financing constraint, the hardest leg of the AI Project Trinity.

Nvidia 估计，PORTS-Pike 每代硬件可产生 1500 至 2000 亿美元的收入，这为其提供担保带来了巨大的动力。按总承诺计算，LPS 担保每美元所支持的容量也是 AICP 的两倍以上——最大风险敞口约为每兆瓦 2470 万美元，而 AICP 为每兆瓦 5860 万美元。LPS 担保解决了数据中心融资约束，这是 AI 项目三合一中最艰难的一环。

Our forecast combines new LPS guarantees, third-party reassignment leases transferring into the guarantee line when they commence, and we assume Nvidia exercises their option to guarantee the remaining 3.75 GW of PORTS. Together, these assumptions take maximum exposure under datacenter and LPS guarantees from $108.5B today to roughly $338B by F1/31.

我们的预测综合了新的 LPS 担保、第三方转租在开始时转入担保额度，并且我们假设 Nvidia 行使选择权，为 PORTS 剩余 3.75 吉瓦提供担保。综合这些假设，数据中心和 LPS 担保下的最大风险敞口将从目前的 1085 亿美元增至 F1/31 时的约 3380 亿美元。



Source: SemiAnalysis AI Compute, Capital and Markets Model

来源：SemiAnalysis AI Compute, Capital and Markets Model

Putting Nvidia's Backstops in Perspective
正确看待 Nvidia 的担保

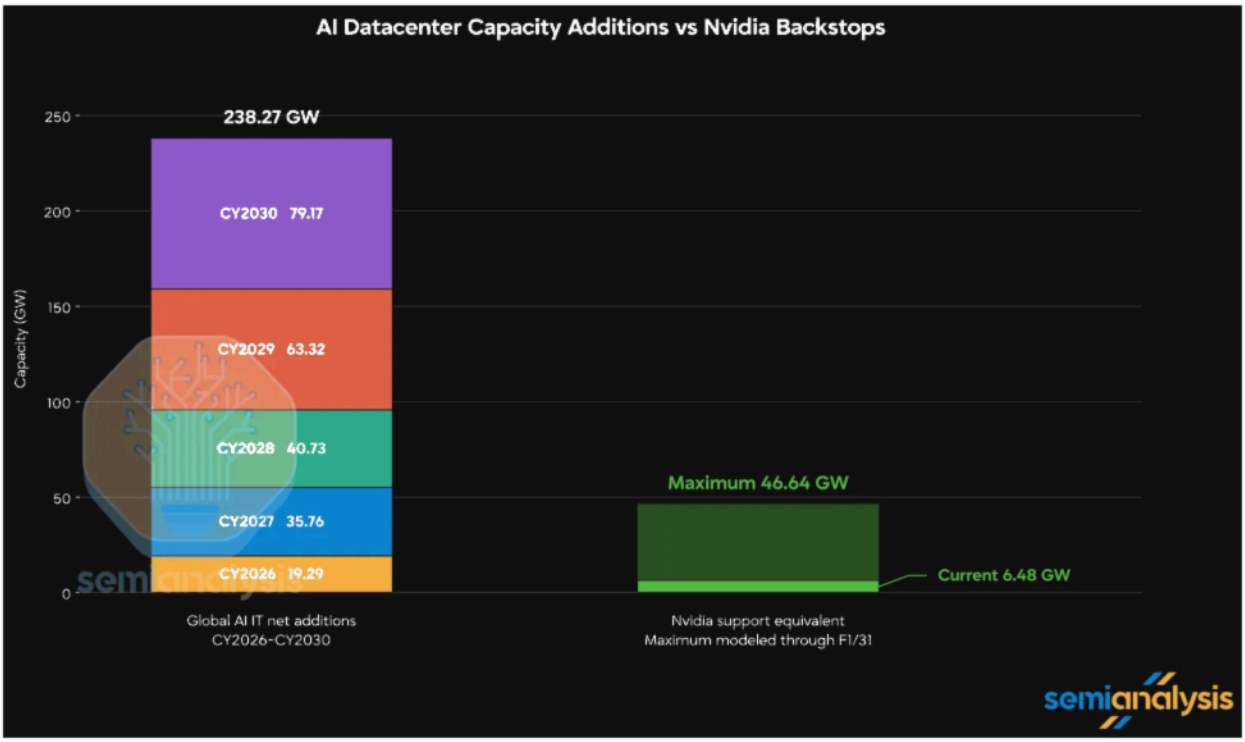
We believe the circular financing concerns overstate Nvidia's role in funding the overall AI buildout. The ~6.5GW in our current backstop count is equivalent to just under 3% of the approximately 240GW of net growth in global AI IT capacity forecast by our Datacenter Model between year-end 2025 and year-end 2030.

我们认为，关于循环融资的担忧夸大了英伟达在为整个人工智能基础设施建设提供资金方面的作用。在我们当前支撑统计中的~6.5GW 仅相当于我们数据中心模型预测的 2025 年底至 2030 年底全球人工智能 IT 净容量增长约 240GW 的不到 3%。

Our expanded support scenario models a maximum potential gross backstop approximately 46.6 GW, a large amount of capacity, though 28.2 GW of this under the AI Capital Partnership, with only a 25% residual value guarantee supported lending. To align the comparison with the buildout through F1/31, we

include the opening commitments and new commitments through F1/29, allowing two years for deployment. This 46.6 GW represents less than ~20% of total planned AI IT capacity additions through CY2030, and while it definitely can move the needle, Nvidia clearly cannot hold up the entire world on its own.

我们的扩展支持情景模拟了约 46.6GW 的最大潜在总支撑容量，这是一个相当大的容量，尽管其中 28.2GW 将属于人工智能资本合作伙伴关系，且受支持贷款仅有 25%的残值担保。为使比较与截至 F1/31 的建设进度保持一致，我们纳入了期初承诺和截至 F1/29 的新增承诺，留出两年部署时间。这 46.6GW 占截至 CY2030 计划新增人工智能 IT 总容量的不到~20%，虽然它确实能够产生影响，但英伟达显然无法独自支撑整个世界。



Source: SemiAnalysis AI Datacenter Model, SemiAnalysis AI Compute, Capital and Markets Model

来源：SemiAnalysis 人工智能数据中心模型，SemiAnalysis 人工智能计算、资本与市场模型

This is also a clear illustration of why the AI industry is simply too big for Nvidia to fund the overall buildout through circular financing. The ~6.5 GW in our current backstop tally corresponds to approximately 2.5-3M GB300-equivalent GPUs, about 25-35% of the number of Nvidia GPUs we forecast shipping in CY2027. The backstopped capacity will be deployed over multiple years however – spread evenly over five years, the current tally would correspond to roughly 0.6M GB300-equivalent

GPUs annually, well less than 10% of our CY2027 shipment forecast.

这也清楚地说明了为什么 AI 行业规模太大，英伟达无法通过循环融资来为整体建设提供资金。我们当前兜底统计中的~6.5 GW 大约相当于 250 万至 300 万块 GB300 等效 GPU，约占我们预测的 2027 自然年英伟达 GPU 出货量的 25%至 35%。不过，这些获得兜底的产能将在多年内逐步部署——如果平均分摊到五年，当前统计大致相当于每年 60 万块 GB300 等效 GPU，远低于我们 2027 自然年出货量预测的 10%。

We model an upper-end comparison – while we count each support type discretely, several instruments can support the same project and some announced capacity will be commissioned beyond 2030.

我们建立了一个上限情形的比较模型——尽管我们对每种支持类型分别计数，但多个工具可能支持同一个项目，而且一些已宣布的产能将在 2030 年之后投产。

Nvidia Support Capacity: Commitments Through F1/29

Support program	Commitment / guarantee ($B)	$B per GW	Support (GW)	Calculation basis
Capital partnership RVGs	264.71	9.38	28.24	F1/27-F1/29 new guarantees
AI Cloud Agreements	170.59	58.61	2.91	Opening plus new additions; Firmus conversion
Beacon Point leases	19.60	27.84	0.70	Existing two 352MW phases
New third-party lease program	172.40	30.00	5.75	F1/28-F1/29 lease vintages
PORTS-Pike initial commitment	105.00	24.71	4.25	Initial 4.25GW; expansion option excluded
New direct LPS guarantees	94.65	24.71	3.83	F1/28-F1/29; includes 2GW lab campus
Existing partner lease guarantees	3.53	3.68	0.96	Nscale conversion applied to unnamed partners
Total support equivalent			**46.64**	

Source: SemiAnalysis Capital and Markets Model

semianalysis

Source: SemiAnalysis AI Compute, Capital and Markets Model

来源：SemiAnalysis AI Compute, Capital and Markets Model

Even under the full expansion we model, the bulk of the AI buildout would still be financed without Nvidia's backstops. We view these programs as a way for Nvidia to get emerging operators to a scale which they can finance themselves. Successful projects under the backstop give operators a track record and allow lenders to experience underwriting their assets and cash flows at a lower risk. The intended end result is for customer revenues and independent capital to fund subsequent expansion, reducing the need for Nvidia's support. Nvidia directly benefits by broadening the customer base that is able to buy its GPUs at scale – our numbers suggest it can materially accelerate that development while remaining a minority source of support

for the overall buildout

即使在我们模拟的全面扩张情景下，AI 基础设施建设的大部分资金仍将在没有英伟达背书的情况下筹集。我们将这些计划视为英伟达让新兴运营商达到能够自行融资的规模的一种方式。在背书支持下成功的项目为运营商提供了业绩记录，并使贷款方能够以较低风险体验对其资产和现金流的承销。预期的最终结果是，客户收入和独立资本为后续扩张提供资金，减少对英伟达支持的需求。英伟达的直接受益在于扩大了能够大规模购买其 GPU 的客户群——我们的数据表明，这可以显著加速这一发展，同时英伟达仍只是整体建设中的少数支持来源

How far can Nvidia take backstops and guarantees?

英伟达的背书和担保能走多远?

Green light – go, go go! Funded debt of about $36B sits against ~$283B of F1/27 EBITDA on our balance sheet model, so net debt to EBITDA runs at negative 0.1x in F1/27 and reaches -1.6x by F1/31. This is because the cash pile compounds faster than anything Nvidia can possibly borrow money on the balance sheet. Credit analysts we have spoken with put downgrade territory around one and a half turns of leverage (i.e. Net Debt to EBITDA). As of today, none of the off-balance sheet obligations count as leverage.

绿灯——冲，冲，冲！根据我们的资产负债表模型，约 360 亿美元的附息债务对应着~$2830 亿的 F1/27 EBITDA，因此 F1/27 的净债务与 EBITDA 之比为负 0.1 倍，到 F1/31 将达到-1.6 倍。这是因为现金储备的复合增长速度超过了英伟达在资产负债表上任何可能的借款速度。我们接触过的信用分析师认为，降级区域大约在一个半杠杆倍数（即净债务与 EBITDA 之比）左右。截至今天，没有任何表外义务被计入杠杆。

Nvidia Leverage with Obligations Held Flat

USD billions, except ratios	F1/27[1]	F1/28	F1/29	F1/30	F1/31
OFF-BALANCE-SHEET EXPOSURE HELD FLAT					
AI Cloud Agreements	36.00	36.00	36.00	36.00	36.00
Datacenter leases for third-party reassignment	20.00	20.00	20.00	20.00	20.00
Datacenter and LPS guarantees (maximum exposure)	108.50	108.50	108.50	108.50	108.50
Capital partnership residual value guarantees	n.a.	n.a.	n.a.	n.a.	n.a.
Cloud Service Agreements	29.00	29.00	29.00	29.00	29.00
Datacenter leases not commenced for own use	25.00	25.00	25.00	25.00	25.00
Supply and capacity commitments	279.00	279.00	279.00	279.00	279.00
Total exposure held flat	**497.50**	**497.50**	**497.50**	**497.50**	**497.50**
DEBT, CASH AND EARNINGS					
Funded debt	36.00	44.83	45.90	85.82	149.28
Add operating lease liabilities	4.54	4.54	26.86	50.08	80.39
Less cash and cash equivalents	(82.14)	(276.58)	(550.88)	(907.30)	(1,363.33)
Net debt, including operating lease liabilities	**(41.60)**	**(227.22)**	**(478.12)**	**(771.39)**	**(1,133.66)**
EBITDA	282.64	460.79	539.44	577.10	704.53
Net debt / EBITDA	*(0.15x)*	*(0.49x)*	*(0.89x)*	*(1.34x)*	*(1.61x)*
LEVERAGE INCLUDING FIXED OBLIGATIONS					
Net debt plus fixed obligations	**455.90**	**270.28**	**19.38**	**(273.89)**	**(636.16)**
(Net debt + fixed obligations) / EBITDA	***1.61x***	***0.59x***	***0.04x***	***(0.47x)***	***(0.90x)***

[1] *F1/27 = Fiscal Year End January 2027*

Source: SemiAnalysis Capital and Markets Model

Source: SemiAnalysis AI Compute, Capital and Markets Model

来源：SemiAnalysis AI Compute, Capital and Markets Model

Yet if we close our eyes, does the world disappear? Clearly not. So we built a harder test to evaluate how well Nvidia could weather the storm of a downturn and still meet its obligations. Add every off-balance-sheet commitment we forecast to net debt as if all were owed immediately, and divide by EBITDA. That ratio is just below 2x for F1/27, inside what the agencies tolerate, and it falls to 1.33x by F1/31, even with considerable expansion of off-balance sheet commitments.

然而，如果我们闭上眼睛，世界就会消失吗？显然不会。因此我们构建了一个更严苛的测试，来评估英伟达能否安然度过经济下行的风暴并仍然履行其义务。将我们预测的每一项表外承诺都计入净债务，如同全部立即到期应付，然后除以 EBITDA。该比率在 F1/27 略低于 2 倍，处于评级机构可容忍的范围内，并且到 F1/31 降至 1.33 倍，即便表外承诺大幅扩张也是如此。

Nvidia Stable Net Worth and Growing Off-Balance-Sheet Obligations

USD billions, except ratios	F1/27[1]	F1/28	F1/29	F1/30	F1/31
EARNINGS AND PAYOUT CAPACITY					
Net income	238.31	409.32	502.85	618.33	772.52
Earnings retained in equity	154.90	266.06	326.85	401.91	502.14
Annual dividends and buybacks (model proxy)	**83.41**	**143.26**	**176.00**	**216.42**	**270.38**
STABLE ASSETS AND NET WORTH					
Cash and cash equivalents	82.14	276.58	550.88	907.30	1,363.33
Receivables after 30% haircut	50.21	83.68	101.89	124.20	153.84
Securities after 80% haircut	27.64	31.75	36.16	42.34	51.41
Stable assets after haircuts	**159.99**	**392.01**	**688.93**	**1,073.84**	**1,568.57**
Less on-balance-sheet liabilities	(107.40)	(146.68)	(191.13)	(281.37)	(400.39)
(A) Stable net worth with planned payouts	**52.59**	**245.33**	**497.80**	**792.47**	**1,168.18**
Add one year of suspended dividends and buybacks	83.41	143.26	176.00	216.42	270.38
(B) Stable net worth including payout suspension	**136.00**	**388.59**	**673.80**	**1,008.89**	**1,438.56**
COVERAGE OF GROWING OBLIGATIONS					
(C) Total forecast off-balance-sheet obligations	589.48	915.67	1,247.40	1,656.95	2,067.42
Surplus / (shortfall) after payout suspension (B - C)	**(453.48)**	**(527.08)**	**(573.60)**	**(648.06)**	**(628.85)**
Coverage with planned payouts (A / C)	*0.09x*	*0.27x*	*0.40x*	*0.48x*	*0.57x*
Coverage including payout suspension (B / C)	***0.23x***	***0.42x***	***0.54x***	***0.61x***	***0.70x***

[1] *F1/27 = Fiscal Year End January 2027*

Source: SemiAnalysis Capital and Markets Model

Source: SemiAnalysis Compute, Capital and Markets Model

来源：SemiAnalysis Compute, Capital and Markets Model

Then take the harshest framing we could construct. Count only stable assets, meaning cash, receivables after a 30% haircut and a fifth of the securities book, and exclude inventory, the rest of the equity portfolio and all of the intangibles. Set those against total liabilities to get a stable net worth, and measure that against the off balance sheet obligations we forecast for each year, which start at the $497.5B filed today and reach $2.1T by F1/31 as supply commitments and the guarantee, lease, AICP and residual value lines grow.

然后采用我们能构建的最严苛框架。只计算稳定资产，即现金、经 30%折减后的应收账款以及证券账簿的五分之一，并排除存货、其余股权组合和全部无形资产。将这些与总负债相抵，得出稳定净资产，再将其与我们预测的每一年的表外义务进行对比，这些义务从今天提交的 4975 亿美元起步，到 F1/31 达到 2.1 万亿美元，因为供应承诺以及担保、租赁、AICP 和残值等项目持续增长。

The idea here is to consider the case where Nvidia's revenue evaporated over the following year. Could it still meet its obligations by drawing on its balance sheet and a few quarters of remaining cash flow before the apocalypse arrives? Even though these obligations come due over a long period of time, up to 20 years in some cases, we take a conservative stance and check whether Nvidia could pay them all off right away. Against today's commitments held flat, stable net worth covers 0.11x in F1/27, crosses

1.0x in F1/29 and reaches 2.35x in F1/31.

这里的思路是考虑这样一种情况：英伟达的收入在接下来一年里蒸发。在末日到来之前，它是否仍能依靠资产负债表和剩余几个季度的现金流来履行其义务？尽管这些义务在很长一段时间内到期，某些情况下长达 20 年，我们仍采取保守立场，检查英伟达是否能立即全部偿付。在今天的承诺保持不变的情况下，稳定净资产在 F1/27 覆盖 0.11 倍，在 F1/29 超过 1.0 倍，并在 F1/31 达到 2.35 倍。

We push on this test further, and model out how well Nvidia's cash generation will grow as more obligations are piled on in our stress test. Against the growing stack it covers 0.09x in F1/27 and 0.57x by F1/31, or 0.70x if Nvidia suspends a year of dividends and buybacks.

我们进一步推进这一测试，并模拟在压力测试中随着更多义务不断累积，英伟达的现金生成能力将如何增长。面对不断增加的义务堆叠，其在 F1/27 覆盖率为 0.09 倍，到 F1/31 为 0.57 倍，若英伟达暂停一年的股息和回购，则为 0.70 倍。

Nvidia Leverage with Growing Off-Balance-Sheet Obligations

USD billions, except ratios	F1/27[1]	F1/28	F1/29	F1/30	F1/31
FORECAST OFF-BALANCE-SHEET OBLIGATIONS					
AI Cloud Agreements	51.00	95.65	142.95	193.58	248.36
Datacenter leases for third-party reassignment	19.60	89.30	92.89	121.22	133.34
Datacenter and LPS guarantees (maximum exposure)	108.22	110.88	172.26	261.54	338.17
Capital partnership residual value guarantees	55.15	137.87	223.90	303.31	372.79
Cloud Service Agreements	37.97	48.00	62.00	77.36	95.69
Datacenter leases not commenced for own use	25.00	30.00	36.00	43.20	51.84
Supply and capacity commitments	292.55	403.97	517.40	656.74	827.22
Total forecast off-balance-sheet obligations	**589.48**	**915.67**	**1,247.40**	**1,656.95**	**2,067.42**
DEBT, CASH AND EARNINGS					
Funded debt	36.00	44.83	45.90	85.82	149.28
Add operating lease liabilities	4.54	4.54	26.86	50.08	80.39
Less cash and cash equivalents	(82.14)	(276.58)	(550.88)	(907.30)	(1,363.33)
Net debt, including operating lease liabilities	**(41.60)**	**(227.22)**	**(478.12)**	**(771.39)**	**(1,133.66)**
EBITDA	282.64	460.79	539.44	577.10	704.53
Net debt / EBITDA	*(0.15x)*	*(0.49x)*	*(0.89x)*	*(1.34x)*	*(1.61x)*
LEVERAGE INCLUDING GROWING OBLIGATIONS					
Net debt plus forecast obligations	**547.88**	**688.45**	**769.28**	**885.56**	**933.76**
(Net debt + forecast obligations) / EBITDA	***1.94x***	***1.49x***	***1.43x***	***1.53x***	***1.33x***

[1] F1/27 = Fiscal Year End January 2027

Source: SemiAnalysis Capital and Markets Model

semianalysis

Source: SemiAnalysis AI Compute, Capital and Markets Model

来源：SemiAnalysis AI Compute, Capital and Markets Model

These metrics are not crazy. We would go further and argue Nvidia should be offering more support. The direct marginal cost of a guarantee in the base case is zero, because the tenant pays and, at PORTS, OpenAI also indemnifies Nvidia. The marginal benefit is a buyer that could not otherwise raise capital and a campus locked to Nvidia silicon

for twenty years, which Nvidia itself sizes at $150B to $200B of revenue per generation.

这些指标并不离谱。我们甚至认为英伟达应该提供更多支持。在基准情形下，担保的直接边际成本为零，因为租户付款，而且在 PORTS，OpenAI 也对英伟达作出赔偿。边际收益则是一个原本无法筹集资金的买家，以及一个锁定英伟达芯片二十年的园区，英伟达自己估计每代可带来 1500 亿至 2000 亿美元的收入。

Each backstop turns a B-rated operator into a financeable one and bootstraps the Neoclouds so they can gain operational experience and build a track record and potentially be put on the path towards an investment grade credit rating. The alternative, which we laid out in The Front End Gets Crowded, is a market where four Gigascalers are the only protagonists in the world with access to investment-grade capital, and thus only they can decide who buys compute. Our datacenter team's read of Nvidia's objective is to have twenty buyers at scale rather than just four. This playbook is not lost on Google at $75.5B of guarantees and Meta at $59.0B of obligations. The downside risk taken here is balanced by a floor of its own. Nvidia returned nearly $26B to shareholders in a single quarter, so the dividend and buyback are a $300B lever over three years to cushion a moderate downturn.

每个兜底机制都能将一家 B 级运营商转变为可融资的运营商，并为 Neoclouds 提供启动支持，使其能够积累运营经验、建立业绩记录，并有可能走上获得投资级信用评级的道路。另一种选择——正如我们在《前端变得拥挤》中所阐述的——是一个由四家 Gigascaler 作为世界上唯一能够获得投资级资本的主角的市场，因此只有它们才能决定谁购买算力。我们数据中心团队对 Nvidia 目标的理解是，拥有二十个规模化买家，而非仅仅四个。这套策略在 Google 的 755 亿美元担保和 Meta 的 590 亿美元义务中同样有所体现。这里承担的下行风险由其自身的底线所平衡。Nvidia 在单个季度向股东返还了近 260 亿美元，因此股息和回购在三年内是一个 3000 亿美元的杠杆，用以缓冲温和的经济低迷。

Taking a step back, the limits that bind are not balance sheet limits. OpenAI is 97% of the guarantee cap, and the agencies are worried about how much of it points at one customer. Nvidia can spread the next tranche across other labs and across Neoclouds, but it cannot diversify away the fact that two frontier labs are the end payers behind almost every floor, lease and guarantee. That means that a demand shock at the labs hits everything, all at once. These are reasons that, if possible, the next tranche should go to new counterparties.

退一步看，真正的约束并非资产负债表上的限制。OpenAI 占担保上限的 97%，而各机构担心其中有多大比例指向单一客户。英伟达可以将下一批资金分散到其他实验室和新云厂商，但它无法分散一个事实：几乎所有底价、租赁和担保背后的最终付款方都是两家前沿实验室。这意味着，一旦实验室遭遇需求冲击，所有环节都会同时受到打击。正因如此，如果可能的话，下一批资金应当投向新的交易对手。

A demand air pocket marks down everyone's chips while Nvidia keeps its margins and its cash. The real risk to Nvidia is not from a cyclical downturn in AI demand relative to expectations, instead it is a scenario where competing chips take leadership, and Nvidia enters a spiral where it must price down to hold share. In this scenario, Nvidia's EBITDA falls, and the higher productivity of competing chips mean that Nvidia is now backstopping projects that are now uncompetitive. Both sides of the ratio – stable net worth, and likelihood of obligations being called upon move in a bad direction for the same reason. These obligations amplify that outcome without causing it.

需求出现真空，所有人的芯片都被减记，而英伟达却保住了自己的利润率和现金。英伟达面临的真正风险并非来自 AI 需求相对于预期出现周期性下滑，而是一种竞争芯片夺取领先地位的场景，届时英伟达将陷入螺旋式下降，不得不降价以维持份额。在这种场景下，英伟达的 EBITDA 会下降，而竞争芯片更高的生产率意味着英伟达如今在为已失去竞争力的项目兜底。比率的两端——稳定的净值和义务被触发的可能性——因同一原因朝不利方向移动。这些义务会放大这一结果，但并非其成因。

That scenario is also the exact reason to be aggressive now. Nvidia leads today, AI demand is strong for at least the next three years, and power is the binding constraint on the buildout, so every powered site is scarce and whoever locks the site up owns that capacity for a generation of hardware or more, tying a campus down and creating a generation of buyers that have to run Nvidia GPUs. As long as Nvidia leads the market, backstops cost nothing, at least not explicitly. This is a play to win large parts of the market and we believe Nvidia should go for it while the window is open.

这种情景也正是现在应当积极进取的原因。英伟达目前处于领先地位，AI 需求至少在未来三年内保持强劲，而电力是扩建的硬性约束，因此每一个已通电的站点都是稀缺资源，谁锁定了站点，谁就拥有了一代硬件甚至更长时间的产能，绑定一个园区并创造出一代不得不运行英伟达 GPU 的买家。只要英伟达引领市场，后备支持就不需要付出代价，至少不是显性代价。这是一场争夺大部分市场份额的博弈，我们认为英伟达应该在窗口敞开时全力出击。



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FC Ventures ❁ 8h

Great piece.

Can you reconcile the fact that your Net Income is a good bit above your EBITDA numbers in the out years? Even assuming a ~5% return on the cash and investments... needing to subtract out taxes (~17%) and D&A should more than offset. How are you getting to a higher net income number?

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