More weakness ahead for Tech Titans?

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Key Takeaways

- We remain cautious on Tech Titans and technology themes heading into 2023.
- Historically, when Tech has a year of significant underperformance, it is followed by another year of underperformance.
- But weakness is not set in stone. We will be watching cloud, semiconductors, and internet advertising trends, along with our scorecard ranks, for signs Tech is starting to rebound

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Tech still weak

Top and Bottom ranked themes

Theme Name	Major Category	Largest ETF	Scorecard Rank	Theme Name	Major Category	Largest ETF	Scorecard Rank
Natural Resources	Global Shock	GUNR	100.0	3D Printing	Technology	PRNT	19.6
Gold/Slvr Miners	Global Shock	GDX	98.0	AI & Automation	Technology	ARKQ	17.6
Infrastructure	Global Shock	IGF **Overweight PAVE**	96.1	Big Data	Technology	DAT	15.7
5G & IoT	Technology	SNSR	94.1	Cannabis	Demographics	POTX	13.7
Environmental Svcs	Demographics	EVX	92.2	Cloud	Technology	SKYY	11.8
Agriculture	Global Shock	MOO	90.2	Internet	Technology	FDN	9.8
Clean Water	Global Shock	PHO	88.2	E-Commerce	Technology	ONLN	7.8
Solar	Global Shock	TAN	86.3	Metaverse	Technology	VR	5.9
MLPs	Global Shock	AMLP **Overweight XLE**	84.3	Broad FinTech	Technology	FINX	3.9
Longevity	Demographics	AGNG	82.4	Gig Economy	Demographics	BYOB	2.0
Sports Betting	Demographics	BETZ	80.4	Blockchain	Technology	LEGR	0.0

As of 12/9/2022.

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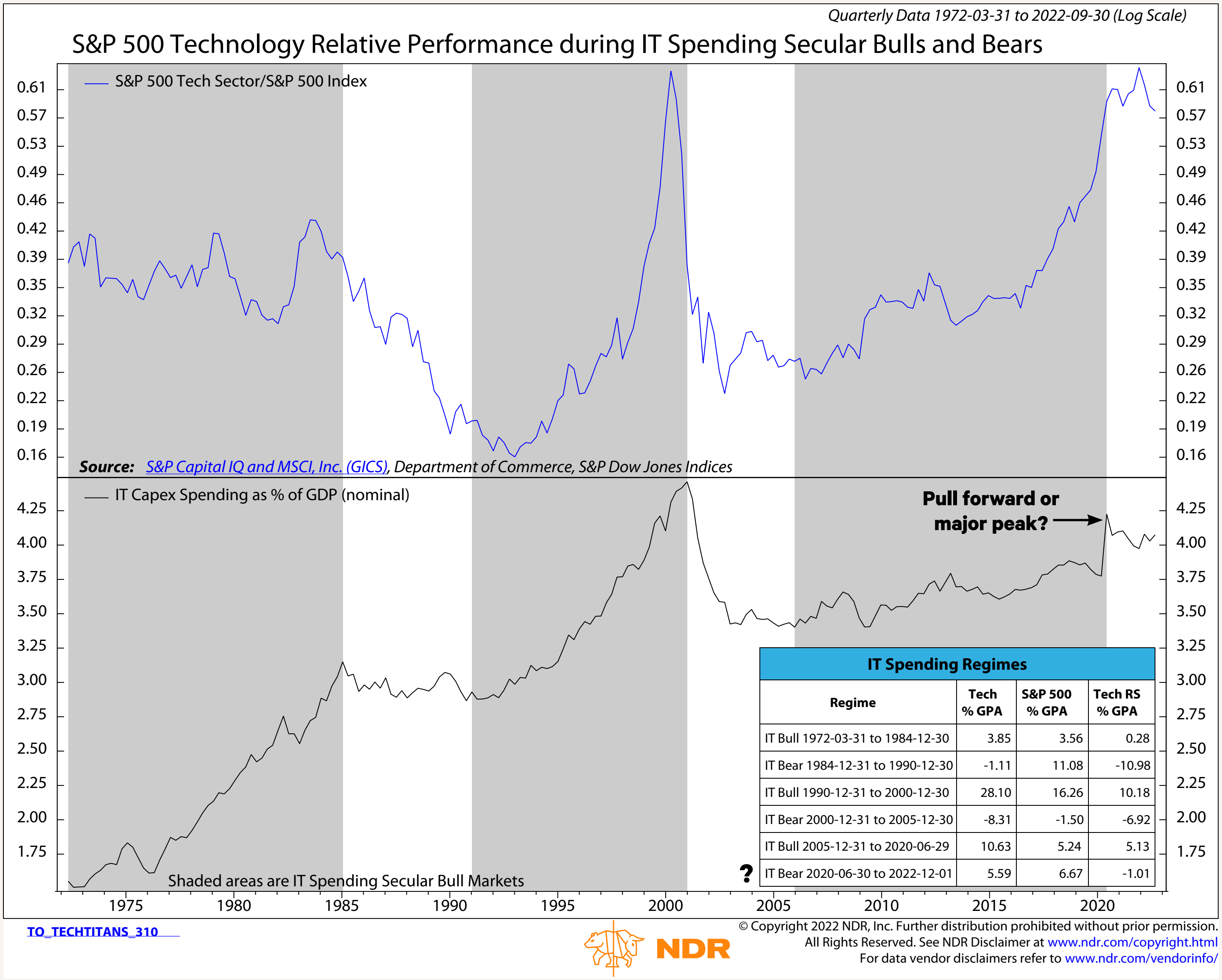
What matters:

- It has been a rough ride for Tech Titans. Since the November 19, 2021, peak, the Tech Titans group plunged nearly 40%. Many Tech themes including Cloud are bottom ranked by our scorecard(above).
- Six Titans (ADBE, NFLX, CRM, AAPL, AMZN, META) have corrected more than 60% from their pandemic (euphoric?) 2021 highs, and two (META, AMZN) have corrected more than 70%.
- Is this just a case where Titans need to slow for a bit because the pandemic pulled forward some sales or is it an end of a super cycle like it 2000? We dive into that question here.

Tech super cycle in question



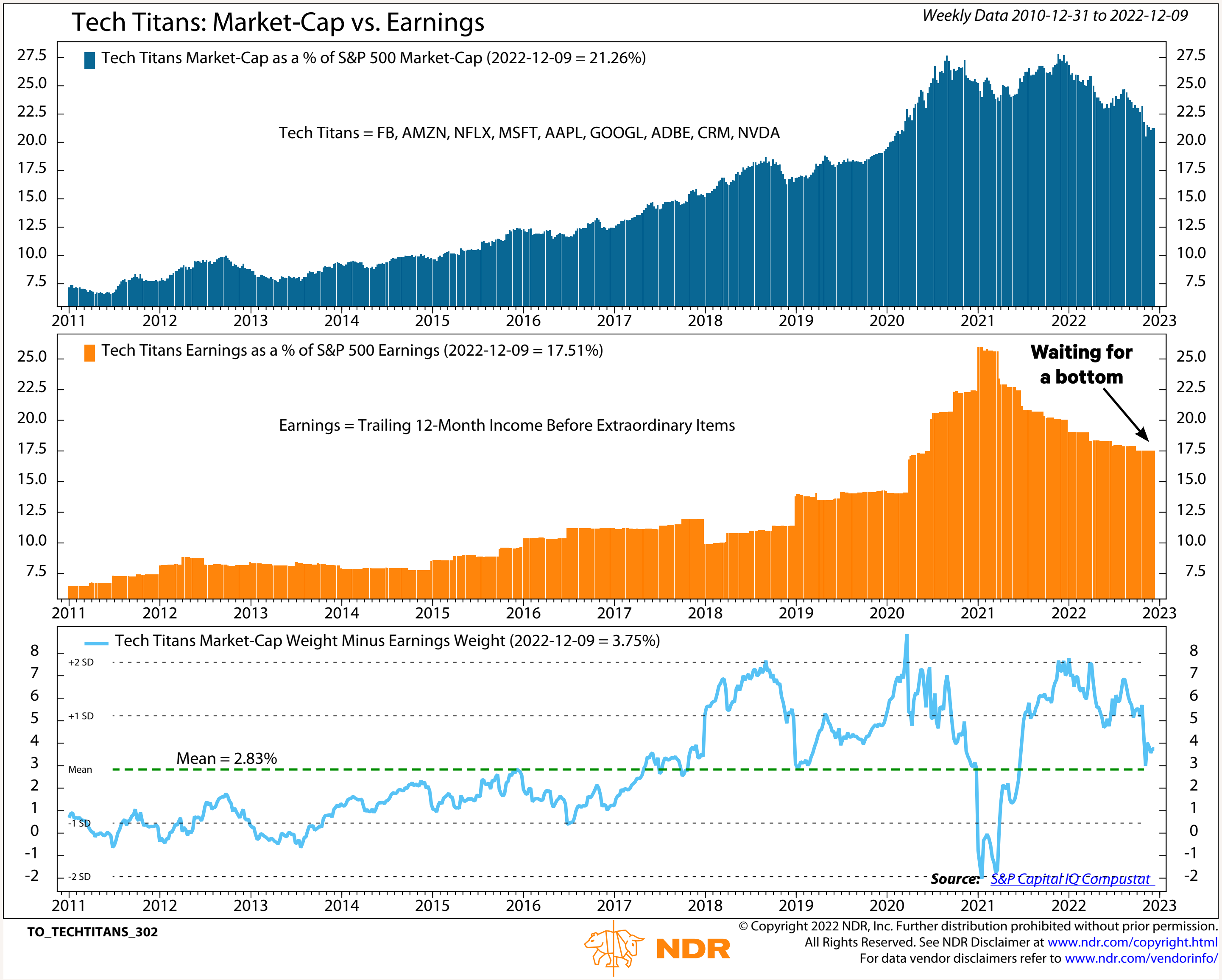
IT Spending Regimes

Regime	Tech % GPA	S&P 500 % GPA	Tech RS % GPA
IT Bull 1972-03-31 to 1984-12-30	3.85	3.56	0.28
IT Bear 1984-12-31 to 1990-12-30	-1.11	11.08	-10.98
IT Bull 1990-12-31 to 2000-12-30	28.10	16.26	10.18
IT Bear 2000-12-31 to 2005-12-30	-8.31	-1.50	-6.92
IT Bull 2005-12-31 to 2020-06-29	10.63	5.24	5.13
IT Bear 2020-06-30 to 2022-12-01	5.59	6.67	-1.01

What matters:

- It has been a really good, long tech cycle. By our measure, IT (software and hardware) capex spending has been growing its share of GDP since Q4 2005. But was Q2 2020 a major peak?
- There are many tech themes that helped drive this cycle: The move to enterprise software to increase productivity and the move to the cloud to cut inhouse IT expense and improve mobility, to name a few.
- But just as dot.com and Y2K spending accelerated and then peaked in Q4 2000, will pandemic-induced spending mark the top of this cycle? We are not yet sure.

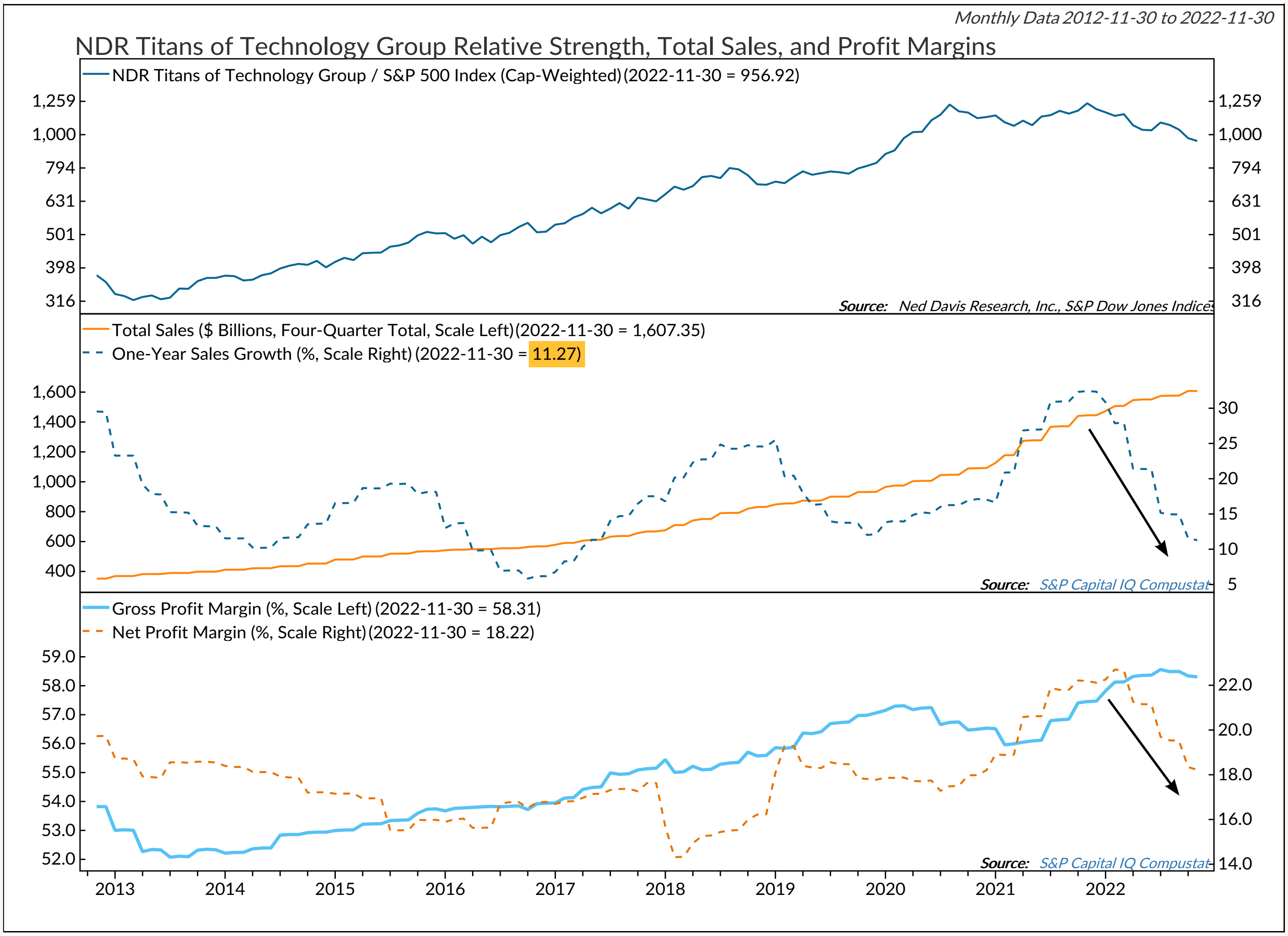
Valuation premium still justified?



What matters:

- At the height of the pandemic, nine Tech Titans accounted for an astounding 27.8% of S&P 500 market cap. That cap may have been justified given their earnings accounted for 26% of S&P 500 earnings.
- Now, Titans only account for 17.5% of S&P 500 earnings yet still account for 21.2% of S&P 500 market cap.
- We believe Titans deserve a market cap weight premium to their earnings weight as long as their growth rate is higher than the rest of the market.

What is the post-pandemic growth rate?



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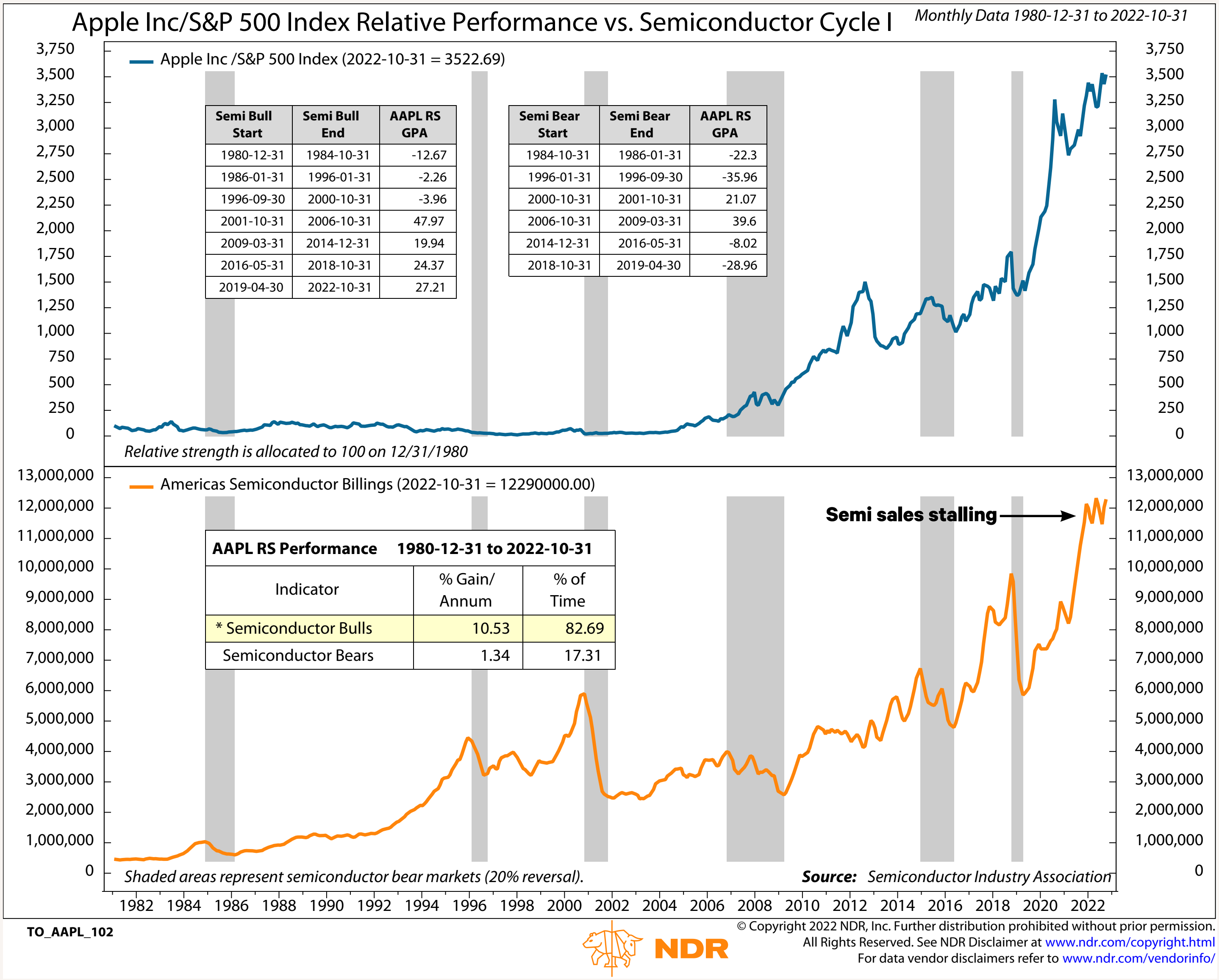
What matters:

- At the height of the pandemic, Tech Titan sales growth jumped to over 30% Y/Y and net margins reached an astounding 22%.
- Since then, however, sales growth plunged to 11.3% and net margins have plunged 400 basis points.
- We know the pandemic pulled forward sales and growth but they could rebound next year in a more Fed-friendly, macro environment. But to what level? Will that level be better than the overall market?

The semiconductor cycle



Semi Bull Start	Semi Bull End	AAPL RS GPA
1980-12-31	1984-10-31	-12.67
1986-01-31	1996-01-31	-2.26
1996-09-30	2000-10-31	-3.96
2001-10-31	2006-10-31	47.97
2009-03-31	2014-12-31	19.94
2016-05-31	2018-10-31	24.37
2019-04-30	2022-10-31	27.21

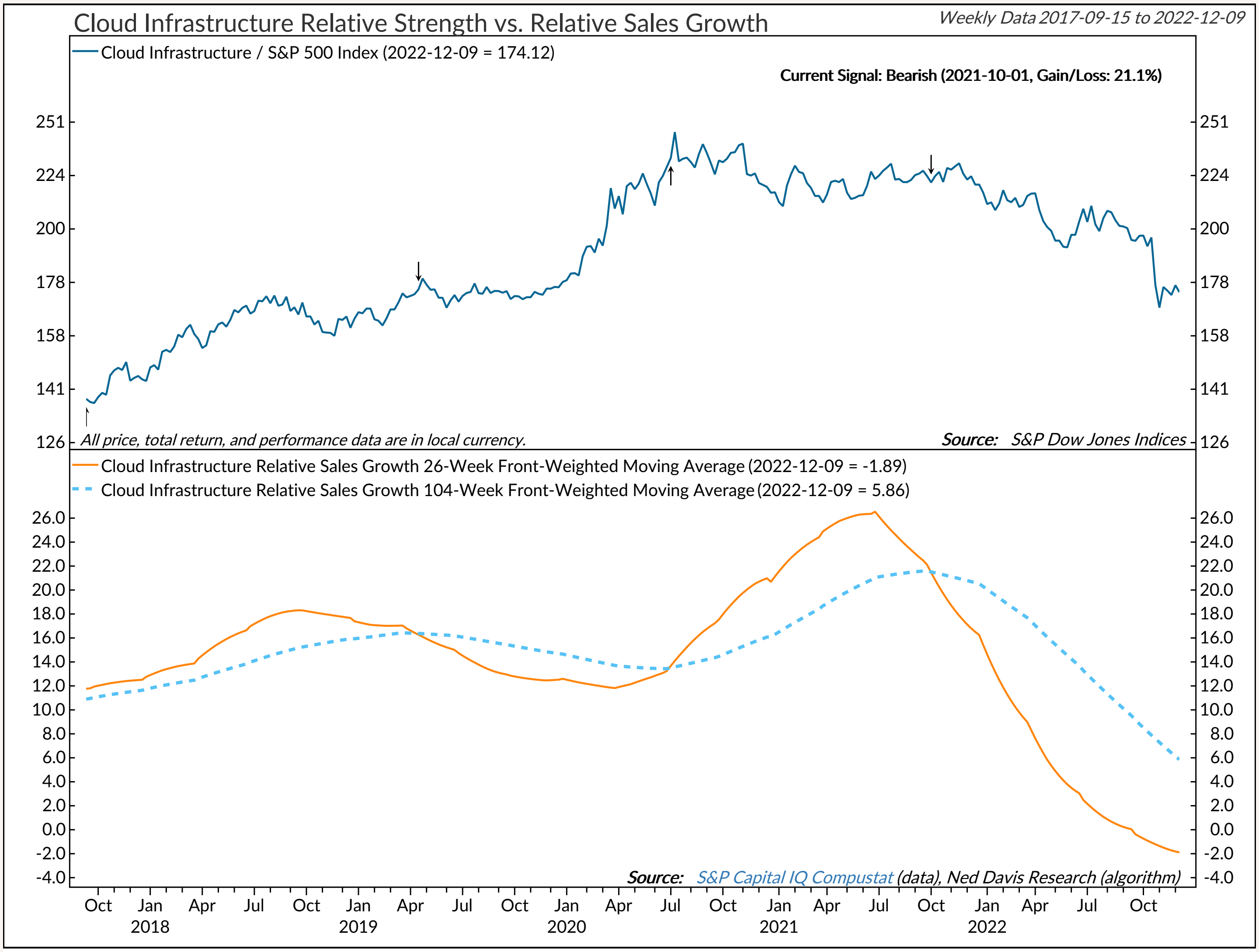
Semi Bear Start	Semi Bear End	AAPL RS GPA
1984-10-31	1986-01-31	-22.3
1996-01-31	1996-09-30	-35.96
2000-10-31	2001-10-31	21.07
2006-10-31	2009-03-31	39.6
2014-12-31	2016-05-31	-8.02
2018-10-31	2019-04-30	-28.96

AAPL RS Performance	1980-12-31 to 2022-10-31	
Indicator	% Gain/ Annum	% of Time
* Semiconductor Bulls	10.53	82.69
Semiconductor Bears	1.34	17.31

What matters:

- There are two key tech cycles we will be watching closely to determine if the Tech super cycle has peaked: semiconductors and cloud.
- Given that everything from solar panels to cars require semiconductors these days, it is hard to imagine a bear market in semis.
- However, semiconductor billings growth (above) has slowed enough for us to question the cycle. We need to see Y/Y billings growth bottom and turn up as proof the super cycle is still alive.

The cloud cycle



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What matters:

- The move to cloud created demand for software-as-a-service (SAAS) and (along with crypto mining) a great demand for high performance servers and semiconductors.
- While cloud-related sales may rebound in a matter of time and better macro, the question is, will sales growth rebound to a rate faster than the market.
- The chart above shows relative sales growth (vs S&P 500) of cloud-focused companies continues to decelerate. A narrowing of 26-week and 104-week relative sales growth rates would be a hopeful sign.

Cloud not evaporating

Cloud-related revenue for Microsoft, Amazon, and Google

CY Annual Revenue ($ millions)	2019	2020	2021		2022 Q3 YTD
Microsoft - Intelligent Cloud*	43,754	53,239	67,667		60,116
Amazon - AWS	35,026	45,370	62,202		58,718
Alphabet - Google Cloud	8,918	13,059	19,206		18,965
Total "Big 3" Cloud Revenue	87,698	111,668	149,075		137,799
Cloud Year over Year ($ mil.)	20,757	23,970	37,407		30,307
Cloud Year over Year (%)	31%	27%	33%	**Holding...**	28%
Total "Big 3" Revenue ($ mil.)	576,628	721,875	912,362		722,914
Total Sales Year over Year (%)	18%	25%	26%	**...weakening**	12%
Total "Big 3" Cloud Rev / Total Rev	15%	15%	16%		19%

*Microsoft Intelligent Cloud segment includes Server Products and Cloud Services, Azure, and Enterprise Services. 2022 Q3 YTD is the three quarter total and 2022 year-over-year measures are 22 Q3 YTD vs 21 Q3 YTD. Source: Company quarterly press releases, Ned Davis Research.

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What matters:

- While the sales growth of cloud-focused companies continues to rapidly decelerate, cloud-related sales are not the culprit.
- Seen above, cloud-related sales growth for the first nine months of the year for the “Big 3” cloud companies is running up a solid 28% year-over-year.
- A big problem has been a weaker consumer which has caused areas like internet advertising to weaken. If cloud sales join other areas of weakness, we see another leg down for Tech Titans.

Tech negative mo can continue

S&P 500 Technology/S&P 500 RS returns for years when a greater than 8% decline year follows a positive return year			
Year	Rel Return (%)	Year Prior (%)	Year After (%)
1979	-13.3	10.2	-7.5
1984	-7.6	3.3	-6.4
1988	-16.1	10.4	-29.1
1991	-15.6	7.4	-3.6
2000	-32.7	49.0	-14.7
2004	-9.0	14.6	-2.5
2022	-9.3	5.1	?
Mean	-15.7	15.8	-10.6

2022 returns are YTD November 2022. The 2022 case is not included in the mean statistics. Source: S&P Dow Jones Indices, Ned Davis Research.

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What matters:

- The bottom line is that we remain cautious on Tech Titans and technology themes heading into 2023.
- As we showed in NDR's 2023 outlook, a big year of S&P 500 Technology performance has been followed by another year of bad performance (6 of 6 cases), when outperforming the preceding year.
- But Tech weakness is not set in stone. We will be watching cloud, semiconductors, and internet advertising trends, along with scorecard ranks, for signs Tech is starting to rebound.

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NDR HOUSE VIEWS (Updated December 9 , 2022)

For global asset allocation, NDR recommends an overweight allocation to stocks, marketweight allocation to bonds, and an underweight allocation to cash. Our overweight equity allocation is in response to improving model readings and a shift in Fed rate hike expectations.

Equity Allocation

U.S. | We are neutral on stocks on an absolute basis and relative to bonds and cash. Macro and earnings concerns are offset by extreme pessimism and technical improvements. We favor small-caps over large-caps and Value over Growth.

INTERNATIONAL | We are overweight Europe ex. U.K. and marketweight on all other regions.

Macro

ECONOMY | The global economy is in a sustained slowdown due to waning monetary and fiscal support, stubbornly high inflation, and rising geopolitical risk. While the slowdown remains moderate, the risk of severe recession increases in 2023. Global inflation pressures are easing but will remain historically elevated in the foreseeable future.

FIXED INCOME | We raised our bond exposure to 100% of benchmark duration and are neutral on the yield curve. We are overweight Treasurys and MBS and underweight high yield, ABS and TIPS. We are marketweight everything else.

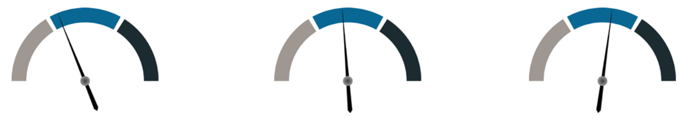
GOLD | We are currently bullish. The majority of our Gold Watch report indicators are now bullish and gold stands to benefit from seasonality and declining bond yields.

DOLLAR | We are bearish due to worsening momentum and model readings.

Economic Summary

December 12, 2022

Near term activity: ● Accelerating ● Neutral ● Decelerating



Global Economy (2.9%) | U.S. Economy (1.5%-2.0%) | U.S. Inflation (4.0%-4.5%)

Economic gauges reflect changes in near-term economic activity. Numbers in parenthesis refer to NDR 2022 forecasts.

Global Asset Allocation

● Overweight ● Marketweight ● Underweight

- ● Stocks (65%)
- ● Bonds (35%)
- ● Cash (0%)

Benchmark: Stocks (55%), Bonds (35%), Cash (10%)

Equities — Regional Relative Allocation

- ● Europe ex. U.K. (14%)
- ● U.S. (61%) | Emerging Markets (11%) | Japan (5%) | U.K. (4%) | Pacific ex. Japan (2%) | Canada (3%)
- ●

Benchmark – U.S. (61.5%), Europe ex. U.K. (12%), Emerging Markets (11.2%), Japan (5.4%), U.K. (3.8%), Pacific ex. Japan (3%), Canada (3.1%)

Global Bond Allocation

- ● Europe (28%)
- ● U.S. (55%) | Japan (14%)
- ● U.K. (3%)

Benchmark: U.S. (55%), Europe (26%), Japan (14%), U.K. (5%)

U.S. Allocation

- ● Small-Cap | Value
- ● Stocks (55%) | Bonds (35%) | Cash (10%) | Mid-Cap
- ● Large-Cap | Growth

Benchmark: Stocks (55%), Bonds (35%), Cash (10%)

Sectors

- ● Health Care (17%) | Energy (5%) | Materials (4%)
- ● Consumer Discretionary (8%)

Benchmark: Technology (27.4%), Health Care (13.8%), Financials (10.7%), Communication Services (9.3%), Consumer Discretionary (12.1%), Consumer Staples (7.0%), Industrials (7.9%), Energy (4.0%), Utilities (2.7%), Real Estate (2.7%), Materials (2.5%)

U.S. Bonds — 100% of Benchmark Duration

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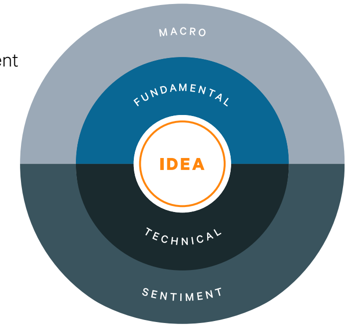

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