



Intel Scenarios Update August 2024 Edition

When Intel announced IDM2.0 and many fabs in 2021, We highlighted a number of issues with this plan

- Intel is not a cost effective manufacturer. They are not agile and the wafer costs are 2x competition (it's really easy math now that Intel has reported it out). They are focusing on their worst area. This is why the decision was made before Pat to outsource Fab work to TSMC
 - When I state this, people site many “reasons” why the excessive cost is not really a valid comparison (scale, catching up, old technologies, foundry reorg, etc). But the number is what the number is.
- Intel cannot afford to spend the capital. Revenue is shrinking, market share is shrinking. You cannot build fabs in hope that people buy in the future. Especially when they are waiting for you to have leading edge performance BEFORE they commit.
- Intel needs to focus on what they do well. Leading compute architecture standard and products. Hold on to >50% share in DC CPU and PC CPU. Intel is not a good graphics chip, mobile or memory company (too slow, too expensive) so be careful about trying to compete in those areas.

Q2 Earning report out:

Intel revenue did not crash. It was flat. Intel has been losing money for some time so that wasn't different (GAAP earnings). Intel sells a lot of CPUs. Intel numbers did not “Downturn” yet.

What became clear at the earning call was:

- Intel is not growing in one of the fastest growth periods in compute. Negative DCAI growth
- Intel has no meaningful foundry business today. \$77m in external revenue including packaging and mask operations. They probably are not a top 20 external wafer foundry today
- Intel loses money on old processes and now when it ramps new processes. Foundry group losses are growing very fast. This despite the risky depreciation timeline that helps short term, hurts long term. A simple spreadsheet will point out the financial issue and Pat has seen those.

- Intel released new products and claimed to be on track for 5N4Y. According to experts , these are apparently great nodes . But it doesn't matter if you don't sell them cost effectively.
- Intel later made comments like "we didn't see this coming" and "We need to cut costs". This is very strange given the fact that the financial plans showed this and Intel stated the cost issues and plans for improvement three years ago. If you increase spending, increase headcount, and revenue is flat, you will have problems. If you change depreciation to 8 years those problems will last longer.

As a result, they will cut costs until they can show a financially stable plan. Where will they cut? Will it work? What about those scenarios for foundry we published 6 months ago?

We have the foundry scenarios below. Intel may still get government orders and may still get orders from partnerships with UMC/Tower/others. Intel has potential for the "I don't want to work with TSMC" revenue. But this apparently will be very slow to grow. Those scenarios are valid still, but the probability has changed.

Intel planned lots of fabs to get foundry customers (this was a good plan). But the customers are still not there (this was predicted). So those Fabs needs to be postponed or cancelled... this is already happening. We have roadmap for all fabs capacity over time (separate blog or on website).

What is happening:

- Get financial plan to afford fabs and development assuming market share losses that are in process.
- Develop new, realistic foundry plan. Real customers and real fabs
- Continue to develop processes and products. Use TSMC to achieve success short term
- Use partnerships and smart capital to manage cash flow. Note: this is very dangerous. Those investors will get their return if Intel doesn't ramp the fabs

What would make Intel a great company again (IMHO)?

IBM2.0 is happening. Jump to the end ASAP. Skip the "we are a foundry", "we have foundry partners", "we provide leadership on new technologies that others make" and jump to the "we buy wafers from companies that are great at manufacturing" or "we are a minority partner in a US foundry company majority owned by TSMC". Focus on Products and architectures and being much quicker and agile.

SCENARIOS

- ***Intel Foundry Success***: Intel has competitive processes at competitive prices and ramps up to be another dominant leading edge foundry. Intel is leader and Intel BUs use Intel processes. Revenue and profits grow.
- ***Intel fills TSMC gaps***: Intel supplies all other foundries, Intel supplies government. Both have few other options so they pay the price needed. Revenue grows steadily over then next 10-15 years.
- ***Intel is ~~IDM2.0~~ ... IBM2.0***: Intel struggles to ramp government work and factories. Intel's foundry partners decide it's not worth it to work with them and the processes are unsuccessful. The fabs are given away, or cancelled, or underloaded. Eventually Intel foundry is absorbed.

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The forecast for Intel External wafer sales is below: Note that this is based on Intel plans. If they do not execute or gain share, then they will go to the "Plan B" (Call us for what Plan B is)

