Special Commentary — August 7, 2024

Investing in the Future

Implications of the High-Tech Investment Boom

Summary

It is unique to the current cycle that businesses today spend more on intellectual property products than any other category of capex. When combined with a building boom in high-tech factories and a surge in outlays on information processing equipment, this opens the door to future productivity growth.

Economist(s)

Shannon Seery Grein
Economist | Wells Fargo Economics
shannon.grein@wellsfargo.com | 704-410-0369

Tim Quinlan
Senior Economist | Wells Fargo Economics
Tim.Quinlan@wellsfargo.com | 704-410-3283

Additional Commentary:

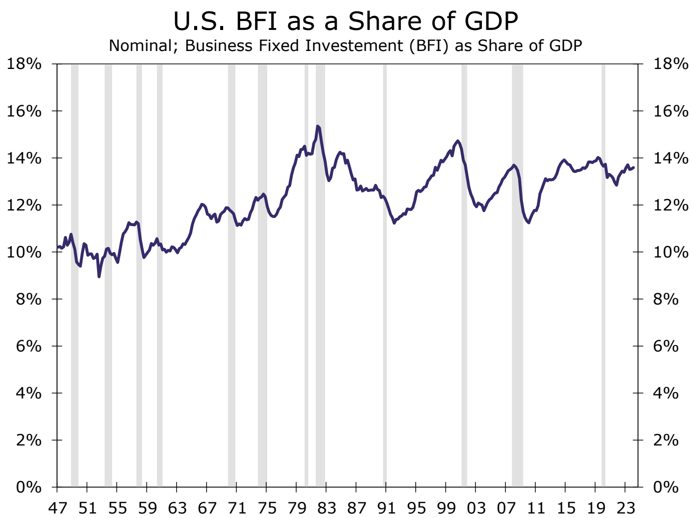
Building the Future: Implications of the High-Tech Construction Boom (March 2024)

Capex is Stronger Than You May Think

At the risk of stating the obvious: as the economy gets bigger, businesses spend more money. Yet for all the hand wringing and boardroom debate about how much to spend and where to allocate that capital, business spending is remarkably steady. In good times and bad, in data stretching all the way back to the 1940s, the money that businesses spend each year typically comprises between 10% and 15% of GDP. Through the second quarter, spending is right in the middle of that range (Figure 1).

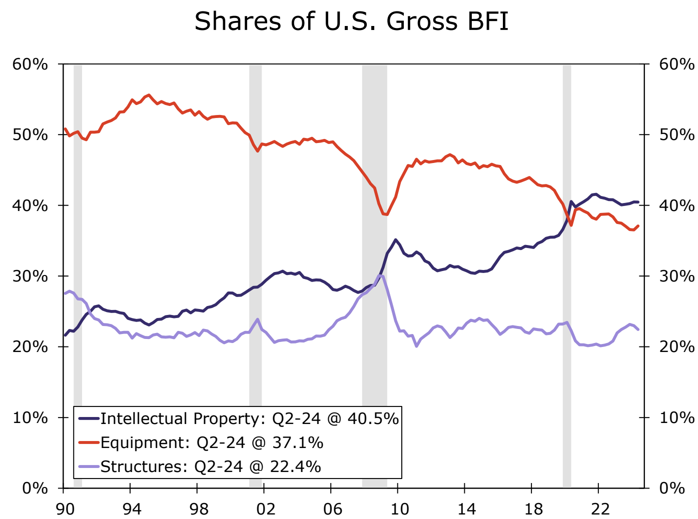
Capital expenditures have actually grown at a reasonably steady clip in recent years. That may be surprising in a world in which the ISM manufacturing index has signaled contraction for nearly two years, manufacturing production has more-or-less stalled and in which durable goods orders have flat-lined. When small businesses are asked about their capital investment plans, they've rarely been more pessimistic than they are today. Yet despite this murky backdrop, business fixed investment (BFI for short) has seen uninterrupted growth since the pandemic, running at a near 5% annual clip on average in recent years.

Figure 1



Source: U.S. Department of Commerce and Wells Fargo Economics

Figure 2



Source: U.S. Department of Commerce and Wells Fargo Economics

One could be forgiven for not seeing anything terribly compelling going on here, yet hiding behind this façade of plainness, something really interesting is happening, and it has scope to lift future productivity. That is huge because productivity is the gateway to raising living standards and lifting real income, which in turn can fuel consumption all while helping businesses to be more profitable. More profits mean more money for future business spending, and with luck, a virtuous cycle can take hold. Productivity is super-growth serum.

The Game Has Changed

So what exactly is it about current hum-drum levels of business spending that can unlock productivity? In short, the composition of business spending has undergone a quiet revolution. The term "capex" used to conjure images of heavy machinery and equipment. That is being replaced with generative AI and software.

Throughout most of the 1990s, more than half of firms' capital budgets went toward equipment. But after a 20-year trend descent in the share of spending on equipment and a 20-year trend rise in spending on intellectual property products, the rankings have changed. Spending on intellectual property now commands the largest share of business investment (Figure 2).

What was once an afterthought for businesses calibrating investment dollars has become the primary source of investment. These shifting priorities to software over physical capital have weighed on purchases of equipment and dented overall manufacturing activity in recent years.

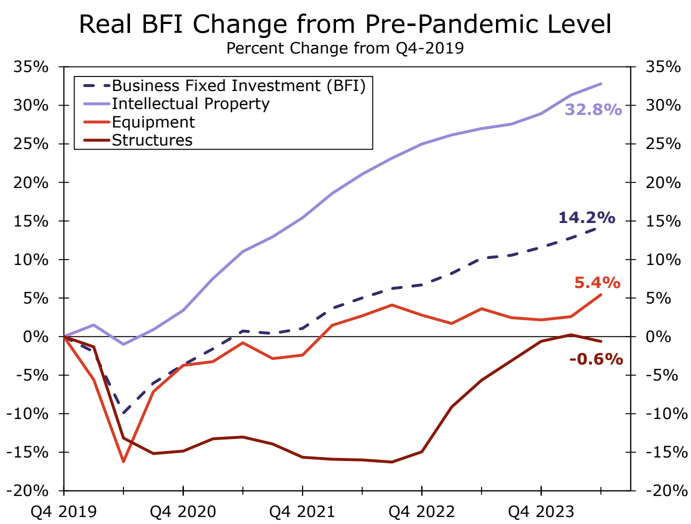
Intellectual Rigor

Intellectual property products (or IPP) refers to firms' spending on software, research & development as well as entertainment, literary & artistic originals. Not only is it the largest category of investment spending today, it has also accounted for almost all the growth in the current cycle.

As seen in Figure 3, IPP spending is up more than 30% over the past five years. Meanwhile, equipment spending has barely grown at all. Equipment outlays took nearly a year-and-a-half to turn positive and have gone mostly sideways since. In fact, the only major type of equipment spending that has actually posted substantial growth is information processing equipment. Leave that category out and equipment spending would still be nearly 2% *below* pre-pandemic levels today. This more tentative trajectory of spending is consistent with what one might expect amid lackluster growth or outright recessionary warnings from most recent manufacturing indicators.

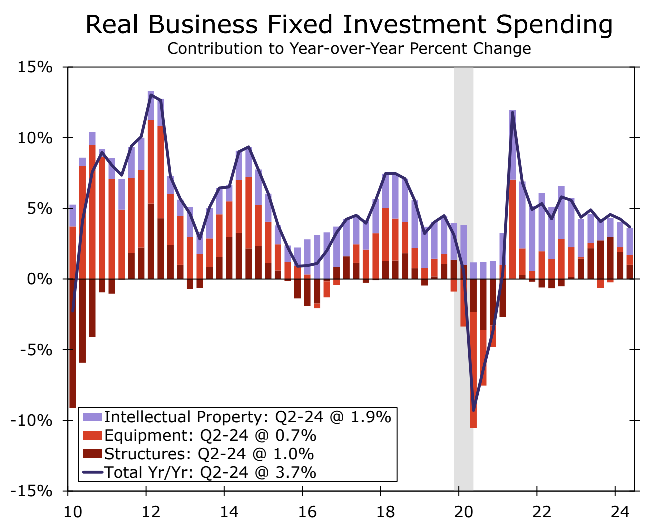
Overall BFI growth has remained strong even as equipment outlays have flagged because weakness has been offset by growth in IPP spending. When we look under the hood of annual BFI growth, IPP outlays have contributed the most to total investment, not only in recent years but heading into the pandemic as well (Figure 4). This is to say, even as there has been a more recent push for automation and generative AI technologies that may be supporting demand today, firms have been prioritizing intellectual property spending for some time.

Figure 3



Source: U.S. Department of Commerce and Wells Fargo Economics

Figure 4



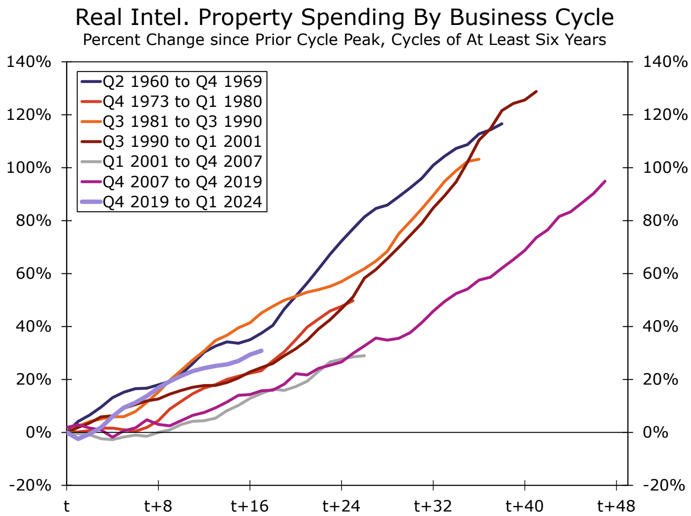
Source: U.S. Department of Commerce and Wells Fargo Economics

But even compared to other cycles, the growth in this one is still outsized. Figure 5 plots IPP spending around past recessions and what's immediately clear is that current spending is the fastest since the tech spending boom of the mid-1990s. Even as IPP outlays were gaining momentum ahead of the pandemic, growth has been turbocharged recently.

Firms are spending more on software in particular today. Software spending is nearly 60% ahead of its pre-pandemic level as of the second quarter, which makes it the fastest major category of overall business fixed investment spending after manufacturing structures outlays (Figure 6). We've previously detailed the enormous growth in manufacturing construction spending that is being fueled by a build-out of computer and high-tech electronics facilities specifically. But the outsized growth in software spending also stands out as it's currently running more than three-times as fast as the next two components of nonresidential investment: research & development spending and spending on information processing equipment. This surge in software investment has also led it to surpass research & development as the largest share of intellectual property in recent years.

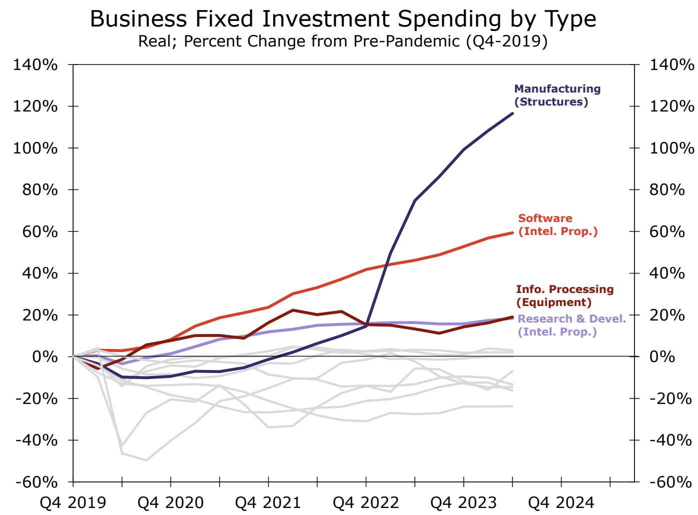
Robust software investment is one of the early ways that AI adoption will be reflected in economic statistics. It could also ultimately help boost productivity growth, a topic we delved into with our Potential Growth series earlier this year. There are many determinants of an economy's productivity rate, and a rise in capital accumulation is a factor. It ultimately remains uncertain just how much hardware and software investment will be required to support the AI transition. But to the extent we see a continued acceleration in software investment take hold, it could eventually lead to productivity enhancements, particularly if combined with strong demand for information processing equipment.

Figure 5



Source: U.S. Department of Commerce and Wells Fargo Economics

Figure 6



Source: U.S. Department of Commerce and Wells Fargo Economics

Despite steady growth in IPP and a jump in Q2 equipment outlays, we still believe the broad capex environment remains unfavorable today and conditions will likely constrain investment headed into 2025. Not only are businesses still facing high financing costs and tight lending standards, but they are also coming up against an uncertain U.S. presidential election that will likely determine components of the 2017 Tax Cuts & Jobs Act which include key business interest and depreciation clauses set to completely sunset at the end of 2025. Still, the money that has already been spent on software in particular and intellectual property products more broadly has planted the seeds for future potential gains in productivity.

Software Investment Poses Upside Risk to Productivity

Capital budgets are increasingly being re-oriented toward a high-tech future. This is evident not just in the increased spending on intellectual property products, but also in the building boom for high-tech facilities and increased spending on information processing equipment. Businesses allocating dollars are prioritizing software investment over physical capital, sustaining investment spending even as other areas see less growth or even outright spending cuts. There is no guarantee this tech-focused spending will elicit a productivity boom, but to the extent that it does, it would be good for growth. Productivity can boost living standards and real income, which can fuel consumption and lift profits.

Subscription Information

To subscribe please visit: www.wellsfargo.com/economicsemail

Via The Bloomberg Professional Services at WFRE

Economics Group

Jay H. Bryson, Ph.D.	Chief Economist	704-410-3274	Jay.Bryson@wellsfargo.com
Sam Bullard	Senior Economist	704-410-3280	Sam.Bullard@wellsfargo.com
Nick Bennenbroek	International Economist	212-214-5636	Nicholas.Bennenbroek@wellsfargo.com
Tim Quinlan	Senior Economist	704-410-3283	Tim.Quinlan@wellsfargo.com
Sarah House	Senior Economist	704-410-3282	Sarah.House@wellsfargo.com
Azhar Iqbal	Econometrician	212-214-2029	Azhar.Iqbal@wellsfargo.com
Charlie Dougherty	Senior Economist	212-214-8984	Charles.Dougherty@wellsfargo.com
Michael Pugliese	Senior Economist	212-214-5058	Michael.D.Pugliese@wellsfargo.com
Brendan McKenna	International Economist	212-214-5637	Brendan.Mckenna@wellsfargo.com
Jackie Benson	Economist	704-410-4468	Jackie.Benson@wellsfargo.com
Shannon Grein	Economist	704-410-0369	Shannon.Grein@wellsfargo.com
Nicole Cervi	Economist	704-410-3059	Nicole.Cervi@wellsfargo.com
Jeremiah Kohl	Economic Analyst	212-214-1164	Jeremiah.J.Kohl@wellsfargo.com
Aubrey George	Economic Analyst	704-410-2911	Aubrey.B.George@wellsfargo.com
Delaney Conner	Economic Analyst	704-374-2150	Delaney.Conner@wellsfargo.com
Anna Stein	Economic Analyst	212-214-1063	Anna.H.Stein@wellsfargo.com
Ali Hajibeigi	Economic Analyst	212-214-8253	Ali.Hajibeigi@wellsfargo.com
Coren Burton	Administrative Assistant	704-410-6010	Coren.Burton@wellsfargo.com

Required Disclosures