Mngeles



Dam(n)



estern Pennsylvania is home of the Allegheny Mountains, part of the vast Appalachian chain that runs 1,500 miles from Alabama to Newfoundland. It is some of the most scenic landscape in eastern North America, with verdant mountains and deep valleys cut by numerous rivers. Following the success of the Erie Canal, completed in 1825, canals were built across western Pennsylvania, connecting the many rivers into a single transportation system.



he Conemaugh River cuts the deepest gorge in North America east of the Rockies, ¹ and by 1853 the state of Pennsylvania constructed a dam in the gorge, creating a reservoir to serve the canal. A few years before, in 1846, the Pennsylvania Railroad was established, and in a short time rail supplanted barge transport. The canal system, built over thirty years, soon became obsolete. The state sold large tracts of land to the railroad company, including the canals, the dam and the reservoir on the Conemaugh River. The Pennsylvania Railroad laid their tracks but had little use for the waterways.

Henry Clay Frick, chairman of Carnegie Steel, and one of the richest men in America, thought it would be grand to have an exclusive hunting club for his friends in the Pittsburgh area. His friends included Andrew Carnegie, the banker Andrew Mellon, and the prominent attorney Philander Chase Knox. They formed the South Fork Fishing and Hunting Club in 1880, membership limited to just 50 men of their

choosing, and together they purchased the land around Lake Conemaugh, as the reservoir was known. Included in the price was the lake and its dam. It was a perfect, idyllic spot for their exclusive club, where members could enjoy boating and fishing on the lake and hunting in the nearby forests.

Frick and his friends enjoyed their sylvan paradise, but they neglected one simple maintenance item that would have catastrophic consequences. Their negligence is a reminder that failure to preserve our basic infrastructure—our homes, roads, electrical grids or payments system—the latter topical with the largest bank failure since the Global Financial Crisis of 2008, threatens the very functioning of the economy.

igh-level economic data are strong. The unemployment rate, at 3.5%, remains near the lowest level since the early 1950s (Chart 1), with ten million unfilled jobs. GDP is expanding at a rate of more than 2% despite the largest hike in interest

Chart 1 US Unemployment Rate, 1946-2023



Source: Bloomberg Finance L.P.

1,350 feet deep.



rates since the early 1980s and the sharpest contraction in the federal budget since the Second World War (Chart 2).

Inflation remains problematic, though. At 6%, it is still the highest since the 1980s, despite its fall from 9%

over the past nine months (Chart 3). A tight labor market, a growing economy and an inflation rate three times the Fed's target all argue for continued monetary tightening.

Chart 2 US Federal Budget Deficit as Pct. Of GDP, 1973-2023



Source: Bloomberg Finance L.P.

Chart 3 US Consumer Price Index, YoY Pct., 1973-2023



Source: Bloomberg Finance L.P.



But monetary policy works with a lag. Having expanded by nearly 50% in 2020-2021, thus creating the inflation we see today, money supply is now contracting for the first time since the 1930s (Chart 4). This presages a continued decline in inflation in the coming months.

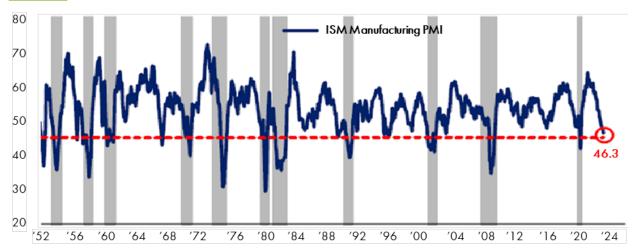
Other economic data point to weakness in the economy, suggesting that any further tightening of monetary policy risks sending the economy into a recession. Manufacturing data, especially, are headed lower. The broad Purchasing Managers' Index is contracting at a level coincident with every recession in the past seventy years (Chart 5).2 New orders for

Money Supply M2, YoY Pct. Change, 1973-2023



Source: Bloomberg Finance L.P.

ISM Manufacturing PMI and Recessions, 1952-2023



Courtesy: BofA

² With the exception of 1967, when the drop in the PMI did not coincide with a recession.



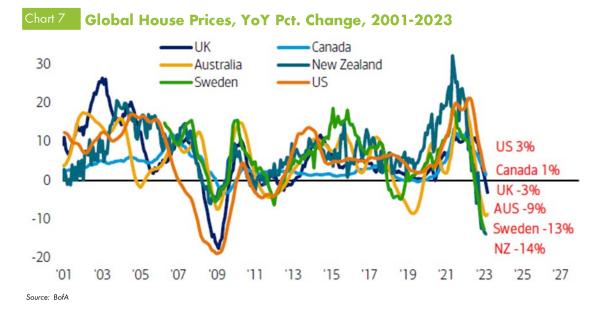
manufactured goods are also declining, suggesting a fall in corporate profits is coming (Chart 6).

Housing is the other main sector of the economy that is weakening in the face of higher interest rates. New starts are down 400,000 units from a year ago as

mortgage rates have jumped to their highest levels in over twenty years. Housing prices are heading lower globally (Chart 7).

Even the employment picture is cracking a bit. Job growth is slowing, and while the number of unfilled







jobs remains at just under ten million, that is down from twelve million a year ago (Chart 8).

uring the pandemic, Congress poured money directly into the bank accounts of individuals and companies. Total bank deposits jumped from \$13 trillion in March 2020 to more than \$15 trillion in just three months, peaking at over \$18 trillion a year ago. It was the largest influx into the banking system in history (Chart 9).

Banks had to do something with this additional \$5 trillion in deposits. They increased lending to individuals and businesses, but mostly, they bought highquality bonds like US Treasuries.

Tightening monetary policy leads to declines in bond prices. In 2022, the more than 400 basis point hike in interest rates led to the biggest drop in the value of bonds in American history.3 Mark-to-market losses of bank assets is estimated to be about 10%, which

Chart 8 Job Openings in the US, 2000-2023, thousands



Source: Bureau of Labor Statistics

Deposits, All Commercial Banks, YoY Change, \$Billions





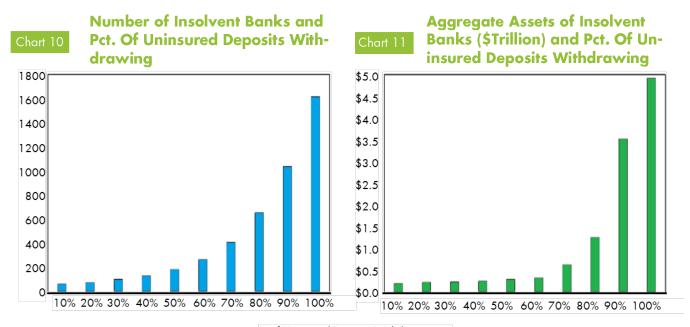
would essentially wipe out all the capital banks have. But banks are not required to mark all their assets to market, thus avoiding the impact on capital of fluctuations in the value of their assets.

Most depositors do not think that they are lending their cash to banks when depositing money, but that is exactly what they are doing. All lending involves risk, and if banks make enough bad loans, depositors may not get their money back. This happened with regularity in the 19th century.

The more common risk, associated with the prospect that a bank may have lost money on its lending, is a rush by depositors to withdraw their money. All banks keep a certain amount of cash on hand to meet withdrawals, but the very nature of banking is to take daily deposits and invest them in long-term loans. Not a bank on the planet could meet sudden, substantial withdrawal requests.

In 1934, Congress created the Federal Deposit Insurance Corporation to insure each bank depositor \$2,500 in deposits, hoping to engender confidence that money was safe in banks. It worked spectacularly. In the four years prior to the creation of the FDIC there were 9,000 bank failures in the US. In 1934, there were nine.

Over time, the amount of deposits insured has risen, most recently to \$250,000 after the Global Financial Crisis in 2009. But around 40% of all bank deposits, about \$9 trillion, exceed the insured limit, and those deposits are subject to loss should a bank fail. Large withdrawals from uninsured depositors would cause many more bank failures. A mere 10% withdrawal of uninsured deposits would lead to an estimated 66 bank failures with more than \$210 billion of assets. If all uninsured deposits withdrew from the banking system, more than 1,600 banks would fail, representing \$5 trillion in assets (Charts 10-11).



% of Uninsured Deposits Withdrawing

Source: See footnote

- 4 At Silicon Valley Bank 92.5% of deposits were uninsured.
- At Jiang, Erica Xuewei and Matvos, Gregor and Piskorski, Tomasz and Seru, Amit, Monetary Tightening and U.S. Bank Fragility in 2023: Mark-to-Market Losses and Uninsured Depositor Runs? (March 13, 2023). Available at SSRN: https://ssrn.com/abstract=4387676 or https://dx.doi.org/10.2139/ssrn.4387676.



ven in the absence of more bank failures, bank fragility is having an effect in the broader economy. Real estate lending has plummeted (Chart 12), for example. Total bank lending fell \$104.7 billion in the last two weeks of March alone, the biggest decline since the data began in 1973.

Banks with assets over \$250 billion are considered "systematically important," meaning, presumably, they are too big to fail and will be rescued if required. This backstop, which goes well beyond the FDIC cap on insured deposits, is an encouragement to move deposits to these megabanks. That would be a major policy mistake. Bank balance sheets are already sufficiently complex and opaque to regulators and, likely, even to bank management. And small and midsized banks⁶ are major creditors in the economy, accounting for about half of all commercial and consumer lending, and the majority of residential and commercial real estate lending.

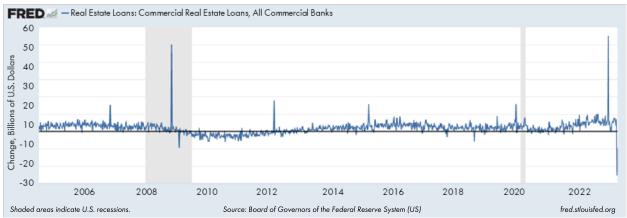
Bank deposits dropped \$500 billion in March, and are \$1 trillion less than a year ago (Chart 9). Banks will have to pay more to keep deposits. Lending standards have been tightening since the beginning of the year and banks are making fewer loans. Bank

profitability will be pinched, and that is before loan losses increase and additional regulations circumscribe lending.

Banks will look to restrict credit, and that will constrain economic growth, particularly perilous as the important sectors of manufacturing and housing are already under pressure. Commercial real estate is also at risk.

Commercial real estate is a broad industry, and many sectors are experiencing favorable trends. Demand for multifamily housing and industrial space continues to be strong. Other areas of real estate are more challenged. Retail has long been buffeted by the multiyear (multidecade) growth of online shopping, but weakness in office properties is a more recent product of the pandemic and technology. Occupancy rates in most cities is only about 50% of what existed before the pandemic. Cash flows will not support current valuations, which may be below the mortgage amount. With approximately \$1 trillion of commercial mortgage loans due by the end of 2024, 7 lenders may realize significant losses as owners simply turn in the keys.





⁶ Under \$250 billion in assets.

Of the \$5.6 trillion outstanding

Credit formation is an essential function of banking. There are nonbank sources of capital that fill some of that credit role, but there is no alternative to the other critical function of banking, facilitating the flow of money throughout the economy. Just as is managing the flow of water is fundamental to prevent floods from destroying life and property, maintaining the flow of money is essential to prevent a collapse in the economy. Oftentimes it takes a disaster to remind us to pay attention to the flows of both money and water.

n 28 May 1889, a low pressure system formed over Kansas. Two days later, the storm dumped ten inches of rain on western Pennsylvania, the heaviest rainfall recorded in that region. On the morning of 31 May, members of the South Fork Fishing and Hunting Club, who had been staying the night in the cottages they had built for themselves, saw water cresting over the dam. The spillway was clogged with debris, and the club's engineer considered blasting a hole in the dam to let some water escape. He rejected this idea as too risky. There was nothing they could do but pray the water would stop rising. The workers and the club members were told to seek higher ground and pray. Just before 3pm, the dam collapsed.

Over the next 65 minutes, the 14.55 million cubic meters (nearly four billion gallons) of water in Lake Conemaugh surged through the valley, picking up rocks and debris along the way. The flood was momentarily halted when it slammed into the 78-foothigh railroad bridge over the Conemaugh River, but in a few minutes the water took down the bridge and gathered greater force down the valley, travelling at 40 mph at a height of 60 feet. Fourteen miles down river from the dam the town of Johnstown was crushed. 2,208 people perished, the largest loss of civilian life in American history until the 9/11 attacks in 2001.

The South Fork Fishing and Hunting Club made two fatal errors. The first was they lowered the height of the dam by three feet in order to widen the road across it. The second, more important, error was selling off the five large discharge pipes for scrap, leaving the dam without a means of regulating the flow of water. This basic oversight led to the disaster.

Survivors sued the club for negligence. Philander Chase Knox defended the club in court, claiming an Act of God was to blame. His defense was successful, and neither the club nor its members were held responsible, and no compensation was paid to survivors. Frick, Carnegie, Mellon, Knox and the others resumed their gilded lives. Mellon served three presidents as US Secretary of the Treasury from 1921 to 1932, while Knox was elected a US senator and served as US Attorney General under presidents McKinley and (Theodore) Roosevelt, and US Secretary of State under President Taft. Carnegie did build a library for the people of Johnstown. 8

The court case did have a lasting impact on American jurisprudence though. The public outrage over the acquittal of responsibility of the club led courts around the country to adopt the British common law practice that established "strict, joint, and several liability." This "strict liability" standard, that holds a person responsible even in the absence of fault or criminal intent, is in effect today because of the fury over the decision in the Johnstown Flood suit.

redit comes from the Latin, credere, to trust. The owners of the dam trusted that the waters would never rise more than ten feet. They trusted that the large drainage pipes would never be needed to relieve pressure on the dam. In normal times, they were right. On 31 May 1889, they were wrong, and 2,208 people died.

⁸ It is today the Johnstown Flood Museum



Bank depositors trust that they can access their money on demand. In normal times, that is true. But it is not always true.

Banking is unlike any other industry in that is represents a systemic risk to the economy. If an auto company (Chrysler) or a consumer company (Radio Shack) goes bankrupt, workers lose their jobs, investors lose their money, but there is no systemic risk to the economy. This is not so with banking. It is not just the flow of credit throughout the economy that is impaired, but also the payments system that enables the trillions of dollars to move daily between buyers and sellers, employers and workers. Bank failures have a cascading effect on impeding the flow of money in the economy, thus putting the entire economy at risk.

The payment system cannot be allowed to fail, ever. At the same time, most businesses cannot operate without large deposits in the banking system, to pay vendors and meet payroll. This must be protected.

There are no simple solutions to the inherent conflicts in the banking system. If all deposits are guaranteed, moral hazard expands. Banks should compete for deposits and investments, but not at the risk of catastrophic failure. Shifting deposits from small banks to megabanks only swaps one problem for another. Tradeoffs abound, and there are no easy answers.

But we must never lose sight of the fundamentals of our economy. We must protect our infrastructure, both physical and financial. The consequences of neglect are too dreadful to contemplate otherwise, as the people of Johnstown learned to their horror.



Source: NPS





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