# Small businesses and the economy: A roller coaster ride

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## ABSTRACT

Numerous problems have persisted affecting the U.S. and global economy since they first presented themselves during the COVID-19 pandemic. The pandemic brought both a health crisis and worldwide calamity through labor shortages and disrupted supply chains. Inflation began as shortages led to upward pricing pressures. U.S. consumer debt – as well as public debt – have increased to record levels and the conditions seem to be pointing towards longer-term impacts. At the same time, U.S. consumers have been tapping into 401k accounts and making hardship withdrawals. In some industry sectors, substantial layoffs have occurred (although particularly in the tech sector, many have been attributed to over-hiring during the pandemic). As the Federal Reserve attempts to moderate inflation through sustained interest rate increases, the consumers and businesses of the U.S. economy must continue to find ways to navigate these circumstances. This paper chronicles and further analyzes the economic conditions that are informing (as well as driving-) consumer behavior and small business decisions. A metaphorical roller coaster ride is navigating steep climbs and abrupt falls, twists, and turns with recession concerns that suggest a possibility of careening off the rails.

Keywords: small business, entrepreneurship, economic conditions, inflation, debt, recession.

## INTRODUCTION

COVID-19 dealt the U.S. and global economy a substantial upheaval, which constituted an exogenous shock (Cowling et al., 2020; Morgan et al., 2020). In the four years since the global pandemic unleashed itself most virulently in the spring of 2020, several records were set in the United States, which individually and collectively presented uncertainties for consumers, small businesses, and those trying to discern impacts. "The United States was experiencing a period of low inflation before 2020. Then, in early 2020, the coronavirus disease 2019 (COVID-19) created various market problems, causing prices for goods and services to rise" (Hernandez, 2023). The Federal Reserve's (FED's) subsequent efforts to lower the inflation rate to a targeted level of 2% over time (*Federal Reserve issues FOMC statement*, 2023) have been implemented by raising interest rates. Rate increases have been met with setbacks, one of which is due to the nature of using this method to reduce inflation – it can take time to realize the full effects of a hike as there are both short-term and long-term implications. Despite a sustained series of aggressive rate hikes, inflation has not come down enough to meet its objective.

Referencing history, the FED has never increased rates as precipitously as it did with 11 consecutive rate hikes (from 0% in March 2022 to 5.5% in September 2023, where it currently remains). While from June 2004 to June 2006 the FED increased rates 17 consecutive times, those rate hikes took place over a more extended timeline and started at 1.25% and ended at 5.25%, i.e., the hikes were in smaller increments, and they were spread out over a longer period. The point is the effort the FED is putting into curbing inflation is unprecedented and while it is helping to cool the economy, inflation rates, according to data and analysis associated with the Consumer Price Index (CPI) (see Table 1, Appendix), are at a 40-year high. There is a balance to be struck, since interest rates impact economic activity in other ways, especially with high ticket purchases such as housing and automobiles (Caporal & Albright, 2022), and across lending in general. When consumers are affected by economic conditions (up or down), small businesses will see changes in their purchasing behavior. Whether the impact will be severe or more of a controlled descent is yet to be seen (Rubin & Harrison, 2022; Serwer & Croll, 2022). So as to provide readers with a conceptual framework that encapsulates this research, please refer to Figure 1 (Appendix).

## LITERATURE REVIEW

Reflecting on relevant trends associated with small business economies post-pandemic, this research draws on an ongoing effort comprised of several databases (holding artifacts collected across time) and specifically 296 artifacts as a subset informing this work. This research investigates the current conditions of our economy by chronicling and analyzing past contributing factors, to explore entrepreneurial development and consumer behavior moving forward. Variants of COVID-19 have continually emerged (*Update on SARS CoV-2 variant BA.2.86*, 2023), occasionally threatening the reinstatement of measures such as mask-wearing. However, it was with the original SARS-CoV-2 virus in 2020 (*SARS-CoV-2 variant classifications and definitions*, 2023) that problems such as labor shortages contributed to supply chain disruptions (Craighead et al., 2020), then inflation, and many questions about the possibility of a looming recession (Lahm Jr. & Perry, 2023b). It has also been observed that long COVID impacted some members of the labor force by taking them out of work altogether or causing them to work reduced hours (Bach, 2022; *Science & tech spotlight: Long COVID*, 2022).

Supply chain disruptions can be difficult to tame due to the way a shortage of a critical component in one industry can impact another industry (or many industries). The interconnectedness of cross-industry supply chains is well documented, and it was tested during COVID-19, leading to the development of the Viable Supply Chain Model (Ivanov, 2022). This can be exemplified by the chip shortages (*Supply chain issues and autos: When will the chip shortage end?*, 2023) severely impeding the production of vehicles in the automotive industry (Santacreu & LaBelle, 2022). Because microprocessors (i.e., chips, semiconductors) are key components to many other products, multiple industries besides automobile manufacturing have been impacted: "Semiconductors power virtually every sector of the economy—including energy, healthcare, agriculture, consumer electronics, manufacturing, defense, and transportation" (*Semiconductor supply chain risks -- Commerce invites comments to OMB on info collection (by 9/17)*, 2021).

To some extent, initial bottlenecks have subsided, many of which would not likely have been common knowledge among consumers, such as shipping pallet shortages (*Navigating pallet price trends for 2023*, 2023). Nevertheless, disruptions in government operations, industries, businesses, work, and personal lives exposed a delicate web of interdependencies on many fronts relative to supply chains, and these vulnerabilities continue even if most inventories may have been restored. Inflation arose (exacerbated by labor and material shortages) and it has been persistent (*Federal Reserve issues FOMC statement*, 2023). Then, there are longer-term issues such as (decades of) labor shortages in the trucking industry (Min & Lambert, 2002; Schuster et al., 2023) that continue to impact these conditions.

## METHOD

This study is an extension of an ongoing research effort comprised of several databases capturing artifacts from a period primarily spanning 2019-2024 (pre-, during-, and post-COVID). Search efforts have included library database collections (*Ebsco, ABI/INFORM,* and *ProQuest*), artifacts published by reputable research organizations and associations, consulting firms, and data from government agencies. Additionally, due to the volatile, unpredictable, and evolving nature of consumer behavior, small business response, and economic contributors, select popular press sources have been included, where appropriate. While these sorts of sources are not ideal, they sometimes do help capture the impact of real-world, real-time conditions and serve as integral resources for chronically the impact that abiotic factors (e.g., a decision to increase interest rates or not, the adoption of shrinkflation decisions, etc.) have on the biotic (e.g., human beings). Regarding the leveraging of secondary data sources (e.g., government reports, popular press sources, association research reports, etc.), Rabinovich and Cheon (2011) note that these secondary qualitative data artifacts have been identified as promising resources for understanding dynamic circumstances. The current economic conditions are dynamic and anything but static. Therefore, where relevant, these sorts of secondary artifacts are used to inform our analysis. This effort has resulted in an extensive, up-to-date database that serves as the primary resource for informing this research.

To refine the search parameters to more appropriate and relevant schemas, the filters applied included full-text availability, scholarly sources, and a focus on business disciplines, including terms such as small business and entrepreneurship, "gig" economy (freelancing and similar terms), debt sources, and inflation impacts. This strategic narrowing served a dual purpose. Firstly, the vastness of COVID-19-related scholarship, evident in unfiltered searches

yielding millions of results, necessitated a more targeted approach. Specifically, one focused on a combination of terms presented previously. For instance, medical databases were excluded due to their extensive coverage of the term COVID-19 and its irrelevance in that context. Subsequently, these searches were refined with additional keywords such as COVID-19, pandemic, inflation, and recession. Aligning with the specific objectives of this research to contribute to the small business, consumer behavior, and entrepreneurship literature, the applied filters aimed to streamline the scope, helping to ensure precision in sourcing materials germane to this investigation. The outcome is a curated collection of 296 artifacts (as mentioned above) in the primary localized database leveraged to inform this paper.

This curated repository of extant literature frames the current conditions that small businesses in the U.S. are navigating due directly to the sustained impacts of the COVID-19 pandemic, the continual influence of inflation, and the ongoing efforts to mitigate a recession. Extended discussion of the impact of these exogenous contributors on the U.S. consumer is also critical to the chronicling and examination of the broader economic landscape and the purpose of this paper.

## DISCUSSION

Due to a dynamic set of economic circumstances and lagging data resources (e.g., government entities and scholarly publications), this research is conceptual. Current aftershocks of COVID-19 include: sustained record-setting inflation levels; unprecedented debt accumulation and borrowing; lingering supply chain issues in some areas; labor shortages; and consumer and business owner confidence indices are presented as influencers of the post-COVID U.S. economy. While these factors have presented economic difficulties, the continual growth of small businesses points towards an economy with great potential.

## INFLATION

Inflation as a noun has been defined as the "general price level caused by an imbalance between the quantity of money and the trade needs" (Bryan, 1997). Inflation as a verb – which is particularly relevant in this application – typically pertains to those shifts in the general price levels of services and goods throughout an economy as time progresses (Salwati & Wessel, 2022). The Organisation for Economic Co-operation and Development (OECD), is an intergovernmental organization comprised of 38 member countries with market-based economies, i.e., those that are economically substantial in a global economy. According to OECD research, global core inflation (that which excludes food and energy, and these have proven to be the most unstable components) has not slowed significantly since it began to rise in the wake of COVID-19. It "[inflation] remains too high in most economies" (*Confronting inflation and low growth*, 2023). OECD further observes that GDP growth worldwide through 2024 is expected to remain weak, and borrowing costs are rising as monetary policies are working their way through various countries' central banking systems.

As has been the case globally, U.S. inflation has risen dramatically since 2020 (Ball et al., 2022). "Despite turning the corner on the COVID-19 pandemic, stress remains on the finances of American households" (Caporal & Albright, 2022). Notably, an inflection point in the economy may have been first reached with gas and diesel fuel prices. The national average price for a gallon of gasoline surpassed five dollars in the second week of June 2022 (*Weekly U.S. all*

*grades all formulations retail gasoline prices (dollars per gallon)*, 2023), "an all-time high never seen since AAA began collecting pricing data in 2000" (*National average hits new all-time high at $5 per gallon*, 2022). While fuel prices have stabilized in recent months, the cost of goods associated with the Consumer Price Index (CPI) have continued to escalate.

**The Consumer Price Index (CPI)**

Within the context of the U.S. economy, inflation is monitored through many different measures, one of which is the Consumer Price Index (CPI). The CPI serves as a measure tracking the average shift over time based on the prices paid for typical goods and services that consumers purchase (e.g., housing, food, medical care, etc.). Using the CPI calculator, Table 1 (Appendix) tracks inflation for the past 24 years. Divided into 2-year time intervals, the value of $100 is tracked starting in September of 1999 through to September of 2023. The justification for 2-year intervals is based on the overall lifecycle of COVID-19 (pre- and post-transition of COVID), which has been identified as an exogenous shock (Morgan et al., 2020) with repercussions that are still impacting the global economy. Dividing the period from September 2019 to September 2023 into two 2-year intervals can help demonstrate the impact COVID-19 and corresponding policies have had on inflation, particularly the period from fall 2019 (pre-COVID) – to fall 2023 (post-transition-COVID). In turn, the impact on inflation within the U.S. economy is evident and these historic increases have had a direct impact on the household debt within the U.S. economy.

Two of the three greatest percent changes in inflation over the 2-year intervals occurred in the past four years (2019-2021 = 6.84% & 2021-2023 = 12.23%) – essentially during the start, peak, and denouement of COVID-19 (notwithstanding any possible variants or resurgence). Interestingly, the long-term economic impacts of long COVID (Lahm & Perry, 2023), continue. Most notably, the percentage change (2021-2023 = 12.23%) represents the greatest percentage change in the past 24 years. This observation taken in conjunction with the FED's efforts to curb inflation, with the most aggressive effort in raising rates, demonstrates the complexities associated with the aftermath of COVID-19 in the economy. Moreover, the pre-pandemic (August 2019) to post-pandemic (August 2023) value according to the CPI has increased 20% (i.e., what once cost $100 in September 2019, would now cost $120 in September of 2023). While efforts are continually being made to mitigate inflation, the impacts continue to reverberate across the U.S. economy. These conditions have impacted consumers and their households and in turn have exacerbated accumulated debt in the U.S. As costs rise, the consumer's needs continue and this creates a situation where debt, typically, and most dramatically in the form of credit cards, accelerates. In fact, the largest accumulation of credit card-based debt was reported in Q2 of 2023 at $1.03 trillion (the first-time credit card debt has reached $1 trillion dollars in the history of credit cards. At the submission of this paper (February 2024, credit card debt crossed $1.13 trillion). This is an unprecedented total sum and these all-time high balances are cause for concern.

**Monetary Policy and Interest Rates**

Prior to the pandemic, the U.S. Federal Reserve issued a policy statement on January 29, 2020, observing that on a (i.e., the previous) 12-month basis, inflation for items other than food and energy had been below its target range of 2 percent; the labor market was strong; and its FOMC Committee had decided to maintain a federal funds rate at 1-1/2 to 1-3/4 percent (*Federal*

*Reserve issues FOMC statement*, 2020). As COVID-19 began to spread worldwide, two emergency (unscheduled) meetings[1] were subsequently held (both in March 2020) and the federal funds rate was cut to a target range of zero to ¼ percent (Tepper, 2023). Zero might be regarded as that point at the bottom (technically called a lift hill) of a roller coaster ride that has since ensued in the economy. Beginning in March of 2022, the FED began to raise rates 11 consecutive times until September 2023 (meetings are not necessarily on a monthly basis), when it determined that the most recent preceding (set in July) target range for the federal funds rate would be held at 5-¼ to 5-½ percent (*Federal Reserve issues FOMC statement*, 2023). As per the OECD, "While the rising borrowing costs are painful for households and firms, dampening households' and firms' demand through higher borrowing costs is a standard channel through which monetary policy normally takes effect" (*Confronting inflation and low growth*, 2023).

## CONSUMER DEBT

Debt comes in many forms and types of expenditures and investments. While perhaps an oversimplification, carrying certain types of debt may be considered better than others, i.e., bad versus good debt. Examples of good debt include carrying a mortgage on a primary residence or that which is incurred while pursuing further education (leading to career advancement). Either or both types of debt can generally be viewed as a long-term investment. Bad debt may be associated with expenditures that are unlikely to appreciate over time and may often involve high borrowing interest rates. There are several examples here as well, including expenses on credit cards (revolving debt), new car loans, and cash advances (vacation trips, et al.). In a 2017 report, the International Monetary Fund (IMF) determined that debt in the short term can temporarily spur an economy and positively impact growth and employment conditions (Global financial stability report: Is growth at risk?, 2017). The IMF's analysis then determined that within 3-5 years the positive effects initially realized are typically reversed, and the likelihood of a financial crisis increases. It was further noted in the report that these effects on debt are stronger in more advanced economies.

Another contributing factor is with the increase in inflation, types of unhealthy debt can grow as well. As the price of commonly needed goods and services increases (inflation), without corresponding wage increases to offset the inflated expenses, consumers turn to various permeations of debt to support their lives and lifestyles (this is not to suggest that some may adopt additional tactics such as cutting expenses, taking on new employment, and so forth). So far as the myriad forms of consumer debt go, there have been record increases across nearly every form of debt from credit cards, home equity lines of credit, mortgages, auto loans, and student loan debt. Of note, student loan debt repayment plans were reactivated in October 2023 for the first time since the start of the global pandemic, March 2020, with the long-term impacts of such reactivation unknown yet (*Quarterly report on household debt and credit: Q 4*, 2023; Vanden Houten, 2023). These have been recognized as the greatest sources of household debt in the U.S. Each contributes to the overall economic outlook and demonstrates the complex interactions between consumer behavior, financial markets, and government policies.

In the following section consumer debt sources will be further discussed and an emphasis will be placed on realized and impending defaults based on existing data sources. This will

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[1] Calendars, statements and meeting minutes are published on the Federal Reserve's website on a page dedicated to this information: https://www.federalreserve.gov/monetarypolicy/fomccalendars.htm

include a review of credit card debt, home equity lines of credit, mortgage (housing) debt, auto loan debt, and student loan debt specifically.

**Credit Card Debt: A Growing Concern**

For the past decade consumer debt has continued to increase with the greatest source of debt being housing debt (e.g., mortgages, home equity lines of credit, etc.). Most compelling – and concerning – is the rate at which non-housing debt has increased since the start of COVID-19 generally, and specifically the rate at which credit card debt has escalated. For the first time credit card debt has crossed the $1 trillion threshold (*Total Household Debt Reaches $17.06 Trillion in Q2 2023; Credit Card Debt Exceeds $1 Trillion*, 2023). Additionally, over 10% of the current total debt was accumulated in the past year. In context, the total year-to-year increase of credit card debt from 2015-2021 was at $80 billion. In fact, credit card debt has nearly doubled in the past 10 years (see Table 2, Appendix). From 2021-2023 the total year-to-year increase of credit card debt is over $250 billion, which is 3x the aggregate of increases from 2015-2021 with regard to credit card debt. The rapid increase in credit card debt has been attributed to inflationary pressures and increased levels of consumption, which are explicitly connected to robust increases in credit card balances and other debts that were driven in part by rising prices (*Total household debt surpasses $16 trillion in Q2 2022; Mortgage, auto loan, and credit card balances increase*, 2022). At the same time credit card debt is increasing at unprecedented rates, the housing debt has stabilized and loan originations declined (*Risk review*, 2023).

According to WalletHub, in Q2 of 2023 additional credit card debt was triple the average amount of new debt households had accumulated in previous periods and represents the greatest accumulation of debt in a quarter since the Great Recession of 2007-2008 (McCann, 2023). To these ends, the rise in credit card debt is indicative of impacts of inflation on the average consumer and as that debt accumulates, in light of higher interest rates, it is assumed that this debt will continue to have impacts on consumer spending, behavior, and economic health – and therefore, small businesses.

**HELOC & Home Equity Loans**

As the Federal Reserve continued to raise interest rates in its determined efforts to tame inflation, this impacted mortgage borrowing and real estate markets (Lahm Jr. & Perry, 2023a). At the same time, housing shortages propped up pricing in many areas, resulting in high-priced housing (and rentals), along with higher interest at the same time (Stauffer & Reed, 2022). Looming economic uncertainty and the weight of high interest rates seems to have had an impact on homeowner proclivity to pursue and open home equity lines of credit (HELOCs) (McMillin, 2023; *TransUnion home equity trends report*, 2023). According to the Consumer Financial Protection Bureau, “a HELOC is an open-end line of credit that allows you to borrow repeatedly against your home equity” (*My lender offered me a home equity line of credit (HELOC). What is a HELOC?*, 2017). These equity lines are typically a calculation based on a percentage of the equity a homeowner has accumulated in their property (e.g., 75%-90% of the equity accumulated, whereby a $100,000 equity in a property valued at $200,000 could result in a $75,000 line of credit available through the HELOC) and can be used for any purchase the consumer decides.

As consumers are continually searching for additional ways to make purchases, reliance on credit cards, and other sources of credit, like HELOCs are on the rise. As reported by BankRate.com, over the period from July 2022 to July 2023, RubyHome (a real estate platform) analyzed Google search engine traffic, and online searches for "HELOC" rose 305% reaching an all-time high search rate in July 2023 (McMillin, 2023). According to a report by the credit bureau TransUnion, "HELOC volumes were comparative to pre-pandemic levels while home equity loan origination are well above levels seen between 2008 and 2021" (*TransUnion home equity trends report*, 2023).

**Automobile Prices and Loans**

Computer chip shortages coinciding with COVID-19 severely impacted several industries, including automobile manufacturing (*Supply chain issues and autos: When will the chip shortage end?*, 2023). As observed in an article published by *Automotive News*, "Over the past three years, the automotive industry has undergone significant changes, spurred by a global pandemic that disrupted vehicle supply chains, the rapid development of new technologies, and fluctuating interest rates" (Wanderon, 2023). Hence, supply chain issues exacerbated pricing, i.e., made vehicles much more expensive, while at the same time, interest rates also increased the overall cost of ownership. According to the Federal Reserve Bank of New York's Quarterly report on household debt and credit (Q 4, 2023) automobile loan balances increased to $1.55 trillion (*Quarterly report on household debt and credit: Q 4*, 2023). Additionally, since 2015 auto loan debt has increased 50% (see Table 2, Appendix). The increased cost of vehicles and the increase in interest rates are creating a financial situation for consumers that has led to a 30-year high for delinquencies and loan defaults.

**Student Loan Debt**

The continuing student loan debt in the U.S. brings considerable pressure and a profound impact on both debt carriers and the broader economy. As borrowers navigate accumulating debt, it negatively impacts their financial stability in both the short- and long-term and influences their financial position in terms of homeownership and their engagement in the local economy. According to research conducted by Park and Miller (while employed by the U.S. Department of Housing and Urban Development), "Many borrowers view student loan debt as a significant barrier to major lifetime milestones, including homeownership" (2023, p. 413). Other researchers have focused on achieving additional milestones (or not), such as marriage, starting a family (again, homeownership), and saving for retirement (Sims, 2017), any and all of which could conceivably be impacted by debt. Another report from the Federal Reserve Bank of New York noted that by the third quarter of 2023, "student loan debt increased by $30 billion and stood at $1.6 trillion" (*Quarterly report on household debt and credit: Q3 2023.*, 2023); this figure represents approximately 9 percent of total household debt.

Additionally, a study by the National Bureau of Economic Research (2018) (Collin-Dufresne et al., 2018) suggested that student loan debt responsibility can impact the likelihood of starting a small business, thereby negatively influencing entrepreneurial activity. Some of these observations were pre-COVID-19. During the COVID-19 global pandemic, student loan debt was put on hold from March 2020 to October 2023, pausing payments and halting the accrual of interest on debt. With the restarting of student loan payments, it has been estimated that the impact of these student loans on nearly 45 million Americans could result in an estimated $100 billion in reductions in consumer spending over 2023-2024 (Vanden Houten, 2023). A reduction in consumer spending at this magnitude could serve as another metaphorical increase in wind velocity in the FED's goal to orchestrate a soft landing with respect to the U.S. economy.

Addressing this multi-variable crisis requires concerted efforts in policy, programs, and practices to alleviate the strain on individual consumers and small businesses representing the economy. It will never be a single variable or factor that tilts the U.S. economy into a recession, but an aggregate of myriad factors chipping away and eroding the foundation of a given economy to the point of recession.

**Making Ends Meet**

Some consumers are struggling with inflation across several categories of goods, e.g., food, fuel, energy, insurance premiums, rent, and tapping a variety of resources (and methods) to make ends meet. Via a collaborative effort, PYMNTS and LendingClub released a study indicating that 25% of consumers (i.e., respondents) could not "make ends meet" without supplemental income gained from a side hustle such as freelance work or selling goods and services online (*New reality check: The paycheck-to-paycheck report*, 2023). The U.S. Department of the Treasury's Financial Stability Oversight Council (FSOC) produces annual reports to monitor the stability of the U.S. financial system. Its 2023 report stated that in 2023, "the major drivers of economic conditions have been persistently high inflation and increasing interest rates" (*Financial Stability Oversight Council (FSOC) Annual Report*, 2023). According to survey research findings from Bankrate.com (Bankrate survey conducted March 14-16, 2023):

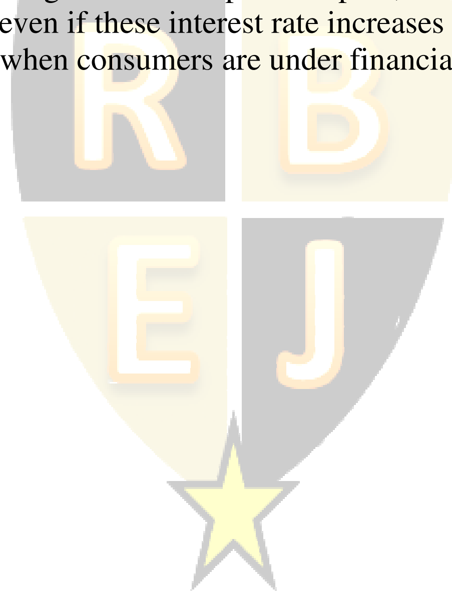
> Over two-thirds (68 percent) of parents of adult children have made or are currently making a financial sacrifice to help their kids financially, according to a new Bankrate survey. Parents say they sacrificed retirement savings (43 percent), emergency savings (51 percent), paying down their own debt (49 percent) or reaching a financial milestone (55 percent). (Gillespie, 2023)

Bank of America, through its quarterly reports entitled, *Participant Pulse*, includes data and analysis of hardship withdrawals from 401(k) plans (it administers). While the most recently available report indicates that hardship distributions in Q4 of 2023 are slightly down from the previous period, i.e., Q3, 2023, they are up from the previous year (*Participant pulse Q4*, 2024). Further, the same publication from Q2 of 2023 showed a 36% increase year-over-year (2023 vs. 2022) (Anderson, 2023). It should be noted that such data reflects only Bank of America's customers (4 million total participants in its recordkeeping clients' employee benefits programs). As illustrated in Figure 2 (Appendix), 401(K) withdrawals by generation, according to a survey conducted by the financial services firm Betterment LLC, found that the following percentages

among individuals who are making withdrawals from retirement accounts: Baby boomers (40%), Gen Z (30%), Millennials (27%), and Gen X (16%).

## CONCLUSION

According to the Federal Reserve "the [FOMC] Committee will take into account the cumulative tightening of monetary policy, the lags with which monetary policy affects economic activity and inflation, and economic and financial developments" (*Federal Reserve issues FOMC statement*, 2023). The Federal Reserve does seem more focused on taming inflation than focusing on consumer debt. The logical inference of increased prices for consumer goods is that they can force some stretched households into borrowing more, and if costs stabilize, spending on credit could come down. Yet, debt levels increasing (Caporal & Albright, 2022; *Quarterly report on household debt and credit: Q 4*, 2023) along with interest rate hikes does suggest the ascending climb on a roller coaster. Once this economy reaches a summit on this metaphorical roller coaster, what's on the other side could become a spine-chilling descent for consumers and small businesses alike. Many Americans are living paycheck-to-paycheck already (Henwood, 2023), and for them, a period of high inflation represents pain, and to follow this with high interest rates will hurt as well (even if these interest rate increases are meant to tame inflation). It's a foregone conclusion that when consumers are under financial stress, small businesses will soon after, suffer too.



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**APPENDIX**

**Figure 1**

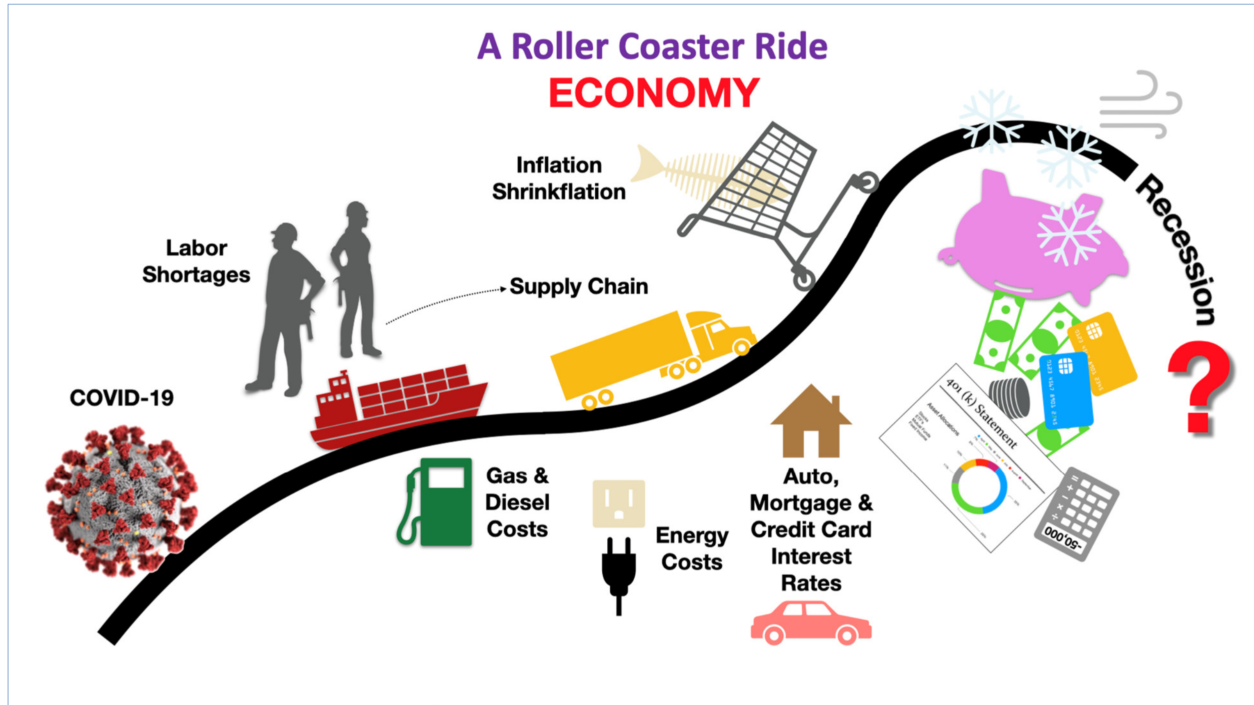


**Figure 2**

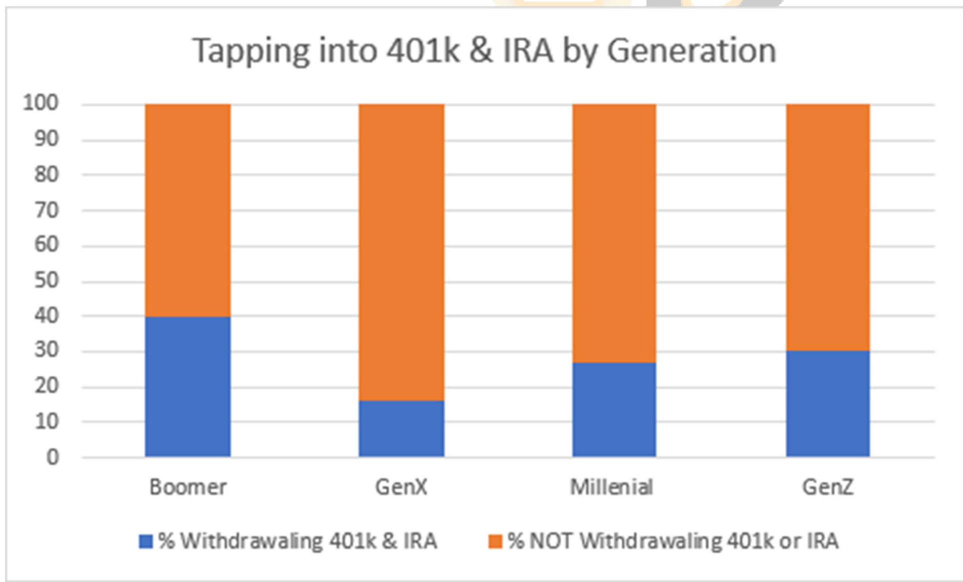


Figure developed using Betterment retail investor survey 2023: Assessing the "new normal". (2023). Betterment LLC. https://www.betterment.com/resources/2023-investor-survey

**Table 1**

### U.S. Bureau of Labor Statistics CPI since 1999 in 2-year intervals

| September to September | Starting Value | Ending Value | Percentage Change |
|---|---|---|---|
| 2021 – 2023 | $100 | $112.23 | 12.23% |
| 2019 – 2021 | $100 | $106.84 | 6.84% |
| 2017 – 2019 | $100 | $104.03 | 4.03% |
| 2015 – 2017 | $100 | $103.73 | 3.73% |
| 2013 – 2015 | $100 | $101.62 | 1.62% |
| 2011 – 2013 | $100 | $103.21 | 3.21% |
| 2009 – 2011 | $100 | $105.06 | 5.06% |
| 2007 – 2009 | $100 | $103.59 | 3.59% |
| 2005 – 2007 | $100 | $104.87 | 4.87% |
| 2003 – 2005 | $100 | $107.34 | 7.34% |
| 2001 – 2003 | $100 | $103.87 | 3.87% |
| 1999 – 2001 | $100 | $106.19 | 6.19% |

Table developed using Consumer Price Index (CPI) data, before seasonal adjustment, and a "CPI Inflation Calculator" from the U.S. Bureau of Labor Statistics (BLS); percentage change figures are rounded. Retrieved from https://www.bls.gov/data/inflation_calculator.htm

## Table 2

### Major categories of U.S. consumer debt

| YEAR Q2 | Housing Debt (mortgage & home equity) | Non-Housing Debt (total) | Non-Housing Debt (credit card) | Non-Housing Debt (auto loan) | Non-Housing Debt (student loan) | Non-Housing Debt (*other) | Total Debt | % Increase year-to-year | Housing Debt % of total | Non-Housing Debt % of total |
|---|---|---|---|---|---|---|---|---|---|---|
| **2023** | $12.38 | $4.70 | $1.03 | $1.58 | $1.57 | $0.52 | $17.08 | 7.48% | 72.48% | 27.52% |
| **2022** | $11.70 | $4.44 | $0.88 | $1.50 | $1.59 | $0.47 | $16.14 | 8.18% | 72.49% | 27.51% |
| **2021** | $10.76 | $4.18 | $0.78 | $1.41 | $1.57 | $0.42 | $14.94 | 2.45% | 72.02% | 27.98% |
| **2020** | $10.15 | $4.12 | $0.82 | $1.34 | $1.54 | $0.42 | $14.27 | 4.61% | 71.13% | 28.87% |
| **2019** | $9.81 | $4.05 | $0.87 | $1.30 | $1.48 | $0.40 | $13.86 | 3.40% | 70.78% | 29.22% |
| **2018** | $9.43 | $3.87 | $0.83 | $1.24 | $1.41 | $0.39 | $13.30 | 3.93% | 70.90% | 29.10% |
| **2017** | $9.14 | $3.69 | $0.78 | $1.19 | $1.34 | $0.38 | $12.83 | 3.84% | 71.24% | 28.76% |
| **2016** | $8.84 | $3.45 | $0.73 | $1.10 | $1.26 | $0.36 | $12.29 | 3.38% | 71.93% | 28.07% |
| **2015** | $8.62 | $3.24 | $0.70 | $1.01 | $1.19 | $0.34 | $11.86 | 1.72% | 72.68% | 27.32% |

Table developed using data from the from the Federal Reserve Bank of New York's "Quarterly Report on Household Debt and Credit (Q2)". Retrieved from https://www.newyorkfed.org/microeconomics/hhdc

*Other includes retail-based credit cards and other consumer loans.