
Weathering Volatility 2.0

October 2019

A Monthly Stress Test to Guide Savings

Executive Summary



JPMORGAN CHASE & CO.

INSTITUTE

Executive Summary

Diana Farrell

Fiona Greig

Chenxi Yu

In this report, the JPMorgan Chase Institute uses administrative bank account data to measure income and spending volatility and the minimum levels of cash buffer families need to weather adverse income and spending shocks.

Inconsistent or unpredictable swings in families' income and expenses make it difficult to plan spending, pay down debt, or determine how much to save. Managing these swings, or volatility, is increasingly acknowledged as an important component of American families' financial security. In prior JPMorgan Chase Institute (JPMCI) research, we have documented the high levels of income and expense volatility families experience. In this report, we make further progress toward understanding how volatility affects families and what levels of cash buffer they need to weather adverse income and spending shocks. We explore six key questions:

1. What is the trend of month-to-month income volatility between 2013 and 2018?
2. What is the distribution of income volatility and is it persistent from year to year?
3. What are the prevalence and magnitude of income spikes versus dips?
4. How does income volatility differ across demographic groups?
5. How does month-to-month spending volatility compare to income volatility, overall and across demographic groups?
6. What are the minimum levels of cash buffer that families need to weather adverse income and spending shocks?

Data Asset

FROM THE ENTIRE UNIVERSE OF NEARLY 40 MILLION CHASE DEPOSIT CUSTOMERS

SIX MILLION ANONYMIZED FAMILIES

from a 75-month balanced panel (October 2012 to December 2018)

**Our unit of analysis is the primary account holder, which we refer to as a “family.”
To be included in our sample, an account holder must have:**

1

At least **five transactions** (inflows or outflows) from a personal checking account in every month between October 2012 and December 2018.

This attempts to ensure the Chase account observed is the account holder’s active bank account.

2

At least **\$400 in average monthly total income** for every twelve-month rolling period.

This serves to filter for account holders whose income is likely landing at the Chase account observed.

3

At least **\$10 in average spending**, and at least \$1 spent every month.

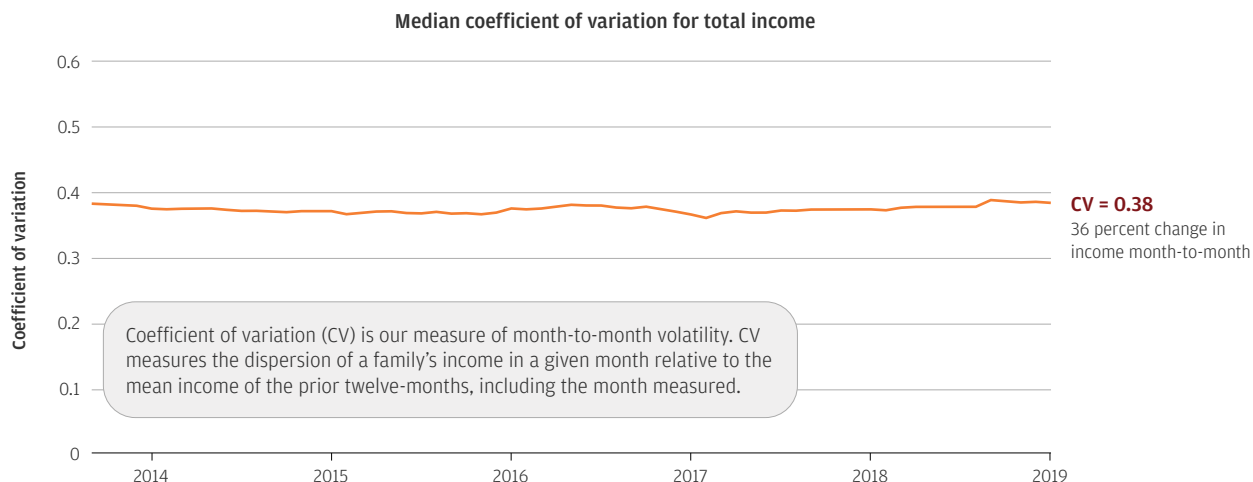
This attempts to ensure we see spending activity for a given account.

Incomes we observe are take-home incomes, meaning after taxes and payroll deductions. Income categories we construct in our data set include labor income (i.e. payroll and other direct deposits) and non-labor income (i.e. government income, capital income, and otherwise).

Source: JPMorgan Chase Institute

Finding One

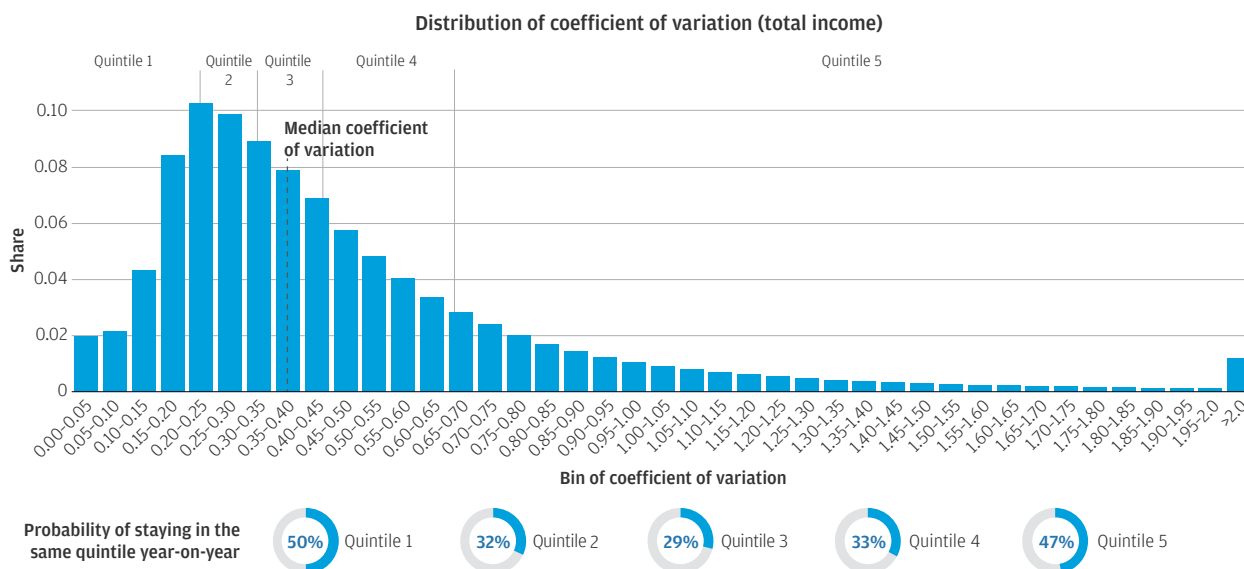
Income volatility remained relatively constant between 2013 and 2018. Those with the median level of volatility, on average, experienced a 36 percent change in income month-to-month during the prior year.



Source: JPMorgan Chase Institute

Finding Two

There is wide variation in the levels of income volatility families experience, both across families at a given point in time and also for a given family across time.

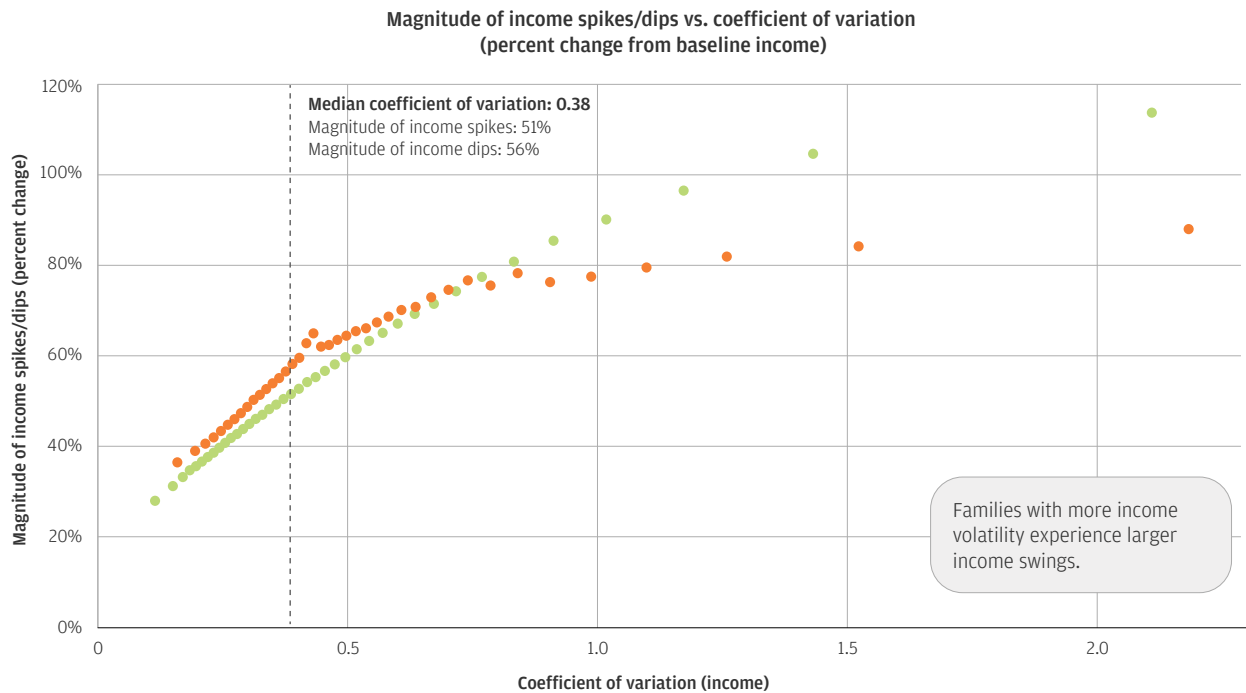
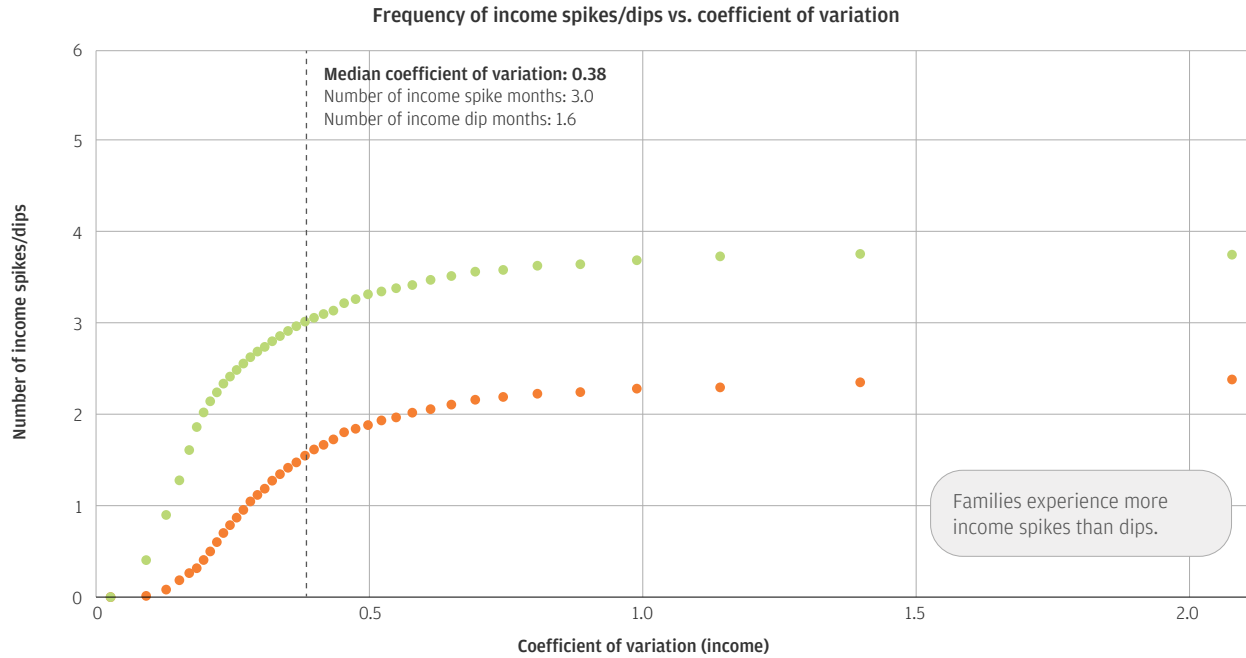


Note: These quintile cutoff points are computed for the year 2013.

Source: JPMorgan Chase Institute

Finding Three

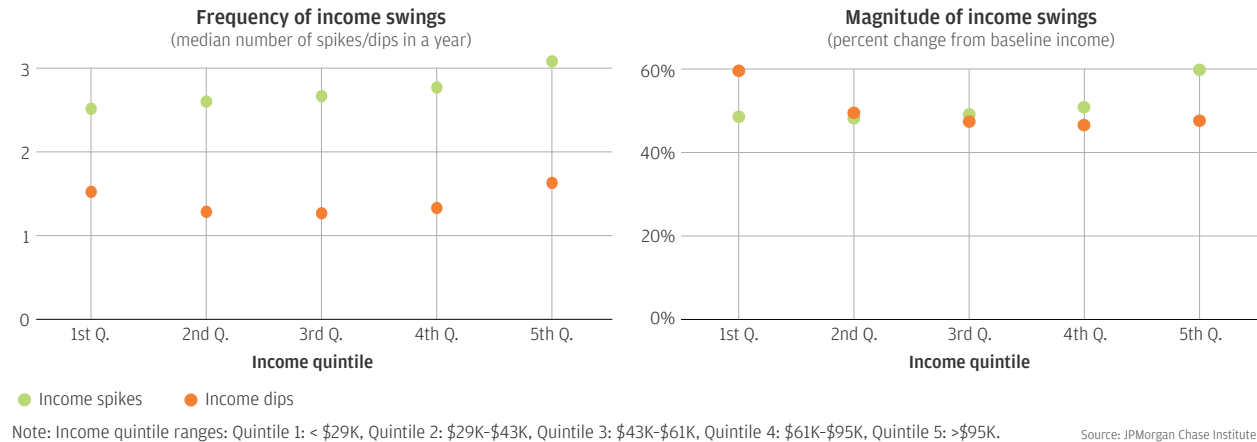
On average, families experience large income swings, in almost five months out of a year. Income spikes are twice as likely as income dips and most common in March and December. Families with the most volatile incomes experience swings that are larger but not more frequent than families with less volatile incomes.



● Income spikes ● Income dips

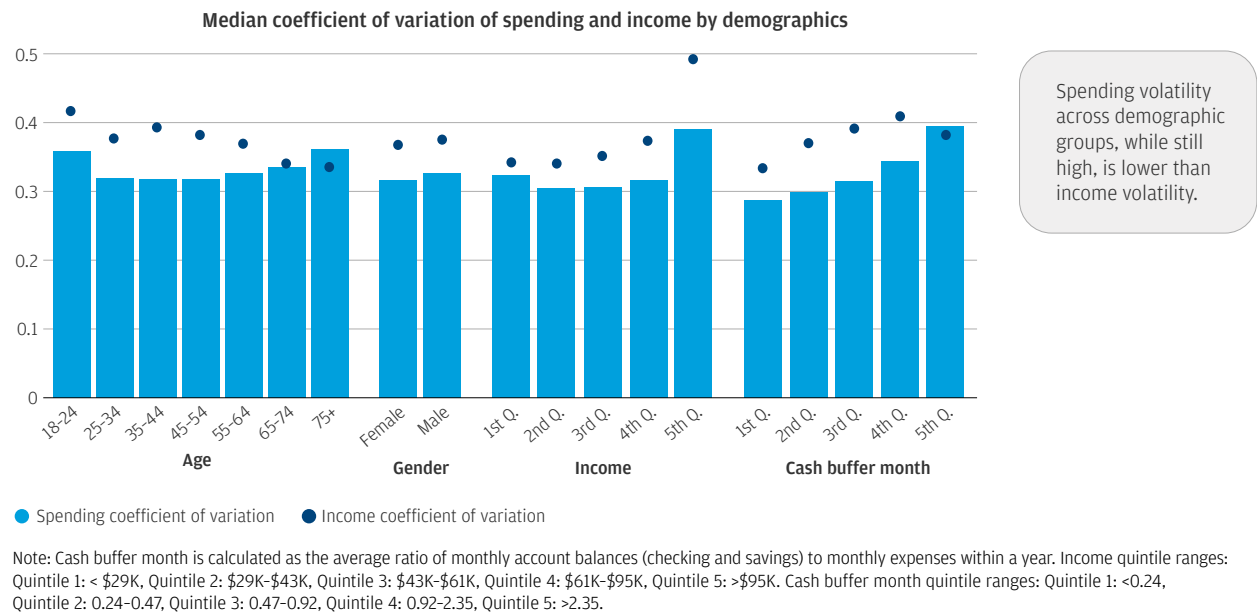
Finding Four

Income volatility is greatest amongst the young and the high income. However, downside risks, as measured by the magnitude and frequency of income dips, are greatest among low-income families.



Finding Five

The trend of spending volatility was flat between 2013 and 2018. While the level of spending volatility was also high, it was 15 percent lower than that of income volatility, except among account holders over the age of 75 and those with the largest cash buffers.



Finding Six

Families need roughly six weeks of take-home income in liquid assets to weather a simultaneous income dip and expenditure spike. Sixty-five percent of families lack a sufficient cash buffer to do so.

Event	Frequency	Magnitude of cash buffer needed to weather event (median weeks of income)	Proportion of families with insufficient cash buffer to weather event
Simultaneous income dip & expenditure spike	Once every 5.5 years	6.2 weeks	65 percent
Income dip	Once every 9 months	2.8 weeks	48 percent
Expenditure spike	Once every 4 months	2.6 weeks	46 percent

Source: JPMorgan Chase Institute

Our findings have important implications for designing savings strategies to improve families' financial health and resilience. They suggest that the tools currently available to help families weather volatile income and spending could be better tailored to an individual's cash flows. Simply saving a certain percentage of monthly income may leave a family with an inadequate cash buffer, exacerbating financial distress in cash flow negative months and resulting in under-saving during cash flow positive months. Instead,

families may need to more aggressively harvest savings opportunities during income spike months. We provide empirical guidance for families, financial health advocates, financial advisors, and policymakers on the minimum levels of cash buffer families need to weather adverse shocks. Given the key role stability plays in the health of families' financial life, it is critical that we continue to gauge how income and spending volatility are changing for American families and the implications for families' financial health.

Acknowledgments

We thank Guillermo Carranza Jordan and Robert Mcdowall for outstanding contributions to every stage of the research process. We also thank Amar Hamoudi and Peter Ganong for their thoughtful comments and advice throughout.

We are grateful for the invaluable constructive feedback we received from JPMorgan Chase Institute colleagues including Carolyn Gorman, Tanya Sonthalia, Max Liebeskind, Erica Deadman, Chi Mac, and Sruthi Rao; and external academic and policy experts Robert Moffitt, James Ziliak, Dmytro Hryshko, David Johnson, Elisabeth Jacobs, Jonathan Morduch, Karen Dynan, Fatih Guvenen, Tim Lucas, Emily Gallagher, Julie Siwicki, Hunt Allcott and Matt Conan. We are deeply grateful for their generosity of time, insight, and support.

This effort would not have been possible without the diligent and ongoing support of our partners from the JPMorgan Chase Consumer and Community Bank and Corporate Technology teams of data experts, including, but not limited to, Howard

Allen, Connie Chen, Anoop Deshpande, Andrew Goldberg, Senthilkumar Gurusamy, Derek Jean-Baptiste, Ram Mohanraj, Stella Ng, Subhankar Sarkar, and Melissa Goldman. The project, which encompasses far more than the report itself, also received indispensable support from our internal partners in the JPMorgan Chase Institute team, including Elizabeth Ellis, Alyssa Flaschner, Anna Garnitz, Courtney Hacker, Sarah Kuehl, Caitlin Legacki, Carla Ricks, Gena Stern, Maggie Tarasovitch, Tremayne Smith, and Preeti Vaidya.

Finally we would like to acknowledge Jamie Dimon, CEO of JPMorgan Chase & Co., for his vision and leadership in establishing the Institute and enabling the ongoing research agenda. Along with support from across the firm—notably from Peter Scher, Max Neukirchen, Joyce Chang, Marianne Lake, Jennifer Piepszak, Lori Beer, Derek Waldron, and Judy Miller—the Institute has had the resources and support to pioneer a new approach to contribute to global economic analysis and insight.

Suggested Citation

Farrell, Diana, Fiona Greig, and Chenxi Yu. 2019. “Weathering Volatility 2.0: A Monthly Stress Test to Guide Savings.” JPMorgan Chase Institute. <https://institute.jpmorganchase.com/institute/research/household-income-spending/report-weathering-volatility-2.0>.

For more information about the JPMorgan Chase Institute or this report, please see our website www.jpmorganchaseinstitute.com or e-mail institute@jpmchase.com.

This material is a product of JPMorgan Chase Institute and is provided to you solely for general information purposes. Unless otherwise specifically stated, any views or opinions expressed herein are solely those of the authors listed and may differ from the views and opinions expressed by J.P. Morgan Securities LLC (JPMS) Research Department or other departments or divisions of JPMorgan Chase & Co. or its affiliates. This material is not a product of the Research Department of JPMS. Information has been obtained from sources believed to be reliable, but JPMorgan Chase & Co. or its affiliates and/or subsidiaries (collectively J.P. Morgan) do not warrant its completeness or accuracy. Opinions and estimates constitute our judgment as of the date of this material and are subject to change without notice. The data relied on for this report are based on past transactions and may not be indicative of future results. The opinion herein should not be construed as an individual recommendation for any particular client and is not intended as recommendations of particular securities, financial instruments, or strategies for a particular client. This material does not constitute a solicitation or offer in any jurisdiction where such a solicitation is unlawful.

JPMORGAN CHASE & CO.

©2019 JPMorgan Chase & Co. All rights reserved. This publication or any portion hereof may not be reprinted, sold, or redistributed without the written consent of J.P. Morgan. www.jpmorganchaseinstitute.com