A GLOBAL THINK TANK DEDICATED TO DELIVERING DATA-RICH ANALYSES AND EXPERT INSIGHTS FOR THE PUBLIC GOOD
Weathering Volatility
Big Data on the Financial Ups and Downs of U.S. Individuals
May 2015
The JPMorgan Chase Institute data asset for Weathering Volatility

27M Chase accounts
from which a sample of 2.5M is taken

100,000 people out of the 2.5 million sample were randomly selected and the following four types of information were analyzed:

- Monthly Balances: For 27 months on all Chase consumer products: checking account, savings account, credit card, mortgage and home equity loans and Auto loans
- 135M Transactions: Information on amount, day and time, zip code, merchant and channel
- Credit Bureau Data: Estimate of monthly payments as well as current outstanding balances and delinquency statistics for credit cards, mortgages and other lines of credit
- Individual Characteristics: On an entirely de-personalized sample: gender, age and zip code

Criteria used to select the 2.5 million accounts include:
- Checking account in October 2012 to December 2014.
- At least $500 of deposits every month.
- At least five outflow transactions every month.
- Chase credit card in October 2012 to December 2014.
Categories assigned to inflows and outflows

135 million transactions

We used three types of information to categorize transactions:

- Merchant category codes
- Transaction description
- Transaction channel

### Inflows
- **46%** Income
  - Labor income: Payroll, other direct deposit
  - Capital income: Annuities, dividends, interest income
  - Government income: Tax refunds, unemployment, Social Security
  - Other: ATM deposits, unclassified income
- **36%** Uncategorized*
- **19%** Transfers
  - Transfer from savings, money market accounts and other investment accounts

### Outflow
- **57%** Consumption
  - Goods: Groceries, retail, auto, fuel
  - Services: Restaurants, child care, education, entertainment
  - Debt: Credit card payments, auto loan payments, student loan payments
  - Utility: Gas, electric, water, communications
- **28%** Transfers
  - Transfers to savings, money market accounts, and other investment accounts, principal portion of mortgage payments
- **15%** Uncategorized*

* Certain types of transactions, such as check deposits or check withdrawals, were unknown and thus remained uncategorized.
Individuals across the income spectrum experienced high levels of income volatility and even higher levels of consumption volatility.

**MONTH-TO-MONTH INCOME INCOME AND CONSUMPTION VOLATILITY BY INCOME QUINTILE. 25TH AND 75TH PERCENTILE MONTHLY CHANGES**

<table>
<thead>
<tr>
<th>Quintile</th>
<th>Income Change</th>
<th>Consumption Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>25th Percentile</td>
<td>-9%</td>
<td>-25%</td>
</tr>
<tr>
<td>75th Percentile</td>
<td>+11%</td>
<td>+26%</td>
</tr>
<tr>
<td>Quintile One</td>
<td>+14%</td>
<td>+27%</td>
</tr>
<tr>
<td>Quintile Two</td>
<td>+15%</td>
<td>+27%</td>
</tr>
<tr>
<td>Quintile Three</td>
<td>+16%</td>
<td>+27%</td>
</tr>
<tr>
<td>Quintile Four</td>
<td>+15%</td>
<td>+27%</td>
</tr>
<tr>
<td>Quintile Five</td>
<td>+16%</td>
<td>+29%</td>
</tr>
</tbody>
</table>
Income and consumption changes do not move in tandem. There was almost no correlation between the two.

SCATTER PLOT OF INDIVIDUAL CHANGES IN INCOME AND CONSUMPTION BETWEEN 2013 AND 2014.

Slope of line: 0.108
Standard error: 0.002
R-squared: 0.033
The typical US household does not have a sufficient financial cushion to weather adverse income and consumption volatility.

Liquid assets needed by the typical American household to weather volatility:

- $4,800 Buffer needed
- $1,800 Shortfall
- $3,000 Actual liquid assets

LIQUID ASSETS NEEDED BY THE TYPICAL AMERICAN HOUSEHOLD TO WEATHER VOLATILITY
How Falling Gas Prices Fuel the Consumer

Evidence from 25 Million People

October 2015
Data asset for assessing impact of falling gas prices
The distribution of credit versus debit cardholders varies significantly by state.
The Midwest and South were more impacted by gas price declines than the East and West

Average Gas Spend by County in the High Price Period (Dec 2013 – Feb 2014)

Top 5 Counties:
- Allen, Louisiana
- Armstrong, Texas
- Cameron, Louisiana
- Greenlee, Arizona
- La Salle, Texas

Bottom 5 Counties:
- Bronx, New York
- District of Columbia
- Hudson, New Jersey
- Kings, New York
- New York, New York

* Counties within each list are displayed in alphabetical order

Source: JPMorgan Chase Institute
For every dollar saved at the gas pump, individuals spend roughly 80 cents on other things.
When gas prices dropped high-gas spenders changed their consumer spending more than low-gas spenders.
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